Background Paper

Tackling the Global Gordian Knot: Can economic growth be socially inclusive and environmentally sustainable?

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I Introduction

Our need to manage systemic global risks, and to protect the global commons, calls for better global governance. The tension between the short-term pressures on national leaders from their citizens, and the trade-offs needed to balance costs and benefits in inter-national and inter-temporal transactions, frustrates its achievement. Current events, from the recent global financial crisis, to the risk of inflection points if we transgress planetary boundaries make it clear that we cannot continue on our present path.

Western values and beliefs, backed by superior firepower, were employed to impose order in international affairs for most of the 19th and 20th centuries, and underpinned the international architecture crafted after World War II (although the Soviet Union rejected its economic pillars – the IMF, World Bank and GATT). The implosion of the USSR in 1991 led briefly to a unipolar world, in which the USA emerged as a military and economic superpower, and sought to extend the reach of Anglo-American values – which were said to have triumphed in an Hegelian "end of history" – in a world fast 'globalizing' under the influence of information and communications technologies, and integrated financial markets and supply chains.

This overreach prompted a cultural backlash, and the economic ascendency of Asian powers and emerging markets generally in the past two decades, has ended the period in which Western norms can be imposed on other states.

Efforts to restructure global institutions have either failed (reform of the UN Security Council), or had relatively little impact (changed representation and voting rights in the IMF and World Bank), while endeavors to conclude successor agreements to the GATT Uruguay Round and the Kyoto Protocol have proved frustratingly slow. A large part of the reason is that there has been no substantive effort to define a normative framework on which to base new global agreements, and to guide the relationship between states and global institutions.

The complexity of the [partially] adaptive ecosystem in which humanity is embedded, and of the economic and social systems that we have created on a global scale, exceed our capacity to understand and plan their workings. Academic, disciplinary and institutional specialization makes it difficult to address integrated global challenges comprehensively. Impacts are experienced and interpreted differently by different groups, frustrating the emergence of common perspectives, whose absence precludes agreement on what to priorities, and what behaviors to encourage or to proscribe.

The discussion, at the Trilogue Salzburg 2011, of the need for agreed Norms for Global Governance, led to recognition that the collective action needed to address challenges across national boundaries is frustrated by the absence of integrative, trans-disciplinary categories that allow us to understand them properly, and by the divergence of interests, and the way in which values are prioritized, in different societies. The fraught debate in Europe over the best means to maintain the European Union in conditions of economic and social stress reflects these tensions.

Against this backdrop, the Trilogue Salzburg 2012 will address the first challenge on the Global Agenda[1] identified in 2011 – making economic growth socially inclusive, and environmentally sustainable. Participants will benefit from the reflections of leading research institutions on the ways in which the national societies in which each is based, suggest that this goal should be achieved, and by understanding the interests and the values that each society prioritizes in defining its preferred path.

The research institutes contributing their insights to this year's Trilogue on the topic - Tackling the Gordian knot: Can Economic Growth be Socially Inclusive and Environmentally Sustainable? - are the Brookings Institution [on the USA], the Royal Institute of International Affairs [EU], the Institute of Contemporary Development [Russian Federation], the Asia Society [China], the Observer Research Foundation [India], the South African Institute of International Affairs [sub-Saharan Africa], and the Fundação Gétulio Vargas [Brazil]).

II Can economic growth be socially inclusive and environmentally sustainable?

It may seem ambitious to pose so large and comprehensive a question in a time of global economic angst. The IMF's Data Mapper[2] projects world GDP growth in 2012 at 3.5 percent – down from 5.3 percent in 2010 and 3.8 percent in 2011 – and that of the advanced economies only 1.4 percent. The USA, where unemployment is stubbornly above 8 percent, is projected to grow by only 2.1 percent, while GDP in the Euro zone will contract by 0.3 percent. Even the UK will grow by only 0.8 percent, despite the Queen's Diamond Jubilee and the London Olympics. If it were not for the developing economies' expected growth of 5.7 percent – China's 8.2 percent; India's 6.9 percent; the Russian Federation's 4 percent; Brazil's 3.0 percent; and sub-Saharan Africa's 5.4 percent – things would be worse. Indeed, they might well be, as most institutions have revised their growth projections downwards!

Restoring the global economy to robust growth is the priority, many would argue. Narrowing the socio-economic divides and focusing on environmental sustainability may be important goals, but hardly a prime concern while many developed economies face the threat of a double-dip recession. In any event, some growth theorists argue, a rising tide will lift all ships, and the best guarantee of social advancement for both the working and middle classes lies in employment in profitable

[1] The FutureWorld Foundation has commissioned, over the next three to five years, an independent research and seminar series employing interdisciplinary teams from clusters of leading European, U.S., Asian, Latin American, Middle Eastern and African think tanks, to address each of the five pillars of the *Global Agenda:*

- *Delivering environmentally and socially sustainable economic growth*
- *Effectively reducing poverty and improving equity*
- *Addressing the sources of global, national and human vulnerability and promoting security*
- *Sharing the norms and values that enable global coexistence, while celebrating humanity's cultural diversity*
- *Improving the quality of global governance and our global institutions*

Each cluster is asked to develop core, actionable proposals, and to make explicit the *values* and *norms* that underpin its recommendations. The aim is to identify the *perspectives, values* and norms which are held in common across each of these cultural clusters, and those that diverge.

[2] http://www.imf.org/external/datamapper/index.php, accessed July 31, 2012.

businesses. Burdening a faltering economy with efforts at social engineering and concerns about the environment is the best way to guarantee a prolonged recession.

There is some truth in these arguments, but also some dangerous conceits. They take no account of the impact of the growth model we have pursued for thirty years on either inequality, or the environment. Returning to that path, if it were possible, might deliver increments in GDP growth for a few years, but would confront us in short measure with a larger series of threats, with potentially devastating consequences.

Recent studies in the U.S. have disclosed stagnation of the wages of blue-collar workers over five decades, and increasing concentration of national income and wealth in the hands of the top one percent. The socialization of losses in the aftermath of excessive private profits in the financial sector, and evidence of dishonest behavior by banks in pursuit of profits, have triggered outrage and regulatory responses.

The phenomenon and the reaction are not restricted to the United States. The Occupy Wall Street movement had spread by October 2011 to demonstrations in 1,000 cities in 82 countries, to denounce what organizers called ‘an intolerable situation’. A second round of demonstrations took place on May 12, 2012.

Recent assessments of the gap in pension and related social security provisions in Europe suggest that €1.9 trillion in aggregate personal savings each year – 19 percent of 2010 GDP – is needed to allow EU citizens an adequate standard of living in retirement, because of increasing longevity and falling birth rates. The underfunding of social security provisions in the U.S.A. is also well documented: The Board of Trustees of the Social Security Trust Fund estimated in 2010 that the Fund, which replaces about 41 percent of preretirement income for most U.S. citizens, will be exhausted in 2037. Meanwhile, China, India and other countries in the developing world, with diverse demographic profiles, are grappling with the need to develop effective social security systems, to enable greater inclusiveness.

Meanwhile, despite rising evidence of extreme weather events around the world due to perturbation of the climate system, and the resulting sharp rise in insurance claims for climate-related damage, we are not progressing satisfactorily towards a scientifically-based agreement on limiting emissions of greenhouse gases under the UN Framework Convention on Climate Change. At best, the Intergovernmental Panel on Climate Change and the International Energy Agency tell us, present commitments will hold projected warming to 3.5˚C, which threatens acute water scarcity and prolonged drought in some regions, and devastating floods in others, potentially displacing millions of people in forced migrations for survival, exacerbating social tensions and conflict.

Likewise the Rio+20 Conference on Sustainable Development which aimed to “reduce poverty, advance social equity and ensure environmental protection on an ever more crowded planet”, ended inconclusively due to deep divisions, prompting the World Bank’s Special Envoy for Climate Change to say of the deliberations, that “any observer … would have found it impossible to believe that we are serious about solving these problems.”

The Trilogue Salzburg 2012 will therefore address this comprehensive challenge, asking if a new growth model that is less socially divisive, and better aligned with the planetary ecosystem in which we are embedded, can be identified, agreed and implemented.

III Summary of Key Findings

The research papers prepared for the Trilogue allow us to understand how the challenge is framed in leading states and regions around the world; how well national or regional policy integrates its different dimensions; which components are prioritized, and why; and how the resulting trade-offs are managed, or rationalized. These insights may allow us to understand how much agreement there is, and to grasp the nature and scale of the divergence.[3]

A more detailed summary of the research papers will be available at the Salzburg Trillogue. A few preliminary observations may help to frame the debate. At the Trilogue Salzburg 2011, we concluded tentatively that the absence of effective trans-disciplinary concepts that allow us to understand and address these complex global challenges and differences of interests, and different ways of prioritizing values in different societies, frustrate agreement on issues of the global commons. The insights we can glean from these research papers, suggest that this is true.

- In their paper, Joshua Meltzer and David Steven from Brookings Institution outline the evolution of the U.S. economy and the impacts of its growth on economic, social and environmental outcomes; discuss "the shifting interests of different groups in American society and the structural, institutional and cultural factors that will inform change"; and offer scenarios for the future, "each of which represents a plausible pathway towards a new political settlement." They cite the vision of the High Level Panel on Global Sustainability[4]:"to eradicate poverty, reduce inequality and make growth inclusive, and production and consumption more sustainable, while combating climate change and respecting a range of other planetary boundaries", and state simply: "A vision of this kind has no chance of adoption in the United States." The High Level Panel's paper had called on all countries to adopt a global strategy for sustainable development, and to measure the implementation of this strategy through a set of goals that would reflect equally "the economic, social and environmental dimensions of sustainable development and the interconnections between them." Mr Meltzer and Mr Steven offer three possible scenarios for the U.S., the most constructive of which, Intelligent Design, postulates a domestic political focus on creating

[3] We hypothesized in 2011 that the common perspectives that emerged could frame the scope of potential collective action, while *common values and norms* could serve as the *normative parameters of the solutions*. We suggested that a triadic structure might emerge, recognizing the need:

(i) To subordinate key global public goods, and certain areas that threaten a *tragedy of the commons*, to *supranational systems*;
(ii) to *cooperate more closely and harmonize rules* on human rights, trade, financial flows and security (e.g. weapons of mass destruction, terrorism, pandemic control); and
(iii) to *commit to common objectives* in other areas, without creating institutions to control or enforce compliance.

[4] Secretary-General's High-level Panel on Global Sustainability launches its report "Resilient People, Resilient Planet: A Future Worth Choosing", http://www.un.org/gsp/report.

jobs; intelligent approaches to financial regulation and policies supporting sectors with high export potential; a strategic approach to domestic opportunities in the energy sector, with policies to maximize the potential of gas and effect a contribution by the sector to fiscal consolidation through reduced subsidies; which collectively have an impact on sustainability. In this scenario, "geopolitical outcomes are more cooperative, with some innovations in global governance, even though important stresses remain unaddressed."

- The paper by Carlos Simonsen Leal and Mario Monzoni of the Fundação Getúlio Vargas in Brazil presents the starkest contrast to the U.S. perspective. The authors take the need for collective action in search of inclusion and environmental sustainability as a point of departure, and argue for the creation of a Global Forum on Green and Inclusive Economy, with a Council for Sustainable Development as a high level deliberative authority, including civil society representatives among its members. Pointing to our collective failure to "deal with extreme poverty and income inequality on the planet", and noting that our "current mode of production and consumption … has … reached critical conditions in some natural systems", while "we are … 'overdrawing' from the Earth [in others] and eroding the planet's resiliency", Mr Simonsen Leal and Mr Monzoni call for a new development model based on a shared vision of the future, a development agenda comprising public policies to incentivize the emergence of a green and inclusive economy, corporate responsibility that promotes wealth generation while respecting the natural limits of the planet, leadership training in substantive values., financial instruments to finance the eradication of poverty and economic activities that promote equality and the conservation and sustainable use of natural resources; and monitoring tools to measure progress. They discuss the values that would guide such a transformation, and propose policies for action, globally and in Brazil, in agriculture, energy, forests, industrial processes and waste management, transportation and water, to achieve it.

- The paper by Dmitri Zenghelis of the Royal Institute of International Affairs, on Europe's perspective in the midst of debt, fiscal and structural crises in the Euro zone, asserts that "environmental and social sensibilities are woven into fabric of social consciousness" to a greater degree in Europe than in any major region, and that the returns available in capitalizing on environmentally and socially sustainable investment in green technology and infrastructure, have never been greater. To restore Europe's growth path, Mr Zenghelis draws on the literature on optimal currency areas illustrating the need for automatic adjustment through labor mobility and financial flows, to advocate urgent resolution of the euro debt crisis by mutualizing the liabilities of member states; progress to a more federal union with shared fiscal responsibilities and mechanisms to prevent the build-up of future imbalances; and a program to encourage investment through a policy-driven, European transformation to a resource-efficient economy. In the latter he draws extensively on endogenous growth theory – "investment in knowledge begets increased output, and resources for further investment [in] a virtuous-growth spiral of endogenous growth" – and the need for government intervention to set policy in cases of market failure.

- Igor Yurgens of the Russian Institute of Contemporary Development has identified key challenges for sustainable development in Russia: Intense global competition for primacy in innovation; demographic problems giving rise to a growing social burden; climate change; pollution, industrial waste and ecosystem degradation; food security; a growing demand for

energy resources; and lower aggregate capital availability due to the degradation of natural, physical and human capital. He argues for a focus on the preservation of natural resources by reducing resource depletion and pollution of the environment. By shifting from an extensive resource export model to a new model of economic development, based on innovation and cutting-edge technologies, Russia can align its domestic reforms with discernable global trends. Science-intensive processing and infrastructure sectors with minimal environmental impact should displace the dominance of the resources sector; the efficiency of natural resource use should be enhanced to avoid rapid depletion; and the volume of pollution per unit of end product, as well as aggregate pollution, must be reduced. Mr Yurgens suggests aligning the interests of countries with resource economies – those with a high concentration of mineral and energy resources; strong positions on world markets; and powerful resource production industries requiring direct investment, technology transfer and human capital, as well as economic diversification – to allow them to act in concert to ease price volatility on exchange-traded commodities; forecast changes in the volume and structure of global demand; create a stable and supply of food and energy resources in the context of environmental constraints and trends toward resource effectiveness; facilitate multilateral investment cooperation, technology transfer and innovation; influence international trade of highly processed oil, gas and petrochemical products; create infrastructure for the new global LNG market; define a common approach to reserve classification, assessment and review; align national laws on subsoil resources and their use; and shape national legislation to discourage artificial manipulation of resource markets.

- In his discussion of China's perspectives, Dr Junglie Zhang, of the Asia Society notes China's extraordinary economic growth due to market-oriented reforms over 30 years, to become the world's second largest economy. This growth has created social and environmental problems, not least because of the dramatic increase in electricity generation using thermal power, and industrial pollution. The World Bank estimates that China's economic losses from pollution and environmental degradation were 10.51 percent of Gross National Income in 2008, while the Chinese Academy for Environmental Planning assessed the cost of pollution and ecological degradation at 3.8 percent of GDP in 2009. Recognizing that a growth model relying on high resource input and heavy pollution is not sustainable, the Chinese government undertook a major policy shift in 2003, under the Scientific Outlook on Development, which requires comprehensive, balanced, and sustainable people-oriented development, including harmonious development between humans and nature. The 12th Five-Year Plan for National Economic and Social Development provides for resource conservation, environmental protection, energy saving, and climate change mitigation; and China has proposed models for a green economy, a circular economy, and a low-carbon economy. The 12th Five Year Plan's renewable energy targets are an industrial policy aimed at employment and wealth creation, an energy policy to ensure a long-term, sustainable, diversified and stable supply of electricity, and an environmental policy to replace coal-fired power plants with clean energy to meet China's commitment to reduce carbon intensity by 40–45 percent by 2020. Not least because of the trade-offs it faces between poverty eradication and environmental protection, China does not accept any conflict between its social and economic goals. Its environmental policies assume that prevention can minimize the negative impact of growth. Dr Zhang concludes that China is on the right track in its sustainability strategy but that it must prioritize and enforce its policies, recognizing that its

large landmass and population demand a diverse range of standards. He suggests that economic growth and globalization do not necessarily cause environmental degradation and that China does not have to slow its growth, but that it needs a comprehensive strategy, based increasingly on market-based instruments and international policy coordination. Encouraging and securing public participation in optimizing the balance between economic output and environmental quality will be key.

- In her paper on India, Lydia Powell of the Observer Research Foundation notes that "the desirability of high mass consumption, technological dynamism and rising levels of gross domestic product" are universally seen, among the political class, as the solution for all India's "social and political problems such as poverty, social exclusion and surprisingly, even environmental degradation." Ms Powell celebrates the fact that "India showed the world that it is possible to maintain, sustain and strengthen a functional democracy at per capita income levels of USD 100" at independence, and that its "per capita income has grown roughly ten times [since then, while] democracy continues to thrive and mature". She notes, however, that this achievement is "grossly flawed ... because of India's unforgivable failure in addressing mass poverty, inequality, destitution and discrimination", which she attributes to poor policy, vested interests and the caste system. The Government has no official position on how best to balance growth, social inclusiveness and environmentally sustainability, but a recent report by the National Planning Commission on Low Carbon Strategies for Inclusive Growth (2011), argues that "livelihood considerations such as income generation and poverty alleviation must dominate our policy choice, even if it requires overriding carbon emission concerns." Ms Powell notes that the idea that we need a more socially inclusive and ecologically sustainable model for development is not new, and that ways and means to achieve it have been widely discussed. The question is why the models proposed "are failing to make a marginal impact on the neo-liberal growth model." She suggests that concept of sustainable development is "equally untenable … as it endorses the false promise that an expanding economy can be fully compatible with environmental sustainability"; and concludes that "[v]alues such as 'social inclusiveness' and 'ecological sustainability' will be prioritized only when 'economic growth' ceases to be a proxy for development or progress."

- Addressing the challenge in Sub-Saharan Africa, Mzukisi Qobo of the South African Institute of International Affairs notes that African countries have struggled since independence to grow their economies sustainably and develop their people. Many externally-driven and home-grown initiatives have emerged – from structural adjustment facilities, poverty reduction programs and the highly-indebted poor countries (HIPC) debt initiative of the Bretton Woods Institutions, to the Lagos Plan of Action and the Abuja Treaty, which were grounded in Pan-Africanism and self-sufficiency. The New Partnership for Africa's Development (NEPAD) emerged in 2001, aiming to eradicate poverty through "African-owned and African-led development", but seeking partnership with OECD countries to enable Africa's incorporation into the global economy. None of these programs provided a coherent normative framework, and ideological differences about means – state-led versus market-led development – left the assumptions underpinning growth and development largely unexamined in Africa. This is not surprising. The conceptual underpinnings of the notion of environmentally sustainable and inclusive growth are weak. Policy discourse on development tends to be obsessed with outcomes (quantifiable indicators of the state of the economy), rather than process (concepts,

values, the institutional framework, and the nature of social relations). In search of the latter, Mr Qobo ranges across Nordhaus and Tobin's Measure of Economic Welfare, Amartya Sen's Development as Freedom, Social Watch's Basic Capabilities Index and Mathis Wackernagel's environmental footprint index, before turning to the World Bank's Commission on Growth and Development and the Commission on the Measurement of Economic Performance and Social Progress. The last, instituted by Nicolas Sarkozy and chaired by Joseph Stiglitz, argued for recognition of the multi-dimensional nature of well-being – including education, health, personal activities, political voice and governance, social connections and relationships, environment and security. Mr Qobo argues that these dimensions are particularly important when reflecting on well-being, inclusiveness and sustainability in African contexts. He celebrates the emergence of the G20's Development Working Group and the G20 Framework for Strong, Sustainable and Balanced Growth for giving voice to developing countries, but notes that contradictory development paradigms have continued to inhibit African development, and prevented the African economic revival of 1999-2008 being translated into a coherent program aimed at growth, poverty reduction and climate adaptation.

The first part of the hypothesis last year was that differing interests – in part the product of different stages of development and differing local circumstances – and a propensity to prioritize different values, accounted, to an appreciable degree, for the difficulty we face in reaching agreement on the challenges of the global commons. The second was that conceptual models that did not do justice to the complexity of these challenges compounded that problem. The excellent papers prepared by the researchers suggest that both are true.

Ms Powell, Mr Zhang and Mr Qobo have argued forcefully, for reasons that are both distinct and overlapping, that the notion of sustainable development is inadequate, in part because it is poorly conceptualised. Ms Powell adds the criticism that it "endorses the false promise that an expanding economy can be fully compatible with environmental sustainability"; and argues that "[v]alues such as 'social inclusiveness' and 'ecological sustainability' will be prioritized only when 'economic growth' ceases to be a proxy for development or progress."

Mr Meltzer and Mr Steven have said directly that a vision "to eradicate poverty, reduce inequality and make growth inclusive, and production and consumption more sustainable, while combating climate change and respecting a range of other planetary boundaries" based on a global strategy for "sustainable development, measured in ways that would reflect equally the economic, social and environmental dimensions of sustainable development and the interconnections between them", has no chance of adoption in the United States. Mr Zenghelis asserts that "environmental and social sensibilities are woven into fabric of social consciousness" to a greater degree in Europe than in any major region, and that the returns available in capitalizing on environmentally and socially sustainable investment in green technology and infrastructure, have never been greater.

Mr Zhang notes that China does not accept any conflict between its social and economic goals. Not least because of the need to address both poverty eradication and environmental protection, its environmental policies assume that prevention can minimize the negative environmental impact of growth. Mr Yurgens might agree: He suggests that by shifting from an extensive resource export model to a new model based on innovation and cutting-edge technologies, science-intensive

processing and infrastructure with minimal environmental impact, Russia can enhance the efficiency of natural resource use, and reduce the volume of pollution per unit of end product, and in the aggregate.

Finally, closest to the vision of the High Level Panel on Global Sustainability, Mr Simonsen Leal and Mr Monzoni call for a new development model based on a shared vision of the future; a development agenda comprising public policies to incentivize the emergence of a green and inclusive economy; corporate responsibility that promotes wealth generation while respecting the natural limits of the planet; leadership training in substantive values; financial instruments to finance the eradication of poverty; equality and the conservation and sustainable use of natural resources; and monitoring tools to measure progress.

At the Trilogue Salzburg 2012 we shall be discussing the growth paths that we are planning – nationally, regionally and perhaps globally – and asking if enabling growth that is environmentally and socially sustainable, is a feasible endeavor for collective action.

IV Comparative data

Certain objective circumstances influence the decisions of governments in the trade-offs which they must make in deciding which objectives to prioritize, not least among growth, income redistribution, investment and regulation to reduce carbon emissions, and to control pollution. Among these, plausibly, are the country's (i) aggregate GDP – the market value of the officially recognized final goods and services produced within a country in a given period; the (ii) purchasing power of the GDP in local currency, with respect to a given basket on (chiefly) non-traded goods for consumption; (iii) the country's GDP per capita (the aggregate GDP divided by the number of persons resident there); and (iv) the national Human Development Index (HDI), a measure of life expectancy, literacy, education, and standards of living in a country, deemed to reflect the quality of life there compared to that in others, and published each year by the United Nations Development Program.

Recently, other, more indices have been developed: Two of the better known are (iv) the Environmental Performance Index, developed by Yale University to track countries performance in environmental public health and ecosystem vitality; and (v) the Happy Planet Index developed by the New Economics Foundation[5], to measure "the extent to which countries deliver long, happy, sustainable lives for the people that live in them…us[ing] global data on life expectancy, experienced well-being and Ecological Footprint to calculate this."[6]

The data in the tables below are drawn from the International Monetary Fund - 2011 (GDP (rer); GDP (ppp); GDP (ppp. p.c); the United National Development Program – 2011 (HDI); Yale University - 2012 (EPI) and the New Economics Foundation - 2012 (HPI).

[5] http://www.neweconomics.org/about.
[6] http://www.happyplanetindex.org/about/.

We have selected the countries and regions covered by this year's review by the contributing research institutions – Brazil, China, the European Union, India, the Russian Federation, sub-Saharan Africa and the USA. As several indices do not provide data for regions, we have used – arbitrary – proxies in these cases for the European Union (Austria - supplemented by Germany and the United Kingdom in the HPI), and sub-Saharan Africa (South Africa).

The tables raise interesting questions about the reasons for the relative rankings of China, Russia, India, Brazil and South Africa, on the HDI, EPI and HPI. The EPI tables show the relatively better performance of Brazil vis-à-vis the USA (and Russia, China, India and South Africa), while the HDI metrics have China outperforming Brazil, Russia, India and South Africa. Brazil is the 'star' among the large countries on the HPI – outperforming India, the (European) EU proxies, the USA, Russia and South Africa. This – and the fact that Brazil showed most improvement in its placement on the EPI in 2012 - correlates with the emphasis that the *Fundação Getúlio Vargas* has placed on green growth, sustainability and substantive values in its paper.

Standard Economic and Social metrics

Rank	Country	GDP (RER) $m	GDP (ppp) $m	Rank	GDP p.c. $	Rank	HDI
1 a	EU	17 577 691	15 821 264	25 b	31 607	--	--
1	USA	15 094 025	15 094 025	6	48 347	4	0.910
2	China	7 298 147	11 299 767	92	8 382	102	0.687
6	Brazil	2 492 908	2 293 954	75	11 769	86	0.718
9	Russia	1 850 401	2 383 954	53	16 736	67	0.755
11	India	1 722 328	4 457 784	129	3 694	135	0.547
29	South Africa	408 074	555 134	78	10 973	124	0.619
---	Austria*	---	---	10	41 822	19	0.885

* Austria is used as an EU proxy for GDP p.c. and HDI as these are not measured at the EU level; likewise South Africa is used a a proxy for SSA.

Environmental Performance Index – Yale University
2012: 132 countries

EPI Rank 2012 Switzerland (1)	Country	EPI Pilot Trend 2012 – Improvement Latvia (1)	Country
7	Austria	23	Brazil
30	Brazil	71	Austria
49	USA	77	USA
106	Russia	95	India
116	China	100	China
125	India	124	South Africa
128	South Africa	132	Russia

* Austria is used as an EU proxy for the EPI as there is no ranking for the EU; likewise South Africa is used a a proxy for SSA.

Happy Planet Index 2012 –
New Economics Foundation

Rank	Country	Life Expectancy	Well-being	Footprint: Gha/capita	HP Index
1	Costa Rica	79.3	7.3	2.5	64
21	Brazil	73.5	6.8	2.9	52.9
32	India	65.4	5.0	0.9	50.9
41	United Kingdom	80.2	7.0	4.7	47.9
46	Germany	80.4	6.7	4.6	47.2
48	Austria	80.9	7.3	5.3	47.1
60	China	73.5	4.7	2.1	44.7
105	USA	78.5	7.2	7.2	37.3
122	Russia	68.8	5.5	4.4	34.5
142	South Africa	52.8	4.7	2.6	28.2

* Rankings for Austria, Germany and the UK have been included as there is no ranking for the EU; South Africa is used a a proxy for SSA.