Number 14

# Making It

Industry for Development

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- Is business doing enough?
- Denmark
- Recycling in Russia
- Intra-BRICS cooperation

# Middle-income countries

# A quarterly magazine. Stimulating, critical and constructive. A forum for discussion and exchange about the intersection of industry and development.


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# Editorial

The World Bank's main criterion for classifying economies is gross national income (GNI) per capita, and every economy is classified as low income, middle income (sub-divided into lower middle and upper middle), or high income. There are currently 103 middle-income countries (MICs), defined as such by having a per capita GNI between US$1,036 and US$12,615 (2013).

Over recent decades, MICs have made a significant contribution to global development through their higher growth rates, accompanied by progress in their social spheres. They are a fast-growing group of countries, both in terms of population and of key economic and human development indicators, with a share of around a third of global manufactured value added.

However, in parallel with some macroeconomic successes, there has been a significant shift in global poverty towards MICs. Some of the world's most populous countries (India, Indonesia and Nigeria, for example) have recently joined this category, with the result that a majority of the world's poor now live in middle-income countries.

Despite being a diverse group by size, population and income level, the MICs share a number of key common challenges to development and some of these are explored by the contributors to this issue of *Making It*.

MakingIt
Industry for Development

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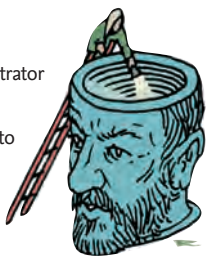
## POLICY BRIEF



Since graduating from the National College of Art and Design in Dublin, cover illustrator **David Rooney** has amassed almost thirty years experience as a freelance illustrator. As a contributor to *The Irish Times* and *Hot Press*, his editorial work has reflected the tumultuous changes in Irish society. He has also been a long-standing contributor to the OECD's *Observer* publication. Since 1999, he has been illustrating books for the prestigious Folio Society, based in London. Recent work has focused mainly on cultural, heritage and museum-related projects, including the BBC series, *The Story of Ireland*, Titanic Experience Belfast, the Lindisfarne Gospels exhibition in Durham, and the new Stonehenge interpretative centre. **davidrooney.com**



# GLOBAL FORUM

The Global Forum section of *Making It* is a space for interaction and discussion, and we welcome reactions and responses from readers about any of the issues raised in the magazine. Letters for publication in *Making It* should be marked 'For publication', and sent either by email to: editor@makingitmagazine.net or by post to: The Editor, *Making It*, Room D2142, UNIDO, PO Box 300, 1400 Wien, Austria. (Letters/emails may be edited for reasons of space).

## LETTERS

### Digital divide – too wide!

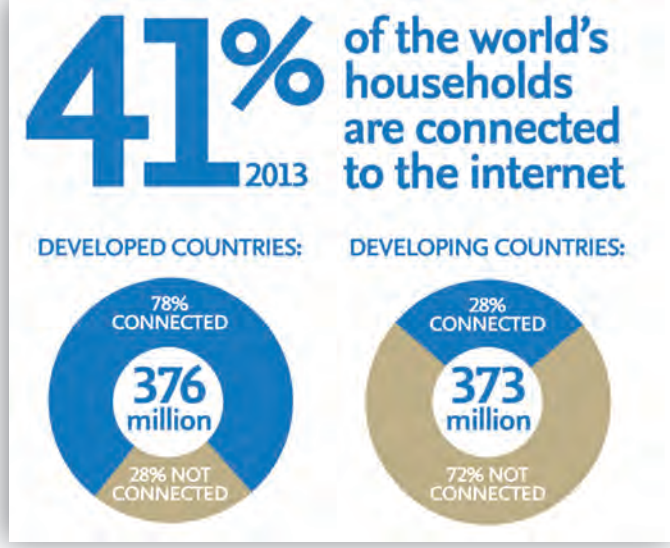
The last issue had an interesting illustration with one of its stories ("At the intersection of technology and development", *Making It* #13). The data came from the latest ICT report of the International Telecommunication Union.

The first astounding fact is that today nearly half the world is connected to the internet. An incredible achievement, if you consider that the internet was not commercialized until the nineties, and in 2000 only 7% of the world's population was connected.

The other, more worrying, fact is the difference between the developed and developing world – a virtual mirror image! This difference would be even more striking if we assume that the "developing countries" figure most likely includes data from some of the emerging economies!

Least developed countries are at a great disadvantage, and it should be one of the priorities for international assistance to try and narrow the digital divide.

● **Hans Friederich, by email**




Source: *ICT Facts and Figures*, the International Telecommunication Union (ITU)

### Cleantech innovate

This issue (*Making It* #13) ties in neatly with our own Cleantech Innovate (UK) programme in February 2014 – www.cleantechinnovate.com – where 40 British growth-oriented technology companies will be presenting live at the largest innovation showcase of its kind in the UK.

● **Robert Hokin, Chief Executive, ecoConnect, The UK's Green Industry Business Network, by email**

The article on innovation policy in the latest issue is really cool ("The what, why and how of innovation policy", *Making It* #13).

● **Linda Swart, National Coordinator, South Africa Innovation Network (SAINe), by email**

### Cheap chic

The article on women's economic role in the South ("The first challengers", *Making It* #12) highlighted the need for wage-led growth and a shift away from market-led growth. The disastrous consequences of the latter can be seen in the Rana Plaza disaster, where shoddy construction turned a garment manufacturing complex in Dhaka, Bangladesh, into a death trap when it collapsed, killing over 1,000 people, mainly women, in April this year.

It led to nearly 50 companies such as Primark, H&M, and Marks & Spencer signing up to a legally binding safety agreement backed by the international trade union, IndustriALL, and the Bangladeshi government. Better wages and improved safety are vital but the fact remains that the clothing being produced was not for the Bangladeshi workers but for the North's insatiable appetite for 'cheap chic'. Now is the time to question a culture where buying a t-shirt for a few pounds, wearing it a few times and then throwing it away has become the norm.

● **Maria Ačimovič, by email**

### South-South debate

Your contributors to the South-South debate (*Making It* #12) made it clear that there will be contradictions in the way trade occurs between developing and emerging countries.

Take China. On the positive side, China's economic status has increased particularly rapidly in East Asia, making this region the most dynamic in the world system. China provides a vast export market and plays a pivotal role in regional trade and production – which has grown massively in east Asia since the 1990s – and increased exports to the US (while, for example, South Korea's reliance on trade with the US has fallen).

There is a negative side. For instance, between 2000 and 2003 Mexico's export manufacturing sector lost nearly a quarter of a million jobs as one-third of the production that left Mexico moved to China. While in Brazil, though exports to China have helped its economy to negotiate the economic slump relatively unscathed so far, the 40% appreciation of the real against the dollar in the last few years has made domestically-produced goods uncompetitive.

But your debate showed that the landscape of the global economy has dramatically


For further discussion of the issues raised in *Making It*, please visit the magazine website at www.makingitmagazine.net and the social networking *Facebook* site. Readers are encouraged to surf on over to these sites to join in the online discussion and debate about industry for development.


changed as a consequence of what Ricardo Meléndez-Ortiz termed "growth champions" like China.

● **Pedro Mendes, by email**

## A different strategy

In his article, ("Where did Rio+20 leave us?", *Making It* #12), Stephen Browne acknowledged that even if the United Nations Conference on Sustainable Development's final document "had had the status of a blueprint – or a roadmap for that 'pathway', the UN (secretariat) has a poor record of developing mechanisms of monitoring and ensuring compliance." Browne suggests that it is not inter-governmental bodies that will deliver sustainable industrial development, but "individuals in supportive environments that will point to the future we want." To stop the cynics asking "why does the United Nations bother to have these conferences on climate change at all?"– why not adopt a different strategy, moving away from the large and costly Rio-type assembly which does not achieve any results? Instead, organize regional gatherings of those individuals, companies and nations willing to (as Browne put it) "face up to the huge tasks of turning around a deteriorating global environment?" There are plenty of us...

● **Ricardo Rodríguez, by email**

## Land grabs

One of the issues raised at the conference, Small Farmers, Big Business? Engaging the Private Sector in Sustainable Agricultural Development, as reported in *Making It* #12, was the "power relations between smallholder farmers and the private sector in developing countries". I hope the representative from the European Commission who talked about this is looking at the issue of land grabs. For example, some of the best land in several African countries has been given over to contract farming for supermarkets in the North. They air freight "exotic" fruit and vegetables so they can be sold all year round in Europe (and North America). This process can involve diverting resources from food production for domestic markets.

● **Patrice van der Schoot, by email**

## Nice to see

Wonder why Western countries typically fail at providing such basic solutions to African nations like India does ("The 'barefoot' solar engineers", *Making It* #12). These poor villages don't need grand donations. They need education and a way to expand that education into other fields. Nice to see that India is progressing in this field.

● **Carl Jung, website comment**

# The right green industrial policies

**Dani Rodrik** considers the use of subsidies to support and nurture green technology.

The future of our planet depends on the world economy's rapid transition to "green growth" – modes of production based on clean technologies that significantly reduce emissions of carbon dioxide and other greenhouse gases. Yet carbon remains badly mispriced, owing to fossil-fuel subsidies and the absence of tax revenues needed to address the global externalities of climate change.

In this context, subsidies that promote the development of green technologies – wind, solar, bio-energy, geothermal, hydrogen and fuel-cell technologies, among others – are doubly important. First, they nudge pioneers to invest in uncertain, risky ventures, with the resulting research-and-development efforts generating highly valuable social benefits. Second, they counter the effects of carbon mispricing on the direction of technological change.

These two considerations provide mutually reinforcing reasons for governments to nurture and support green technologies. Such support has, in fact, become extensive, both in advanced and emerging economies. Look around these economies and you will find a bewildering array of government initiatives designed to encourage renewable-energy use and stimulate green-technology investment.

Although full pricing of carbon would be a far better way to address climate change, most governments apparently prefer to rely on subsidies and regulations that increase the profitability of investments in renewable energy. Often, the authorities' motive seems to be to give domestic industries a leg up in global competition.

Normally, we would consider these competitive motives to be beggar-thy-neighbor in nature. Market-share considerations are zero-sum from a global standpoint in traditional industries, and any resources invested in generating national gains come at the cost of global losses.

But in the context of green growth, national efforts to boost domestic green industries can be globally desirable, even if the motives are parochial and commercial. When cross-border spillovers militate against taxing carbon and subsidizing technological development in clean industries, boosting green industries for competitive reasons is a good thing, not a bad thing.

Opponents of industrial policy rely on two arguments. The first is that governments do not have the information needed to make the right choices about which firms or industries to support. The second is that once governments are in the business of supporting a particular industry, they become vulnerable to rent-

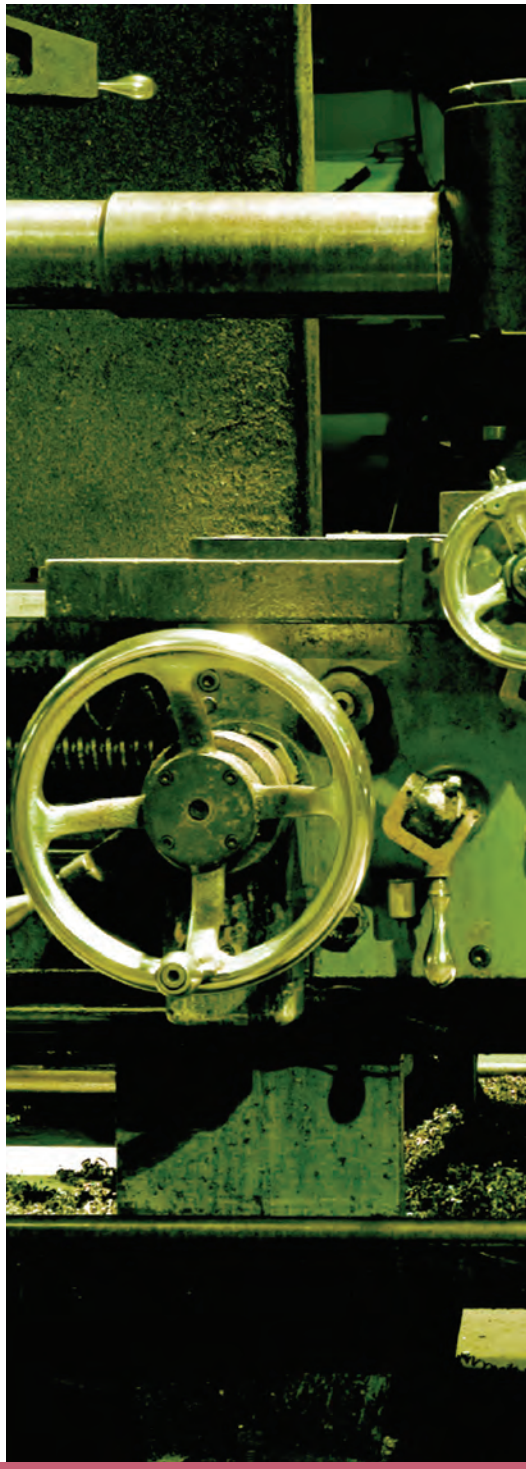


Photo: iStock

seeking and political manipulation by well-connected firms and lobbyists. In the United States, the 2011 bankruptcy of Solyndra – a solar cell manufacturer that folded after having received more than a half-billion dollars in government loan guarantees –seems to illustrate both failures.

In reality, the first of these arguments – lack of omniscience – is largely irrelevant, while the rent-seeking problem can be overcome with appropriate institutional design. Good industrial policy does not rely on governments' omniscience and ability to pick winners; indeed, failures are an inevitable and necessary part of a well-designed program.

While it is too early to reach a conclusive verdict on the US loan-guarantee programme, it is clear that the Solyndra case cannot be properly evaluated without taking into account the many successes that the programme has spawned. Tesla Motors, which received a US$465m loan guarantee in 2009, has seen its shares soar and has repaid its loan early. An evaluation of US Department of Energy efficiency programmes found that the net benefits amounted to US$30bn – an excellent return for an investment of roughly US$7bn over 22 years (in 1999 dollars). Interestingly, much of the positive impact resulted from three relatively modest projects in the building sector.

Intelligent industrial policy requires mechanisms that recognize errors and revise strategies accordingly. Clear objectives, measurable targets, close monitoring, proper evaluation, well-designed rules, and professionalism provide useful institutional safeguards. As challenging as applying them may be, they constitute a much less formidable requirement than that of picking winners. Moreover, an explicit industrial policy – conducted self-consciously and designed with pitfalls in mind – is more likely to overcome the typical informational and political barriers than one that is implemented surreptitiously, as is too often the case.

Green industrial policy can be damaging when national strategies take the form not of subsidizing domestic industries but of taxing foreign green industries or restricting their market access. The case of solar panels provides a cautionary tale. Trade disputes between China, on the one hand, and the US and Europe, on the other, have attracted much attention. Fortunately, this is the exception rather than the rule for green industrial policy. Trade restrictions have so far played a small role relative to subsidies to domestic industries.

In practice, we are unlikely to get purely green industrial policy, which would focus solely on the development and diffusion of green technologies while excluding considerations of competitiveness, commercial gain, and employment growth. Indirect but politically salient objectives such as "green jobs" will most likely continue to present a more attractive platform for promoting industrial policy than alternative energy or clean technologies.

From a global standpoint, it would be far better if concerns about national competitiveness were to lead to a subsidy war, which expands the global supply of clean technologies, rather than a tariff war, which restricts it. So far, we have been getting the former, though there is no way to determine whether, or for how long, this trend will continue.



**Dani Rodrik, Professor of Social Science at the Institute for Advanced Study, Princeton, New Jersey, USA, is the author of *The Globalization Paradox: Democracy and the Future of the World Economy*.**

HOT TOPIC

# Is business doing enough?

**Georg Kell**, executive director of United Nations Global Compact, and **Peter Lacy**, managing director of Strategy and Sustainability for Accenture in the Asia Pacific region, are asked for their views on the United Nations Global Compact/Accenture CEO Study 2013. This tri-annual study explores business leaders' views on corporate sustainability and the role that businesses and CEOs themselves can play in helping to harness sustainability as a transformative force in a global economy.

**Georg, this is the third CEO study on sustainable business carried out by the Global Compact and Accenture. In the context of this study, how do you define the term sustainability?**

It's the long-term delivery of value by the business in financial, environmental, social and ethical terms. This is the simplest definition we have and it's quite sophisticated when you look into the blueprint for sustainability leadership where all four dimensions are actually laid out in greater detail.

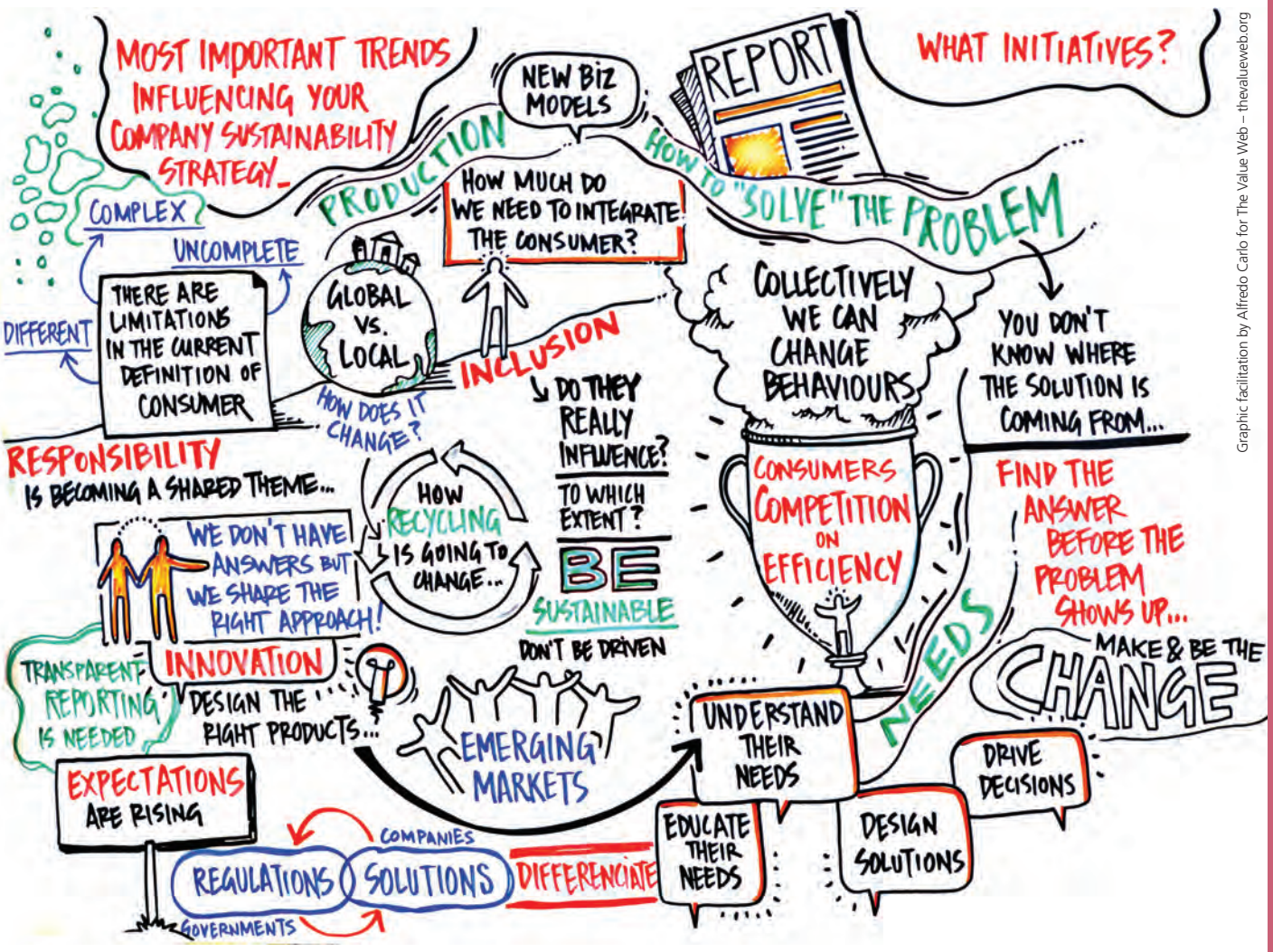
**Peter, do the CEOs that you speak to share that definition of sustainability? What do you think it means to them?**

I think, as Georg said, there is an emerging convergence around the language and the meaning of sustainability, globally. I think if you go back five to ten years, you might have seen a number of different interpretations and actually I think there's consistency about sustainability, encompassing environmental, social and governance issues. And I think the kinds of issues that CEOs cover when we talk to them in the one-to-ones, and what we see in the survey, is that those issues broadly reflect the ten principles of the UN Global Compact.

What I would say is that by industry, and sometimes by geography, they tend to be much more focused at the individual company level, at the individual CEO level, on specific sets of issues: pharmaceutical companies looking at access to health care, industrials looking at the issue of resource efficiency, and so on and so forth. So I think as well as there being convergence globally, there's a very clear focus of different CEOs by different geographies and industries.

GEORG KELL (left) is executive director of United Nations Global Compact.

PETER LACY (right) is managing director of Strategy and Sustainability for Accenture in the Asia Pacific region. Accenture plc is a multinational management consulting, technology services and outsourcing company.




Graphic facilitation by Alfredo Carlo for The Value Web – thevalueweb.org

**Georg, this study is conducted every three years. What are the particular areas of focus this year?**

The study will continue to assess the CEOs' perspectives. This time around I think there are a record number of participants, as a matter of fact, but what makes this year's study special is it will have a much deeper look into the role of key stakeholders, such as governments, investors and consumers, and explore how they influence the CEOs' approach to corporate sustainability. So, it will shine some very fresh light from these perspectives. Moreover, the study will also ensure that sustainability goes beyond environmental issues. It also includes social and governance issues and connects thereby to corporate governance affairs themselves to ensure sustainability and explore how it actually is handled at the leadership level and at corporate governance level. And from a UN perspective, I should add that the study will also shine a very important light on the role of business in the post-2015 development agenda and has new insights on collaboration and how business is willing to team up with other partners in tackling tough dilemmas and how this affects sustainability concepts. So, three new perspectives.

**Peter, from your conversations with CEOs so far, what's changed since 2010?**

I think that the pace of change has been one of the key themes from the survey ➤

## HOT TOPIC

➤ and from the interviews with CEOs right across the world. And I think that what we're seeing is the emergence of a two-speed world on sustainability.

I think on the one hand we're seeing real innovators making huge progress, driving disruptive innovation and products and services that tackle directly a range of sustainability issues, whether it's resource efficiency or clean energy or whether or not it's providing access to finance or products in the base of the pyramid markets. And there are real innovators and many of those are innovating because they're able to link their innovation to the top line, to growth and to profitability and to value creation.

I think there's another set of companies that, even though they are committed to sustainability, are struggling to align that with business success. They are, to some extent, reaching a plateau where they are finding it difficult, without clear market incentives from governments, from consumers and customers, from investors, to continue to advance at the same speed. And, so, there's a gap opening up and I think one of the conclusions is that actually we do need to see more done to provide the enabling market context to drive transformational sustainability, in line with what CEOs themselves report to be the kind of needs there are for sustainability, globally.

**Peter, we have discussed the pace of change on sustainability and how companies are embedding environmental, social and governance issues into core business. From your conversations, how do CEOs see the role of business in tackling sustainability challenges?**

Well, I think the first thing to say is that the CEOs that we spoke to are all members of the UN Global Compact. They're all CEOs ➤

**On 24 July 2013, United Nations Secretary-General Ban Ki-moon visited the New York Stock Exchange to commemorate NYSE Euronext joining the United Nations Sustainable Stock Exchanges initiative, which explores how exchanges can work together with investors, regulators and companies to enhance corporate transparency on environmental, social and corporate governance issues, and encourage responsible long-term approaches to investment.**


Photo: NYSE Euronext

## HOT TOPIC

➤ that were prepared to give us their time and so I think, to some extent, these are business leaders that are already committed to driving sustainability. But what I would say is that amongst that group there is a clear recognition that those leaders need to do more to work in partnership with governments, with other stakeholders, to create the right enabling market conditions. And I think in light of the post-Millennium Development Goals and the next era of the millennium development agenda, I think what is clear is that CEOs recognize the need for organizations like the UN Global Compact to provide a platform for collaborative action. Collaborative action that does reshape some of those market forces and that pushes, cajoles, partners with governments to do more. So, I would say one of the clear findings is that there is an opportunity both to compete in certain areas, but also to collaborate, and to seek out these collaborative platforms to change the rules of the game.

**Georg, what role do you see business and CEOs specifically playing in this debate, and what actions should they be taking?**

Well, first, as Peter said, the insight and the willingness to co-invest in shared platforms by individual business leaders is a new development. For competitive reasons, business has discovered the business case of sustainability, and the good news there is that the concept has gone global for risk mitigation purposes and opportunity enhancement.

However, more and more global leaders recognize that this is not good enough because, to transform the enabling environment and to tackle some of the basic dilemmas, no company alone can be a game-changer in its own right. So, to change and transform the enabling environment – be it corruption, clean technology, etc. – like-minded groups are being formed around specific goals and issues, and this is the big hope we have for the UN Global Compact Leaders Summit. We need sufficient buy-in by business leaders to co-invest in common approaches, together in partnership with governments and civil society, and that is the best way to bring about more transformative and lasting changes in the enabling environment. By demonstrating that indeed business is willing and able to move ahead, irrespective of what governments do, we are of course hoping that this will encourage governments to be a full partner in this change agenda.

**Peter, scientific and economic evidence seems to suggest that, on many measures, we're making pretty slow progress on a lot of these fronts. What do the CEOs you interview believe needs to happen to accelerate progress towards a more sustainable economy?**

Well, I think there are two answers to that question. On the one hand, I think CEOs are very bullish and business leaders are very bullish about the fact that the innovation required, the technology, for example, or the new approaches to business models, the way of rethinking value chains, much of that exists. They feel that they are making, on the whole, a lot of progress in their own companies, although they recognize that there's much more to do both on their agendas and our industry's agendas, and certainly much more to do on the global business agenda.

**The UN GLOBAL COMPACT is the world's largest corporate citizenship and sustainability initiative. Since its official launch on 26 July 2000, the initiative has grown to more than 10,000 participants, including over 7,000 businesses in 145 countries around the world.**

**The Global Compact is a strategic policy initiative for businesses that are committed to aligning their operations and strategies with ten universally accepted principles in the areas of human rights, labour, environment and anti-corruption.**

**Participating companies are asked to embrace, support and enact, within their sphere of influence, a set of core values:**

### HUMAN RIGHTS


**PRINCIPLE 1: Businesses should support and respect the protection of internationally proclaimed human rights; and**


**PRINCIPLE 2: make sure that they are not complicit in human rights abuses.**

## LABOUR


**PRINCIPLE 3:** Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;


**PRINCIPLE 4:** the elimination of all forms of forced and compulsory labour;


**PRINCIPLE 5:** the effective abolition of child labour; and


**PRINCIPLE 6:** the elimination of discrimination in respect of employment and occupation.

## ENVIRONMENT


**PRINCIPLE 7:** Businesses should support a precautionary approach to environmental challenges;


**PRINCIPLE 8:** undertake initiatives to promote greater environmental responsibility; and


**PRINCIPLE 9:** encourage the development and diffusion of environmentally friendly technologies.

## ANTI-CORRUPTION


**PRINCIPLE 10:** Businesses should work against corruption in all its forms, including extortion and bribery.

But I think they're quite optimistic about the potential to align markets with sustainable development. Now, that's the first part of the answer.

The second part of the answer is that while they believe a lot of that exists, they are struggling to reconcile that with the reality of achieving business success measured more traditionally, particularly at a time when we've had a prolonged global slowing of the economy, which is definitely also high on the agenda for them. And, so, I think what they require – and what they tell us that they need – are clearer signals from markets. So, this means clearer regulation and standards, clearer consumer signals, customer signals. This means driving awareness, but driving also uptake of sustainable products and services, and rewarding the brands investing in these areas. And, of course, the all- important issue of investors, engaging and understanding from investors, thinking through the valuation implications and the way in which the sustainability leaders also represent strong financial performers for the long haul. I think those three things are key in terms of what CEOs tell us they need in order to make more progress on sustainability and to see this as a lens for value creation and business success.

**Georg, what do the same CEOs feel that they need from each other and from governments, and from organizations like the Global Compact, to enable them to have a greater impact on global challenges?**

There are three points are really of critical importance for the corporate sustainability movement to become transparent. First, we need incentive structures by regulators to reward good performance through public procurement and through other means. Secondly, we need investors to recognize long-term performance and give a premium on good sustainability. Thirdly, we need consumer preferences to explicitly encourage and support and give greater value to sustainability products and services and innovation.

● **Interview by JAMES MURRAY, editor of BusinessGreen.com – a business website offering companies the latest news and best-practice advice on how to become more environmentally responsible, while still growing the all-important bottom line.**

The amount of raw materials needed to sustain the economies of developed countries is significantly greater than present indicators suggest, a new study has revealed. Using a new modelling tool and more comprehensive indicators, researchers have mapped the flow of raw materials across the world economy with unprecedented accuracy to determine the true "material footprint" of 186 countries over a two-decade period (from 1990 to 2008).

The study, involving researchers from Australia's University of New South Wales, the Commonwealth Scientific and Industrial Research Organization, the University of Sydney, and the University of California, Santa Barbara, was published in the US journal, *Proceedings of the National Academy of Sciences*. It reveals that the decoupling of natural resources from economic growth has been exaggerated.

The results confirm that pressures on raw materials do not necessarily decline as affluence grows and demonstrates the need for policymakers to consider new accounting methods that more accurately track resource consumption.

"Humanity is using raw materials at a level never seen before, with far-reaching environmental impacts on biodiversity, land use, climate and water," says lead author Tommy Wiedmann, Associate Professor of Sustainability Research at the UNSW School of Civil and Environmental Engineering. "By relying on current indicators, governments are not able to see the true extent of resource consumption."

"Now more than ever, developed countries are relying on international trade to acquire their natural resources, but our research shows this dependence far exceeds

## BUSINESS MATTERS

# China's factory owners look for energy savings

Factory bosses in China are looking at ways to cut costs through greater energy efficiency. A recent article in *Bloomberg Businessweek* reports that for decades after China started trading with the United States in 1979, most factory managers didn't focus on electricity prices. During those years, demand from abroad was expanding, labour was cheap and the exchange rate favored China's exporters. But in the wake of the 2008 global financial crisis, conditions have changed.

Kevin Chang, general manager of Concord Ceramics, based in Dongguan in Guangdong province, told Businessweek that his labour costs have doubled and the exchange rate is less favourable. He sees increasing energy efficiency as one way to shore up the bottom line.

The work at Concord Ceramics requires constant air conditioning and, in the summer, electricity accounts for as much as 15% of operating costs. Chang installed a high-volume air-conditioning system to cut expenses, but once the system was up and running, his electricity bill went up. He brought in an engineer from the China Academy of Building Research, a government think-tank, who deduced that the cooling system was more powerful than the factory needed. The air conditioning was constantly cycled between maximum cooling and powering down, therefore wasting energy. The solution was to run just half of the unit. The air remains at a steady temperature and Chang says he will save about 40% on electricity bills.

Another company, Shenzhen Black-Cloud Packaging, which makes packaging material for clients, including Apple, installed four giant ceiling fans imported from the US.


Photo: Robert Scoble

**Right: Workers at the Seagate Technology International (Wuxi) factory.**

the actual physical quantity of traded goods," says Wiedmann.

In 2008, the total amount of raw materials extracted globally was 70bn metric tonnes – 10bn tonnes of which were physically traded. However, the results show that three times as many resources (29bn tonnes) were used just to enable the processing and export of these materials.

The researchers say that because these resources never leave their country of origin, they are not adequately captured by current reporting methods. They have used a new indicator they call the "material footprint" to more accurately account for these 'lost' resources and have developed tools that could assist policy-makers in future.

Economy-wide accounting metrics (such as Domestic Material Consumption or DMC) currently used by certain governments and intergovernmental organisations, including the OECD, the European Union and the UN Environment Programme, only account for the volume of raw materials extracted and used domestically, and the volume physically traded.

These indicators suggest resource-use in wealthy nations has increased at a slower rate than economic growth – something known as relative decoupling – and that other countries have actually seen their consumption decrease over the last 20 years – something known as absolute decoupling. Decoupling of raw material usage from economic growth is considered one of the major goals en route to achieving sustainable development and a low-carbon economy.

But the study authors say when their "material footprint" (MF) indicators are factored in, these achievements in decoupling are smaller than reported and often non-existent.

All industrialized nations show the same typical picture over time: as GDP grew over the last two decades, there appeared to be a relative decoupling of resource use, as indicated by DMC (even absolute decoupling for the UK). However, when measured by the material footprint indicator, resource use has grown in parallel to GDP with no signs of decoupling. This is true for the USA, UK, Japan, EU27 and other OECD countries. South Africa was the only country shown to have an absolute decoupling using the MF indicator. (University of New South Wales)

Each one replaced 40 desk fans, using a tenth of the energy. "The problem is not usually lack of technology, but lack of expertise to operate energy systems," Samuel Zhou, an energy consultant in Shanghai, told *Businessweek*. "With pollution, you can see it or smell it. Energy is invisible. You cannot tell a motor is running inefficiently without data intelligence."

Taryn Sullivan, CEO of global supply-chain analytics company, Efficiency Exchange, has spotted energy waste at every factory in China she has visited. She estimates an average potential savings of 13%. At Circle Furniture, also based in Guangdong, her firm analyzed the electricity bills and concluded that the company was paying the local utility a monthly fine for drawing more current than needed, which increased the amount of energy lost in transmission. A simple mechanical adjustment resolved the issue.

In a related story, the US Institute for Industrial Productivity has started a new project with the Dezhou Energy Conservation and Supervision Centre (ECSC) to drive the adoption of energy management systems in some of China's biggest industrial enterprises. The ECSC is the Chinese government organization responsible for reducing energy use in Dezhou city in Shandong province, one of the country's most industrialized areas.

Through the partnership, 52 industrial enterprises in Dezhou will receive assistance to adopt an energy management system (EnMS) by June 2014. EnMSs are widely considered to be one of the single, most important factors in reducing the energy use of industrial operations.

Wang Shiyan, Director of Dezhou ECSC, said the government is promoting EnMS across China, and implementation has now started with the pilot in Dezhou. "The Chinese government is determined to cut energy use across the country. If this scheme is successful, it will be rolled out in other cities in China. This could lead to huge cuts in energy use and greenhouse gas emissions countrywide," he said.

# British and French leaders 'rediscover' industrial policy

On 11 September, Vince Cable, the UK's Secretary of State for Business, Innovation and Skills, addressed a conference of business leaders and told them, "We are developing an industrial strategy; this is about setting out a long-term, whole of government approach to how we support business. This will give confidence now for investment and growth." He announced that in the last twelve months the UK government had committed over £4bn to industrial strategy.

Cable's message was backed up by the UK's Prime Minister, David Cameron, who told conference participants, "Around the world right now countries are competing for investment, for jobs, and I want Britain to be right at the head of the pack. That's why a proper industrial strategy is so important."

As the weekly *The Economist* noted sarcastically, "After a 30-year hiatus, Britain's government is meddling in the economy again."

Just a day later, France's President, François Hollande, also announced a new direction for French industrial policy, reviving a more than half-a-century-old tradition of state-led industrial plans. He called on business executives to help France manufacture 34 new high-tech products.

Starting in 1946, French governments had presented a series of five-year plans to guide the modernization of the country's postwar economy, but such planning was abandoned in 1993. Now, according to *Le Monde*, the government is earmarking €3.7bn for the latest plan. The goal is to recreate the 750,000 jobs lost in the last ten years.

"We can all think of examples from the past of great industrial plans that came from the top," Hollande said. "It's not about nostalgia or going back to the Sixties... it's about a state that can accompany and stimulate".

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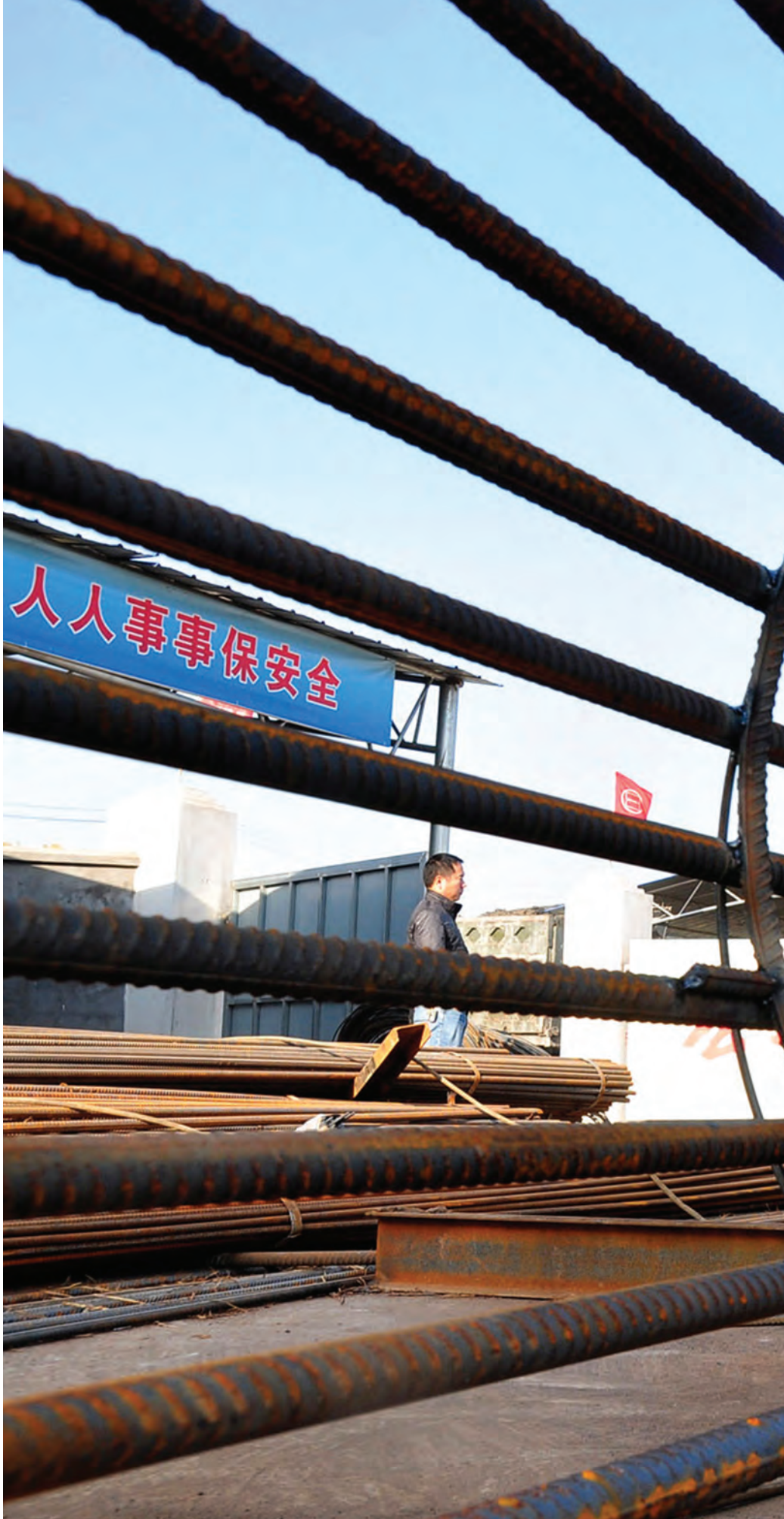
Photo: Reuters/China Daily Information Corp




# Policies to overcome the middle-income trap

**Kenichi Ohno** takes a look at the risks and challenges facing emerging economies

Looking back a century or so, only a handful of non-Western, latecomer countries have risen from poverty to very high income (say, US$20,000 per head and above) by encouraging skills, technology and knowledge. Japan was the first such nation. Then Singapore, Hong Kong (now part of China), Taiwan and the Republic of Korea followed in the late 20th century, but that is practically the end of the list. If we argue that city economies and other tiny states are exceptional, that just leaves ➤

➤ us with Japan, Taiwan and the Republic of Korea only. True, there are countries that enjoy high income thanks to the possession of abundant natural resources or other advantages relative to population size, but that is wealth by luck rather than by development. Many latecomer countries have attained middle-income status, but very few are following the East Asian trio to the high-income club – and the BRICS are no exception.

A middle-income trap or a developmental trap more generally is a situation where a country gets stuck at an income associated with given resources and advantages, and cannot go higher. If these resources and advantages are relatively small, the country is said to be in a poverty trap. If they are average, the country stops in the middle. If they are large, the country is automatically rich, without effort, which may attract envy but not necessarily respect. These three phenomena are fundamentally the same, in that they reflect the inability of governments and people to internally and continuously create the value that the world wants. This problem cannot be remedied by Washington Consensus policies of liberalization, privatization and integration. Freeing-up markets can only take a latecomer economy from suppression to an income level decided by given advantages.

Three policies are required if middle-income economies are to continue to rise and eventually join the rank of advanced countries. First, a national drive for productivity and innovation must be launched, and then institutionalized, to generate internal value instead of relying on windfall revenues or capital inflows. Second, new problems caused by fast growth, such as income and asset gaps, environmental damage, rural-urban migration, congestion and cultural change, must be properly dealt with. Third, macroeconomic management must be improved to reduce shocks associated with freer flows of goods, capital and information. Of these three, the first is primary and the other two are necessary but supplementary conditions for a continued march toward high income. Unless emerging economies achieve all of these, they will slow down and eventually be faced with aging populations and heavy social security costs, without attaining high productivity.


**"Global capitalism makes it harder for emerging economies to meet developmental challenges in comparison with...**

### A macroeconomic challenge

Unfortunately, global capitalism makes it harder for today's emerging economies to meet developmental challenges in comparison with the early post-second world war period when global trade expanded strongly and capital controls were in place. The world is more complex today due to free capital movement covering virtually the entire planet. The role of financial markets is also more precarious. For latecomer countries, international finance is a source of external funding, as well as imported instability. Furthermore, global booms and busts are often amplified by the existence and growth of the internal asset markets of these countries, especially stock and property.

Until the 1980s, economic crises in low and middle-income countries were typically caused by the lack of macroeconomic policy discipline. After spending too much and facing difficulties in servicing public debt, distressed governments often knocked on the door of the International Monetary Fund. Lending countries and their bankers demanded fiscal and monetary austerity, currency devaluation, and bolder economic liberalization ("structural adjustment") in exchange for a rescue package. These problems do occur even today, but they are no longer the only or dominant macroeconomic problem afflicting the developing world.

Massive purchasing power races across the currencies, stocks, bonds, commodities and real estates (and their derivatives) of multiple countries in instantaneous response to fleeting expectations on investment returns and risks. The self-motion of global capital can badly harm the entire world economy, as evidenced by the 'Lehman shock' and the Euro crisis.

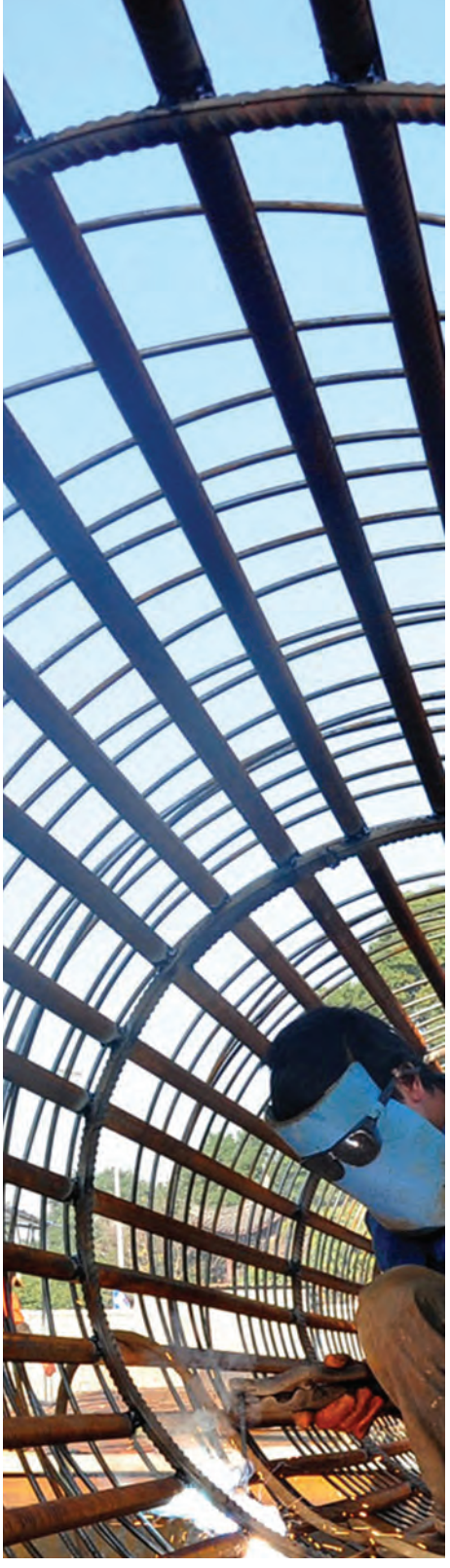
Large capital flows relative to Gross Domestic Product are sometimes the result of policy mistakes committed by the host country, but at other times they are independent of the domestic policy stance. In the Asian currency crisis of 1997-98, short-term bank loans

lent to Thailand, Korea and Indonesia were suddenly withdrawn, leading to the collapse of their currencies and domestic demand. Similar crises were observed in Mexico (1994), Russia (1998), Brazil (1998-99), Turkey (2000-01) and Argentina (2001-02) but the kinds of money that entered and left were not always the same. In addition to financial shocks, countries are also battered by traditional shocks arising from global business cycles and commodity price instability. The recent economic slowdown of BRICS countries has much to do with their inability to protect themselves from these international shocks.

### Policy issues

A comparison of best (and worst) international policy practices reveals some topical issues. First, it is clear that policies of high-quality, not laissez-faire ones, are needed to overcome a middle-income trap. For sure, there are still devotees of the Washington Consensus, but the majority of developing country governments no longer want to hear an ideological debate over state versus market. Rather, they wish to know about pragmatic methods for promoting enterprises and industries. Although there are many programmes for developmental knowledge sharing, few donors or international organizations teach this in a way that is sufficiently detailed, customized and practical for the learner country.

Second, we cannot go back to the days when authoritarian developmental states strongly raised incomes and created manufacturing sectors as in Taiwan, Korea, Singapore and so on. Since the collapse of the Soviet Union, all nations, irrespective of development stage, are required to adopt democratic procedures. At the same time, we can hardly agree with the idea that advanced democracy and governance can and should be introduced, even in low and middle-income nations. Both markets and democracy evolve historically and must be supported by a proper mindset, by policies and institutions, all of which take time to build. If either is copied by a country without preparation, it will function superficially and produce no real results. What the world needs is a search for democratic principles that do not block decisive policy formulation and implementation. We still do not have a definitive answer to this.



**...the early post-second world war period when global trade expanded strongly and capital controls were in place."**

Third, we are still arguing whether governments should improve business conditions in general or "pick winners" and pour attention and resources into targeted sectors. This is an old debate which is still pertinent today. The common objections to selective industrial policy are that officials cannot tell infant industries from 'zombies' and that they are, anyway, easily captured by political interests. But East Asian states succeeded in both; they promoted targeted industries *and* improved the general investment climate. This was made possible not by the special cultural traits of the region but by continuous pragmatic policy learning. Through trial-and-error, East Asian states built-up mechanisms by which government and businesses communicated effectively, without being captured, and together successfully picked winners. Policy capability cannot be considered sufficient unless public-private partnership reaches this level.

Fourth, there is a risk of perfecting policy procedure without achieving economic results. Many latecomer countries have adopted New Public Management (management techniques and practices drawn mainly from the private sector), of one kind or another, declaring visions and missions, setting annual targets with strict monitoring and evaluation, and so on, in the hope that this will improve policy quality. Thanks to such efforts, Malaysia's innovation programmes have become remarkably beautiful and complex, and Nepal's local governments are now bound by minimum conditions and performance measures indicators. It is nice to see bureaucrats work hard for something. Nevertheless, policy contracts such as this often mistake the means (policy) for the end (developmental results), and run the risk of making officials self-satisfied and content, without raising national competitiveness or living standards. If the cause of mediocre growth rates is an overly relaxed or inactive population, rather than inferior policies, improving policies to perfection is the wrong response.

**Marian V Jones** explores the connections between internationalization, entrepreneurship and innovation in middle-income countries

# Growth at the centre of the confluence

In a globalizing world, the process of internationalization tests the ability of the entrepreneur (or the firm's leaders) to anticipate and respond in innovative, competitive and profitable ways to their increasing exposure to international business influences and opportunities. Internationalization for small firms, embarked on as an entrepreneurial process of opportunity discovery and value creation, includes innovation and growth as potential gains from trade.

The entrepreneurial perspective on internationalization (international entrepreneurship) stems from the study of international new ventures (INVs), and is normally now referred to as the International New Venture theory of internationalization. Research suggests that INVs first emerged in the early 1990s, coinciding with significant globalization drivers such as regional economic integration, and the widespread deregulation of trade and industry sectors such as finance, as well as technological advancement including information and communication technologies (ICTs). INVs are remarkable amongst small and medium-sized enterprises (SMEs) in their entrepreneurial ability to participate early and successfully in international business. Understanding INVs may usefully inform policy measures that promote and support SME internationalization, and has particular relevance for middle-income countries (MICs).

## Understanding the issues for MICs

MICs vary significantly in terms of development and output but collectively they account for 30% of the world's manufactured value added. In MICs, SMEs contribute over 90% employment, and 70% of GDP compared to the world's high income countries where figures are closer to 65% of employment and 55% of GDP (OECD). SMEs represent well over 90% of all firms in most countries of the world; however, few are internationalized. In CARICOM countries, for example, it is estimated that micro, small and medium-sized enterprises account for 70% of jobs, but SMEs in total account for only 3-5% of exports.

MICs are highly dependent on export markets, and mobilizing SMEs towards internationalization is imperative for economic growth. In MICs, falling barriers to trade and international investment, trade and fiscal policies, have enabled some SMEs to become emerging market multinational corporations (EMNCs), but not many SMEs have internationalized so successfully and most struggle to enter export markets or follow EMNCs into global value chains.

## Barriers to SME internationalization

Barriers to SME internationalization vary by sector and country but the following are typical. External barriers include lack of available funding and public sector support, including the provision of information, and education and training for internationalization. Internal barriers typically revolve around resource shortages, including a lack of time and working capital, and inadequate capabilities such as the ability to identify foreign opportunities, and limited information or capability to analyze markets, to contact or locate overseas customers or to attain reliable representation. Research shows that SMEs lack self-confidence in engaging with global value chains, and do not understand the global context. Therefore they struggle to identify opportunities or know what their competitive advantage in the chain might be. Highly specialized firms, on the other hand, are more knowledgeable about where they fit in the global landscape. INVs face the same external barriers as other SMEs but differ in that they seem to have capabilities that enable internationalization, and are ready for internationalization from the outset.

### Internationalization pathways

The literature suggests two main trajectories of SME internationalization. One is the traditional export development route, through which the firm establishes itself first in its domestic market before embarking tentatively on exporting to geographically and culturally close countries. In the process, it gradually learns about its foreign markets and customers as well as about the process of exporting, and later more complex international business activities such as licensing, alliances and foreign direct investment. The other is the INV approach, which identifies some firms that internationalize very early, often to several countries and using a variety of business modes. Some INVs are able from the outset to compete internationally in global industries, although there is less knowledge about their long-term performance. INVs typically have unique proprietary assets, are able to identify and fill a global market niche, start with a global mind-set, and have good knowledge and application of ICTs. The prior experience of the founders in driving this process is significant, and includes international work experience, education and travel. INVs also have excellent networks, absorptive capacity and dynamic capabilities, enabling flexibility and innovation.

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### Internationalization, entrepreneurship, innovation and the growth cycle

Some studies suggest that INVs have a pre-foundation history from which founders bring experiential knowledge of, for example; *internationalization*, i.e. how to engage in international business; *entrepreneurship* – how to identify and exploit ideas, including how to establish and build a firm; and innovation and how to move an invention through innovation to market. Alternatively, firms established for the explicit purpose of exploiting a technological innovation may immediately and simultaneously engage in the processes of entrepreneurship and internationalization, accelerated by competitive pressures from global technology markets. Research also shows that longer established firms may internationalize quickly, once they have taken the initial step. What is clear is that rapidly changing consumer demand in global markets is forcing many firms to internationalize early, but that to sustain exports they also need to understand and anticipate change and respond to it through innovation. Global pressures therefore demand the processes of creating and building a business, and discovering or creating opportunities, and innovation and internationalization become increasingly interdependent.

Returning to the notion that internationalization involves exposure to the international business world, entrepreneurial creativity is enhanced by ideas generated through contact with multiple international business contacts, from multiple areas of the world. Ideas so generated become opportunities to innovate and create value through new products and services, and to enter new international markets for growth. Conceivably, in an international environment, if the processes of internationalization, entrepreneurship and innovation align, it may be possible to establish a sustainable cycle of opportunity, value creation and growth.

### Why is this important, particularly for MICs

It is imperative for MIC growth and development that SMEs are mobilized towards internationalization. The process of internationalization is not only about entering international markets, it is also about the ability of SMEs to engage with global competitors in their home markets, and to participate in global production systems through the global value chains (GVCs) of established trans-national corporations. While upgrading manufacturing SMEs to global standards renders them contenders for participation in GVCs, other mechanisms to cultivate SMEs capable of internationalizing quickly and successfully may be longer term and their impact less immediately obvious.

Some mechanisms, supported for example by the United Nations Industrial Development Organization, include introducing opportunities for experiential learning (learning through action or direct involvement) or knowledge exchange between universities, government and industry bodies. The internationalization of education, the integration of science and technology with business training, and the inclusion of entrepreneurship in educational curricula, at all levels, will help future entrepreneurs to foster a global mind-set in their businesses. Challenges will most likely involve the alignment of knowledge systems across those different areas of responsibility and knowledge domains. Most importantly, there is a need for research on SME internationalization in MICs, which have received less scholarly attention than High income Countries, as findings from the latter are not necessarily transferrable to the MIC context. Finally, empirical research on the structure and dynamics of GVCs, and their interaction and knowledge exchange with SMEs, is required to support policy interventions.


# The role of development cooperation in "middle-income" countries

**Jonathan Glennie** reassesses some assumptions about poverty reduction, sustainable industrial development and the role of international public finance.

It has become a common assertion that, as countries cross the threshold from "low income" to "middle income" status, a process should be set in place to close down development cooperation programmes. Some influential development analysts have gone so far as to say that there is little for the international community to do in middle-income countries (MICs). Poverty, they imply, has been as good as dealt with in these countries, which should now have the ability to raise enough money to finance their social and other needs without recourse to international public funds.

But while it is certainly true, of course, that cooperation relationships need constantly to evolve, and that aid dependency should be reduced in all countries ("low" and "middle-income"), such an assertion demonstrates some fundamental misunderstandings about the nature of need in MICs and how the international community can support progress.

First, it implies a very limited understanding of what poverty is. Second, it fails to recognize the urgent need for interventions that go well beyond the limited objective of reducing extreme poverty, namely industrial development in the context of environmental sustainability, and the move from low-tech to high-tech production. And third, it misunderstands the role that international public flows ➤

Photo: Tuca Vieira

The Paraisópolis *favela* (Paradise City shantytown) borders the affluent district of Morumbi in São Paulo, Brazil.

➤ (of which traditional aid will be a diminishing component) can play in supporting national efforts in these two broad areas.

Nevertheless, the current heightened focus on the role of development cooperation in "middle- income" countries affords us an opportunity to reassess some of the assumptions we may previously have held and to hone our thinking for what is undoubtedly a radically different moment in the modern history of human development.

## Poverty

It is a frequently heard assertion that MICs are no longer poor. The problem with this notion is not just that average incomes – the issue around which the LIC-MIC data is built – is only one of a number of measures of poverty. While everyone knows this, it is depressing how quickly we all still resort to GNI per capita measures to guide our decisions. Poverty analyses in country need to get much more detailed than a lazy (and methodologically limited) income analysis if they are really to understand how poor and marginalized communities are faring. Guatemala, for example, is a "middle-income" country in which malnutrition is chronic, at about 50% of the population – higher than in many "low-income" countries. Ditto India. Contributors of international public funds should look at multidimensional poverty indicators before they declare countries to be devoid of poverty. Meanwhile, some countries, particularly small island states, might need support on environmental grounds – an income-only assessment is too crude. Some donors, such as the European Union, do take into account non-income issues in this way.

Nor is the problem simply that, even if income poverty were the only issue we wanted to measure, the low-income, middle-income and high-income country (LIC-MIC-HIC) thresholds are entirely arbitrary. We hardly even know how they were calculated decades ago, and few people would defend them analytically. Martin Ravallion, the World Bank's head of research, recently described them as "arcane", and called for them to be phased out. Of course, some development institutions will have to set up rules for allocating development finance, but most have the capacity to make decisions based on a thorough analysis of need and effectiveness, rather than a vague proxy. I expect the originators of the LIC-MIC-HIC methodology would be shocked at how generally it is now being applied to development decisions. Apart from anything else, almost all countries are now MICs – there are only 36 low-income countries (LICs) left. A sign of a changing world, maybe, but also that the term "middle income" is close to useless as a means of distinguishing country types.

No. The most important problem with the assertion that countries described as "middle income" are no longer poor is that the threshold set for graduation is unjustifiably stingy. Who decided that the international obligations of the world's wealthiest countries should end when average per capita incomes rise to just under US$3 per day? What a

Photo: Jonathan Ernst/World Bank

Photo: World Bank

**"The obligation on wealthier countries and individuals to support development in other countries remains until living standards are much more broadly equalized across the world."**

travesty of any notion of solidarity and justice. South Sudan, one of the world's poorest countries, entered the annals of history as a "middle income" country, a status the country's new Minister of Finance described at an Overseas Development Institute (ODI) conference as "a joke". We need radically to reform our notion of what an acceptable standard of living is in 2013.

A similar problem appears to be just around the corner as the language of "eradicating poverty" takes hold. By using this shorthand – what people mean, of course, is eradicating extreme income poverty – we may be planting a false understanding in people's minds. Just as it has become worryingly common to hear countries in which poverty remains a grave problem referred to as countries that have "emerged from poverty", so families now earning a pittance may start to be considered "non-poor" unless we are strict with our terminology.

In my view, the obligation on wealthier countries and individuals to support development in other countries remains until living standards are much more broadly equalized across the world. If we just raised it a little, and redefined lower-middle-income countries (LMICs) as LICs (i.e. raising the bar from an average income of US$3 a day to US$11 a day) a further 48 countries would be low income again.

### From low-tech to high-tech

When that much higher standard is factored into the "need" side of the equation, it is clear that many MICs, and certainly all LMICs, still require a great deal of international solidarity and attention. But that is only the start of it. Poverty reduction is only one element of a broader development plan, if a central one. The major development objective for almost all "developing" countries, and of course that includes the so-called MICs, is the move from low-tech to higher-tech production.

Among the many alternative ways to categorize countries, to complement or replace the LIC-MIC-HIC measure, there are attempts to assess dependence on natural resources relative to success in developing value added products for the internal market and export. But, in this era, the perennial challenge to move from resource (and tourism) dependence to better paid jobs is facing new constraints, not least from the remarkable development story of one country, China. Not only does China now dominate global low-tech manufacture, increasing its global share from 20% to almost 30% in the last five years, it also dominates the non-OECD share of high-tech manufacture. Since 2007, it has seen its share of high-tech global imports rise from just over 5% to 25% (statistics provided by Eva Paus, Mount Holyoke College, 2013). At the same time as celebrating these remarkable achievements and the impact they have had on poverty reduction in the last two decades or so, this is clearly a game-changing magnitude for other countries seeking to engage in, let alone emerge from, low-tech production.

Add to this conundrum the fact that industrialization in the current era has to occur in a sustainable way, or as near ➤

➤ as possible, given the urgency of poverty reduction. The importance of green development, while ringing the usual alarm bells in many developing countries, is well-acknowledged in the expanding vision of the international community. Infrastructure requirements, part of the structural transformation required for countries seeking to end poverty, are estimated at close to US$1 trillion per year, most of which will be in what are described as "middle-income" countries, while the provision of international public goods, like environmental conservation, could and should be costly. Development, it turns out, only really begins when extreme poverty is eradicated (as Adolf Kloke-Lesch, a former official at the German Development Agency, has said). The so-called BRICS bank proposal is a response to this clear and urgent need.

### The role of international public finance

Sustaining poverty reduction and embedding sustainable development in all countries ("low", "middle" and "high" income) will, then, be costly. But some argue that MICs should now be in a position to finance their own development and that there is an ever-reduced need for international public support. While it is obvious that the terms on which loans are made may become gradually less sweet as countries move up the income ladder, this should not be confused with a reduced need for finance from international public sources. Concessionality is sometimes considered the most important feature of such funds, but wrongly so. Instead of "aid", we need to usher in a new era of international public finance, not because the MICs need it, but because it is an important option to be on the table in what we at ODI have dubbed the "age of choice" in financing for development.

As a forthcoming paper by the UN Development Programme and the ODI will argue, international public finance (as opposed to domestic or private finance) demonstrates a number of positive characteristics that make it important for today's world, even when it is not considered Official Development Assistance (ODA) in the terms defined by the Organization for Economic Cooperation and Development (OECD). It is not out to make a profit; promoting globally agreed goods and values. It can often be more flexible than other options, and is available when other types of finance are not, correcting for market failure. It can also help socialize knowledge because it comes accompanied by expertise in development. This makes it ideal for a range of important expenditures in MICs, from leveraging and catalyzing private international funds, to incentivizing and enabling certain actions considered important for sustainable development (including improving domestic resource mobilization and the development of civil society). International public goods will increasingly need to be paid for with international money, not to mention ongoing humanitarian emergency assistance and response to financial shocks, as the environment and financial system become possibly more volatile.

Photo: Dana Smillie / World Bank

Photo: Gerhard Jörén / World Bank

**"Industrialization in the current era has to occur in a sustainable way, or as near as possible, given the urgency of poverty reduction."**

Photo: Shutterstock

So, rather than decrease, the coming era could see an increase in the importance and quantity of international public finance, of which what has traditionally been called "aid" will play a part.

In their keenness to demonstrate the transformative importance of their work, aid donors often forget that many MICs never really needed aid as such. Aid has played a negligible role in terms of quantity in many countries for decades especially the very large and/or long-term MICs. India, China, South Africa, North Africa, most of Latin America – these countries and regions have never received very much aid compared with the size of their economies, and their current resurgence has little to do with aid, as some analysts and campaigners sometimes imply when they say that aid has "done its job". The well-known statistics (first raised by Andy Sumner) that 70% of the world's poorest people live in MICs is slightly misleading – all it means is that five very large countries (China, India, Pakistan, Nigeria, Indonesia) crossed an arbitrary income barrier in the last decade or so – and has little significance for development cooperation policy.

As we enter a new era, international public finance can continue to accompany the development process in such countries, cajoling and catalyzing change at a number of levels, even when it is a small proportion of overall financial resources and is becoming less concessional.

## Conclusion

In summary, yes, all relationships should evolve as circumstances change – thus the interminable strategy discussions taking place in NGOs and government agencies. And, yes, we should be open to the new possibilities emerging as countries appear to be generating more domestic resources – the main lesson of the general shift to MIC status over the last ten years – particularly with regard to moving out of a harmful dependence on aid.

There are no easy answers, and as ever the development cooperation landscape will emerge organically as much as it will be planned. But the rhetoric that is leading some agencies to exit from key countries when they cross the LIC-MIC threshold is misguided and appears not fully to take into account either the complex needs of countries even as they emerge from very low-income status, or the broadening set of international objectives leaders appear set to sign up to. The role of international public finance, not just aid, has never been more important, and in this evolving context the LIC-MIC distinction has acquired a status well beyond its relevance to global development discussions. ■

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# FROM SILOS TO SYSTEMS

**Annalee Babb** considers how middle-income countries can leverage global value chains in a digital age.

In this age of digital technologies and knowledge-based economic activity, conceptual challenges exist around the proper context for traditional notions of 'industrial' development, value 'chains' and manufacturing as a distinct sector, segmented from other areas of economic activity such as services.

Classical definitions of 'industry' include economic activity concerned with the processing of raw materials and manufacture of goods in factories. One imagines, therefore, that industrial development encompasses improvements in economic, political and social well-being emerging from 'industry', as so defined. Similarly, the term 'value chain' suggests a degree of linearity, a type of sequential, ordered process. But this does not reflect the way that innovation works in a real-world 21st century context, where the creative and experience industries are adding increasing levels of value to traditional economic activities. In reality, the world that existed when the United Nations Industrial Development Organization (UNIDO) was formed in 1966 has undergone a massive sea change that all but demands a corresponding shift in the use of language and in conceptual frameworks around how economies and businesses now function.

Today, digital convergence means 'everything is everything' and everyone has the potential to be in everyone else's business. Interconnected computers deliver a global network of networks called the internet. The internet is TV. TV is radio. Radio is accessible on mobile phones and other devices. Mobile devices deliver messages, movies, music, books, games and magazine content anywhere, any time. These digital technologies and frameworks are challenging existing market structures, providing alternate routes to market, and fuelling more intimate, interactive connections with consumers.

The internet itself is breaking down silos, hierarchies and structures of control, and it is blurring traditional lines between industry sectors, like manufacturing, services and the creative and experience industries. It is forging dynamic relationships between producers, service providers, innovators, content creators and consumers, helping to facilitate immediate feedback between originators and end users. The future of many business activities is now *personalization*: products, services, content and experiences designed around the worldviews and desires of individual tastemakers, content curators and, perhaps most importantly, average consumers.

The good news is that the death of "old" models invariably opens possibilities for the birth of something new, even with respect to traditional "industry".

For the middle-income countries (MICs) of the English-speaking Caribbean, this shift holds tremendous potential for the evolution of a new post-Independence development narrative that leverages the gains they have made since the end of colonial rule.

In the early years of Caribbean independence, beginning in the 1960s, the main driver of economic development was the need to create jobs en masse. Due to generally low labour, energy, and production costs, these were largely low-skill, low-wage, and high-volume occupations in large multinational manufacturing concerns, for which low-tax regimes and other economic incentives were added inducement. Almost five decades later, significant advances in the region's human development, including high levels of education and literacy, as well as changes in global value chains (GVCs) brought on by technological innovation, have combined to result in the evolution of new models for attracting foreign direct investment (FDI).

Today, extensive outsourcing and offshoring are part of organizational change, partly to sharpen a firm's focus on its core business, including higher specialization and division of labour between locations, and partly to strengthen relationships with partner organizations that have complementary skills. In these GVCs, entry points to various markets are constantly changing and evolving in response to, and in order to pre-empt, accelerating technical progress and the need to constantly align competencies and assets to achieve maximum value.

In one sense, therefore, the focus of MIC efforts to attract FDI has also shifted to per-

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sonalization: providing solutions to foreign investors operating in high-valued-added niches as part of GVCs that require high skill levels and higher degrees of specialization. This emerging value-added pattern represents a collapse in the relative importance of manufacturing *operations* and a rise in the contribution of upstream and downstream functions like logistics, marketing, research and development (R&D), branding, design, tax strategy and finance. This model leverages original content, ideas, skills or raw data, creates value from remote locations, and utilizes information technology tools and telecommunications infrastructure. It both requires and delivers services for which market access and the free flow of content are vital. Barriers to entry include education, creativity and quality of experience.

In 2006, based on an understanding of these global trends, the then government of Barbados created a national investment promotion agency to help propel the country to new dimensions of economic development. Leveraging the promise of digital technologies and frameworks, understanding the evolution in GVCs and reflecting a new model of investment promotion, the original *Invest Barbados* represented a movement away from traditional, ring-fenced, offshore models. It was an attempt to link international business and foreign investment and their GVCs to a vibrant local entrepreneurial culture committed to "engaging the world" through business, innovation and knowledge networks offering high-value-added content, experiences and services. In this, *Invest Barbados* had four core functions:

**1. Value proposition development** to research best-in-class trends, to define the Barbados brand in international business and to design targeted investor solutions, products and/or services to attract FDI that would be a match for the unique Barbados brand.

**2. Global market access/global investment promotion** to seek out specific firms/players in specialized niches in targeted geographical locations that could offer personalized solutions that no other jurisdiction could offer.

**3. Investor relations** to facilitate mandate development/extension for multinationals already located in Barbados, to foster a more business friendly national ecosystem, and to facilitate firm operations through world-class client relationship management.

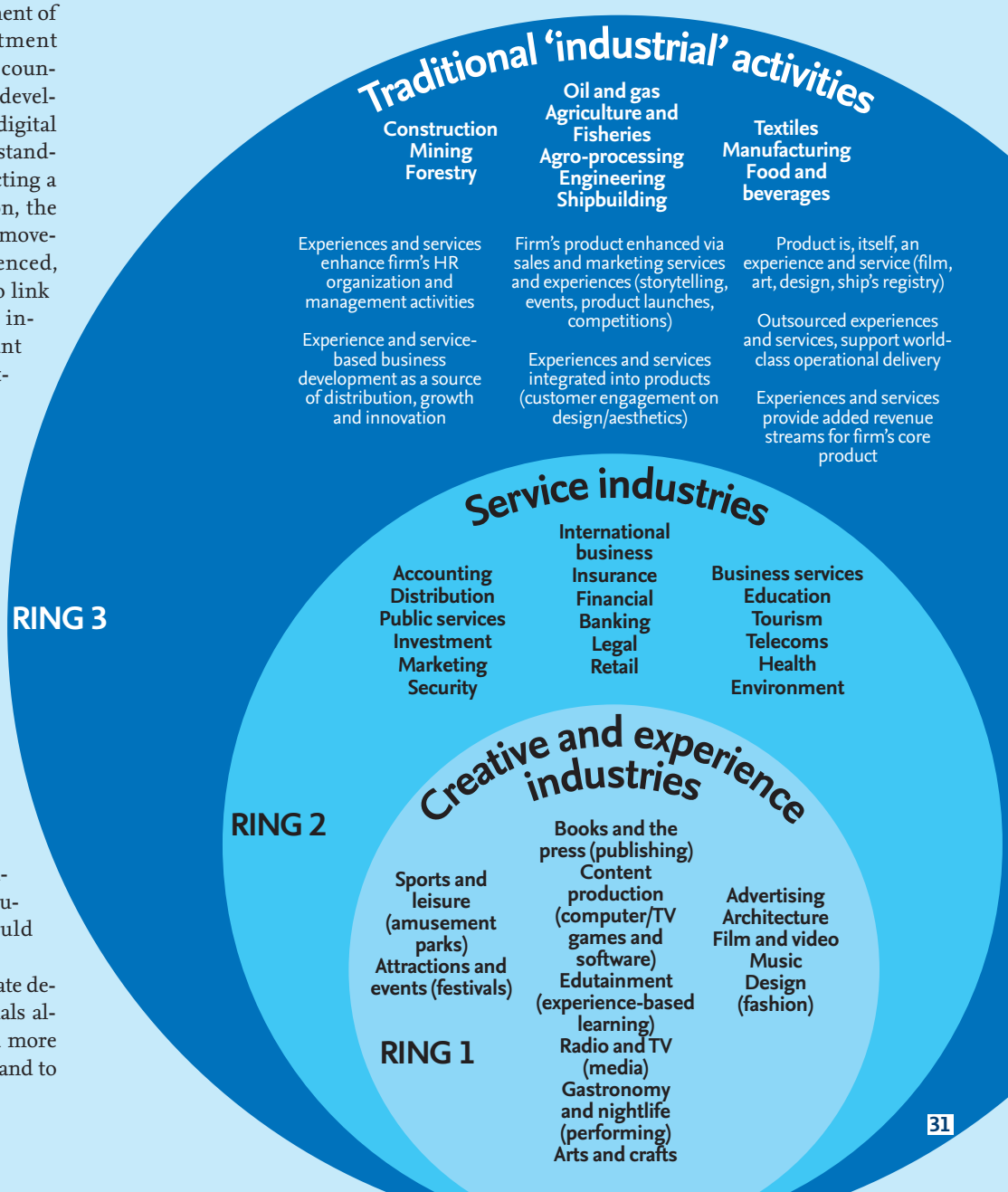
**4. Indigenous services development** to link Barbados' high-quality services, creative and experience industries to FDI to assist in mandate development and/or expansion, and to leverage GVCs for indigenous exports.

With this model, the goal is to think in systems not silos, incentivizing all sectors to try and craft experiences, content and services that enhance product, investor and customer value.

As illustrated in the accompanying visual, traditional industrial activity involves the processing of raw materials and the manufacture of tangible goods. Services industries are intangible, offering knowledge and time to improve the operations and efficiency of other actors. The creative and experience industries are also intangible, experiential in nature and formed from the creative imagination.

Value-added for MICs might be found in focusing on opportunities for collaboration across these three ecosystems and their GVCs, by encouraging actors in Rings 1 and 2 to work together, and with actors in Ring 3, to design business models that increase productivity and add appreciable value.

There is the danger in these recessionary times that governments in small, open MICs will push their economies deeper into recession by implementing harsh austerity measures, while resisting real structural transformation. In crafting solutions that bridge these gaps, international organizations might assist in writing a new development narrative for these often-neglected members of the global community of nations.



**Andy Sumner** and **Sergio Tezanos Vázquez** explore a more nuanced classification system than the current system of low and middle-income countries.

# A development classification in a non-linear (developing) world

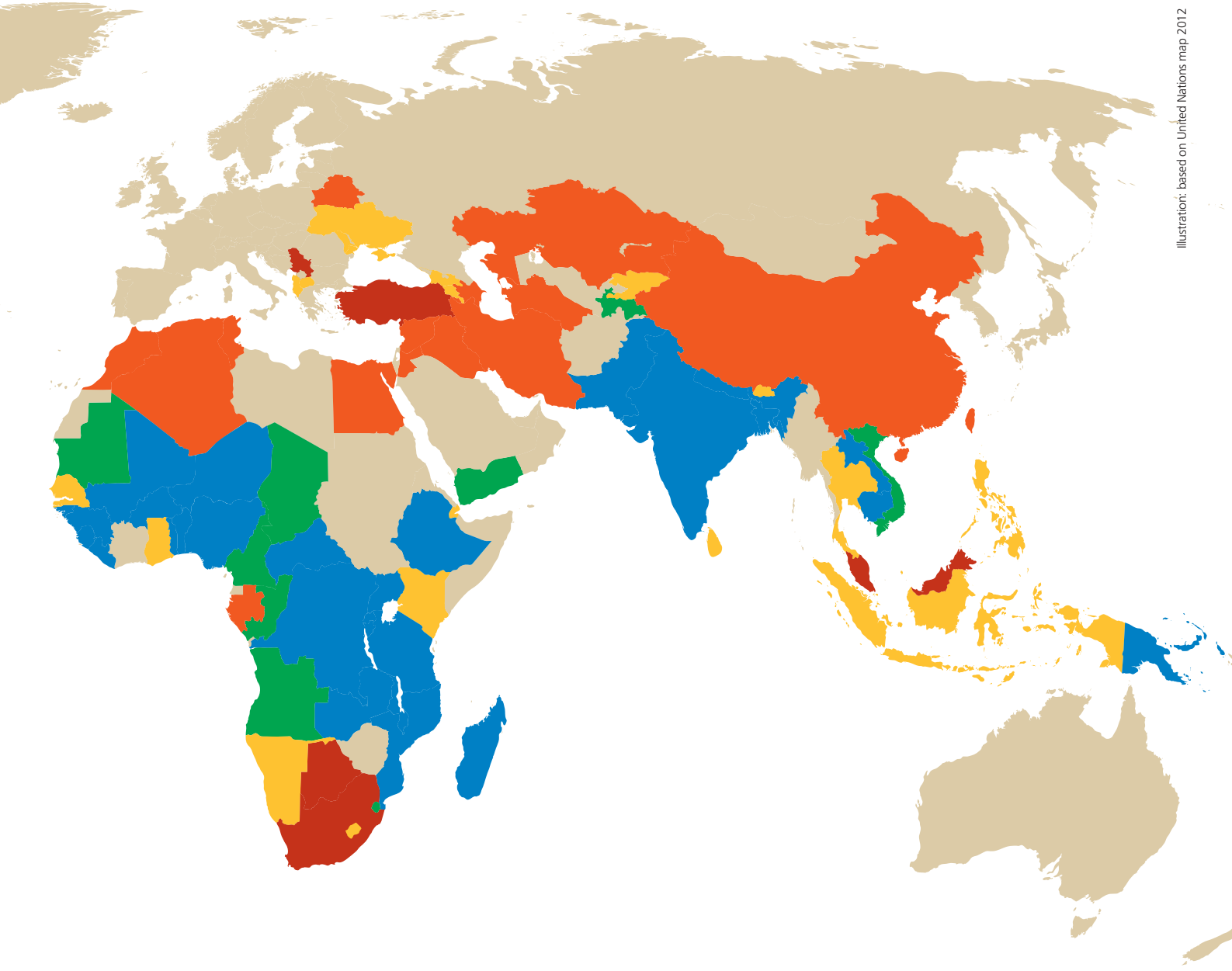


Illustration: based on United Nations map 2012

**Cluster 1 countries** — *Countries with high poverty rates and largely 'traditional' economies*

**Cluster 2 countries** — *Countries with high poverty and malnutrition rates, which are primary product-exporting and have limited political freedom*

**Cluster 3 countries** — *Countries which are dependent on external flows and have high levels of inequality*

**Cluster 4 countries** — *Emerging economies which are primary product-exporting with low inequality but with high environmental pollution and limited political freedoms*

**Cluster 5 countries** — *Unequal emerging economies with low dependence on external finance*

**Countries not included in the classification**

● The analysis includes 101 of the 139 low and middle-income countries (i.e. 72.7% of the targeted countries, and 95.3% of the population of the developing world). The countries not included in the analysis are either States with less than one million inhabitations (Antigua and Barbuda, Dominica, Fiji, Grenada, Kiribati, Maldives, Marshall Islands, Mauritius, Mayotte, Palau, Samoa, Sao Tome and Principe, Seychelles, Solomon Islands, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Tonga, Tuvalu and Vanuatu), or countries and territories with limited statistical information (Afghanistan, Bosnia and Herzegovina, Cuba, Eritrea, Kosovo, Lebanon, Libya, Mongolia, Myanmar, the Democratic People's Republic of Korea, Somalia, Sudan, Timor-Leste, Uzbekistan, West Bank and Gaza, and Zimbabwe).

Photo: Dimas Ardian/istock

Workers in a Samsung factory in the Indonesian city of Cikarang. Indonesia has made substantial progress toward achieving some of the United Nations' Millennium Development Goals. The number of people living in poverty has been reduced but the country has a dismal trajectory in terms of providing the population with basic sanitation, and it faces rising income inequality and gender discrimination.

In 1963, Dudley Seers – the British development economist – wrote in *The Limitations of the Special Case*: "the typical case (of a developing country) is a largely unindustrialized economy, the foreign trade of which consists essentially in selling primary products for manufactures. There are about 100 identifiable economies of this sort, covering the great majority of the world's population."

And perhaps most famously, in 1969, Seers wrote in *The Meaning of Development*: "The questions to ask about a country's development are therefore: What has been happening to poverty? What has been happening to unemployment? What has been happening to inequality? If all of these three have become less severe, then beyond doubt this has been a period of development for the country concerned [...] If one or two of these central problems have been growing worse, especially if all three have, it would be strange to call the result 'development', even if per capita income has soared."

Since then, many have challenged the use of income per capita as the primary proxy for development. Of course, in addition to the World Bank's low and middle-income countries classification, there are other classifications –notably the human development approach based on Amartya Sen's work with the United Nations Development Programme (UNDP), the UN's Least Developed Countries classification, and the Global Multidimensional Poverty Index (MPI) proposed by the Oxford Poverty and Human Development Initiative.

We continue this tradition, with a more recent twist, based on two reasons. First, that development is a multidimensional process. And second, that the location of global poverty is changing: only a quarter of the world's extreme poor live in countries classified by the World Bank as low-income countries.

We point to an emerging way of thinking about development, moving beyond the linear, 'league table' approach, which tends to imply a certain shared pathway, and here outline an example of what this might look like (and there are no doubt others). A more detailed explanation of our development taxonomy can be found in a paper recently published by *The Journal of Development Studies*.

We use a hierarchical cluster analysis to

identify five clusters of developing country, taking a set of indicators for 2005-2010 covering definitions of development based on the history of thinking about 'development' over the last 50 years from four conceptual frames:

i. development as structural transformation.
ii. development as human development.
iii. development as democratic participation and better governance.
iv. development as environmental sustainability.

Our development taxonomy differs notably from the usual per capita income classification used to classify low and middle-income countries. Notably, many countries commonly labelled as "emerging economies" are not in the emerging economies clusters because they retain characteristics of poorer countries.

Our analysis generated the following five clusters of developing countries:

● **Cluster 1.** ***Countries with high poverty rates and largely 'traditional' economies*** **(in the Dudley Seers sense).** These countries have the highest poverty and malnutrition headcounts; however, the income inequality is less acute than in clusters 3 and 5. On average, the agricultural sector contributes one-third of GDP, although exports of primary products are low. Moreover, these countries have the lowest levels of labour productivity and innovation, and they have the second lowest governance indicators and the lowest $CO_2$ per capita emissions. Many of these economies are highly dependent on external flows (mainly ODA). This cluster includes 31 countries (25 low-income and six lower-middle-income countries), some of them surprising, for example, India, Nigeria, Pakistan and Zambia.

● **Cluster 2.** ***Countries with high poverty and malnutrition rates, which are primary product-exporting and have limited political freedom.*** These countries have severely constrained political freedoms, high dependency on natural resource exports and moderate income inequality (relative to the average for all developing countries). These countries rank second after cluster 1 in terms of income poverty, malnutrition, non-agricultural GDP, productivity, innovation and $CO_2$ per capita emissions. This cluster includes nine countries (two low-income countries and seven lower-middle-income countries), including Angola, Cameroon, Congo, Mauritania, Swaziland, Viet Nam and Yemen.

● **Cluster 3.** ***Countries which are dependent on external flows and have high levels of inequality.*** This cluster ranks third in terms of income poverty, malnutrition, non-agricultural GDP, productivity, innovation, and $CO_2$ per capita emissions. However, these countries have the second highest income inequality after cluster 5 (see below), the lowest proportion of exports in the primary sector, the second highest external finance, and the second best scores in governance (although still below the world average) and democracy indicators. This cluster has 32 countries (two low-income countries, 20 lower-middle income-countries and 10 upper-middle-income countries), including Colombia, Ghana, Indonesia, Panama, Peru, Senegal and Thailand.

● **Cluster 4.** ***Emerging economies which are primary product-exporting with low inequality but with high environmental pollution and limited political freedoms.*** These countries have the lowest poverty and malnutrition, and rank second in terms of non-agricultural GDP, productivity, innovation capacities and external finance. However, they have the second highest proportion of primary products in exports, the second lowest governance indicators, the lowest democracy indicators and they are the most polluting countries of the sample. This cluster has 15 countries (five lower-middle-income countries and 10 upper-middle-income countries), including Azerbaijan, Belarus, China and Kazakhstan.

● **Cluster 5.** ***Unequal emerging economies with low dependence on external finance.*** These countries have the highest inequality, non-agricultural GDP, labour productivity and innovation capacities. They also have the best governance and democracy indicators, the lowest dependency on external finance and the lowest poverty and malnutrition headcounts. This cluster includes 14 countries (one lower-middle-income country and 13 upper-middle-income countries), including Argentina, Botswana, Brazil, Chile, Costa Rica, Malaysia, Mexico, South Africa, Turkey and Uruguay.

Two-thirds of the world's poor – not surprisingly given the characteristics noted above– live in *cluster 1* countries, though this is largely due to the inclusion of four populous countries (Bangladesh, India, Pakistan and Nigeria – and one should remember that a third of world poverty is accounted for by India). About a quarter of world poverty is situated in *cluster 3* and *cluster 4* countries, and the remaining 5% live in *clusters 2* and *5*.

What is most striking is that we find that there is no simple 'linear' representation of development levels (from low to high development countries), as found in the income per capita classification and in the Human Development Index and its variants. In particular, whereas the income classification depicts a linear development process where all countries are assessed as if they were following a similar 'development path' of income growth – as described, for example, by Rostow's 'stages of growth', regardless of other development dimensions, our taxonomy offers a somewhat more nuanced understanding of the diversity of challenges of developing countries.

Building a development classification is not a simple task: once we overcome the overly-simplistic, income-based classification of the developing world, we find that there is no group of countries with the best (or worst) indicators in all development dimensions.

As Seers noted, "the most important use of development indicators is to provide the targets for planning". Therefore, if it is possible to identify reasonable homogeneous development groups, it would be more appropriate for development planning to build 'complex' taxonomies on a five-year basis than to rank countries in terms of per capita incomes. In keeping with a growing consensus in development thinking, this way of thinking points to an understanding which is less about linear progression, and where change is path-dependent and development policy is best seen as an evolutionary process.

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Photo: Novo Nordisk

# Stable, prosperous and happy

Denmark is often cited as one of the world's best countries to live in. In the 2013 World Happiness Report, published by Columbia University's Earth Institute and commissioned by the United Nations, Denmark is ranked the happiest country in the world. Significant contributing factors include the country's high level of economic prosperity and its strong welfare state, based on the principle that all citizens have equal rights to social security. Within the Danish welfare system, a number of services, including health and education, are available to citizens, free of charge. The Danish welfare model is subsidized by the state and, as a result, Denmark has one of the highest taxation levels in the world.

One of the main foundations for economic growth and social welfare in Denmark since World War II has been manufacturing, which has flourished in the context of an economy with a strong record of macroeconomic stability, an extended period of political stability and consistently high international rankings in terms of ease of doing business.

## Flexicurity

Denmark's strengths include abundant talent – thanks to high academic standards – and relatively flexible labour laws. 'Flexicurity' is the word often used to describe a model that attempts to manage the challenges of globalization, while securing steady economic growth and employment. The flexicurity model has three components:

- flexible rules for hiring and firing, which make it easy for the employers to dismiss employees during downturns and hire new staff when things improve. About 25% of Danish private sector workers change jobs each year.
- unemployment security in the form of a guarantee for a legally specified unemployment benefit at a relatively high level – up to 90% for the lowest paid workers.
- an active labour market policy. An effective system is in place to offer guidance, a job or education to all unemployed. Denmark spends approx. 1.5% of its GDP on active labour market policy.


Photo: Lego

## At a glance

*Head of state: Queen Margrethe II*

*The Prime Minister is Helle Thorning-Schmidt of the Social Democrats*

*The current government is a coalition of Social Democrats, Social Liberals and the Socialist People's Party*

*Population: 5.6 million*

*Urban population (% of total population): 87%*

*Ranking in the World Happiness Report 2013 index: 1*

*Ranking in Ease of Doing Business 2013 index: 5*

*Internet users (% of total population): 90%*

*Main industries: iron, steel, non-ferrous metals, chemicals, food processing, machinery and transportation equipment, electronics, furniture and other wood products, shipbuilding and refurbishment, wind turbines, pharmaceuticals and medical equipment*

Photo: Carlsberg

The country has a strong research base and has long been among the world's biggest spenders on research and development in both the public and private sectors. Not coincidentally, Denmark has consistently ranked in the top ten in the annual *Global Innovation Index*.

## Clean-tech

Innovation and public support have helped Denmark to become a world leader in the field of clean technology solutions. In 1980, the Danish government was Europe's first to bring in large-scale subsidies for renewable energy providers and Denmark quickly became a pioneer in developing commercial onshore and offshore wind power. Today, according to the Danish Wind Energy Association, there are more than four thousand onshore turbines making Denmark the country with the highest ratio of turbines per capita. The Danish wind turbine industry is the world's largest and Danish companies have installed more than 90% of the world's offshore wind turbines.

Solar power initially also benefited from a long-term public subsidy, dating back to 1979. The subsidies were stopped in 2001 but the move had a positive effect on the


Photo: Bang & Olufsen

Photo: Novozymes


Photo: Maersk


Photo: Vestas

World-famous Danish companies include Novo Nordisk, Bang & Olufsen, Carlsberg, Novozymes, Maersk and Vestas.

industry, pushing it to produce solar panels of the highest possible quality in order to improve returns on investment.

Wind and solar energy are key elements in a green strategy promoted by the Danish government. At present, Denmark covers 22% of national energy consumption with renewables. In 2012, the parliament pledged to ensure that 35% of the Danish energy supply will be based on renewables by 2020, with the aim of attaining 100% by 2050.

## Challenges ahead

In spite of the country's competitive strengths, manufacturing employment has been shrinking for decades. From 1980 to 2010, Denmark shed nearly 160,000 production jobs. The top five industries in Denmark, machinery; food and beverages; petroleum and chemical products; fabricated metals; and electrical components, which account for 68% of Denmark's manufacturing employment and 78% of manufacturing's contribution to GDP, have lost a combined 65,000 workers since 2000.

Over the same period, manufacturing's share of GDP shrank from 17% to 12%, and financial and business services now account for the biggest share (25%) of GDP (source: OECD). Future prospects are dimmed by the decline in the number of young people entering industrial employment. According to a recent report by the Boston Consulting Group (BCG), only 9% of Denmark's industrial workforce is under the age of 24, down from 21% in 1993. This decline threatens Danish industry because the availability of highly trained factory workers has long been a key competitive advantage. The competitive challenge will be exacerbated over coming decades as highly trained workers retire, with few successors rising through the ranks.

## Wage inflation

Manufacturing competitiveness is also being eroded by wage inflation. Although wages in China and other emerging markets are rising sharply each year, the labour-cost gap is not shrinking sufficiently to improve Danish manufacturing competitiveness compared with low-cost countries in the near term. Since 2004, average Danish hourly factory wages have increased 3.5% annually. Even though this is far below the pace of wage inflation in China and other emerging markets, Danish wages are rising just as fast in absolute terms because they are starting from a much higher base. The BCG projects that average factory wages will increase from the current rate of about €29 per hour to €36 per hour by 2020.

The country's manufacturing sector is dominated by companies established decades ago in old-line industries. There have been very few major new entrants as revealed by the fact that 24 of Denmark's 30 biggest manufacturing companies were founded before 1972, suggesting that the country is not developing enough dynamic new manufacturers capable of becoming global leaders in next-generation industries.

If allowed to continue, the erosion of the manufacturing base is likely to have serious ramifications for the economy because manufacturing companies not only contribute jobs and strong trade balances, but also support adjacent industries. Only the right mix of policies and corporate investment will enable Denmark to restore its competitiveness and ensure that manufacturing remains a powerful contributor to future economic growth and job creation.

Interview with **Ida Auken**, Denmark's Minister of the Environment.

# 'More than 22,000 Danish companies produce and sell green products and services'

**In 1971, Denmark established a Ministry for the Environment and was the first country in the world to implement an environmental law in 1973. Does this ease up your work from the perspective of reputation or does it impose more demands in order to keep up with expectations? What are the expectations of the Danish people and neighbouring countries?**

During the 1960s and 1970s, Denmark experienced massive economic growth. Along with the new consumer society, the need for environmental regulation quickly became clear. That is why we as a country today can say that we have a relatively long tradition of taking good care of our nature, water and other resources. Danish citizens expect their drinking water to be fresh and clean, and they expect that they can take a swim in the ocean without any risk from pollution.

Of course, it is no easy task to find the perfect balance between use and protection. We are a small country and our space is limited. But the awareness of environmental issues among the people, industry, agriculture and organizations definitely helps. I strongly believe that we need to have a close partnership with all participants to make the right decisions. In many cases we are first movers when it comes to environmental regulation and I think a lot of our neighbouring countries are impressed with that.

**Can you tell us more about the bright green environmental movement?**

The core elements of the bright green movement are innovation, closed loop material cycles and sustainable product designs, urban revitalization and entrepreneurial enthusiasm to transform our society to a more sustainable society. This is very much along my own line of thinking and I firmly believe it can pave the way for serious improvements in resource efficiency, and it should of course be embraced at the highest political levels in order to support this development.

The response of the bright green movement is to transform the challenges of today and send a positive notion to businesses and other key figures that there is only one type of growth in the future, that this growth is green and that it provides business opportunities. In my mind it is clear that those who are able to connect the challenges of the resource/climate crisis and the economic crisis will be the market leaders of the future. I also believe that it is absolutely crucial to mobilize action through a positive narrative, rather than speaking about sustainability merely as a challenge. A positive drive is a prerequisite to initiating a fast track green transition.

Having said that, we should not lose sight of the urgency of the challenges with which we are confronted and we should not forget that the overall target in terms of resource use should be an absolute decoupling between economic development and environmental impact. Attention should therefore also be given to our absolute levels of resource use – to avoid resource efficiency gaining in one area and resulting in increased resource use in other areas. This can easily be forgotten in the bright green enthusiasm for green innovation.

An important element in this respect is people's awareness and consumer behaviour. Who wouldn't want to hang on to our cars and IT-gadgets, but if only they were designed to be sustainable? At the same time, there's no question that in addition to taking on board green innovations, we need to change our habits. Most of these changes, often called for by the so-called "dark greens" – eating less meat, cycling and walking more, for example – also possess significant potential in terms of achieving environmental results.

**Lego is one of the most well-known Danish companies. Long before other firms they reduced and removed the use of toxic materials in the manufacturing of their products and started to lead in corporate social responsibility (CSR) and environmental responsibility. How do you think the national culture and values of a country play a role and influence corporations in their responsibility plans and in their own value-building?**

Denmark can be proud of a large number of Danish companies leading the CSR agenda, and I am convinced that there is a reason for this:

First of all, environmental issues have been part of the public, as well as political, debate since the early 1970s. Denmark was the first country to adopt an Environmental Act and this has driven Danish companies to 'green' their corporations and pioneer green technologies. However, my task as Minister for the Environment is not only about legislation and compliance – it is also about encouraging companies to go beyond compliance ad embrace CSR: eco-labels, environmental management systems, sustainability reporting, resource efficiency, etc.

The demand in Denmark for green products is clearly visible. We are one of the front runners in the EU regarding the public procurement of green goods and services. Furthermore, the Danish consumer leads the world in the purchase of organic products, and the Nordic eco-label – the swan – is recognized by 90% of Danes. From my point of view, CSR is not only driven by culture and values. And it is definitely not driven by philanthropy. CSR is driven by business and thus becomes a part of a company's DNA and new business model.

Danish companies use CSR strategically – to increase competitiveness, to access new markets, to be resource-efficient, to cut costs, and to develop new and innovative products. A recent analysis showed that more than 22,000 Danish companies produce and sell green products and services – that is 20% of our companies!

**From an environment perspective, what are the greatest challenges and opportunities for Denmark in the next 10 years and in the long run?**

I like to think of challenges and opportunities as two sides of the same coin. In the long run – and even just within the next 5 to 10 years – we need to be smarter in the way we address the issues that are not just challenges for

Denmark, but challenges for the global environment and for the health and prosperity of us all.

Just one example: we have come far in our efforts to improve air quality in Denmark's largest cities, yet too many people are still badly affected by pollution. This is a problem we share with cities all over the world. Examples of other significant challenges that still require attention include the scarcity of clean water, biodiversity loss, climate change, the dispersion of toxic chemicals, and unsustainably high levels of resource use.

The opportunity is to deliver a green solution to these problems which at the same time strengthens the basis for growth. For example, we must develop technologies that reduce emissions from cars, power plants, ships; develop alternatives to fossil fuels, new business models and so on; and develop a framework around it that supports its market uptake both through regulation and through voluntary instruments such as green procurement. The challenge is to do it – the opportunity is to do it now and do it just a little bit better than the rest.

**How does the Danish government support Danish companies who want to go the extra mile pursuing green innovations?**

The Danish government supports green technology development through a number of targeted programmes, including a green technology development programme. Furthermore, the government actively promotes green public procurement. Specifically, we produce guidelines for public procurers regarding green product requirements, and green specifications are incorporated into a large number of multi-year public procurement framework contracts.

In addition, a green procurement partnership between the Ministry of the Environment and major town municipalities has been established in order to encourage further targeted green demand. Other instruments in support of such companies are environmental certification and labelling schemes, whereby the Ministry for the Environment provides financial support to an independent eco-labelling secretariat, which provides assistance and guidance to companies.

● *Interview by DAAN ELFFERS, head of the EMG Amsterdam office. EMG is a leading international sustainability consultancy, offering CSR consulting for profit and growth from sustainable development.*

Photo: sf.dk

**"There is only one type of growth in the future… This growth is green and it provides business opportunities."**

**Ida Auken, Denmark's Minister of the Environment.**

GOOD BUSINESS

In the latest of a series focusing on remarkable companies that are making waves in the areas of green industry and sustainable industrial development, *Making It* takes a look at the Russian recycling company, Karton Chernozemie.

# Karton Chernozemie

According to a recent report by the World Bank's International Finance Corporation, more than 48 million metric tons of municipal solid waste was generated in the Russian Federation in 2010, 95% of which was sent for disposal, mostly in landfill sites. In contrast to most countries in the European Union, which typically recover around 60% of municipal waste, in Russia, most of it is just thrown away.

This situation, the IFC report states, has "negative environmental consequences". Toxic substances accumulate in landfills, infiltrating the soil and groundwater, and polluting the air, with short-term effects (such as combustion and landfill fires) as well as long-term impacts (decreased biodiversity and soil fertility, and damage to human health). There is also the issue of resource efficiency, or rather the lack of it. The low recovery rates in Russia mean that the use of raw materials and energy is massively inefficient. Experts estimate the Russian waste market has a potential value of US$3.5bn.

## Prize winner

The Karton Chernozemie recycling company is trying to change things, starting in the Voronezh region of Russia. The company, one of the first of its kind in the Russian Federation, collects, sorts and recycles polymer, cardboard and glass waste. It was founded by Igor Zaboev and Petr Boikov in 2008. In a short time, their success with the company received international recognition, and they were awarded the Youth Business International *Environmental Entrepreneur of the Year* prize in 2012. (Youth Business International is a global network of independent, non-profit initiatives helping young people to start and grow their own business and create employment.)

The two had started out in the construction industry but saw the potential for waste collection in the town of Semiluki, the administrative centre of the Semiluksky District of Voronezh Oblast. They began collecting cardboard and paper from containers and several industrial companies. Boikov recalls, "We started out with just one truck, which we purchased on credit, and one compacting machine. This wasn't enough to make good business and we had to increase our volumes. In our case, it meant we had to get long-term contracts to supply large recycling companies."

The young entrepreneurs soon discovered that their market was limited by the fact that large-scale recycling firms only accept raw materials in pre-packaged 'brick' form. To have any chance of significant growth, they needed to invest in the expensive machinery needed to produce these bricks. After being denied a loan by a large number of commercial banks, they turned to Youth Business International member, Youth Business Russia, which was able to provide them with a loan and connect them with a successful and well-established business mentor from their community.

## Bottlenecks

The financial element of the support was used to purchase the equipment needed to produce the easily tradable bricks, and by 2010 the company was collecting waste and supplying it to larger recycling companies across the Voronezh region and beyond. But, even with this expansion, Karton Chernozemie had to address some bottlenecks.

Boikov says, "Everybody understands that the collection of wastepaper is important but nobody wants to meet halfway. There is a lot of wastepaper but just a few recycling companies to handle it, and they dictate their terms. If you don't accept their terms, then you have to look further afield and this increases your transport costs."

In the absence of a well-developed waste management system in Russia, the entrepreneurs looked to the neighbouring Ukraine, and made contact with a cardboard and paper mill in Kiev.

"Although Ukraine is a former Soviet state, it has managed to develop its waste recycling sector, and in that country about 65% of waste is collected, sorted and sent to recycling companies. The Kiev mill can recycle about 30,000 tonnes a month, compared to the local factories in Lipetsk, just 3,000 tonnes, and in Rostov, just 5,000 tonnes," says Boikov.

**"Low recovery rates in Russia mean that the use of raw materials and energy is massively inefficient. Experts estimate the Russian waste market has a potential value of US$3.5bn."**

Igor Zaboev and Petr Boikov (right), founders of the recycling business, Karton Charnozemie.

## Plastic recycling

A key decision that has helped the company grow still larger was the move away from dependence on the high-intensity, low-yield work of recycling paper, and a diversification into plastic recycling.

"Our business has social roots, and almost from the beginning we helped the town to remove plastic bottles and other plastic waste because these are hazardous materials that do not decompose," recalls Boikov. "Today, we collect and compress this waste, and bring it to other enterprises which can make use of it. For example, in the production of rubber shoes, plastic crumbs can be added to make the material stronger."

Karton Chernozemie is now dealing with the full cycle of Russian domestic waste, collecting from residents, sorting, processing and eventually distributing the various raw materials to different factories throughout Russia. Plastic waste goes mainly to the Ukraine, where it is converted into plastic pipes, shoes and garden tools and furniture.

In the future, the company plans to expand into the disposal of hazardous waste, including items like light bulbs, mercury thermometers and toxic waste. This is a reflection of a social commitment to the cause of environmental protection.

"It is not just a business issue but the matter of my personal contribution: have I done anything useful in my life?" says Igor Zaboev. "The future of my business is good because the potential for recycling is endless in Russia. I am pleased to be changing ingrained habits and getting new ideas accepted as the norm."

# Opportunities and challenges for business engagement in the post-2015 development agenda

By **BETTY MAINA**, CEO of the Kenyan Association of Manufacturers, and **STEFANO PRATO**, the Managing Director of the Society for International Development and Maina's adviser on the High Level Panel on the Post-2015 Development Agenda.

"It is time for business to set higher standards for its operations and move beyond the current understanding of corporate social responsibility into a new socially and environmentally sensitive business model."


Photo: US Mission Geneva

The past twenty years have witnessed a significant increase in business partnerships, with governments and civil society in the pursuit of various aspects of the sustainable development agenda. As the international community engages in widespread dialogue on the framework to replace the Millennium Development Goals, the energy, innovation and resources of the private sector are increasingly recognized to be one of the core drivers of the agenda for economic empowerment, and to redress the current mismatch between aspirations, capabilities and opportunities many countries – particularly, but certainly not exclusively, African ones – are confronted with.

This involves a much more comprehensive engagement by the private sector than 'simply' that of successfully running businesses. Having had the honour to serve on the United Nations Secretary General's High Level Panel of Eminent Persons on the Post-2015 Development Agenda, we had the opportunity to closely interact with many entrepreneurs and managers that are actively engaged in the search for strategies

that could create the conditions for their business to thrive in more inclusive, equitable and sustainable economies and societies.

Such an enhanced business engagement in development comes with new opportunities, as well as renewed challenges. The acceleration of development progress offers increased opportunities for business as it fosters sustained growth and expanding markets, stronger rule of law and political stability, social cohesion and an increasingly educated and healthy workforce. Beyond the production of goods and services, an expanded development engagement also offers opportunities in the provision of social services, such as the delivery of education and health. At the same time, the innovation that drives entrepreneurship can contribute to finding novel ways to address societal problems that could help leap-frog the stages other economies had to go through in their past development paths.

The recognition of the role of the private sector in fostering growth, promoting innovation and providing employment also means that business now has a seat at the table – globally, regionally or nationally – where development policies are defined, with increased opportunities for advocacy on the conditions that facilitate entrepreneurial and market development.

However, these opportunities also involve new challenges and even short-term trade-offs. In this respect, it is necessary to unpack the private sector and recognize that there are very different ways of doing business, some more virtuous than others. It is time for business to set higher standards for its operations and move beyond the current understanding of corporate social responsibility into a new socially and environmentally sensitive business model. This requires action at various levels: the rethinking of corporate reporting standards, the fine tuning of global and national regulations, the strengthening of consumer education and association, and the nurturing of stronger business ethics at all levels. Rather than taking the back seat and waiting for these changes to unfold, the private sector should lead its own transformation in active dialogue with government and civil society. Doing so will also help a great deal in addressing the confidence challenge raised by many watchdogs and civil society networks with regards to the deeper engagement of the private sector with the development policy agenda.

Business increasingly realizes that its long term prosperity is at stake if the challenges of poverty and marginalization are not properly confronted, and economic development patterns do not provide for greater inclusiveness and increased equity of opportunities and outcomes. The frontline involvement by so many companies and business associations in the shaping of the Post-2015 development agenda shows that the private sector is definitely stepping up to co-lead the transformations that are required for these challenges to be tackled and prosperity to thrive.

The critical engagement of the private sector and a new responsible way of doing business are essential for the pursuit of sustainable and equitable development.

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Photo: Anastasia Pelikh / istock.com

# Can intra-BRICS cooperation advance amid economic gloom?

By **OLIVER STUENKEL**, Professor of International Relations at the Getulio Vargas Foundation in São Paulo, Brazil

Since the 4th BRICS Summit in Delhi in March 2012, things seem to have largely gone downhill for the BRICS members (Brazil, Russia, India, China and South Africa). Brazil's economy has lost its vigor, and stifling regulations keep it from becoming more competitive. Growth in China has fallen far below the 10% mark, potentially endangering political stability. India's currency is hitting a "historic low" or a "lifetime low", reflecting its sliding economy. Russia, for its part, is struggling to diversify its economy, while South Africa must be careful not to be overtaken by challengers that seek to turn into the continent's economic hub, such as Nigeria or Kenya.

While reigniting their economies is indeed the major challenge in the coming years, doubts about the utility of the BRICS acronym are misguided. The necessity to strengthen intra-BRICS ties, as well as the opportunity to articulate new narratives on how to best tackle global challenges, remains, and the BRICS leaders must continue to invest in the grouping. It is now time to begin developing a proactive agenda for the 6th BRICS Summit in Fortaleza in 2014.

In the midst of all the economic gloom, business leaders from the BRICS met in Johannesburg in August 2013 to identify specific measures to eliminate barriers to growing trade and investment. The BRICS Business Council was established during the 2013 BRICS Summit in Durban in March, with South African businessman, Patrice Motsepe, named chair of the body. South African President Zuma's decision to address the meeting underlines that South Africa remains the perhaps most eager BRICS member: in 2012, South Africa's total trade with other BRICS countries stood at over 290 billion rand (about 29bn US dollars), up 11% from the 2011 figure; and South Africa's accession to the BRICS grouping in December 2010 remains one of Zuma's major foreign policy achievements.

In parallel, BRICS trade ministers have initiated a study on how to promote value-added products and strengthen investment relations. The trade ministers formed the Contact Group on Economic and Trade Issues, which will meet in November 2013 in South Africa to discuss the study.

> "While China enjoys strong economic ties with all the BRICS countries, trade among the rest is far too low. Trade barriers, regulations and visa rules must be eased to promote economic activity between them."

At the 2014 Summit in Fortaleza, the following three issues should be on the agenda:

First, efforts to strengthen intra-BRICS ties further need to continue, particularly those between the 'BRIS': While China enjoys strong economic ties with all the BRICS countries (it is Brazil's, India's and South Africa's most important, and Russia's second largest, trading partner), trade among the rest is far too low. Trade barriers, regulations and visa rules must be eased to promote economic activity between them. At the same time, diplomatic ties should increase: Brazil's diplomatic presence in China and India, for example, remains far weaker than that in Italy and in France, something which no longer reflects economic realities. Finally, social and cultural relationships need to be strengthened: Indian universities are part of Brazil's 'Science Without Borders' programme, which sends 50,000 Brazilian undergraduates and 50,000 PhD students to study abroad. Russian universities have begun to accept degrees from a number of Brazilian institutions. These are important first steps, but they need to take place in a more systematic fashion.

Strengthening ties between the BRICS goes beyond economics. Getting to know each other better is crucial in order to turn into more effective geopolitical actors willing and able to develop constructive proposals on how to deal with global challenges such as climate change. In addition, the BRICS continue to face serious domestic challenges, and possibilities to learn from each other abound: Brazil's *Bolsa Família* programme, for example, could help improve policies in India.

South African businessman, Patrice Motsepe, chair of the BRICS Business Council.

Photo: World Economic Forum

BRICS leaders, Mexico, June 2012.

Photo: Roberto Stuckert Filho/PR

Secondly, the BRICS need to address global security issues in a more tangible fashion than they have done so far. One important example is maritime security. The BRICS members have coastlines with the Atlantic Ocean (South Africa and Brazil), the Indian Ocean (India and South Africa), the Pacific (China and Russia) and the Arctic Ocean (Russia), and they are thus bound to play a key role in the governance of the seas. Tensions between China and India had long been identified as the major obstacle to including maritime security in discussions during the BRICS summit, yet recent cooperation between the two is likely to remove these difficulties. Both the Chinese and Indian navies are increasingly able to project their power outside of their respective oceans. Brazil is interested in defining a South Atlantic Security Space – it has defined Africa as a strategic priority, and it is developing a fleet of nuclear powered submarines. As ever, larger ships can no longer pass the Suez Canal, and we will see a revival of the Cape of Good Hope route, which could be controlled by Brazil and South Africa, but at this point the two still lack the capacity to play this role. Aside from maritime security, issues such as the 'Responsibility to Protect' are set to gain an ever more prominent space in international affairs, and Brazil should continue to put innovative ideas (such as 'Responsibility While Protecting') on the table during BRICS Summits.

"The BRICS should begin to cooperate more closely regarding their growing economic and political presence in Africa."

Finally, the BRICS should begin to cooperate more closely regarding their growing economic and political presence in Africa. Brazil has historic ties with Lusophone Africa (principally Angola and Mozambique), but it is beginning to engage across the entire continent. China's and India's role is more visible still, and even Russia has big plans for the African continent. The BRICS are all 'emerging donors' set on fundamentally changing the future of development cooperation. Since none of them is a member of the Organization for Economic Cooperation and Development, the BRICS Summit could turn into a platform to debate these issues and begin to develop standards and best practices.

Slower growth across the BRICS cannot be an excuse for the BRICS leaders to turn inwards and disregard the global challenges that require their active input to be dealt with successfully.

● See Post-Western World: how are emerging powers changing the world www.postwesternworld.com

# Industry in the new global development agenda


By **ULLA HEHER**, Post-2015 Strategic Planning Coordinator at the United Nations Industrial Development Organization (UNIDO)

The Millennium Development Goals (MDGs) have been the global benchmark for development progress since their adoption in 2000, but are scheduled to expire in 2015. Right now, the international development community is considering what happens next. So far, preparations have included an array of thematic, national and regional consultations bringing the UN system together with a broad range of development partners; the report of a high-level panel of eminent persons appointed by the UN Secretary-General; intergovernmental discussions on sustainable development arising out of the Rio+20 conference; and countless initiatives from the grassroots up. All of these are aimed at informing the multilateral negotiations kicking off at the UN General Assembly in the fall 2014.

It is no secret that the MDGs, despite their undoubted successes, suffered from shortcomings. In particular, they had little to say about the means by which they should be achieved. As an organization dedicated to achieving prosperity through inclusive and sustainable industrial development, it was especially apparent to UNIDO that this aspect was sadly lacking.

It is ironic that, while in the 1990s industrial development fell out of fashion in the so-called "North" due to the hike in the services sector and the prevailing gospel of Washington Consensus policies, at the very same time industrialization was slashing poverty rates in East and South Asia. In fact, it is largely through industry that MDG Goal 1 – to halve extreme poverty and hunger – will be met at the global level.

However, things have changed immensely since the turn of the millennium. Preparations for the post-2015 agenda have given the sense that the new goals should be rooted in the three dimensions of sustainable development – economic, social and environmental. Meanwhile, industrial policy is firmly back on the agenda in countries around the world and at all stages of development. This stems from the realization that manufacturing and entrepreneurship are the key drivers to create the growth rates, jobs and economic structures needed to eradicate poverty and provide sustainable livelihoods for all.

> "It is largely through industry that MDG Goal 1 – to halve extreme poverty and hunger – will be met at the global level."

For many developing countries, accelerating the transformation of their productive structures is increasingly an integral part of their strategies for achieving inclusive and sustainable development. This is supported by the fact that almost one-third of manufacturing value added is now created in developing countries, up from under 20% about 15 years ago. In fact, the real question about industrial policy in the years beyond 2015 is not *whether* but *how* it should be practiced to best strengthen the global approach to development.

While concrete measures depend very much on country-specific challenges, endowments, and levels of integration in


the global economic system, we can see three broad streams of action for countries at different stages of development. For least-developed countries (LDCs), industrial development offers the most promising opportunity for adding value to their natural resource endowments or agricultural produce, hence bringing about the structural transformation that lies at the heart of inclusive and sustainable development. For middle-income countries (MICs), faced with the prospect of being caught in the "middle-income trap" as their cost structures rise but their capacity to produce higher-value products remains constrained, appropriate policy options need to support the upgrading of their manufacturing sectors to maintain their international competitiveness. Meanwhile, where "developed" countries are concerned, the lasting legacy of the financial crisis highlights the structural problems hindering their recovery, including the dangers of de-industrialization, which accentuates the relevance and pertinence of industrial policymaking today.

And how should this fit with the post-2015 goals? First, it is clear that the best of the MDGs should be retained after 2015. Eliminating extreme poverty should still be the overarching aim. But it is also clear that the new agenda has to better promote a comprehensive approach to sustainable development, providing cross-sectoral solutions to allow for goals to be met simultaneously without one coming at the expense of another.

In this context, fostering inclusive and sustainable industrial development not only promises to effectively contribute to shock-resilient economies and flourishing societies, but also presents a welcome meeting point between the aid agenda of traditional donors, the priorities of emerging development partners and the current development concerns of recipient countries, thus laying the foundation to realize a truly global partnership for sustained prosperity for all.

In November 2013 the issue of sustainable industrialization will be considered in the Rio+20-mandated Open Working Group on Sustainable Development Goals, the main intergovernmental body currently discussing the post-2015 framework in New York. Just a week later, UNIDO will host its General Conference in Lima, Peru – the last to be held before the new global goals are finalized. Both events will be important opportunities for confirming the centrality of industry to development. Let's hope that development partners take the opportunity to address a glaring deficiency of the MDGs and bring industrial development back where it belongs.

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## FURTHER READING

Altenburg, Tilman – Industrial policy in developing countries: overview and lessons from seven country cases
Asian Development Bank – Asia's Economic Transformation: Where to, How, and How Fast? in Key Indicators for Asia and the Pacific 2013
Chandrasekhar, C.P. – Poor Empiricism: The "Middle Income" Trap
ECLAC – Financing for development and middle-income countries: new challenges
ECLAC – Middle-Income Countries: A Structural-Gap Approach
Ghani, Ejaz – How to Avoid Middle Income Traps?
Glennie, Jonathan – What if three quarters of the world's poor live (and have always lived) in Low Aid Countries?
Herbert, Siân – The future of European Union aid in middle-income countries. The case of South Africa
Ohno, Kenichi – Avoiding the Middle-Income Trap: Renovating Industrial Policy Formulation in Vietnam
Ohno, Kenichi – The Middle Income Trap: Implications for Industrialization Strategies in East Asia and Africa.
Sumner, Andy – Global Poverty and the New Bottom Billion: What if Three-Quarters of the World's Poor Live in Middle-Income Countries?'
Sumner, Andy – Global poverty, aid and middle-income countries: Are the country classifications moribund or is global poverty in the process of 'nationalising'?
Szirmai, Adam, Naudé, Wim and Alcorta, Ludovico (eds) – Pathways to Industrialization in the Twenty-First Century: New Challenges and Emerging Paradigms
Thomas, Anna – Do Middle-Income Countries Need Aid?
UNIDO – Industrial Development Report 2009. Breaking In and Moving Up: New Industrial Challenges for the Bottom Billion and the Middle-Income Countries
UNIDO – Networks for Prosperity. Connecting Development Knowledge Beyond 2015

## FURTHER SURFING

http://data.worldbank.org/about/country-classifications – How the World Bank classifies countries
www.accenture.com/microsites/ungc-ceo-study/Pages/home.aspx – The UN Global Compact/Accenture CEO Study on Sustainability 2013
www.kcl.ac.uk/aboutkings/worldwide/initiatives/global/intdev/Index.aspx – King's International Development Institute (IDI) focuses on "emerging economies," both to explore the sources of their success as well as understand the major development challenges they continue to face
www.odi.org.uk – The Overseas Development Institute (ODI) is a leading independent think-tank on international development and humanitarian issues
www.stateofgreen.com/en – State of Green contains information about Denmark's transition to a green growth economy
www.unido.org/mic-conference.html – High-level conference on middle-income organized by the government of Costa Rica and facilitated by the UNIDO initiative, Networks for Prosperity, in June 2013
www.youthbusiness.org – A global network of independent non-profit initiatives helping young people to start and grow their own business and create employment

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