



Measuring Green Growth: Why Standardisation is (Sometimes) Not Desirable

Summary

The need to find a suitable alternative to our present carbon-based production pattern is currently the subject of international discussion, not least because economic growth usually goes hand in hand with increased resource consumption. As part of such an alternative, all economic decisions would have to take into account environmental concerns and the value of natural assets. The discussion is mainly focused on different concepts of green growth, now a buzzword. The hope is that we can find a solution to our world's most pressing issues, one that enables us to achieve economic growth while conserving ecosystems, preventing environmental degradation and contributing to the aims of climate stability and poverty reduction.

In addition to the important debate on the different ways of achieving this, it is also essential to discuss how we can effectively map the achievement of green growth. A number of international organisations have proposed sets of indicators for measuring green growth, and initiatives such as the Green Growth Knowledge Platform (GGKP) have been set up to pool existing knowledge, identify gaps in knowledge and provide a platform for discussion.

In this context, finding a standardised way of measuring green growth is far less trivial than it may appear at first glance, as there are at least two sources of heterogeneity that need to be taken into account: the different concepts

of green growth that exist and the specific conditions of each country that require different priorities to be set. Differing income levels mean that countries will have varying degrees of scope for action and will set different policy priorities. Furthermore, there are often fundamental structural differences between economies, with implications for environmental impact and the use of natural resources. There must also be a certain degree of political stability for green growth strategies to be planned and implemented properly. Finally, it is necessary when measuring green growth to (be able to) distinguish between cyclical and structural changes in the economy.

This results in several sets of indicators for measuring green growth. However, the goal should not necessarily be to develop one sole set of universally valid indicators. If we are to clearly delimit the concept of green growth to prevent its arbitrary use, then we need firstly to come up with a comprehensive way of defining it and secondly find overarching key indicators for measuring it that reflect central categories. At the same time, the different baseline conditions in developing countries, emerging economies and industrialised nations mean that green growth strategies must be adapted to individual situations. Accordingly, sets of indicators for measuring green growth need not only to allow a certain degree of flexibility, but also to be capable of reflecting this diversity.

The green growth debate

The need to find alternatives to carbon-based, environmentally harmful production processes is currently the subject of international discussion at the highest political level. The World Bank, the Organisation for Economic Co-operation and Development (OECD), the United Nations Environment Programme (UNEP) and the World Economic Forum have each published their own reports on the issue in recent years. For the most part, the discussion can be summarised under the heading "green economy" or "green growth". Underlying the debate is the undoubtedly correct assumption that a significant proportion of our economic activity is dependent on natural assets and environmental services which have a decisive influence on human well-being, and that this activity is contributing to their degradation. Nevertheless, measuring the contribution of the environment to (socio-)economic development and aligning policies accordingly still represents a significant directional change in the understanding and perception of growth and development.

At the same time, environmental concerns and the value of natural assets must be integrated in all aspects of economic decision-making. Initiatives such as the GGKP have made this their goal. The platform involves over 30 organisations, including the World Bank, the UNEP and the OECD, who are working to compare the way they each understand the concept of green growth and to develop ways of measuring it. The Global Green Growth Institute (GGGI) was set up in 2010 with the aim of paving the way for and publicising a new "green" growth model. The fact that there is as yet no final consensus on the analytical framework or a single set of indicators for measuring green growth shows that this is no trivial task.

Green growth concepts

While the three pillars of sustainability – its economic, environmental and social aspects – are almost always present in the various concepts of green growth, their relative importance varies greatly depending on the perspective of the authors. The UNEP argues for a transition to a green economy that is low-carbon, resource-efficient and inclusive, stating that such an economy seeks to improve well-being and social equity and at the same time reduce environmental risks and ecological scarcities. The World Bank, on the other hand, defines green growth as being efficient in the way it uses natural resources, clean in the way it minimises pollution and environmental impacts, and resilient in that it takes into account natural hazards and the role that environmental management and natural capital play in averting physical disasters. For its part, the OECD understands green growth as promoting economic growth and development and at the same time ensuring that natural assets continue to provide the resources and environmental services that are essential to

our well-being. Drawing heavily on the OECD definition, the GGKP defines green growth as promoting economic growth and development and at the same time ensuring that natural assets continue to provide the resources and environmental services that are essential to our well-being. It concentrates on the synergies and trade-offs between the environmental and economic pillars of sustainable development, but makes no explicit reference to inclusive growth or resilience.

Having a clear definition is the prerequisite for being able to determine whether a development path can be classified as green growth and to measure how successfully that path has been embarked upon. Yet to our knowledge there is still no conclusive, universal definition that goes beyond the conceptual definitions just outlined in their specificity.

Green growth indicators

Each of the aforementioned international organisations has developed a set of indicators for measuring its own concept of green growth or a green economy. (1) The UNEP's indicators for green economic policies can be divided into three categories: a) environment (indicators for issues and targets to be addressed by green growth policy), b) policy (indicators for policy interventions), and c) well-being and equity (indicators for *ex ante* assessment and *ex post* analysis of the impact of policy interventions). These three categories cover up to five topics each and have been assigned a total of 40 indicators. (2) The World Bank proposes a set of indicators for measuring the potential benefits of green growth policies. It measures the benefits within each of the three pillars of sustainability and identifies the channels through which these benefits are generated. (3) The OECD's proposed framework for measuring green growth comprises five topic areas: a) socio-economic context and characteristics of growth, b) environmental and resource productivity, c) natural asset base, d) environmental dimension of quality of life, and e) economic opportunities and policy responses. Each of these topic areas consists of up to five sub-topics to which numerous indicators are assigned. (4) At the heart of the GGGI is the idea of Green Growth Planning (GGP), which is intended to assist countries in developing green growth strategies with the aid of diagnostic, planning, and monitoring and evaluation (M&E) indicators (GGKP 2013). This approach distinguishes between areas to be developed (well-being and economy) and areas to be sustained (ecosystem, natural resources and climate). Each topic is divided into several sub-topics and each sub-topic is mapped with up to five indicators.

Most of the indicators proposed by the aforementioned initiatives are already available and have proven successful, although the concept of green growth is relatively new. They also overlap to some extent with the indicators for the Millennium Development Goals (MDGs)

and can in part be taken from economic, environmental and social statistics or derived from available data. Nevertheless, different sets of indicators continue to be used, due among other things to the various concepts of green growth having different objectives.

Ultimately, a central issue in the discussion about green growth is how to quantify and measure it using indicators that satisfactorily map the economy-environment nexus at the very least. In order to be suitable for measuring green growth, indicators must satisfy the four criteria of policy relevance, analytical soundness, measurability and ease of communication (cf. OECD 2011). Green growth is too complex a concept to be mapped effectively using just a single indicator. Instead, several indicators are needed to do justice to its content.

Policy relevance of green growth in countries with heterogeneous general conditions

Generally speaking, green growth indicators should map the progress of a country (as a unit of analysis) on its development path towards achieving the objectives of the aforementioned green growth concepts. On the one hand, measuring green growth should allow the initiated development path to be analysed as objectively as possible and facilitate a certain degree of comparability. On the other hand, the world's sovereign states, over 190 in number, clearly vary greatly in their characteristics, which could mean that there are alternative ways of achieving the same goal. As such, it may well be counter-productive to standardise indicators across the board.

Differing income levels mean that countries will set different policy priorities and will also have varying degrees of scope for policy action. In middle-income and high-income countries, for instance, relative poverty is highly relevant to policy, while in countries with low average incomes higher priority is often given to preventing absolute income poverty. An indicator measuring water quality in water bodies may be relevant to the former, while an indicator measuring safe access to clean drinking water could be of greater priority to the latter. This does not imply that the other indicator in each case is irrelevant, but instead illustrates the different priorities of each country. The different weighting of various aspects must be reflected in a set of indicators for measuring green growth in order for these indicators to be meaningful and therefore relevant to policy.

Which green-growth measurement indicators are relevant to a given national economy will also depend largely on the economic structure of the country in question. The size of individual economic sectors affects various aspects such as patterns and intensity of pollution, land consumption and an economy's reliance on imports or exports. A country's natural resource base is another aspect that is key to a set of indicators. In

resource-rich countries in particular, it is necessary to include indicators that track resource stocks and their changes over time in order to measure the sustainability of resource consumption. It is of course essential to take account of the availability/scarcity of the resources. As such, indicators must also reflect the relative appreciation in value of resources where they become scarce.

Economic fluctuations pose another challenge to the operationalisation of green growth measurement: In order to make statements about green growth strategies, indicators must be able to distinguish between cyclical and structural increases or decreases in green growth indicators. This challenge could be tackled by using a combination of indicators that measure both short-term and long-term changes. This would make it possible to identify a long-term (sustainable) green-growth strategy, even if this strategy may lead to short-term losses of (green) growth, and to distinguish it from strategies that have positive short-term effects but are not sustainable. Last but not least, it is necessary to have a minimum degree of political stability in the first place in order to develop and implement an effective green growth strategy. In summary, the focus of green growth strategies may vary between countries with different general conditions, which means that specific indicators may be relevant and meaningful to differing degrees depending on the country in question.

Policy recommendations

In order to make green growth concepts meaningful and attractive to as many countries as possible, customised dashboards, i.e. sets of indicators specific to individual (groups of) countries, can be used. Using a customised set of indicators makes it possible to measure as accurately as possible those aspects deemed important in a specific case. The disadvantage is that it is difficult to compare results across countries and that it is easy to manipulate the results due to the potentially arbitrary nature of indicator selection. A compromise solution would be to combine a number of key indicators that are measured in the same way for all countries with a selection of country-specific ones. Table 1 provides an overview of possible categories and key indicators for measuring green growth.

A partially customised set of indicators would thus be able to take account of the heterogeneity of the countries while also reflecting both the large degree of overlap and the differences between the green growth concepts. This solution would ensure at least a certain degree of comparability, but still leave room for different priorities and interpretations of green growth. This would not only make it possible to pursue different development paths, but also make these paths compatible with a country-specific green growth agenda.

Table 1: Possible categories and key indicators of green growth		
Category	Explanation	Examples of possible key indicators
Natural assets	Indicators monitor the natural asset base and any changes in it.	- Natural resource use (index) - Change in land use
Environmental and resource productivity/intensity	Indicators measure economic growth in terms of how low-carbon and resource efficient it is.	- Carbon productivity - Resource productivity
Environmental quality of life	Indicators describe direct and indirect interaction between humans and the environment.	Exposure to harmful levels of air pollution (% of population)
Policies and opportunities	Indicators map the policy framework and the economic opportunities resulting from green growth.	- Environmental policies - "Green" jobs
Socio-economic context	Indicators describe the socio-economic context.	Context-based, e.g. income inequality, access to health care
Source: based on OECD 2011, 2013, 2014 and GGKP 2013		

Looking ahead

The concept of a green economy is helpful, as it shifts the focus away from pure economic growth to a broader understanding of well-being that incorporates environmental sustainability and social participation.

An overarching definition of green growth and key indicators that reflect central, overarching categories could provide a reliable common framework in this context. This could prevent a situation where, for example, environmental quality is compromised, yet the term green growth is used. These cornerstones also help to ensure comparability between countries.

Indicators must simplify, but also be able to preserve the complexity of the elements being measured. It is important to stress that developing countries, emerging economies and industrialised nations have differing degrees of scope for action: both the policy priorities and the options for implementing them differ. Given the heterogeneity in general conditions, it is hardly surprising that their strategies for green growth and approaches to measuring it differ. This implies that the set of indicators needed in order to map green growth in different economies may vary by country and strategy. Provided these indicators reflect this diversity, the parallel use of different sets of indicators can be welcomed.

Literature

Green Growth Knowledge Platform (GGKP) (2013): Moving towards a common approach on green growth indicators : a Green Growth Knowledge Platform scoping paper

Organisation for Economic Co-operation and Development (OECD) (2011): Towards green growth, Paris

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