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THE INDEX ECOSYSTEM AND THE COMMITMENT TO DEVELOPMENT INDEX

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The Index Ecosystem and the Commitment to Development Index*

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1. The Index Ecosystem

For fifteen years the Center for global Development (CGD) has produced the Commitment to Development Index (CDI). This is a good time to take stock and ask how, if at all, the CDI should be modified. The construction of the CDI raises a number of questions, some of which are more fundamental than others, and some of which are more useful than others. And many if not most of the questions apply to any proposed index, not just specifically to the CDI. I start with a discussion of these general issues.

Any index does violence to a complex reality. Just as a 1:1 scale map is fully accurate but not at all useful, the question to ask of any index is how well it reduces the dimensions of reality to a manageable scale, but the question cannot be answered unless one is clear about the objectives of the exercise. The point can be illustrated by the Human Development Index (HDI) launched in UNDPs Human Development Report of 1990. As is well known, this original HDI took three dimensions of wellbeing at the national level—per capita income, literacy rate and life expectancy—and, after a technical normalization exercise, simply took an equal-weighted sum of the three indicators as the HDI for a country.

I was among the many at the time who criticized the index for its simplistic assumptions and its technical failings (Kanbur, 1990). How, for example, could we rationalize the equal weights on the three dimensions? But the creator of the HDI, the late Mahbub Ul Haq, a brilliant economist with a Ph.D from Yale, responded that his objective was not to derive a technically perfect index, but one which would help change the development conversation away from a sole focus on income towards human dimensions such as education and health. That was the objective. For this he needed something which could be easily communicated and by which countries could be ranked. The ranking was crucial, because that would begin a debate within each country as to why it was lower than its perceived rivals. Civil society within each country could use the ranking to appeal to the national elites, and the simplicity of the index would make clear which of the dimensions accounted for the poor relative performance their country. Equal weighting was a key aspect of the simplicity—more sophistication in deviating from this benchmark would require explanation to non-specialist audiences. The audience for the index and its objectives mattered in its design.

It is perhaps difficult now to recall the enormous effect of the HDI on elite conversation within countries, and how it impacted the international conversation in channeling it towards education and health, and eventually towards the Millennium Development Goals (MDGs). Somewhat paradoxically, an index which combined three dimensions spurred the addition of more dimensions—a dashboard but without an index—in the MDGs.

The HDI has continued with many modifications to the original specification, but is now perhaps less prominent than it was a quarter century ago, not least because many other indices to capture multiple dimensions of wellbeing and development have been proposed and propagated. One such example is the Social Progress Index (SPI), https://www.socialprogress.org/index/methodology, which is a simple average of 51 social and environmental indicators (income indicators are excluded). Other examples are listed in Hillebrandt, Käppeli and Mitchell (2017a).

Indices which are successful attract competitors, and one fundamental and useful question to ask is on the nature of this competition and whether an index has been superseded by the competition.

Most recently, the dashboard has grown dramatically with the SDGs, which have 17 goals and more than two hundred indicators. The growth of dimensions and indicators has now raised the question of manageability of a massive dashboard, as well as clarity on its conceptual foundations. As Ebrahim Patel, South Africa's Minister for Economic Development has noted, income per capita as the sole indicator is clearly too few, but more than two hundred indicators is too many (Kanbur, Patel and Stiglitz, 2018). The proposal, rather, is to have a small dashboard, perhaps with fewer than 10 components, which is relevant to the policy dialogue in the country. The dashboard would thus be country specific, and would not be integrated into an index through a weighting scheme on the different dimensions.

The Index ecosystem has a constant pull between increasing dimensionality on the one hand and simplicity on the other. More than two hundred indicators are bound to invite a compression. The exact compression is a reflection of the focus and objective of the index, like the 51 indicators used in the SPI. The most recent growth in the ecosystem is the World Bank's Human Capital Index (HCI), which has three main components—survival, education and health. Survival is the easiest part of the index, measured simply through the under-5 mortality rate. Education combines enrollment rates as a measure of quantity and test scores as a measure of quality. Health combines the adult survival rate with stunting. The index is meant to give the answer to a question on relative productivity:

"The units of the HCI have the same interpretation as the components measured in terms of relative productivity. Consider for example a country such as Morocco, which has a HCI equal to around 0.5. This means that, if current education and health conditions in Morocco persist, a child born today will only be half as productive as she could have been relative to the benchmark of complete education and full health. The HCI exhibits substantial variation across countries, ranging from 0.3 in the poorest countries to 0.9 in the best performers." (Kraay, 2018, p. 5)

The detail of the HCI can be interrogated, as can the detail of any index—the quantitative measures used for each dimension and the weighting schema. No doubt these discussions have started and will continue. But, analogously with the HDI, the real question is how the HCI will impact the narrative and the dialogue. It is to be launched with much fanfare at the World Bank/IMF Annual Meetings in Bali in mid-October. And, no doubt again, UNDP will be watching to see how it impacts the influence of their own HDI.

Alongside the questions of how many and which dimensions and indicators, and how exactly to weight them, the other big question in discussion of indices is that of outcomes versus inputs. In fact, one specification of the results chain is from inputs to outputs to outcomes. Thus, for example, education expenditure is an input, pupils per teachers is an output, and children's test scores are the outcomes. Of course every step in a results chain is an input into what comes

after, so the classification is somewhat arbitrary, but it is nevertheless useful. Thus, for example, the SPI characterizes itself as being focused on outcomes not inputs:

"Our aim is to measure the outcomes that matter to the lives of real people, not the inputs. For example, we want to measure a country's health and wellness achieved, not how much effort is expended nor how much the country spends on healthcare." (https://www.socialprogress.org/index/methodology).

The newcomer HCI describes itself as follows:

"The HCI provides rough estimates of how current education and health will shape the productivity of future workers….Naturally, since the HCI captures outcomes, it is not a checklist of policy actions, and right type and scale of interventions to build human capital will be different in different countries…..Finally, the HCI is not a measure of welfare, nor is it a summary of the intrinsic values of health and education – rather it is simply a measure of the contribution of current health and education outcomes to the productivity of future workers." (Kraay, 2018, pp.8-9).

The SDGs in turn have been characterized as mixing up inputs and outcomes (Kanbur, Patel and Stiglitz, 2018). On the other hand, indices used in evaluation schemes such as the performance based allocation of the World Bank's IDA funds, are characterized as being entirely input focused. Such a strategy of aid allocation has been criticized for in effect imposing a particular view of what leads to development and poverty reduction (Kanbur, 2005). Where there is a clear consensus on such a link this is not an issue. But where the theory itself is contested, for example on whether greater private sector involvement in education will lead to better education outcomes, then it may be better to condition aid allocation on outcomes, allowing experimentation with alternative models to lead to those outcomes. This is the basis of the "cash on delivery" (COD) approach to development assistance promoted by CGD.

The above discussion characterizes some features of the Index Ecosystem in which the CDI will have to survive and thrive. It should be clear that the technical aspects of the CDI, on which we can have a detailed discussion and which I will indeed discuss, are unlikely to be the determining factor in its value and hence its survivability. Rather, the ecosystem questions concern whether it has competition, the nature of this competition, and how it can evolve to add value to its target audience.

2. The Detail of CDI

The CDI is a weighted sum of scores for different dimensions of *inputs from rich countries* towards *outcomes in poorer countries*. There are seven high level categories of inputs—Aid, Finance, Technology, Environment, Trade, Security, Migration. These high level categories are broken down into sub-components and each sub-component is further measured by typically more than one indicator. In the end the CDI uses more than 100 indicators for 27 OECD countries, and uses a weighting schema to generate the overall index. The linkages from inputs to outcomes, and the weights, are based on evidence in the analytical literature, or on the experience of the team:

"In some parts of the CDI, the way in which indicators are combined is grounded in a clear conceptual framework and calibrated to available evidence….But where theory and evidence are thinner, we need to use our judgement….The weights are open to challenge, but are backed by years of experience in the relevant fields." (Hillebrandt, Käppeli and Mitchell, 2017b, pp 12-13).

The key framing fact is that the CDI is a weighted sum of more than 100 indicators. For each of these we could of course carry out a meticulous dissection of the evidentiary basis of including this or that specific policy indicator as having a positive impact on developing countries. But the degree of detail behind each of the indicators is daunting indeed, and in the end each contributes only a small part to the overall index, so changing the measure for each sub-dimension after extensive discussion will barely move the needle in terms of the overall index. I want to make this point by illustrating with three examples from the specificity of the index.

As a first example, consider the Finance category noted above. This is in turn divided into two subcomponents—financial transparency in the rich country, and rich country support to investment in developing countries. The financial transparency component is in turn measured by no fewer than 16 indicators which thus together make up 50% of the weight of the Finance component of the CDI, which in turn is one seventh of the total weight of the CDI. One of these indicators I son public company ownership:

"The indicator considers whether a country requires all available types of company with limited liability to publish updated beneficial ownership or legal ownership information on public records accessible for free via the internet. If beneficial ownership information is published for free, a full transparency credit is awarded. If there is a fixed cost for accessing the data not exceeding US$10, €10 or £10, only half the credit (0.5) is awarded. If only legal ownership information is available for all types of company for free, a 0.2 transparency credit is awarded. If access to legal ownership data entails a cost not exceeding US$10, €10 or £10, a 0.1 credit is awarded." (Hillebrandt, Käppeli and Mitchell, 2017b, p. 22).

This leads to a score which accounts for a (1/16 x ½ x 1/7) 0.4% weight in the total CDI. I myself do not have sufficient expertise to pronounce on the detail on the paragraph above but even a radical reassessment and change in the sub-sub component would not change the overall index by much. And if such small changes in turn change country rankings, these shifts have to be taken with a pinch of salt.

As a second illustration of the detail in the CDI, each leading to relatively small weight in the overall index, consider the Technology component, one of the overall "big seven" categories of policies. The underlying narrative is that technology advances are good for development, and what we need to look at in rich country policies is a combination of public investment in research and development, and the stringency of intellectual property rights which may prevent spread of discoveries:

"Accessing knowledge is one way in which poor countries can catch up with the wealthy ones. Donor countries can contribute to technological development and diffusion of knowledge and innovation by publicly funding research and development activities. Very often the outcomes of research are protected by intellectual property rights….However, it is important that the system sufficiently enables others to make use of these outcomes, and contributes to the advancement of human knowledge further." (Hillebrandt, Käppeli and Mitchell, 2017b, p. 27).

When I considered the detail underlying these categories, as laid out in Park. et. al (2014), I found myself most convinced by the intellectual property rights case than by the public investment argument. It has to be said that there was very little in the way of formal statistical evidence of the direct impact of rich country public R&D on poor countries. In any case, there is no a priori reason why public R&D in rich countries should necessarily be of a composition to benefit developing countries. This is recognized in the discount rates applied to R&D on agriculture (25%) and defense (50%). Why these rates precisely is not discussed.

Under the intellectual property rights sub category there are three further divisions—patent coverage (20%), "TRIPs" (50%), rights loss provisions (30%). Again, why these relative weights is not discussed specifically.

The detailed specification of the patent coverage is as follows:

"If a country's patent coverage policy enables others, to access and make use of such knowledge, it scores 0 points. If, on the other hand a country enables such patenting, i.e. their policies are too restrictive it receives 2 points. The evaluation is done by Walter Park et al and the two categories are weighted equally: a country can be penalized with a score of max. 1 for patents on plant and animal varieties and with a score of max. 1 for patents on software. Scaling is done in tenths." ((Hillebrandt, Käppeli and Mitchell, 2017b, p. 28).

This scaling is not justified with reference to the literature, but in the end it accounts for only (1/5) x (1/3) x (1/7)= 0.95% of the total CDI.

My third illustration of the detail of the CDI is the most conventional of the big seven categories—aid. This is divided into aid quantity and aid quality, with 50% weight on each sub-component going into the overall aid score, which is in turn of course one seventh of the total CDI. Thus the good old fashioned volume of aid indicator, specified as the ratio of (DAC defined) Overseas Development Assistance as a ratio of Gross National Income, accounts for 1/7 x ½ = 7.1% of the CDI. I believe this is the indicator among the more than 100 indicators with the single biggest weight. And the weight is perhaps big enough for significant shifts in aid quantity effort to move the needle on the CDI—although it would be interesting to see how

much country ranking would change if the aid ratio increased by 10% (CDI would of course go up by only 0.7%).

On the quality of aid, there are a bewildering number of subcomponents and associated indicators: maximizing efficiency (8 indicators), fostering institutions (8 indicators), reducing burden on recipients (7 indicators), and transparency and learning (8 indicators). For the detail on how these indicators are specified we are sent to Birdsall, Kharas and Perakis (2009), but each of these indicators—for example, share of untied aid, or use of recipient country systems, or coordinated missions, or completeness of project level commitment data, etc—accounts for only 1/31 x ½ x 1/7 = 0.2% of the overall index.

To conclude this section, let me reiterate that there is bewildering detail in the makeup of the CDI. The judgements made along many of the more than 100 indicators, and the weighting schema used, can be questioned and discussed. But (i) I did not spot any egregious misspecifications and (ii) in any event, small changes here and there, or even in many different places, are unlikely to make a big difference to the overall CDI.

3. The CDI in the Index Ecosystem

What are the CDI's competitors, and should the CDI continue in some form or other? I think the answer to this is relatively straightforward. Unlike the proliferation of indices and dashboards directed towards measuring countries' performance on the wellbeing of their citizens, there does not seem to be a closely comparable index which assesses rich countries' performance on their impact on poor countries. As Hillebrandt, Käppeli and Mitchell (2017a) argue, there is actually no index which comes close to what the CDI tries to do. The Good Country Index (https://www.goodcountryindex.org/) comes closest, but does not come very close. At least for the next few years, the CDI looks like being unique in its mission to rank rich countries in terms of their impact on poor countries.

Does the CDI add value to justify its cost? Even with its uniqueness in the field, its impact may not be big enough. This is not a question which can be answered in quantitative terms, rigorously identifying whether the publication of the CDI and the national conversations to which it gives rise change rich country policies towards greater beneficial impact on poorer countries. And the qualitative answer depends on the specific objectives and the audience in mind. As I see it there are two audiences. First are the aid ministries in rich countries; second is civil society in rich countries and more generally globally. And the direct objective is, in the first instance, to seed and to change the conversation on policies. In particular, does the CDI succeed in its objective of moving the conversation beyond the conventional focus on the volume of aid? Answering questions such as this require that the assessment of impact of CDI will have to be somewhat qualitative in nature.

Although CGD does point to cases where publication of the index led to some movement in the conversation (for example, Hillebrandt, Käppeli and Mitchell, 2017a note that "after the poor performance of Japan on the CDI in 2006, the Japanese Ministry of Foreign Affairs issued a statement that started a constructive discussion on the methodology of the CDI"), I think there would be great value to having a systematic independent qualitative assessment of the impact of the CDI on its intended audiences. For what it is worth, my non-scientific, anecdotal, sense is that when the CDI is published there is a brief flurry of activity in aid ministries, and a flurry of coverage in the press. But I am not sure the CDI leaves a lasting mark either in aid ministries or in global civil society. Certainly, fifteen years into its publication, it seems to leave less of an impression on civil society discourse than other "big beasts" in the Index Ecosystem, including the non-index dashboard of the SDGs. But we will not know until a systematic assessment has been done. Until this is done, we will have to proceed on the assumption that the value added of the CDI, which is clearly positive, exceeds the costs of its production.

A potentially important issue arises because of who pays for the CDI—the donor countries. I do not see such a conflict of interest for other indices, where the payers of the piper do not have quite such a direct interest in calling the tune. To some extent the conflict of interest is mitigated because this is a relative ranking across donor countries. But eyebrows might still be raised if those who pay more for it tend to come out on top. There are of course counter arguments—including that it is the good donors who pay to find out where they fall short. And

processes and procedures with sufficient firewalls will help to build confidence that conflicts of interest are being addressed.

These three questions—does the CDI fit a well-defined niche, does it justify its costs, and are there patent conflicts of interest engendered by who pays for it—frame an assessment of CDI in the context of the Index Ecosystem in which it exists. But we could ask whether, again in the context of the ecosystem, there are ways in which the value added of the CDI could be increased. The next section turns to this question.

4. Improving the CDI

I have already argued that detailed discussion on the more than 100 sub-sub-components of the CDI may be of academic interest but ultimately perhaps of marginal import given the small weights of any one component in the overall index. In this section I want to consider three possible changes to the CDI which may increase its value added by more than marginal tweaking of one of the 100 indicators.

The first issue is posed as follows in the outline note on the academic review (Center for Global Development, 2019, p.5):

"Poverty Impact--all indicators are connected to economic development of developing countries, but few explicitly consider the poverty level of other countries. An exception is the immigration inflow indicator, where we look at the inflow of total immigrants to rich countries, weighted by a selectivity factor based on countries of origin, i.e. countries are more rewarded for accepting migrants from poor countries, rather than relatively rich countries (measured by GDP/capita). Should this logic be extended to further indicators, or should it be restricted to a few indicators, given that most poor people live in lower-middle income countries and might not be covered by these poverty-weighted indicators?"

How to weight national average impacts by a poverty factor require us to answer a deep conceptual question on the salience of national poverty over and above its contribution to global poverty. Total global poverty (say the head count measure) is a population weighted average of national poverties. It is through this lens that the first MDG of halving the global rate of poverty between 1990 and 2015 was achieved because China and India did so, even though many countries in Africa did not. With a truly cosmopolitan global perspective, one would be indifferent between a poor person being lifted out of poverty in a middle income country versus in a low income country—or in a low poverty incidence country compared to a high poverty incidence country (Kanbur and Sumner, 2012). Thus giving special weight to policies which help high poverty incidence countries more would be based on the theory that helping these countries is more likely to lift a typical person out of poverty than helping low poverty incidence countries. To this could be added that it is inherently better from a normative point of view to reduce poverty in a high poverty incidence country than in a low poverty incidence country, even if the impact on global poverty is the same.

I do not believe that these two strands of argument needed to clinch weighting by poverty indicators are sufficiently well established conceptually and empirically to warrant a major shift in the CDI. In any event this would make the construction of the CDI even more complex and detail bound than it currently is, which may not augur well for communication and clarity.

The second issue I want to take up is posed to us as follows:

"Does the CDI include the most important governmental actors1 for development?
- Are the current actors (27 high-income countries) the most important?
- Which actors should be included/removed from the CDI-assessment?
- How should we deal with the trade-off between including more countries vs. limited

data availability for many emerging development actors." (Center for Global Development, 2018, p.5)

The same document goes on to say:

"Country coverage - we will be exploring whether the CDI can be extended, or more likely whether some common components or indicators could be produced, for a wider range of countries. We are minded to focus on large non-OECD large countries like Brazil, China, India, UAE, Saudi Arabia, Kuwait and Russia." (Center for Global Development, 2018, p. 5).

As I have noted, the CDI is unique in the Index Ecosystem for focusing on likely impact of the policies of rich, basically OECD, countries' policies on poor countries. Although the quantity of aid is the indicator with the single biggest weight, at 7% this is still quite small, emphasizing that many things other than aid matter. However, a range of middle income countries have become significant aid donors in the past fifteen years, not least China, but also the countries mentioned above. Further, not only are these countries becoming significant in bilateral aid, their influence in multilateral organizations is growing and is set to grow even more, both in established institutions and in newly created ones like the Asian Infrastructure Investment Bank and the New Development Bank.

For this reason, I believe that the CDI should begin to work on including the countries listed above. The CGD note rightly points out that there are data constraints which mean that not all or even not many of the more than 100 indicators which currently compose the CDI will be available for the new countries, and we are asked about the tradeoff between more countries and fewer indicators. In my view CDI should weigh the tradeoff in favor of more countries, or it risks a growing irrelevance—certainly in the aid arena as the relative contribution of conventional donors shrinks, but also in the broader policy arena as the new countries continue to become more assertive in the global domain. In any event, reducing the number of indicators may be no bad thing, as I will presently argue.

I think the new countries can be introduced step by step. For example, at a first stage one could simply present and discuss the information one has on the indicators available for these countries—a dashboard. At a second stage one could do a comparative exercise just for the new countries, with a common set of indicators. At the third stage one would have (obviously a much smaller) set of indicators and weights for the old and new countries. There is no reason why the conventional CDI should not still form the basic exercise, while supplemented by additional information at each of these stages.

The third area in which I want to examine improving CDI's value added is motivated by the following questions which were posed in the CGD note:

"Does the CDI measure the areas that matter most to development?
- Are the current components and indicators sound?
- Should we consider adding any components or indicators?
- Should we drop any components, or indicators?

Are there any potential improvements to measuring policies within the components?

- Do the components consist of the most important elements?
- Are they appropriately measured/ weighted?
- Are there measures we remove, or better ones we should include?" (Center for Global Development, 2018, p.5)

In the previous section I tried to indicate the complexity and detail underlying the more than 100 indicators of the CDI, and questioned whether a detailed assessment of the type asked for above would provide much value added. However, arising from this concern on the complexity of the construction of the CDI, I want to pose a bigger question. Would the CDI be better off having far fewer indicators and much simpler weighting structure?

I recognize that this is not necessarily a response that would emerge from an exercise to construct a technically perfect index, whatever that means. But let me pose the question in a different way. Suppose we were restricted to something like 7 sub-components under each of the 7 high level headings—in other words , 49 indicators in all, each to be equally weighted. Which of the hundred indicators would we then choose (without "cheating" by aggregating some so that we end up with 49). Indeed, one might argue that 49 is too many and that 4 or 5 under each of the 7 high level categories, leading to between 30 and 35 indicators, may be more manageable and more conducive to conducting a conversation around the outcomes of the index. I don't have an answer to this question, but I think it would be a very useful exercise to force us to think what is really important and what is not, and what evidence can be brought to bear to help with the choice. This can be done initially as an exercise alongside production of the standard CDI.

5. Summary

1. The CDI has carved out a fairly specialized niche in the Index Ecosystem. No other Index comes close to what it tries to do.
2. It is not clear, however, that it is having the impact it should on aid ministries and on global civil society. Anecdotally, it is not clear what imprint it leaves beyond the flurry of reports that greet its publication. A special study is needed to assess its impact in a systematic though perhaps mainly qualitative way.
3. There is an argument to be made that construction of CDI as it stands is too complex and detailed. Assessment one way or another of each of the more than 100 sub-sub-components is in any case unlikely to change the overall CDI by much given that each component has quite a small weight. Going into poverty based weighting will only increase the complexity.
4. If anything, CDI should consider reducing the number of sub-sub-components to a much smaller number, and ask itself which components would be included if there was a limit to the number to say 30. This can initially be done as an exercise alongside the production of the standard CDI.
5. The highest increase in CDI's value added will come from including the newly resurgent countries such as China and India alongside the old OECD countries. Without these CDI risks growing irrelevance. This introduction can done in sequence, alongside production of the standard CDI, leading eventually to a CDI which has fewer indicators but more countries.

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