



Executive summary

Considerations for your business:



If the availability of raw materials (including water) declines, how sustainable is your business plan?



Are your profit margins sufficiently robust should the cost of energy rise significantly?

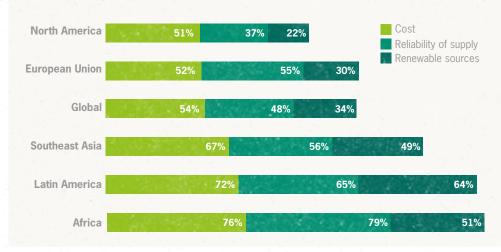


Do you have plans to move to greener sources of energy and/or a more sustainable supply of raw materials?

Energy

- Businesses in emerging markets cite energy as more important to their growth strategy compared with counterparts in developed markets
- More than three-quarters of African businesses cite the cost and supply of energy as crucial to their growth plans
- Relatively few North American and European businesses are looking to move to greener sources of energy

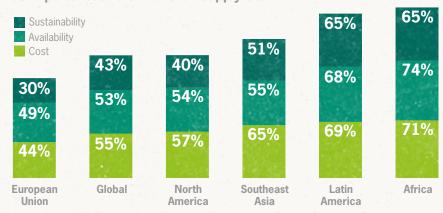
Percentage of businesses citing energy as important to their growth strategy



Raw materials

- Raw materials are relatively more important to businesses in emerging markets
- Around two-thirds of businesses in Africa, Latin America and southeast Asia cite cost as important to them (or their supply chains) over the next 12 months
- The availability and sustainability of supply is also very important in Africa and Latin America
- Businesses in Europe are the least focused on raw materials with fewer than half citing cost, availability or sustainability as important.

Percentage of businesses citing raw materials (including water) as important for them or their supply chain



Foreword

Do we need to change the narrative of the sustainability debate?

Ahead of the annual UN Climate Change Conference in Peru at the end of this year, the leaders of major emerging economies continue to present a united front. When the leaders of Brazil, China, India and South Africa met in New Delhi recently, they reaffirmed that the eradication of poverty is a necessary precondition for meaningful action on climate change and remains their main challenge.

They maintain that developed economies, those historically responsible for the bulk of carbon emissions, should provide transfer funds and technology. The commitment of US\$100 billion per year by developed economies proposed by then US Secretary of State Hillary Clinton five years ago in Copenhagen remains unfunded and Indian environment minister Prakash Javadekar warned that developed countries must "walk the talk." For their part, leaders of developed economies point to the fact that their economies are generally growing more slowly and that their carbon emissions are falling even as those of developing peers are rising due to their rapacious demand for carbon-intensive fuels.

Economists call this stalemate 'the tragedy of the commons' where a common good which benefits everyone and to which everyone has equal access -

in this case the environment - has no governance in place in terms of whose role it is to avoid depletion. No one wants to take responsibility for the clean-up, but as the environment degrades it affects everyone. Just take the world's two largest economies: China is suffering from desertification while air pollution regularly reaches levels considered dangerously unsafe; in the United States, a recent White House report says that every decade of inactivity will result in 40% higher losses from, and costs due, to climate change by deepening the risks to property and livelihoods.

As with so many familiar concepts, sustainability means different things to different people. Personally I find the definition offered by Professor Jeffrey Sachs of Columbia University as helpful as any; he describes sustainable development as "inclusive economic growth which does not impinge on

planetary boundaries." This not only tells us that business growth ambitions need to take into account the wider impact on society and the environment, but also that we need to understand the limitations of the world we operate in. After all, the relationship of businesses with the environment is dynamic and interdependent. The question is how to shift the focus from a perceived general burden of supporting the common good to a debate about the benefits of action and the costs of inaction.

We asked 2,500 senior executives in 34 economies about the importance of energy and raw materials to the success of their operations to better understand prevailing business attitudes to resource scarcity. This report details the full survey results, but the running theme for me was the link between resources and growth, particularly in the emerging markets of Africa and Latin America. Yes, there are

short-term costs associated with acting more sustainably, but these are far outweighed by the long-term benefits. We need to start talking in language that resonates with businesses; highlighting the costs of not 'going green'. Energy supply is becoming more volatile while green technologies have moved on rapidly. The opportunity in emerging markets is huge; the debate should be how, not whether these technologies are deployed.



Nathan Goode Global leader - energy and cleantech Grant Thornton

Energy

Primary energy sources in recent years appear to have become more volatile in recent years, less certain and more technologically challenging. Whether down to conflict and political unrest in oil and gas producing territories, or disasters such as the Deepwater Horizon oil spill in the Gulf of Mexico or the Fukushima nuclear meltdown in Japan, the desire for safe, secure (and preferably indigenous) energy is greater than ever.

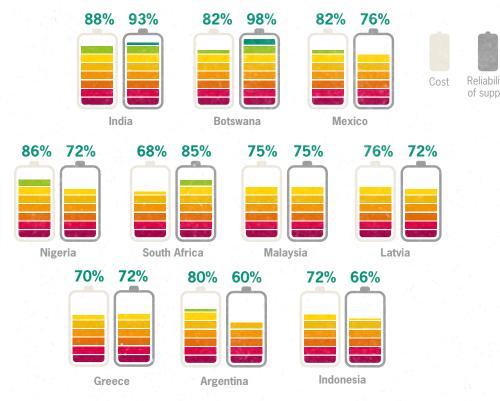
Globally, we see countries addressing the challenge in different ways. In the United States, the shale gas revolution is set to make the economy self-reliant by 2035, while in Mexico the government has broken 75 years of state ownership by opening the energy market to foreign investors, a move expected to bring in around US\$50bn in investment. China and the United States have also signed a series of partnership pacts to allow companies and research institutions to share knowledge around nascent technologies, such as carbon capture and storage (CCS).

Partnerships such as these are an interesting example of how countries with widely different economies can work together to broaden the energy mix available to businesses and consumers, increasing the sustainability of the energy supply and lowering costs in the long-term. However, in the short term, even the established renewable

energy technologies such as wind and solar, require significant amounts of capital to be invested up front. To get the required project investment, governments in some countries set prices per kilowatt hour well above the wholesale cost of electricity at the time, in the form of clean energy subsidies. The picture of government support varies globally, however, and in any case there are other forces at work. In emerging markets, for instance, businesses find it hard to access finance: over the past 12 months, 32% of BRIC businesses have struggled in this regard, compared to just 15% of their G7 counterparts.

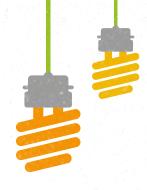
This lack of capital creates a 'make do and mend' mentality which makes capital intensive solutions difficult and, we would argue, ultimately stifles business growth. This is in spite of the importance both of the cost and reliability of energy supplies to the expansion plans of emerging market

Percentage of businesses citing energy as important to their business growth strategy (top ten)



"Power shortages continue to impede the Indian economy which has, despite all challenges, regained its GDP growth momentum post the formation of the new government. Corruption in allocation of energy resources, and continuing subsidies to provide power to consumers below cost have resulted in chronic underinvestment in infrastructure. The new government's initiatives on infrastructure investments in power, especially solar, as well as their boldness in reducing subsidies, is being seen as strong indicators of achieving grid tariff parity by 2020."

Vivek Singh, Grant Thornton India



businesses. In Africa 76% of business leaders say the cost of energy is important to their growth strategy over the next 12 months, slightly ahead of Latin America (72%) and Southeast Asia (67%). This compares with just over half in Europe (52%) and North America (51%). Of the top ten economies most concerned with the cost of energy, eight are emerging markets, led by India (88%), Nigeria (86%) and Mexico (82%). Australia is the anomaly in the top ten; but then its top ten exports, accounting for 65% of the total, are all natural resources. Similarly, businesses in Africa (79%), Eastern Europe (71%) and Latin America (65%) are most likely to cite the reliability of the energy supply as important to their growth strategy. This drops to 55% in the EU, which still gets the majority of its gas from Russia, and just 37% in North America. Botswana (98%), India (93%) and South Africa (85%), all countries which suffer from crippling power

shortages top the global rankings.

Reliability, of course, is both about the ability of a country to access energy resources and get them to where they are needed within the country itself. Many emerging economies face huge challenges within their transmission and distribution networks, to the point where energy self-sufficiency becomes a corporate, rather than a national aspiration.

Switching to greener sources of energy is relatively less important to businesses globally; a third of businesses across the world cite it as important to their growth strategy over the next 12 months. However, again there are pockets of focus, especially in the emerging markets of Latin America (64%), Africa (51%) and southeast Asia (49%). This compares to just 22% in North America and 30% in Europe and perhaps reflects the fact that governments on both sides of the Atlantic are pushing the energy efficiency agenda. Alternatively,

it may reflect the fact that "green energy" is generally more localised than its conventional counterparts, and therefore well suited to helping businesses reduce their dependence on an unreliable grid system. At the country-level, businesses in India (83%), Mexico (74%) and Botswana (72%) are most focused on 'going green', just ahead of Australia (68%), the latter perhaps a slight surprise given that its government recently acquired the unwanted distinction of being the first developed nation to repeal a carbon tax.

switching to

"The energy reforms agreed earlier this year have not only opened up the oil exploration sector to foreign investors, breaking the monopoly of Pemex, but also the electricity market to small generators. A target to boost renewables 33% by 2018 has also been agreed which has helped to attract record levels of clean technology investment."

Mauricio Brizuela. **Salles Sainz Grant Thornton (Mexico)**

Raw materials

Access to raw materials remains at the heart of commerce and in recent years global demand has been driven by China in its role as the manufacturing 'workshop of the world', which has bought up supplies of copper, iron ore, oil and other commodities on a vast scale. In 2011 China was estimated to control 95% of the world's supply of rare earths, used in everything from wind turbines and hybrid vehicles to computer hard drives to televisions. As China seeks to rebalance away from investment and exports towards domestic consumption, its appetite for raw materials has slowed somewhat, but they remain intrinsic to businesses in many sectors from construction to manufacturing.

The price of rare earths has fallen since 2011, thanks in part to the production of alternatives by countries worried about the imbalance caused by China's dominant purchasing position. Meanwhile, improved recycling of metals and wood-based products has the potential to reduce the strain on the planet's resources and the concept of the 'circular economy' is beginning to gain currency, although it is a long way from being embedded in standard business supply chains.

Now water scarcity is also starting to present a very real challenge to many businesses; once treated as a free raw material, water increasingly needs to

be viewed as a finite resource. The booming shale gas sector has a considerable thirst but given that 70% of water extraction across the globe is channelled towards agriculture, sectors such as hospitality and food & beverage are particularly at risk. For example, since 2003, Coca-Cola has spent close to US\$2bn in a bid to reduce water use and improve quality where it operates, including giving US\$2m to the World Wildlife Fund to restore a section of the river Nar in the UK. In 2013, Nestlé budgeted US\$43m for water-saving and wastewater treatment facilities. The Accor hotel group is well on the way to reducing its water use by 15% by 2015. However, water is also vital to other sectors: Rio Tinto, Ford and EDF are among the many multinationals who have invested heavily in treatment and management systems over recent years. Importantly these measures can save a business money; Cadbury has reduced its operating costs by around US\$17,000 per year at sites where it has introduced wastewater treatment facilities. Globally, 55% of business leaders cite the cost of raw materials (including water) as important to their operations (or supply chain) over the next 12 months, climbing to 65% in southeast Asia, 69% in Latin America and 71% in Africa. This compares to 57%

in North America and 44% in Europe. The different sectoral composition of mature economies may account for some of this difference, but there is also a major issue in terms of infrastructure and quality of supply, in a similar way to electricity. This again reinforces the point that the sustainability debate needs to be framed in terms of sustainable economic growth potential. Businesses in Australia (89%) are most likely to cite the cost of raw materials as important, followed by Botswana (86%) and India (84%). Japan (81%) and Nigeria (78%) complete the top five.

"Last year was the hottest on record in Australia, resulting in severe droughts which threatened our position as the third largest exporter of beef in the world. The dry conditions resulted in little grass growth, forcing farmers to buy grain itself more expensive because of tight supply - to feed their cattle, or destock by sale or slaughter."

"Raw materials are intrinsic to the construction industry, so technological advances in alternative, more sustainable raw materials can have a huge impact on future cost reductions and efficiencies generally. One example is modular housing which is supposed to save time and costs, although financiers are still very hesitant to finance projects that propose to use this technology. The challenge is having these innovative, more sustainable options become the norm. Financiers need to be educated on the future cost benefits so they support the earlier adopters of this technology and viable case studies are produced."

Sian Sinclair, global leader, real estate and construction

Availability of raw materials also tends to be more important to businesses in emerging markets, cited by a majority of respondents in Africa (74%), Latin America (68%) and southeast Asia (55%). The North America (54%) and European (49%) figures sit either side of the global

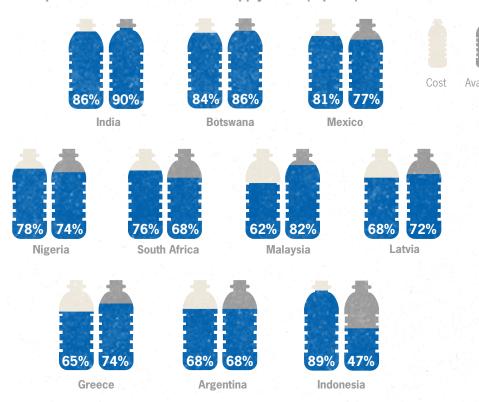
"The opportunities available through digging up and selling on raw materials are limited so the sustainability agenda is gaining traction in Nigeria. Our economy needs to move towards producing higher value-add products to move out of the 'middle income trap'. Reform of the energy sector, including removal of subsidies in oil and gas operations, are essential to improve raw material availability and for sustainable growth in the manufacture of higher value-add products."

Victor Osifo

Grant Thornton Nigeria

average (53%). Businesses in Australia are relatively unconcerned with the availability (47%), especially when compared with peers in Botswana (90%), India (86%) and Armenia (82%). Businesses in Japan (77%), Nigeria and South Africa (both 74%) also cite availability as very important. If sustainability is to move from being seen as a common good to a specific cost-benefit analysis in the minds of business leaders, then the link with long-term growth needs to be articulated clearly. So it is encouraging news that those businesses most concerned with the cost and supply of raw materials are also most focused on looking for sustainable sources. Botswana (86%), India (81%) and Australia (75%) top the country rankings on this measure. At the regional level, close to two-thirds of business leaders in Africa and Latin America (both 65%) are focused on accessing sustainable sources of raw materials, ahead of North America (40%) and Europe (30%).

Percentage of businesses citing raw materials (including water) as important for their business or supply chain (top ten)



Source: Grant Thornton IBR 2014

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Grant Thornton is one of the world's leading organisations of independent assurance, tax and advisory firms, with more than 38,000 people in over 130 economies.

Energy and cleantech

We work with dynamic companies across different parts of the sector. An in-depth understanding of the industry and the different routes to commercialisation, enable us to provide the right support to your growth. Investors, projects and owners may all sit in different countries, so our experts in member firms in our global organisation, can provide quick access to investment, legislative and tax advice across borders. The key issues we help our clients with include:

- commercialising renewables
- reducing energy demand
- energy investment going mainstream

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IBR 2014 methodology

The Grant Thornton International Business Report (IBR) is the world's leading mid-market business survey, interviewing approximately 2,500 senior executives every quarter in listed and privately-held companies all over the world. Launched in 1992 in nine European countries, the report now surveys more than 10,000 businesses leaders in over 30 economies on an annual basis, providing insights on the economic and commercial issues affecting companies globally.

The data in this report are drawn from more than 2,500 interviews with chief executive officers, managing directors, chairmen and other senior decision-makers from all industry sectors in mid-market businesses in 34 economies conducted in May 2014. The definition of mid-market varies across the world: in mainland China, we interview businesses with 100-1000 employees; in the United States, those with US\$20m to US2bn in annual revenues.

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