



The Structural Transformations towards Sustainable Development

Background paper for the
High-Level Panel of Eminent Persons on the Post-2015 Development Agenda

Prepared by the Secretariat of the Sustainable Development Solutions Network

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This paper outlines the key elements of an economic, social and environmental transformation strategy need to achieve sustainable development. It complements the Draft Framework for Sustainable Development prepared by the Leadership Council of the Sustainable Development Solutions Network (SDSN), available at www.unsdsn.org/resources/.

Summary:

Over coming decades all countries – rich and poor – will face five major drivers of change: (i) a new technological era creating new opportunities and threatening existing industries; (ii) changing labor markets with jobs increasingly based on knowledge and skills; (iii) integrated global production systems and the rise of the global cooperation; (iv) planetary boundaries (climate change, nitrogen cycle, phosphorus cycle, etc.); and (v) rapid demographic change and migration. Each of these drivers operates at local, national, regional and global scales.

Under a business-as usual (BAU) scenario, many countries will benefit from new opportunities, but others will not. The world will experience divergence, endemic fragile regions, rapid global environmental change, rising income inequalities and youth unemployment, the risk of a race to the bottom on regulatory and tax standards, and poorly managed migration. The principal reason for the poor results of a BAU scenario is the failure of global cooperation.

A sustainable development scenario is technically possible and would need to be based on the normative principles of economic progress for all countries, convergence in living standards, support for fragile regions, skill development for all, successful decoupling of economic progress from natural resource use and pollution. Such a scenario requires the mobilization of all public and private actors around a shared global framework for sustainable development and convergence outlined in this paper.

The five drivers have three important implications: First, the past is becoming a much poorer guide to the future. Today's economic transformation strategies rely largely on "catching-up" and the imitations of development paths of countries that are a higher up on the income ladder. This will become much harder since technologies evolve faster than ever, workers need very different skills even in the same industries, and staying within planetary boundaries will require new approaches to energy, agriculture, urban development and so forth.

Second, the need for ongoing structural change is becoming more urgent and pervasive. All countries – rich and poor – will need to pursue economic, social and environmental transformations. High-income countries will need to change their consumption and production patterns and invest in human capital formation to maintain their living standards. Developing countries will need to promote structural transformations to meet the aspirations of their people for sustainable growth with equity.

Finally and most importantly for the post-2015 development framework, national economic, social and environmental transformations can no longer be pursued in isolation from the challenges the world faces at large. We need a shared framework for sustainable development and convergence as central components of the post-2015 agenda.

Recent decades have seen rapid economic growth in many developing regions and a tendency towards *convergence* in living standards as fast-growing developing countries narrow the income gaps with high-income countries. During the period to 2030, the world has the potential to spread prosperity, end the age-old scourge of extreme poverty and improve economic wellbeing throughout the planet on an unprecedented scale.

Yet, success is far from assured. Countries around the world will need to undertake deep transformations to end poverty, create jobs, improve livelihoods, improve social inclusion, and ensure environmental

sustainability. The economic, social and environmental transformations are all inter-related and must come together as one structural transformation to achieve sustainable growth with equity. Most importantly, these transformations for sustainable development must be based on a shared global framework for sustainable development, which this paper sets out to develop.

The first section of this paper discusses the main drivers of change that affect all countries. The next section summarizes a business-as-usual scenario. Section III outlines an alternative convergence scenario for sustainable development, and Section IV describes the global framework for sustainable development that would be required. The fifth section outlines the implications for national economic transformations in an age of sustainable development. The building blocks for such national transformations are summarized in the appendix.

I. Five global drivers of change

The coming decades will be shaped by at least five major drivers of change that will affect all countries – rich or poor:

1. **A new technological era:** We are living in an era where rapid technological change, especially empowered by the information revolution, is deepening the integration of the world economy, changing the structure of jobs, offering new economic opportunities for all countries, and threatening existing industries.
2. **Changing labor market:** Decent jobs today are increasingly based on knowledge and skills. Remuneration for unskilled labor is diminishing. The challenge facing most countries is to prepare their young people for a globally competitive labor market that demands skilled workers. Yet, upgrading skills and providing quality education to all is extremely complex and requires sophisticated institutions at national and local level. For example, countries have traditionally struggled to adopt successful models of vocational training from elsewhere. Finding better ways of preparing the young for a changing labor market by providing high-quality education from pre-school to tertiary levels becomes a central priority.
3. **Global production systems & rise of multinational corporations:** Supply chains for most industrial products now span the entire globe, and services are increasingly provided across borders. Many more low-income countries than ever before now have an opportunity to join an international production system. Multinational corporations (from North and South) are becoming increasingly important players in the global economy allowing them to undertake regulatory and tax arbitrage across jurisdictions.
4. **Planetary boundaries:** Human impacts on the environment are increasing rapidly and are becoming the great cause of environmental change. On current trends most planetary boundaries (climate, nitrogen cycle, pollution, etc.) are being exceeded. Only a massive change in patterns of production and consumption will allow economic activity to stay within planetary boundaries.
5. **Demographic change and migration:** Countries around the world are experiencing rapid demographic change. A substantial number of low-income countries continue to experience high total fertility rates and youth bulges, while many high-income and middle-income countries experience rapid reductions in total fertility rates and an ageing of their populations. These demographic changes will interact and will increase regional and global flows of migrants with the potential to create instability, but also to smooth the demographic transitions in individual countries.

Notice that every driver operates at all spatial levels: global, regional, national, and local. This means that national policies not only need to be in tune with global realities, but also need to be harmonized with planetary boundaries. Countries can no longer pursue national policies independently of global standards. National governments and multinational companies have responsibilities regarding climate change, biodiversity, technology transfer, transparency, and mutual assistance. The same applies to cities' development strategies and regional frameworks for cooperation. A new global framework is therefore required for sustainable development. This framework needs to operate at global, regional, national, and local levels.

II. The business-as-usual (BAU) scenario

For an illustrative business-as-usual (BAU) trajectory we assume the absence of a shared global framework for sustainable development and uncoordinated economic policies. Many countries will be able to exploit new technologies allowing them to converge rapidly with the per capita GDP in high-income countries. They will succeed in attracting multinational corporations to invest in production activities, thus creating employment, but the growing competition among countries will lead to a “race to the bottom” in terms of regulatory standards and taxation. Even the successful countries may struggle to raise the public revenues they need to invest in human capital, infrastructure and environmental protection.

No efforts are made to assist the more vulnerable countries, which will stagnate or fall behind. Many countries will fail to provide adequate training and economic opportunities to their young and will face rising youth unemployment. Countries may make token efforts to reduce the resource intensity of production and consumption, but the world will not witness a trend shift in the destruction of the environment. With the global population rising to 9 billion people by 2050 and 10 billion before 2100, the world will experience unprecedented environmental change.

While many of today's middle-income countries will grow wealthy under a BAU scenario, the world will be exposed to several risks:

- ***Divergence & fragile regions.*** While countries overall will converge and several middle-income countries will become rich, many other developing countries will stagnate or fall behind into deepening poverty. Fragile regions, such as the Sahel, the Horn of Africa, and Central Asia, will be threatened by extreme poverty, climate change, unsustainable population growth and instability. In the BAU trajectory, there are no economic, social, or political forces sufficiently strong to guarantee their escape from endemic poverty and fragility.
- ***Global environmental changes*** will create severe climate change, with average global temperature increases of 3-5 degrees Celsius or even higher and exceed other planetary boundaries (e.g. nitrogen cycle, biodiversity loss). Such unprecedented environmental change will result in dramatic crises of food production and public health, and natural disasters. Food prices will soar, and some parts of the world (coastal areas, today's drylands) may become virtually uninhabitable.
- ***Income inequalities and youth unemployment*** will worsen. Likewise, many rich countries will stagnate, as witnessed in several industrialized countries in recent years. Youth unemployment will become more pervasive than it already is today. Even countries with falling birth rates may struggle to generate sufficient employment.

- **Rapid but uneven technological progress.** The uptake of new technologies that can promote economic transformation will be extremely uneven and inequitable. Technological progress will remain very rapid, but possibly less than half of the world society will reap the full benefits.
- **Race to the bottom on regulatory and tax standards.** Countries, particularly in the developing world will increasingly compete for scarce private capital, and may be forced to lower regulatory standards and tax rates. Multinational corporations will be free to arbitrage across countries, thus putting major pressure on public revenues in every country.
- **Poorly managed migration.** The diverging economic prospects and high population growth in low-income countries will increase migration flows across the world. If poorly managed these migration flows stand to increase social divisions and tensions.

The reason for the poor results of the BAU scenario is the failure of global cooperation around a shared framework for sustainable development. A global market economy without cooperation around a shared framework is not equipped to ensure widespread use of new technologies, address environmental threats (especially climate change), support fragile regions, reduce inequalities between skilled and unskilled workers, and provide opportunities for all children. In short, a BAU world will not witness the broad-based economic, social, and environmental transformations needed in every country to achieve sustainable growth with equity.

III. Convergence and the sustainable development scenario

To avoid the pitfalls of the BAU scenario countries must pursue their structural transformations, but the world as a whole must also make use of the opportunities presented by the five drivers and cooperate to manage the constraints and challenges they generate. A sustainable development scenario would have the following core elements:

- **Economic progress for all:** Countries around the world succeed in pursuing their economic transformations utilizing new and sustainable technologies to spread economic progress. The scenario does not envision a zero-sum struggle in the world economy as the result of the end of growth.
- **Convergence across countries:** By giving room for all countries and regions to benefit from economic progress, the scenario enshrines “economic convergence” as a global norm and deepens the “right to development.” Poor countries have the right to a global policy environment and natural climate conditions that promote their ability to catch up with the richer countries. Of course, actual convergence is not guaranteed. It is conditional upon good governance in the developing country and an effective global partnership.
- **Support for fragile countries:** Fragile countries and other countries with special needs will receive the international support they need to end extreme poverty and access technologies enabling them to pursue their own economic transformations.
- **Skill development for all:** Under the scenario universal education and skill development will be promoted to foster decent jobs and economic opportunities so that inequalities are reduced and all groups within the society are able to share in the progress.

- **Successful decoupling:** The scenario decouples economic progress from natural resource use and ecosystem damage, thereby combining further economic progress with environmental sustainability.

As this note outlines moving away from BAU towards a sustainable development scenario appears technically feasible, but it requires an unprecedented commitment from all stakeholders: rich and poor countries, small and large businesses, civil society including scientists and technologists. They must all be mobilized urgently and with a clear unity of purpose to achieve sustainable growth with equity.

IV. A global framework for sustainable development and convergence

In a world of 193 countries of the UN, at vastly different levels of development and with vastly different economic, ecological, social, and demographic realities, how can countries identify the right global standards and the right national policies consistent with those standards? A shared framework for sustainable development and convergence is needed that will enhance cooperation, establish some common standards, and support every country in ending extreme poverty and enhancing human well-being. Before illustrating the key components of such a framework, we identify the key principles that should govern such a framework:

First, the framework must be *universal*. The five drivers affect all countries, and every country contributes to environmental resource use and pollution, so the framework must apply to every country – rich or poor.

Second, the framework must be *normative*. It must be founded on a new ethics, one that expands our moral compasses beyond national borders, religious beliefs or cultural backgrounds. It needs to build on the well-established principles of the Universal Declaration of Human Rights, embrace the principles of human dignity and reciprocity and takes these as its own moral foundation.¹ In economic terms it should espouse economic convergence across countries and regions as a central aim and posit that such growth be pursued with due regards for social inclusion and with respect for environmental sustainability and planetary boundaries.

Third, building on a strong ethical foundation, the framework must be *operational* and provide clear guidance to regions, countries, and local governments on how structural transformations can be pursued. In particular, an operational global framework can assist countries in adopting a long-term vision to their economic transformation and take the short-term politics out of the pursuit of long-term national priorities. For example, a global commitment to improved education can support countries in developing a shared long-term commitment to high-quality education regardless of who is currently in power.

The world will benefit from a clear set of agreed priority areas for action to guide the economic transformations during the period to 2030. A plausible set of ten priority areas that meet the above criteria might be:

1. **Ending Extreme Poverty and Promoting Sustainable Growth:** Extreme poverty in all its forms should be eliminated everywhere (possibly backed by an expanded and extended set of MDG targets to 2030). Special attention will be given to fragile regions that need international support to achieve middle-income status.

¹ See speech by President Horst Köhler at the IMF Annual Fall Meeting, Tokyo, October 2012.

2. **Promoting Sustainable Growth and Wellbeing:** All countries have a right to development based on a global norm of convergence. By 2030, all societies should be middle-income or higher. The measure of GDP should be improved to capture environmental losses and other pertinent non-market phenomena. Broader measures of wellbeing should be deployed including direct measures of subjective wellbeing.
3. **Productive Rural Communities and Sustainable Agriculture:** To promote the rural economic transformation, create productive, healthy and resilient rural communities. Use improved technologies, farming practices and policies to ensure higher and sustainable yields, crop resilience, protection of ecosystem services, reduced post-harvest losses, and lower food waste.
4. **Quality Education, Job Skills, and Decent Work:** The world of work is changing rapidly, driven by globalization and technological changes. Youth in particular must be prepared for decent work in the new era through universal quality secondary education and school-to-work policies including vocational training. Early childhood education (ECD) will be expanded to promote equal opportunities for all children. Communication and information technologies can play a central role in expanding access to quality education in all areas.
5. **Gender Equality, Personal Security, and Human Rights:** Ensure that all people enjoy equal opportunities regardless of gender, race, religion, etc. Provide personal security and freedom from all forms of violence. Promote a comprehensive approach to measuring human well-being that goes beyond GDP per capita.
6. **Healthy Lives and Sustainable Fertility:** By 2030 children and mothers should not die of preventable and treatable causes. All families should have access to reproductive health and other services needed for voluntary reductions in fertility rates to stabilize or reduce the world's and every country's population. Every country should have a healthy life expectancy of at least 70 years by 2030, and many countries will achieve 80 years or more. This can be achieved through universal access to health services, improved lifestyles, and healthy diets.
7. **Productive, Inclusive, and Resilient Cities:** To promote the urban economic transformation, create productive, healthy, peaceful and resilient cities, well-adapted to larger populations, job creation, and environmental changes. Cities should be free of slums and debilitating living conditions.
8. **Averting Dangerous Climate Change and Industrial Pollution:** To avoid a more than 2°C rise of the Earth's temperature, decarbonize the energy system by mid-century using renewable and low-carbon energy technologies and adapt to ongoing climate changes. Re-design industrial processes for materials efficiency, recycling, and safe waste management.
9. **Protecting Biodiversity and Ecosystem Services:** Address market failures that lead to environmental destruction. Protect all key ecosystems, marine and terrestrial, by ensuring sustainable practices of land use, waste management, water use, and other practices.
10. **Good Governance, Global Partnership, and Ensuring the Benefits of Technology:** Promote transparency, accountability and good governance for public actors (local governments, municipalities, national governments, international organizations), business, civil society, academia and the research community. Ensure an effective international partnership on the basis of a graduated set of global rights and responsibilities. The rules of the international system that are made consistent with the trajectory for convergence and sustainable development. Key

sustainable technologies should be promoted for early-stage development and for broad global diffusion, especially to ensure the interests of low-income countries.

This global framework offers every country a way towards sustainable growth with equity including an end to extreme poverty. These are not guarantees; success will depend on individual and national responsibilities, as well as an unprecedented commitment by all and unity of purpose around a new ethics for sustainable development. Countries must do their part through good governance, and individuals must do their part through hard work. But if they do so, they should benefit from a supportive global partnership.

V. Implications for national economic transformations

Economists have been studying economic transformations for decades, and a lot is known about the necessary conditions for creating economic growth (see Annex for a list of key building blocks). GDP growth is of course not enough. It must be accompanied by employment generation and rising economic wellbeing for all members of society. Growth that generates employment and opportunities – as opposed to GDP growth resulting from an increase in global commodities prices – relies on constant innovation and technical progress, which in turn depend on continuous economic transformation.

The central engine for economic growth and employment generation is business, so national building blocks for economic transformation must be designed to promote the role of business. Yet, the most successful growth stories in recent decades show that governments need to play proactive roles in close cooperation with business. Governments need to prove the public goods needed for private actors to be productive. Openness for exports has been a central element of successful transformation strategies, but successful countries have often managed their exposure to trade in select industries and provided export subsidies to protect nascent industries until they were strong enough to compete internationally.

Economic development is spatial, and economic transformations succeed when all the necessary building blocks come together in an area. Even within the same country different cities will over time specialize in different industries and employment opportunities. Each one will require its own economic transformation strategy. Likewise, urban and rural areas present different challenges and opportunities, so countries need to think through the urban and rural components of their development strategy including urban-rural linkages.

The five drivers and the changes they imply for national economic transformation strategies hold three important lessons: First, the past is becoming a much poorer guide to the future. Today's economic transformation strategies rely largely on "catching-up" and the imitations of development paths of countries that are a higher up on the income ladder. The combination of the five drivers makes this much harder since technologies evolve faster than ever, workers need very different skills even in the same industries, and staying within planetary boundaries will require new approaches to energy, agriculture, urban development and so forth. In other words, the world of economic policymaking is becoming richer in opportunities for all countries but also vastly more complex to navigate.

A second implication is that all countries – rich and poor – will need to pursue economic, social and environmental transformations. High-income countries will need to change their consumption and production patterns and invest in human capital formation to maintain their living standards. Developing countries need to promote economic transformation to meet the aspirations of their people.

Finally, and perhaps most importantly for the post-2015 development framework, the five drivers imply that national building blocks for economic transformations must be embedded in a shared framework for

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sustainable development and convergence. Put differently, national economic transformations can no longer be pursued in isolation from the challenges the world faces at large. We need a shared global framework along the lines proposed in this paper.

Annex: National Building Blocks for Economic Transformation in an Age of Sustainable Development

The traditional building blocks for economic transformations are summarized below. They are all necessary for success, so this list does not represent a menu of options for countries to choose from.

- **Human capital and equal opportunities for all:** Only healthy and educated populations can be economically productive. Countries therefore need to ensure widespread access to primary health services, healthy cities, and basic education. In many urban settings, even in low-income countries, a full secondary schooling cycle is required for basic manufacturing jobs. Likewise, the exclusion of groups, such as women or ethnic minorities, is inimical to economic growth. Countries that empower all their citizens to contribute fully to the economic transformation stand the highest chance of achieving sustained growth.
- **Public infrastructure:** Companies can only be productive and competitive on regional and international markets if they have access to adequate infrastructure (reliable electricity, adequate transport, safe water, etc.).
- **Peace and security:** The most important public good for economic transformation is peace and security. In the absence of personal security people will not invest, and countries will be unable to grow.
- **Stable and effective policy environment:** National and local governments must also put in place stable and predictable monetary and fiscal policies, ensure an effective regulatory environment that supports business investment. Of particular importance is transparency, safeguards against corruption and effective public procurement processes.
- **Private investments:** The engine of economic growth and job creation are investments in private capital, such as plants, machinery and inputs. Private investment in manufacturing and services will materialize only if the other building blocks are in place. An exception is the natural resource sector since oil and mining companies can build their own infrastructure and import the needed staff.
- **Active government policies for industrialization and trade promotion:** The most controversial national building block for economic transformations are active government policies to promote industrialization and trade. It is difficult to get such policies right, and the history of economic development – particularly in Africa – is littered with ill-fated public strategies for economic transformation that relied on simple “big push” theories. Yet, the simple truth is that every country, which has achieved sustained economic growth including the high-income countries, uses some form of active policies for promoting growth and trade. In addition to effective innovation systems, successful governments have supported individual sectors of importance to the entire economy. These countries, particularly in East and SE Asia, have flouted the policy consensus promoted by IFIs during the 1990s and early 2000s, but their success has led to a fundamental rethink in Washington and elsewhere.²
- **Regional integration:** Countries can increase the effective size of their markets through regional integration comprising shared infrastructure (particularly transport and power pools), reduced tariffs and non-tariff barriers to trade. Regional integration is particularly important in Africa,

² For a presentation of the East Asian experience and implications for other developing countries see Lin, Justin Yifu (2012) *The Quest for Prosperity. How Developing Economies can take off.* Princeton UP. USA.

which comprises mostly small economies and a disproportionately large number of landlocked countries. Without enhanced regional integration countries like Rwanda and Burkina Faso cannot access world markets except for high-value products that can be shipped by air.

- **Supportive global trade frameworks:** Most countries that have grown rapidly in recent decades have done so on the basis of export-led growth. These countries will need access to world markets for their products and services. Unfortunately, the world trading system and many bilateral trade agreements still discriminates against agricultural exports from low-income countries – a sector where many can be competitive.
- **Effective financial intermediation and access to credit:** Entrepreneurs and companies require financing to be able to invest. An effective financial system that can offer long-term, predictable financing at reasonable interest rates is a central building block for national economic transformations.
- **Innovation systems and technological upgrading:** The long-term driver of economic growth is technological progress, so countries need to innovate constantly. At early stages of development countries can import technologies and deploy their cheap labor. Yet, as incomes rise, countries need to build their own innovation systems, comprising universities, national research centers, industry clusters and public-private partnerships. Getting such innovation systems right can be very difficult, which partly explains the “middle-income trap” that some middle-income countries have found themselves in – particularly in North Africa and parts of Latin America.

In future, economic transformations in every country will need to respond to opportunities and novel challenges presented by the five drivers identified in the text (technological change, global production systems, changing labor markets, planetary boundaries, demographic transition and migration). As a result, the traditional list of building blocks for economic transformations must be broadened to include:

- **Information and communication technology as backbone for development:** Countries need to have an effective strategy for promoting ICT, which can have a transformational impact on of health, education, energy, transport, smart cities, and smart agriculture.
- **Vastly expanded training:** In recent decades primary education was sufficient for manufacturing jobs, but this is changing rapidly. Today’s workers need vastly more training and technology skills. Early childhood development and at least secondary education are becoming the norm. Mobile learning will soon become a reality for people around the world and will establish a new standards that even the poorest countries will need to meet in order to remain competitive in basic industries.
- **International coordination of tax and regulatory frameworks:** Competition among countries for FDI is a positive force, but the extent of arbitrage opportunities for multinational corporations across tax and regulatory frameworks can create a race to the bottom. International cooperation is needed to contain the use of tax havens and excessive transfer pricing schemes. In particular low-income countries that typically rely disproportionately on corporate taxes for domestic resource mobilization stand to benefit from improved coordination.
- **Decoupling of economic growth and resource consumption to stay within planetary boundaries:** Perhaps the biggest change stems from the need for all countries’ economic transformations to collectively respect planetary boundaries. Inter alia this will require national strategies for sustainable agriculture, low-carbon energy, biodiversity conservation and reductions in industrial waste and pollution. High-income countries bear primary responsibility for

addressing climate change and other planetary boundaries, but over time all countries, particularly today's middle-income countries will need to lower their per capita emissions and consumption of natural resources.

- **Promoting the demographic transition and managing migration:** All countries have a responsibility to lower their fertility rates to replacement levels or below using voluntary and non-coercive means. Differing demographic dynamics and per capita income levels will increase the flow of migrants, which needs to be managed collaboratively to avoid social tension and promote economic convergence.