



The Nobel Laureate and Rotman Dean's Advisory Board member discusses his latest initiative, the Commission on Growth and Development, and some of the wicked problems it has set out to tackle.

Thought Leader Interview:

Michael Spence

by **Karen Christensen**

The Commission on Growth and Development recently released its inaugural study, *The Growth Report: Strategies for Sustained Growth and Inclusive Development*. Of all the world's wicked problems, why did you choose to focus on growth?

The Commission was brought together by a belief that the world's challenges – poverty, the environment, misunderstandings between nations, vast differences in living standards within and across countries – are best met in conditions of rising prosperity and expanding economic opportunities. We focus on growth not because it is the final goal, but because it enables so many things that people care about: poverty reduction, productive employment, education, health and the opportunity to be creative. You really can't reduce poverty or achieve any of the other Millennium Development Goals without growth, but we felt that it had gotten lost in the shuffle a little bit. There has been so much attention focused on other (legitimate) issues such as health and education. We wanted to focus attention on the fact that high growth rates that significantly improve peoples' lives and their freedom to be creative are increasingly accessible. Understanding how they are achieved is of great value to the leaders of developing countries, as well as to advanced countries and institutions that seek to be supportive. Unlike miracles, sustained high growth can be explained – and we hope, repeated.

You found that 13 of the world's economies have grown at an average rate of seven per cent a year for 25 years or longer – meeting your definition for 'fast, sustained growth'. What elements do they have in common?

In all cases, there was a functioning market economy with its price signals, incentives, decentralization and enough definition of private-property ownership to enable investment. In addition, these high-growth paths were characterized by high levels of savings and investment, even in the early stages when per capita incomes were low. 'High' savings in this context means at or above 25 per cent of GDP. China was the high-water mark, ranging between 35 and 45 per cent of GDP. The investment portion includes a substantial component of public-sector investment in education and infrastructure. Both are crucial, as they increase the rate of return to private-sector investment, which is the proximate driving force in the growth process.

Another common ingredient is resource mobility. Contrary to the image that sometimes comes from a macroeconomic overview, growth at these rates is not achieved by having people do exactly what they were doing before, but slightly more efficiently. The portfolio mix of economic activity changes very rapidly: if you took a snapshot of one of these economies at five-year intervals, the changes would be dramatic; at 15-year intervals, the same economy



13 Success Stories of Sustained, High Growth Figure One

Country	Period of Growth	Per capital income at the beginning	and in 2005
Botswana	1960-2005	210	3,800
Brazil	1950-1980	960	4,000
China	1961-2005	105	1,400
Hong Kong*	1960-1997	3,100	29,900
Indonesia	1966-1997	200	900
Japan*	1950-1983	3,500	39,600
Korea*	1960-2001	1,100	13,200
Malaysia	1967-1997	790	4,400
Malta*	1963-1994	1,100	9,600
Oman	1960-1999	950	9,000
Singapore*	1967-2002	2,200	25,400
Taiwan*	1965-2002	1,500	16,400
Thailand	1960-1997	330	2,400

**Economies that have reached industrialized countries per capita income levels*

would be barely recognizable.

I should note that growth of the kind we studied was unheard of before the latter half of the 20th century, and it was only possible because the global economy became so much more open and integrated. Every case of sustained high growth to date has included a growing export sector as a growth driver and a rising fraction of GDP associated with exports and imports. The systematic reduction of barriers to trade and investment in the last 55 years and the dramatically falling costs of transportation and information technologies have combined to raise the level of that integration.

You believe that these high-growth economies benefited from three particular resources of the global economy. Please describe them.

First, all of them imported knowledge – often in the form of technology. This ranged from engineering and production technology to managerial expertise and knowledge of global markets. Importing such knowledge means that it does not have to be redeveloped domestically from scratch. And unlike most commodities, when knowledge is transferred from point A to B, both sides benefit from it. One avenue for imported technology to travel is by foreign direct investment (FDI), but there are cases – like Japan and Korea – in which there was significant technology absorption from the rest of the world and relatively little FDI. Here, foreign education and explicit programs aimed at learning played important roles.

Second, they targeted global demand. Once a country imports knowledge and technology, it usually discovers an area where it can have what economists call ‘comparative advantage’ – a product or service where it can be cost competitive in the global economy. In a relatively poor economy, demand is limited and its composition does not necessarily correspond to sectors of comparative advan-

tage. The global economy is huge in comparison: at the right price and costs, demand is, for practical purposes, unlimited. As we saw in Japan, Korea, Singapore and now China, the growth of exports can set in motion a process of sustained growth that is transmitted to the whole economy and could never be achieved by relying on domestic demand alone.

A third area in which the global economy has supported growth is through investment – more precisely, investment beyond the capacity of the domestic economy to save. One component of this is FDI, typically not a large fraction of total investment (20 per cent of overall investment would be typical), but its magnitude understates its importance because of its role in bringing technology, know-how and access to external markets.

Benefits from rapid growth can flow widely in a society while income inequality rises at the same time. Why is this?

As people move and productivity rises, it is possible for everyone to be better off; but those who move to new sectors first have higher productivity and higher incomes, and the result is a pronounced tendency for income inequality to rise for an extended period. While this is a natural consequence of the growth process, it presents a challenge: excessive inequality of income is not only a normative problem in most societies, it is also socially and politically disruptive and can threaten support for the policies and public-sector investments that in part sustain growth. As a result, it needs to be mitigated through the redistribution of income or other important services such as health care, education and pensions, and by ensuring that access to infrastructure – clean water, transportation and power – is reasonably equitable.

Of the 13 high-growth economies, seven reached middle-income status and remained there, while six continued to grow, achieving income-levels associated with advanced countries. Why did progress stall for those seven countries?

There is no general answer for that. In some cases, there was a crisis in the political system – Indonesia for instance, where things came to a screeching halt in the context of a currency crisis in the 1990s. In general, progressing from middle- to high-income requires a significant shift in attitude and policy. In most of the cases that actually made it, there was an increase in democratization, whereby a dominant single party became a genuine multi-party system. With that came a higher emphasis on human capital, innovation and services, and other things that characterize the income-generating capacity of an advanced economy such as Canada’s.

Your report notes that, “No country has ever caught up with the advanced economies through farming alone.” Is focusing on agriculture counterproductive to growth?

There is nothing wrong with focusing on productivity growth in agriculture, and in fact, in the early stages of rapid growth, this sector is usually the location of a vast majority of the people. Typically, labour is underemployed in these sectors, so people tend to move to cities and new industrial sectors where investment is taking place and productivity is higher. The loss in output in the traditional

sector is minimal or zero because of the surplus labour condition, and hence the overall productivity gain is substantial.

The movement of people geographically and across sectors is not an ancillary side effect of the growth process, but rather the essence of it. For example, the difference between the growth rate of GDP per capita and GDP per worker in China is very close to its one per cent per annum decline in the rural population. It is worth noting that this movement of people is a major challenge in the development process. In China's case, one per cent represents 13 million people who are essentially moving to cities each year, with attendant needs for infrastructure, education and services.

There are still many good reasons to invest in agriculture. The rewards can be impressive: agricultural research and extension yield returns of around 35 per cent in Sub-Saharan Africa and 50 per cent in Asia, according to the latest *World Development Report*. Our point is that for significant growth to occur, an economy has to change its very structure: it cannot grow by looking the same as it did ten years ago.

You recommend that developing countries focus on educating young girls and integrating them into the labour force as a way to break intergenerational cycles of poverty. Why is this so important to growth?

Some people don't recognize that in developing countries, formidable obstacles stop girls from completing their schooling: family financial pressure, lack of safety, even basic things such as inadequate toilet facilities. If these obstacles can be overcome, the payoff will be very high. Educated women have fewer, healthier children; they have them later in life; and their children are more successful in school. But too often, girls get blocked as they mature. They have to stay home to take care of their families, they get in trouble if they try to go to work, or it just isn't safe for them to go out on their own. Focusing on their education causes a lot of other things to be done better. In financial terms, it is a 'high-leverage investment'.

One of the biggest challenges the report reveals is cutting carbon emissions to safe levels by mid-century while accommodating the growth of developing countries. What approach do you recommend?

The **Inter-Governmental Panel on Climate Change (IPCC)** has calculated that a relatively safe level of CO₂ emissions globally is 14.5 gigatons per year, which comes out to 2.25 tons per person, globally. Currently, we are at double that. **Figure Two** from the *United Nations Human Development Report* shows per capita emissions for major industrial countries. Clearly, the advanced countries are at levels that, if replicated by the developing world, would dramatically exceed safe levels.

If the developing countries do not grow at high rates, then safe levels of emissions can be achieved by reducing advanced-country emissions by a factor of two or a little more. But with the growth of the developing countries, the incremental emissions are very large because of the size of these populations. To take the extreme case, if the whole world grew to advanced-country incomes and converged on the German levels of emissions per

Global carbon footprints at OECD levels would require more than one planet^a

Figure Two

	CO ₂ emissions per capita (t CO ₂) 2004	Equivalent global CO ₂ emissions (Gt CO ₂) 2004 ^b	Equivalent number of sustainable carbon budgets ^c
World ^d	4.5	29	2
Australia	16.2	104	7
Canada	20.0	129	9
France	6.0	39	3
Germany	9.8	63	4
Italy	7.8	50	3
Japan	9.9	63	4
Netherlands	8.7	56	4
UK	9.8	63	4
United States	20.6	132	9

Source: UNDP, Human Development Report 2007
^a As measured in sustainable carbon budgets.
^b Refers to global emissions if every country in the world emitted at the same per capita level as the specified country.
^c Based on a sustainable emissions pathway of 14.5 Gt CO₂ per year.
^d Current global carbon footprint.

capita, then to be safe from a warming standpoint, emissions per capita would need to decline by a factor of four or more. Reductions of this magnitude with existing technology are either impossible or so costly that they make certain the slowing of developing country growth.

The question is, can we cut our carbon footprint in half and accommodate growth in the developing world that carries with it increased energy consumption and carbon emission in the short run? I believe the answer is yes, if we put our minds to it. We'll probably have to do most of the work in the advanced world first, and then transfer technologies to the developing economies. High energy prices are already helping to create incentives for greater energy efficiency, globally.

Many people argue that developing countries should commit to longer term, 50-year emission targets; after all, they are responsible for a growing share of gases in the atmosphere. We feel this is the wrong approach. Poor countries can make a bigger, quicker contribution by cooperating in cross-border mitigation projects, which meet the dual criteria of efficiency and fairness. The cuts are made in poor countries, which is efficient; but the costs are borne by richer countries, which is fair. Beyond this contribution, developing countries also need to improve energy efficiency, import new technologies rapidly and eliminate energy subsidies. One approach that won't work is to tell a developing country that in effect, it can't grow, by imposing impossible targets on it. The underlying problem is getting

The Commission recommends the following steps which, taken together, will stave off some of the worst dangers of global warming.

1. The advanced economies should cut emissions first, and aggressively. This will slow the accumulation of carbon in the atmosphere and quickly reveal how much it truly costs to cut carbon emissions.
2. More generous subsidies should be paid to energy-efficient technologies and carbon-reduction technologies, which will reduce the cost of mitigation.
3. Advanced economies should strive to put a price on carbon.
4. The task of monitoring emissions cuts and other mitigation measures should be assigned to an international institution, which should begin work as soon as possible.
5. Developing countries, while resisting long-term target-setting, should offer to cut carbon at home if other countries are willing to pay for it. Such collaborations take place through the Clean Development Mechanism provisions in the Kyoto Protocol. Rich countries can meet their Kyoto commitments by paying for carbon cuts in poorer countries.
6. Developing countries should promise to remove fuel subsidies, over a decent interval. These subsidies encourage pollution and weigh heavily on government budgets.
7. All countries should accept the dual criteria of efficiency and fairness in carbon mitigation. In particular, richer countries, at or near high-income levels, should accept that they will each have the same emissions entitlements per head as other countries.
8. Developing countries should educate their citizens about global warming. Awareness is already growing, bringing about changes in values and behaviour.
9. International negotiations should concentrate on agreeing to carbon cuts for more advanced economies, to be achieved 10 or 15 years hence. These mitigation efforts should be designed so as to reveal the true costs of mitigation.

Source: *The Growth Report: Strategies for Sustained Growth and Inclusive Development*

amount of it – is based on commodity price run-ups. There’s also better control of inflation, better macroeconomic management and more effective leadership in government to throw into the mix, depending on which case you’re talking about. Other than the recent food emergency, the run-up in commodity prices is a huge opportunity for many African countries and for the continent as a whole. The trick is to turn the increased wealth and resource rent into a pattern of investment in things like education, infrastructure and other things that support economic diversification, productive-employment creation and sustained growth. The jury is out, but people are hopeful that this will happen.

What surprised you the most about your findings?

The biggest surprise was how important political leadership is. There’s a whole lot of consensus-building required and picking the right model, getting everybody on board, making deals with key stakeholders like labour and business, and a persistent kind of pragmatic approach with imperfect knowledge about how the economy is going to respond to policy. I started out thinking this was mainly about economics, but I ended up thinking that was only about half of it, and the other half is very political.

Your report states that “the defining economic characteristic of the coming decades is likely to be the expanding role of the developing world.” What are the implications for the business community?

Formidable challenges exist, to be sure: climate change, global governance, rising interdependence, volatility, risk and inclusiveness. But we cannot allow them to exceed our capacity for ingenuity, creativity and empathy. We do not know if limits to growth exist, or how generous those limits will be. The answer will depend on our ingenuity and technology, on finding new ways to create goods and services that people value on a finite foundation of natural resources. This is likely to be the ultimate challenge of the coming century, and growth and poverty reduction in the future will depend on our ability to meet it.

On the bright side, the prospects for developing countries are probably more favourable now than they have been since World War II: international trade is growing faster than global GDP; the benefits of decades of learning with respect to operating global supply chains are accessible; and information and technology continue to lower transaction costs and be a powerful integrating force. But perhaps even more important, the key players in all of this – the leaders in emerging economies who have the responsibility for building policies that lead to sustained, inclusive growth – have a wealth of experience to rely on. No one is in the dark. **R**

to the required levels in a way that is fair and that allows developing countries to grow.

Some developing countries are growing because of the recent run-up in commodity prices. How do these prices factor into the growth equation?

We have seen growth acceleration on a rather broad base in Africa and in parts of Latin America, and some of it – even a fairly large

Michael Spence is the Philip H. Knight Professor, Emeritus and former Dean of the Stanford Graduate School of Business. A member of the Rotman Dean’s Advisory Board, the Toronto native received the Nobel Prize in Economic Sciences in 2001 and is chairman of the Commission on Growth and Development, which brings together 21 leading practitioners from government, business and policy-making arenas, mostly from the developing world. For more, visit growthcommission.org or download the Commission’s inaugural report at <http://cgd.s3.amazonaws.com/GrowthReportComplete.pdf>