

Beyond GDP: Towards an Inclusive Measure of Wealth

Prof *Anantha Duraiappah*, the author of the *Inclusive Wealth Report (IWR)* spoke on the *Inclusive Wealth Index (IWI)* as a measure of progress towards sustainability beyond the *Gross Domestic Product (GDP)* at an *ISIS International Affairs Forum* on 25 April 2014. Prof *Duraiappah* is the *Executive Director of the International Human Dimensions Programme on Global Environmental Change (IHDP)*, based in Bonn, Germany. He was also the former *Chief of the Ecosystem Services and Economics Unit of the United Nations Environmental Programme (UNEP)* and helped initiated the *Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES)*. The session was moderated by *Dr Hezri Adnan*, Director for the *Technology, Innovation, Environment and Sustainability Programme (TIES)*, *ISIS Malaysia*. *ISIS Intern Michelle Kwa* reports.

The Gross Domestic Product (GDP) as a quantitative measure of economic growth has traditionally underpinned growth as a necessary condition for development. Notably, not just monetized expansion as measured by GDP, but the growth curves of many indicators have plunged dramatically since the 1950s as a result of physical expansion such as population growth and natural resources consumption. Shortcomings of GDP and criticisms of it as a wealth and welfare measure have led to many discourses as well as the establishment of alternative assessments. One such cited progress indicator is the Human Development Index (HDI) developed by Amartya Sen. HDI, as a normative concept conflates qualitative improvement with quantitative growth in the economy. However, it is argued that HDI's lack of completeness regarding environmental aspects calls for a broader and holistic concept to truly capture the sustainability aspects of societal wellbeing. Only in such manner, can it respond specifically to a country's challenges and policy agendas.

Duraiappah first drew upon the building blocks of the economic growth paradigm in the pursuit and use of economic indicators. He then offered a brief analysis on how GDP alone as a statistical pillar is an overriding concern of human beings striving towards progress and the achieving of sustainable development goals (SDGs). Given this context, he further discussed the approach, main findings and policy implications of the Inclusive Wealth Index (IWI) as an alternative integrated indicator to measure a nation's wealth comprehensively.



Anantha Duraiappah

Is GDP an indicator for sustainable progress?

Duraiappah introduced the discussion by contesting the idea that GDP mirrors economic growth and therefore identifies with the progress and wealth of a nation. GDP for all its practical purposes has (except for Bhutan's Gross National Happiness since the 1970s) failed to capture the progress of literacy, education, environmental security, biodiversity conservation and value of ecosystem services. This method of measuring national production was dominantly catalyzed by the Keynesian view of economic theory during the Great Depression, centred on the idea of the circular flow of income. Such thinking lifted consumption as the primary role in economic management. Reportedly as early as in 1934,

Simon Kuznets, the indicator's inventor, warned that such national economic statistics can scarcely be used to assess the overall welfare of the nation. Kuznets again testified in 1974 on GDP's limitations and stated:

'Distinctions must be kept in mind between quantity and quality of growth, between its costs and return, and between the short and the long run. Goals for "more" growth should specify more growth of what and for what'.

Paradox of wellbeing and income

Duraiappah then reinforced Easterlin's findings on the paradoxical relationship between happiness and income, indicating that happiness does not always increase in parallel to the rise in income of a country over the long term. This statement was vividly described in his study on Japan which highlighted the negative consequences for human wellbeing as biodiversity diminishes. As Figure 1 shows, since 1980, it can be seen that increasing monetized economic growth in Japan has not translated into contentment as seen in the aspirations of the majority of the population to pursue spiritual richness in their future lives.

... [there is] a shift in emphasis from production beyond GDP to greater attention to social and environmental wealth in the context of sustainability.

Rethinking growth

The economic crisis and stagnation of 2008 led to a shift from assessing growth based on GDP. There was an increasing demand for sustainable measurement marking a 'change in the scorecard'. Following this, a report by United Nations Secretary-General's High-level Panel on Global Sustainability, with the title *Resilient People, Resilient Planet: A Future Worth Choosing* called for the strengthening of the interface between scientists and policymakers. Analogously, a

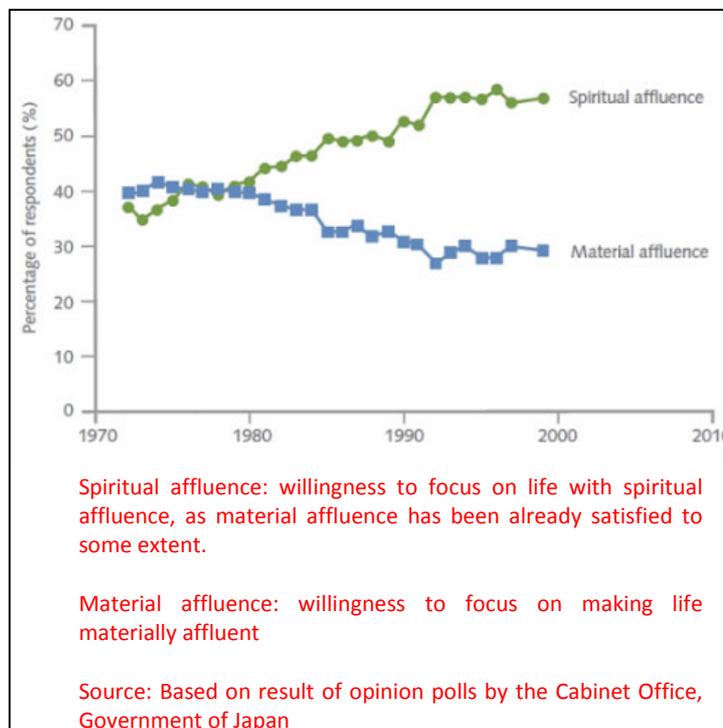


Figure 1: Aspiration for spiritual richness versus material richness (1972–99); source: (JSSA, 2011)

'Sarkozy Commission' led by Joseph E. Stiglitz, Amartya Sen and Jean-Paul Fitoussi was established to evaluate the relevance of GDP. Their report, *Measurement of Economic Performance and Social Progress*, suggested a shift in emphasis from production beyond GDP to greater attention to social and environmental wealth in the context of sustainability. Crucially, the importance of reflecting tradeoffs and synergies of environmental, social and economic goals are stressed to identify system interdependencies, as such, deriving meaningful public policy processes.

Scope of Inclusive Wealth Index (IWI)

Against this backdrop, the IWI, published in the *Inclusive Wealth Report (IWR) 2012*, aims at being a comprehensive index, more inclusive than GDP and HDI — one that incorporates social and environmental costs or benefits in a long-term perspective. Contrary to GDP, which focuses on monetary flows in the short-term, the IWI focuses its attention on the stock of assets by assessing three components of wealth in a country as follows: changes in human capital (education, demographic curve, income, and so on), natural capital (fossil fuels, minerals, forests, farmland, fisheries) and manufactured capital. This index shows whether a country's wealth has been

increasing or decreasing, thus making it an inclusive accounting tool for policymakers and national planning authorities.

The prototype report of IWR was first released in 2012 during Rio+20. It was designed to draw the attention of decisionmakers from 20 countries. With a focus on natural capital, it covered high, middle and low-income economies from all the continents, over a period of 19 years (1990–2008). The selected country samples represent 58 per cent of the global population and 72 per cent of the world’s GDP in 2010.

Accordingly, the mathematical model of IWI is based on three assumptions of the notion of sustainability:

- Sustainability is achieved if wellbeing is positive;
- Inclusive wealth of a country is the shadow value (internalizing externalities) of all its capital assets; and
- Intergenerational wellbeing is positive if the changes in inclusive wealth are positive.

Key findings from IWR

Duraiappah highlighted a few key findings of the report. Firstly, he underlined the significant role of population growth rate in determining a country’s sustainability. Changes in population size affect capital distribution considerably. Colombia, Nigeria, Saudi Arabia, South Africa and Venezuela indicated negative growth on the IWI, signaling that they are on an unsustainable track. One of the primary reasons for this was high population growth rates. (See Figure 2)

Secondly, the case study of Japan showed it was the only country to experience an increase in natural capital stocks. While agricultural land has been steadily declining since 1990, forest resources have been increasing and this was the primary reason for the country’s positive, natural capital growth rate.

Thirdly, the study shows that the increasing human capital in most economies has been the key form of capital to offset the decline in natural capital. However, in elucidation, he revealed that health capital is treated separately from human capital in this study due to its high intrinsic value. (See Figure 3, page 8)

Finally, the clear signs of the tradeoff effects among different forms of capital are witnessed in the changing of capital stocks for 20 countries over 19 years. The identified major driver of the difference in performance was the prominent decline in natural capital.

He drew upon another facet of the analysis which takes into account three determinants affecting a country’s aggregate output resulting in the ‘Adjusted Inclusive Wealth Index’. These elements are potential climate change damage, oil capital gains and total productivity factor (TFP). This has been of relevance to Nigeria, Venezuela, Saudi Arabia and Russia as they moved away from the unsustainable path fundamentally attributed to TFP and oil capital gain.

		Inclusive Wealth Index	Population growth	IWI per capita	Key
	Australia	1.41	1.29	0.12	3.0 – 2.0
	Brazil	2.30	1.38	0.91	2.0 – 1.0
	Canada	1.41	1.03	0.37	1.0 – 0.5
	Chile	2.56	1.35	1.19	0.5 – 0.0
					0.0 – -1.0
					-1.0 – -2.0

Figure 2: Measuring countries’ progress. The average annual growth rate, period 1990–2008. IWI per capita = IWI – Population growth

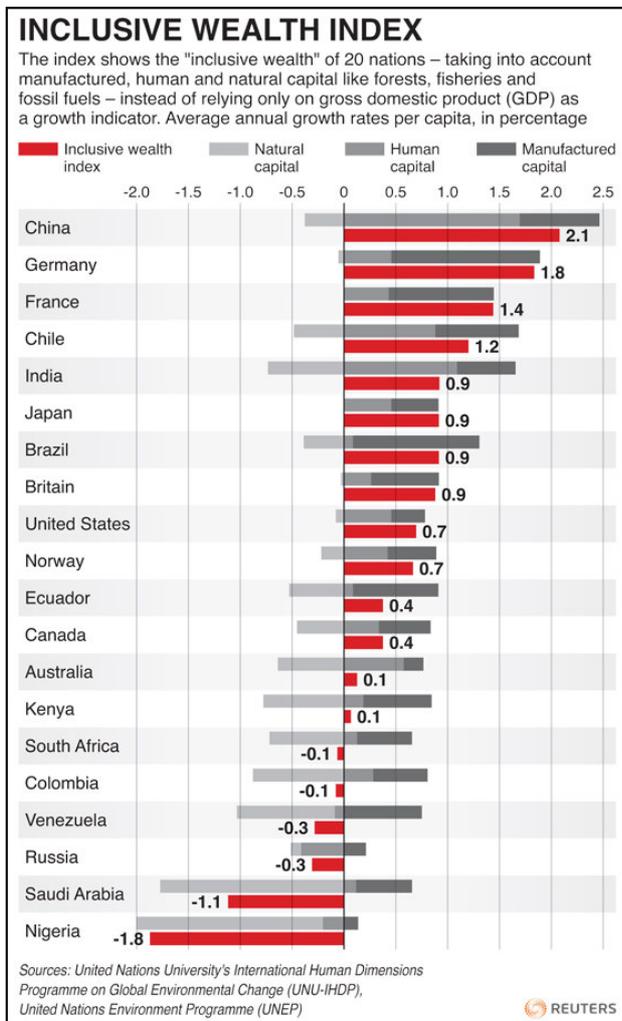


Figure 3: Average annual growth rates (per capita) disaggregated by capital form

Key lessons and challenges

The key strength of the inclusive wealth framework is rooted in the shadow price which is determined by the degree to which the various forms of capital can be substituted. Shadow price essentially captures:

- Each capital's contribution to intergenerational wellbeing at each time period;
- Expected future scarcities; and
- Externalities produced in the use of the capital.

He concluded that estimating the shadow prices of capital, especially natural capital, remains the main challenge due to a number of different methodological approaches.

Policy recommendations

He strongly urged countries to boost investments to increase TPF which will in turn enhance productivity in the generation of goods and services. Japan's models in managing both natural and human capital were embraced through its Satoyama Satoumi (symbiotic interaction between ecosystems and humans) Initiative. Ecological infrastructure in Japan is well-developed so as to avoid natural capital depletion. This is seen as a best practice.

Duraiappah explained that IWI is deemed as one of the useful policymaking tools in providing credible and policy-relevant information. It acknowledges especially the significance of ecosystem services and contributions to economic and human development. Finally, he concluded that IWI is a holistic indicator of supplementing GDP towards achieving sustainable development as it provides an inclusive view of the practical consequences for policymaking.

Looking forward

As 2015 will mark the deadline for the Millennium Development Goals (MDGs), global development agenda beyond 2015 is converging towards SDGs thereby enhancing the relevance of IWI. The discussion calls for the collective will of society as change agents to activate wide-scale implementation and change of mind-sets. Fundamentally, the Achilles heel of any transformation problem lies with political decisions and actions. The power of judgment (rationality versus gut feeling) based on a set of value systems is often anthropocentric, that is excluding intrinsic and ethical values. The discourse between development (quality) and growth (quantity) demands a systematic analysis

... estimating the shadow prices of capital, especially natural capital, remains the main challenge due to a number of different methodological approaches.

and framing of sustainability problems. The considerations of stock of assets in IWI systematically draws attention to long-term dynamics, highlighting tradeoffs and synergies of the system boundary.

References:

Assessment, J.S.S. (2010). Satoyama-Satoumi Ecosystems and Human Well-being: Socio-ecological production landscapes of Japan — summary for decision makers. UNU Tokyo, Japan. URL retrieved: http://archive.ias.unu.edu/resource_centre/SDM-EN_24Feb2011.pdf

Easterlin, R.A., McVey, L.A., Switek, M., Sawangfa, O., & Zweig, J.S. (2010). The happiness–income paradox revisited. *Proceedings of the National Academy of Sciences*, 107 (52), 22463–8. URL retrieved: <http://www.pnas.org/content/107/52/22463.full.pdf+html>

Stiglitz, J., Sen, A., & Fitoussi, J.P. (2009). The measurement of economic performance and social progress revisited — reflections and overview. Commission on the Measurement of Economic Performance and Social Progress, Paris. URL retrieved: http://www.stiglitz-sen-fitoussi.fr/documents/rapport_anglais.pdf



Participants of the dialogue