ASIAN MANAGEMENT INSIGHTS

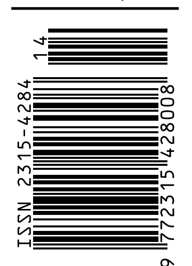
The revival of the Philippine economy
An interview with Cesar V. Purisima

Harnessing the youth bulge
Asia can take advantage

Changes in U.S. trade policy
The global impact

Navigating Innovation

A leader's guide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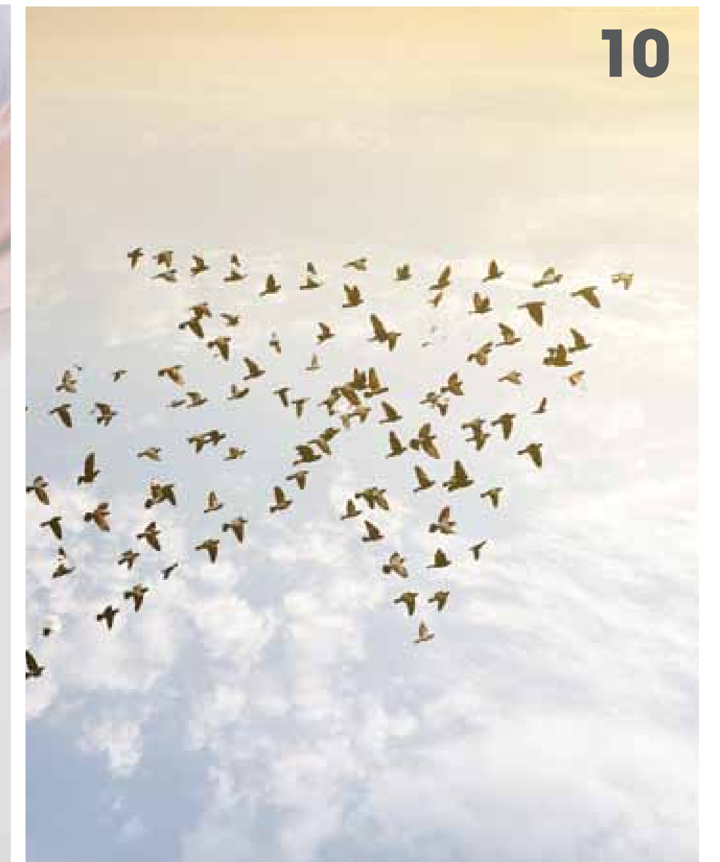

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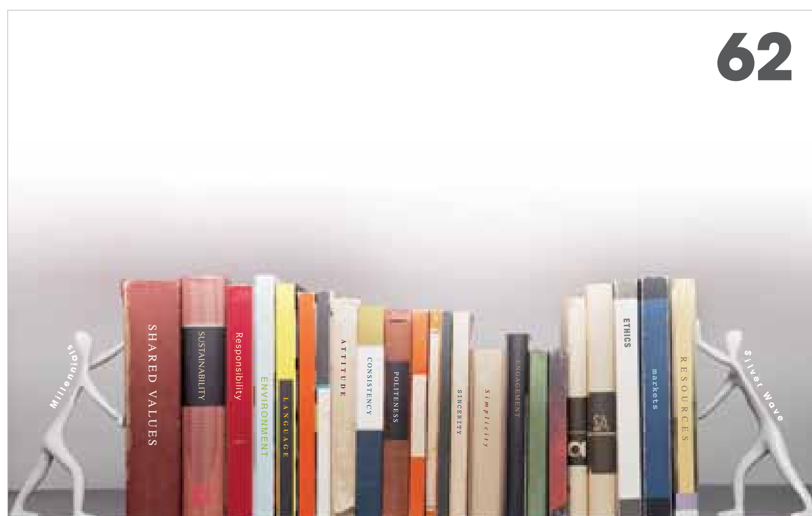

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FROM THE EDITOR

On the fascination with uncertainty:
Life in interesting times

Probably every generation considers itself as living within a vortex of change, but these last few months must be particularly challenging, even for futurists, let alone CEOs and business practitioners. As our author, Florian Kohlbacher, notes, of the eight major megatrends mentioned in a recent survey, executives assigned the most importance to those changes stemming from globalisation, technological progress and digitisation of the economy. For many of them, embracing change amounts to embracing digital life. Some have and some haven't.

One of the most interesting advancements in technology involves the use of smart technologies to transform our cities into smart cities. However the process is not without its risks, reveals Steven Miller. Those responsible for implementing these smart systems must have the organisational capacity to monitor and supervise how they work and then prudently manage the risks. But even in innovation and the digital space, some issues remain eternal. Despite the newfangled business models and market game changers, says Gerard George, the old axiom of industry continues to ring true, that, in any successful innovation, leadership matters.

This month I met with former Secretary of Finance for the Philippines and Chair of the Economic Development Cluster from 2010 to 2016, Cesar V. Purisima, who tells me the greatest opportunity and challenge for the Philippines is in the technology space, with a particular challenge being the maintenance of policy continuity, difficult in a U.S.-style democracy like the Philippines with its six-year administrations. Still on the challenges of policymaking, Julie Kozack writes of the need to build capacity in Asia. Policymakers will need the skills and tools to implement macroeconomic and financial policies prudently and nimbly, she says.

When it comes to managing the fallout from the global impact of changes in U.S. trade policy, prepare for tectonic shifts, warns Jagdish Sheth. Heralded as the next big economic partnership, the Trans-Pacific-Partnership (TPP) was dealt a setback when U.S. President Donald Trump withdrew from the pact on his very first day assuming office. This is also an indication of significant changes to come in global trade policies, and not just in the U.S., Sheth adds.

Consumers might be changing the rules, but technology is changing the game in the digital era, note Rick Smith and Adina Wong, as they relate the globalisation of a one-stop travel portal's business model to the use of proprietary search technology.

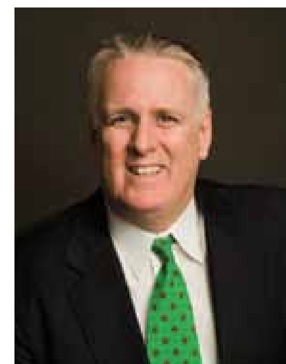
Meanwhile, management education is the focus of Howard Thomas's recent research, which explores whether a distinctive African management education model is possible, achievable or even advisable. And for Jovina Ang and Jochen Reb, the keys to the corporate kingdom lie in the hands of sponsors. Often confused with mentors, sponsors perform a different set of tasks for rising talent: while mentors *give*, sponsors *invest*.

By 2050, the global population distribution is projected to change—Asia will comprise 54 percent of the world's people, while Europe will account for only around 7 percent. An interesting study from Sarah Harper reveals how Asia can take advantage of the changing demographic by harnessing its 'youth bulge'. She notes that 20th century institutions will not suffice to solve 21st century problems.

In a similar vein, Tomáš Klvaňa identifies two social groups that will shape the attitudes of people towards business in the near future: young people between 18 and 25 (the so-called 'millennials'), and active seniors who are a naturally growing slice of developed societies, referred to as the 'silver wave'. Both groups can play a key role in lifting CSR out of a perceived public relations function, he concludes.

These are indeed interesting times, and this issue offers many examples of the changes that are afoot. The insights of these authors provide a glimpse into the future and help us to prepare management strategies to tackle the challenges.

I am reminded of Carl von Clausewitz, the Prussian general and strategist, who said, "Although our intellect always longs for clarity and certainty, our nature often finds uncertainty fascinating." The 'fog of war', often attributed to von Clausewitz, covers unexpected developments that are unfolding—including incomplete, dubious and often completely erroneous information and high levels of fear, doubt and excitement—which all call for rapid decisions by alert commanders. Written in a pre-social media era, it has a familiar ring to it even today.



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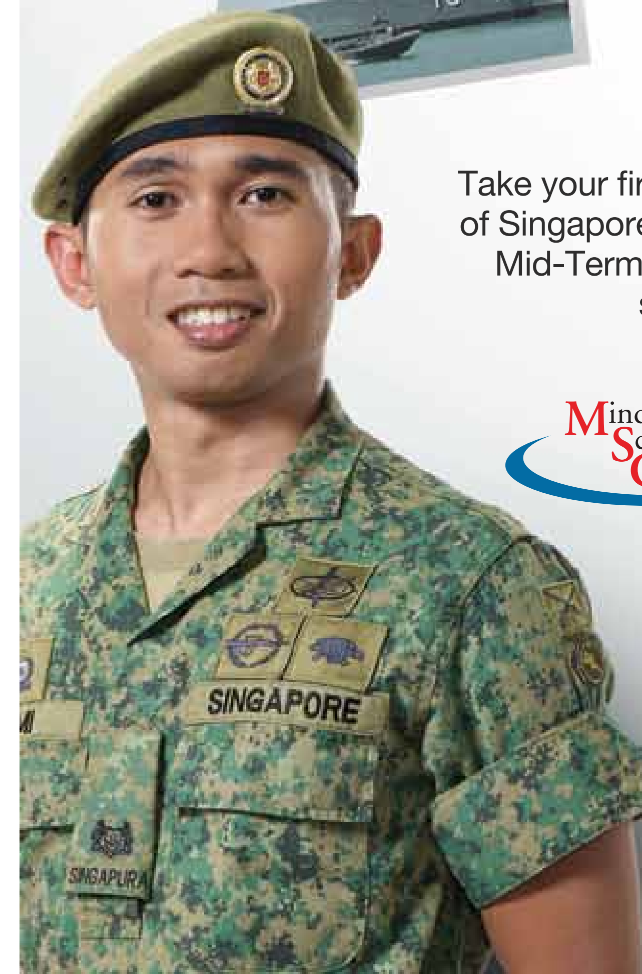

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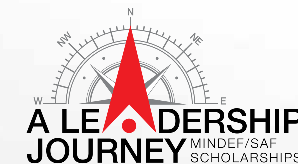

THE REVIVAL of the Philippine Economy

The former Secretary of Finance for the Philippines and Chair of the Economic Development Cluster from 2010 to 2016, Cesar V. Purisima, talks about the turning around of the Philippine economy and restoring investor confidence, in this interview with Philip Zerrillo.

The Philippine economy has been averaging six percent growth over the past five years. What needs to be done to maintain the momentum?

To answer the question, we have to first recall what held us back. After all, it was only about 50 years ago that the Philippines was considered as one of Asia's top economies, alongside Japan. I think what curbed our growth was a lack of the right leadership and economic management, which gave rise to persistent fiscal constraints, infrastructure issues, challenges in governance, a very narrow industrial base, limited human development, and the reining in of the structural growth capacity of the country.

But then you fast forward to the Aquino administration, which ran a programme of good governance and walked its talk. So when we said that we were going to cap the fiscal deficit at 2 percent of Gross Domestic Product (GDP), we did so, and it averaged about 1.8 percent. Similarly, we said that we would increase investment in infrastructure, and from less than 2 percent of GDP in 2010, we increased it to 5 percent.

We sent a clear signal that we would not tolerate corruption, and implemented reforms such as zero-based budgeting that made it more difficult to have wastage and corruption. We filed cases against corrupt people, and joined the global open data initiative where people can look at the budget on the Internet, and then actually drill down to their own locations and see how much money is allocated to their districts.

All these measures resulted in increased market confidence. When that took place, it allowed us to borrow at a lower cost and we were able to reduce the interest component of our budget to about 15 percent from a high of 29 percent back in 2004. The resultant savings could then be devoted to increasing investment in education, healthcare and future infrastructure without having to add new taxes.

Our investors started believing in us and ramped up their own capital investments. Then our consumers became more comfortable about their own future, and also the future of their country, and started spending more on durables, motorcycles or condominiums. So we entered a virtuous cycle of confidence, investment, growth, consumption, and optimism that we are currently enjoying; and over the past six years from 2010 to 2016, the Philippines has witnessed its highest average growth in over 40 years. We were the most upgraded sovereign economy, having been upgraded 24 times by different rating agencies. Suddenly, we were no longer the 'sick man', but the bright spark in Southeast Asia. Hence, I always say this: good governance is great economics!

As of 2013, the agriculture sector employed about a third of the workforce and accounted for 12 percent of GDP. What kinds of reforms do you feel are needed in this sector?

This sector is a major area of poverty. With 33 percent of our workforce contributing to only 12 percent of GDP, the cost of food becomes higher and therefore the wages become even higher, because the people demand higher wages to be able to feed themselves. So clearly, we have to address the situation by addressing the various dimensions of the problem. Access to finance and access to the latest technology are two areas where efforts have to be made. Even simple things like access to ice is critical, as a fisherman can lose between 40 and 80 percent of his catch because he does not have access to ice.

Access to market is another key challenge. For example, before harvested vegetables reach the ultimate consumer, they can go through seven or eight middlemen—and they are the ones who make money from it while the producer and the end consumer pay the price for that.

I always say this: good governance is great economics!

So one of the things that we tried to do is to encourage large companies to work with and help small entrepreneurs. The programme, called 'Kapatid' (Big Brother), is already showing success, with companies' own programmes like Jollibee's Farmer Entrepreneurship Program (FEP) actually proving that this can work. Rather than buying from the local farmers, Jollibee used to import all its onions, as they would be of the same size and same quality with assured delivery. But then Jollibee began to work with farmers, and provided them with training to produce the variety of onions it needed. Those who participated were given purchase orders against which they could borrow from banks. The programme was so successful that today, Jollibee sources all its requirements locally. Nestlé is another example, which has gone from zero to around a quarter local sourcing for coffee beans. Unilever, too, is trying to do the same with coconut procurement.

We have also introduced microfinance opportunities. Instead of paying 100 percent a year in interest, farmers now pay 20 to 30 percent, which is still high, but much lower than before. So efforts are taking place, but there is no single magic bullet—it takes different ideas and solutions to really

solve the issue. Today, the farmer population is very old, the average age is about 57, and we need to try to attract young people to return to agriculture and bring in new innovations.

Along with increasing the budget for irrigation, farm-to-market roads, etc., we also need a shift in policy. An example of this would be to adjust the rice self-sufficiency programme from 100 percent self-sufficiency to perhaps 90 percent of our requirement, accepting the fact that certain parts of the Philippines are not able to compete with the cost efficiencies of say, the Mekong river delta. It would hence be better to reposition the former rice areas as sites for higher-value crops. So we need to move away from commodity-centric Department of Agriculture programmes to area-centric programmes.

Natural disasters play havoc in the Philippine economy annually. What steps have been taken to respond to such unplanned events and prepare for climate change?

While in administration, one of the issues that we really pushed for was the involvement of the finance minister in the fight against climate change. Earlier, and for the longest time, it was just the climate experts who were at the forefront of this fight, but then at the 2015 United Nations Climate talks, finance ministers from 20 vulnerable countries came together to set a target of mobilising US$20 billion in new investment for climate action by 2020. This was critical as, ultimately, the fight against climate change won't be serious unless you bring in the finance ministers and resources.

The Philippines is the fourth most disaster-prone country in the world and under serious threat along with several other island nations. Therefore, this debate on whether climate change is real or not needs to end. We must work together as a community of nations to address this problem and make it mainstream. We have an added challenge—along with climate change, the overutilisation of artesian wells has also resulted in salt water intrusion of the water tables. So for example, we used to have a very vibrant tobacco industry, but the quality of tobacco has been affected by the high level of salt in the soil. Hence, there is an urgent need for us to invest in climate-resilient crops and agricultural infrastructure.

> While in administration, one of the issues that we really pushed for was the involvement of the finance minister in the fight against climate change.

Shifting gears a bit, what are your thoughts on the ASEAN Economic Community, and the opportunities and challenges that it would bring to the Philippines?

I am a big believer in the AEC because, apart from Indonesia, all the other nine ASEAN countries are small and live in the neighbourhood of giants—so we really need to get together in order to attract investment on an economic scale. If we do so, we can actually attain the vision of the founders of ASEAN to make this the hub for Asian business. The opportunity is there, given the geography and the history of the region.

Although we have not moved as quickly as we would like to, I think substantial progress has been made. For instance, the electronic industry is one of its successes. It was one of the 10 industries that was integrated ahead of time, and had we not become part of a more integrated ASEAN sector, the Philippines would have lost this sector because our industry was focused on assembly and there was no supplier cluster whatsoever. Today, we produce up to 12 percent of the world's semiconductors, but that's only because it is now the ASEAN electronics industry—and that is the true potential of ASEAN. I hope we will continue to go back to the original idea, which is complementation, because if we try to do too much concentration, such as producing cars in one area only, then what are the other areas to do?

If we continue to make ASEAN important globally, there is much in the way of upside for all the countries because intra-ASEAN trade now sits at only around 25 percent of total ASEAN trade. Moreover, a lot of this is still in intermediate goods. Also, given the threat of the U.S. and other large markets looking inward, going slow on globalisation and becoming more protectionist, we countries that are dependent on exports to outside bigger markets will have to look for alternative markets. Hence we have to look inward as well, and by increasing intra-ASEAN trade from 25 percent to say 40 percent, and focusing more on final consumption goods, we can actually replace a lot of what we might lose from the United States. So it offers great opportunities for us to really fulfil the potential of the region.

However, what we must not lose sight of is the centrality of ASEAN. We can be pulled by the great powers in one direction or the other, so we have to stick together and agree that this is good for us. There will be challenges down the road, and the Trans-Pacific Partnership (TPP) was one such big challenge. In fact, I believe the United States' withdrawal from the TPP was a blessing in disguise for this region. Because the TPP invited only four ASEAN countries, and so if it became effective, it would have posed a major issue for all the other ASEAN countries. For example, Vietnamese garments would have suddenly gained a 20 percent advantage in the U.S. market vis-à-vis garments from the Philippines or Indonesia. Hence, instead of ASEAN becoming more integrated, there would have been further issues to deal with.

Digital disruption, protectionism and climate change are just some of the megatrends taking place globally. What are your thoughts on how these megatrends would impact the economy in the medium to long term?

I believe the greatest opportunity and challenge for the Philippines is in the technology space. For example, our business process outsourcing industry has been one of the pillars of economic growth, employing 1.3 million Filipinos and contributing at least 9 percent of GDP with revenue reaching US$25 billion in 2016. But it is under immediate threat from technology given the rapid advancement of artificial intelligence. And that is only the beginning. What worries me about artificial intelligence is that I used to think that only manual labour is under threat, and you were safe if you had cognitive labour—but not anymore. So even if you go up the value chain, I believe that down the road, technology will affect your business model.

In a country like the Philippines, we still have to catch up in terms of reducing the equity gap, educating our people and alleviating poverty. Technology can give us the opportunity to leapfrog towards the front, or it can push us further behind. Therefore, I hope that the government and the private sector will be smart enough to realise that we need to make investments in education, infrastructure and other policies, which would then address these problems down the road. Ultimately, although I think jobs will be destroyed, entrepreneurship would be a useful skill. We need to think about the kind of education and skills we impart to our children. This will give them a chance to be engaged productively 15 to 20 years from now in a very different world.

Singapore is very good at this—it is always ahead of the curve. Singapore not only see things, but it does something about it even before you realise it. For instance, it got into the biotechnology space way before most other nations. And the advantage a country like Singapore has is its continuity of policy over a long time. But how do you maintain continuity in a U.S.-style democracy like the Philippines? Our administration has just six years, and six years is not enough.

> Without the support of the head of state and the allocation of political capital, it would be very hard to push for reform.

You have been named 'finance minister of the year' seven times in six years. What strategies and leadership insights can you offer others to learn from your experience in these campaigns on creating change?

First of all, it must be noted that the finance minister is just one part of the team, and in government, 'political capital' is the currency. Without the support of the head of state and the allocation of political capital, it would be very hard to push for reform. Thus the key to my success is that I had the support of my president, whose agenda was aligned with our fiscal agenda. That alignment is crucial, and once you have it, it is just a case of using the political capital judiciously and accepting the fact that you cannot do everything in one administration. You accept that this is a journey, and that you must take many steps with the goal to bring you to a better position than when you started. It has to be a team effort, and one that is led not by the finance minister, but by the head of state.

Second, it must be noted that you are only as good as the people around you. So I believe in recruiting the best talent, and hiring young people who bring in fresh perspectives and energy.

In essence, the finance minister has a marketing job that must start at the top, where the head of state believes in what you are doing. If that happens you will not have an issue in pushing reform with your cabinet, and you will have a better chance of selling it to the legislature and then ultimately to the other stakeholders. And you must be ready for compromise, because without compromise, you cannot get anywhere.

Cesar V Purisima
was the Former Secretary of Finance for the Philippines and Chair of the Economic Development Cluster from 2010 to 2016.

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NAVIGATING INNOVATION A LEADER'S GUIDE

Despite the newfangled business models and market game changers, the old axiom of industry continues to ring true: leadership matters.

By Gerard George

While innovation continues to rest on the successful commercialisation of an idea, businesses today are subject to an ever-evolving techno-economic paradigm driven by the application of new information and communication technologies (ICT). Time and again, the originator of an invention, or idea, fails to capitalise on its inherent value because innovation is not so much about generating ideas and developing new products or services, but about problem-solving. And successful innovation depends on how firms identify and prioritise which problems need to be solved.

Opportunities often arise in the *variation of cost* to innovation, meaning that opportunities to innovate are found within an organisation's unique capabilities, capacity and position in the market. It is within these factors that we define innovation as a better means to serve the specific needs of one's customer base and expand that base, or develop superior ways of catering to someone else's needs.

These opportunities are often fleeting. A firm that was once the disruptor may eventually find itself the disrupted. Leaders of incumbent firms can avoid disruption by recognising where they might be exposed to it, and in the process, astutely select and prioritise the 'right kind' of problems to be solved–not a simple task.

However, understanding innovation through the lens of a firm's *variation of cost* can help leaders manage innovation and growth. Leaders should focus on innovation strategies that capitalise and expand on opportunities adjacent to a firm's existing core output of products and services, while also recognising that the successful execution of these strategies requires the right kind of organisational behaviours, structures and culture.

Recognising opportunity

Firms often overlook opportunities because they are too burdened by the day-to-day, becoming inwardly focused as they forget to make time to be forward thinking. Firms may persist in this mindset until their market position erodes overnight, leaving them open to more opportunistic innovators. This is oftentimes a failure to understand the changing needs of their customer base. But even beyond the customer, firms must examine their entire channel structure, and evaluate their position in the market and how they (and their network of providers) might be impacted by change.

Whether consumer facing or business facing, innovation is ultimately about solving problems. In a commercial sense, it is about how firms do business and make money. It should come as no surprise that disruptive innovations are often commercialised in emerging and traditionally insignificant markets. Products and services catering to these markets must be profitable at lower margins; they must be simpler or cheaper to produce. This is essentially an evolutionary and timeless phenomenon.

We can draw on the early PC industry as an example where proto-PCs were initially targeted towards hobbyists and the home video game console market before eventually going mainstream—taking the business world by storm, and in the process, burying mainframe companies like Amdahl and Unisys. A similar usurpation is taking place today.

FinTech companies are chipping away at the periphery of the traditional banking sector by offering services such as payments and low-cost alternative solutions to cross-border remittances; an essential service to migrant workers. Offering such services is not nearly as lucrative for traditional, incumbent banks as providing services to their more established and less risky customer base. But these overlooked markets may yield dividends for established firms if they can expand their core products and services into adjacent areas in innovative ways. DBS Bank in Singapore, for example, is digitising its backend and collaborating with Singtel, a Singapore-based telecommunications giant, to offer banking services like PayLah!, a mobile payments and deposits platform. It is through partnerships and digital investments such as these, which leverage existing competencies, channels and value networks, that large and established firms can adapt to disruption.

Disruptive versus sustaining innovation

Innovative products may also introduce a new dimension of performance—or answer a previously unmet or under-met want or need. All this can be accomplished through new business models, new manufacturing techniques, new products and services, or different ways of offering established products and services.

DISRUPTIVE INNOVATION

Disruptors, unlike incumbents, are uninhibited by legacy structures because they don't have a customer base to fulfil, and so can focus on something very specific, unproven and high-risk. This form of innovation often typically comes from the outside. Products and services emanating from this domain are frequently inferior in one respect—but offer some other benefits, such as simplicity, cost and convenience, that appeal to less demanding but underserved consumers. New entrants typically win at this game because they lack an existing customer base to satisfy and serve markets that are low-margin, small or uncertain. At the same time, they are not wedded to large capital investments and infrastructure.

That said, incumbent firms need not be fatalistic. Such disruption is only one aspect of one type of innovation. Managers need to redefine what innovation means to them and how it applies to their business. This goes beyond lip service. Innovation, after all, is more than a buzzword—and it is a cliché to think of all innovation as disruptive innovation.

SUSTAINING INNOVATION

Sustaining innovation—as in the structured iterative approach towards improving and safeguarding existing capabilities—is a proven strategy that nourishes one's position within an industry ecosystem or value network. For example, IBM has, for generations, transitioned its product and service offerings in step with the evolving needs of its client business community. In fact, it has gone a step further and even redefined their needs. This strategy is also reflective of the risk appetite of successful incumbent firms in general. Whereas start-ups are by definition high risk and high reward, established firms must take into consideration stakeholder responsibilities that require a more balanced strategy. Rather than pushing the industry to the edge in a drive for game-changing innovation, the incumbent firm typically relies on a best practices method of management.

They do what they have always done, what is prescribed, what reinforces their competencies, and incrementally invest in innovation as a way to expand their 'sweet spot' or core offerings—that is, they look for opportunities in their *variation of cost*. In IBM's case, it was always about providing services that help their business-facing customers work more productively. Whether it was manufacturing mainframes in the 1970s, the iconic Model M keyboard in the PC era, or high-end knowledge and pattern recognition services through today's Watson—IBM's core offerings always remained 'business tools'.

Competency destroying and competency enhancing

Investing in innovation can be thought of categorically: *competency destroying* and *competency enhancing*.

Competency destroying innovation improves performance in a new dimension; these are the game changers. A recent example would be the rise of Uber's ride-sharing technology.

> Disruptors, unlike incumbents, are uninhibited by legacy structures because they don't have a customer base to fulfil, and so can focus on something very specific, unproven and high-risk.

By integrating multiple mobile technologies embedded in smartphones through sophisticated programming, Uber is able to offer taxi services with greater convenience and at a lower operational cost than incumbent firms. Essentially offering an under-met service through a scalable business model built on top of a mobile app, it empowers anyone with a car to offer taxi services to anyone with a smartphone through the Uber app. Whether Uber or FinTech, the lesson here is that any product or service that can be digitised, will be digitised, and disrupted. So, what are the next big competency destroying innovations? Self-driving cars? Regenerative medicine? In all likelihood, the firm that unleashes the next big disruption will probably be an unknown.

Competency enhancing innovations, on the other hand, are more iterative. This type of innovation improves performance along an existing dimension. For example, the transition from CDs to DVDs or mechanical to electric typewriters; in both instances the underlying technology is relatively unchanged, just upgraded. The reason for this is that firms embrace their existing competencies, and sustaining innovations complement this because they fit within existing organisational and capital structures. An installed base is a far less risky way to innovate. Moreover, firms with an installed base also face an inertia from previous investments catering to their customer base, as well as broader clients throughout their value network.

Leaders of incumbent firms should focus on incubating competency enhancing innovations for the short- to medium-term and competency destroying innovations for the longer-term—insofar as they are aligned to what the firm already does (however, this does not mean that the firm should remain 'locked' within the same industry or customer base).

In the insurance industry, companies like Aviva in the U.K. or NTUC Income in Singapore have partnered with tech accelerators to improve profitability in low margin and low growth markets. Meanwhile telematics policies, such as real time monitoring of vehicles for example, could generate enormous premiums and reduce risk profiles, even in high-risk car insurance markets like Russia.

However, innovation need not come only from start-ups or large established firms. Institutions and governments should also pursue an innovation policy. India is a notable example of such innovation. The country is in the process of issuing each of its citizens an 'Aadhar' card, a unique 12-digit PIN identity based on their biometric and demographic data. As of January 2017, this card has been issued to 1.11 billion residents of India. The Aadhar card qualifies as a valid identity for accessing several government services, such as receiving subsidised fuel from the public distribution system or opening a bank account. The innovation has had a cascading effect, coming as a boon to several other industries. A case in point is India's peer-to-peer payments industry, which is booming and providing an opportunity for many upstarts to enter this FinTech space.

Building innovative behaviours, structures and culture

So what can a leader do to recognise and capture the opportunities to innovate?

LOOK BEYOND YOUR ORGANISATION AND INDUSTRY

Industry boundaries are breaking down, and current competitors may not be future competitors. This requires incumbent firms to look beyond their own organisation and industry to see both opportunity and threat. Incumbent firms must establish frameworks to anticipate disruptive innovation—particularly if there are any elements to their products and services that can be digitised, disintermediated and dematerialised, à la Uber.

Leaders of established and incumbent firms should look to collaboration and partnerships, not only with other industry leaders, but small upstarts as well. This is useful in terms of 'problem revealing'

as well as 'solution revealing'. Take Web 2.0 for example, which was ushered in by organisations that facilitate mass collaboration through open platforms and sharing protocols. Open source software, social media, crowdfunding, multiplayer online games and social production have created extraordinary value. Although Web 2.0 organisations have wrought much disruption, firms that 'stay connected', share information and collaborate have a better chance of understanding and adapting to new realities such as these, as and when they emerge.

DISRUPT YOURSELF

Firms can stay ahead of disruption by 'disrupting themselves'. Leaders should facilitate discussions that expose assumptions on misguided views they may have about the market and their customer base. Keep in mind that needs change over time. This is true of one's customer base and the broader value network that a firm is a part of. Some of the most disastrous mistakes incumbent firms have made in the past is the adoption of certain technologies as just a fad. Just as some may have balked at the idea of talking in pictures at the end of the silent film era, others have underestimated and ignored the power of social media today.

Leaders, however, cannot expect their employees to 'go out on a limb' and question assumptions, or take up the mantle of any kind of culture change, without the right kind of incentives. Indeed, aspiration and adaptation are both incentive driven. It is well known that Google, for example, allows its employees to spend as much as 20 percent of their time pursuing their own projects or collaborating with other employees on projects. Developing successful collaborations designed to identify and solve problems in innovative ways require incentives as well. This can take the form of shared intellectual property rights, market entry, or other forms of co-profitability.

UNDERSTAND YOUR CUSTOMER

Social media is creating a convergence between customer service and marketing. Many firms are embracing social media to gauge consumer sentiment and deploy data analytics to better understand customer insight and make informed decisions. Lenovo, a PC, smartphone and tablet manufacturer, is working with Socialbakers, a Czech IT company offering social media analytics software-as-a-service platform, to create executive dashboards that make use of social media data to help drive company decision-making. In doing so, companies like Lenovo are better able to sense consumer trends before their competitors and also serve their customers in more meaningful ways.

> Aspiration and adaptation are both incentive driven.

Lenovo has concurrently partnered with the Economic Development Board of Singapore to launch its global analytics hub in the island city-state. In exchange for offering incentives for Lenovo to base its analytics hub in Singapore, Singapore gains by bringing in new economic growth drivers and broader network effects. Again, it is these kinds of collaborative efforts and partnerships, underlined by incentives that are becoming increasingly characteristic of organisations operating at the cutting-edge.

RE-EVALUATE THE IT FUNCTION

IT touches all areas of an organisation; this is in fact one of the main reasons why ICT is a prime driver of both sustaining and disruptive innovation. Incumbents must therefore constantly re-evaluate their IT functions in so far as it enables them to take advantage of technology-based initiatives, such as social media marketing, data analytics and cloud-based collaboration tools. At the same time, IT should support the core functions of the firm, not the other way around.

Leaders must ask if there is any aspect of the organisation that can be improved with the right set of IT-related skills and digital infrastructure. This has a direct bearing on not becoming inundated with legacy systems and minimising overheads if properly deployed. But beware of IT pitfalls. If incumbent leaders treat social media as a 'thing we have to do', or look at data capabilities as 'an investment we have to make', then these new opportunities are never truly embraced.

DON'T IGNORE WHAT YOU ARE GOOD AT

Incumbent firms should innovate on what is familiar by framing the problem within their core competencies. This goes back to the firm's *variation of cost* and the pursuit of competency enhancing innovation, namely pursuing innovation that is aligned to organisational competency and the target customer base.

An internal culture of sharing needs to be complemented with an openness to ideas from both an inside-out and outside-in approach to encourage exploration and incorporate the 'unfamiliar'—in other words, learning to share and being more open. Again, the right kinds of incentives would need to be put in place to foster this kind of culture. Moreover, these incentives cannot be based purely on providing monetary compensation for taking part in innovation. In fact, when money is involved, it often opens the door for infighting. The point is that these incentives should be aligned with 'trust building'.

Besides encouraging a culture of sharing and collaboration, leaders are also responsible for facilitating what problems should be prioritised and targeted for researching and developing innovative solutions, that is, strategic attentiveness. This should lead to more accurate assessments of the potential threat to one's existing business, or the chances of success for a new business proposition. However, internal collaboration and external selective sharing and revealing are not enough to drive the necessary insights required for problem identification and problem-solving selection.

TURN ALL YOUR EMPLOYEES INTO DATA SCIENTISTS

Data analytics should be deployed holistically across all levels of the organisation to reveal insights and to avoid being blindsided. This, of course, requires regular and timely investments into information-processing capabilities and proper staffing. UPS, for example, uses its Orion computer platform to turn each of its drivers into a responsive logistical node, where each driver collects extraordinary amounts of data that are used to optimise delivery. And as all the drivers are connected to a network, their routes can be optimised on the fly. With this level of sensory input and response at every level of its logistical network, UPS is able to recognise problems in real-time and prioritise accordingly.

DON'T STOP

Change is the new normal; staying idle is not an option. Realistically appraise how your company is doing. Leadership matters, but you can't will innovation into happening. Instead ask yourself, how do you fare as a leader when it comes to:

- Encouraging exploration: How do you combine the familiar with the unfamiliar?
- Strategic attentiveness: How selective is your attention on problem-solving?
- Strategic openness: How do you strategise for sharing and revealing?
- Culture and incentives: Are you building a change culture?
- Business model: How often do you rethink how your business model will adapt to disruption?

Innovation has to be nurtured—encourage your employees to seek out 'disrupting innovation' to stay ahead of the game in the long run, but develop 'sustaining innovation' to tide you through the short- and the medium-term and help anticipate what direction the disruption will come from.

The important thing is to welcome innovation, in whatever form it takes. There may be organisational structures and processes in place, but they should be tools and not hindrances, and there should be a spirit of innovation that even the largest, most established companies should honour if they hope to survive the next round of disruption.

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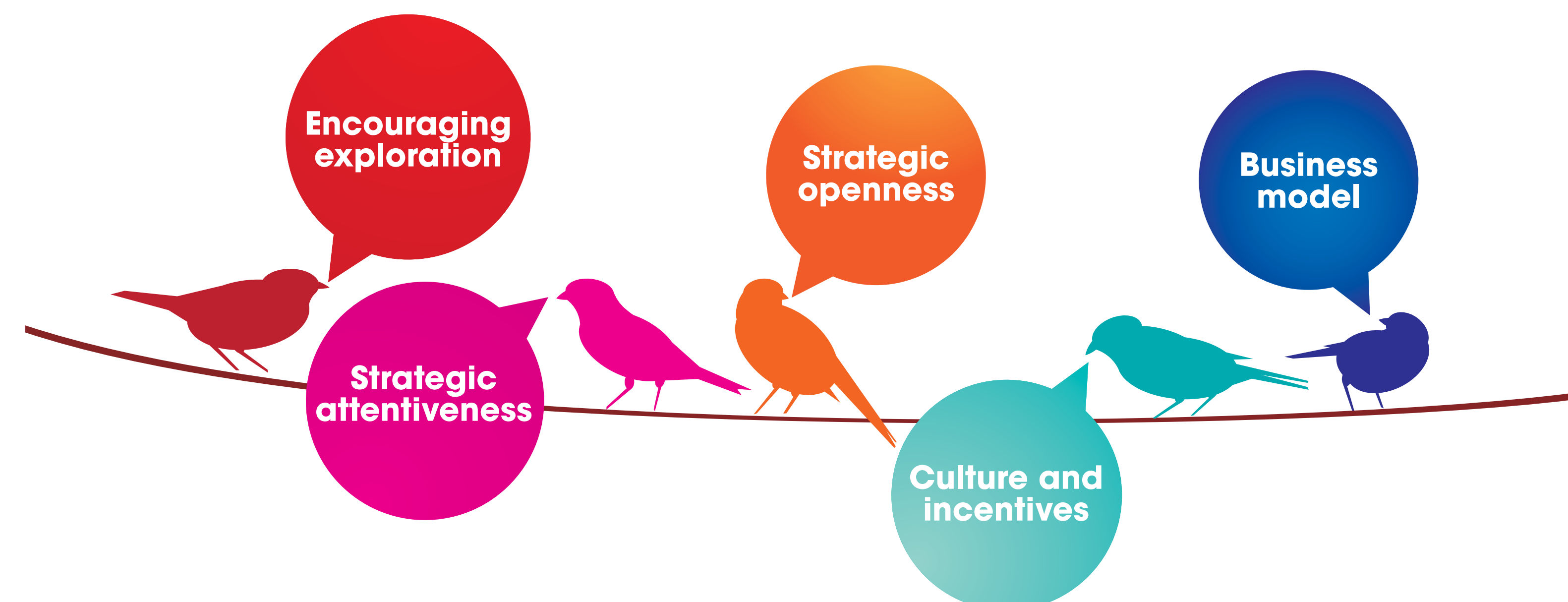

Harnessing the Youth Bulge

How Asia can take advantage of its changing age composition.

By Sarah Harper

As the 20th century was drawing to a close, an overpopulated world fuelled by high birth rates seemed to be the top concern for policymakers, economists and environmentalists alike. The overwhelming question they were grappling with was: How could world population be prevented from growing to over 20 billion in the next century? Yet, within a couple of decades, demographic predictions have shifted from rampant growth to declining and ageing populations. Revised forecasts now expect global population to increase from its current 7 billion to around 11 billion by the end of the 21st century.

These new demographic trends, however, bring new challenges. Presently, in many countries, the working-age population (which is variously defined as persons aged 15 to 60/64) outnumbers the combined population of older adults and children. Globally the working-age population is currently five times more than those over 60. By 2050, this will almost have halved. Not only will the large working-age cohorts start to enter old age, in many countries they will live for much longer, well into their 80s and even 90s.

Asia specifically will have a large population of working-age adults until 2050. At that time, of its 5 billion people, one billion will be over 60 years of age, and slightly less than one billion under 15–leaving over half the population of working age. Unsurprisingly, the global distribution of people will also change–Asia will comprise 54 percent of world population by 2050, while Europe will account for only around 7 percent.

So before Asia begins to worry about its ageing population, it must first handle the more immediate challenges related to its current cohort of young population, or the 'youth bulge', conventionally defined as a large cohort between the ages of 15 and 24. Although this youth cohort represents a potential for greater employment, income and savings, experience has shown that a large young population doesn't always automatically translate into economic growth. Key institutional frameworks related to health, education and governance must accompany it, and the labour markets must be well developed and well planned.

So, what can Asia do to ensure that its youth bulge is converted into a demographic dividend?

The demographic transition

The world is undergoing an unprecedented change in its age composition. What started in Europe in the mid-18th century and took over 200 years to complete began in Asia and Latin America during the 20th century and will be completed in less than 100 years. It is now beginning in Africa.

The change follows the general pattern of demographic transition—as societies develop economically, mortality falls, followed by a lagged fall in fertility rates—leading to a significant change in the age structure of the population (refer to Figure 1). It has long been recognised that population grows rapidly in the time gap between the two trends. What is often less understood is the significant change in a country's age composition that occurs as a result. Additionally, while economists generally believe that demographic transition follows on from economic growth, demographers believe that it is a more complex process driven by socio-cultural as well as economic factors. Indeed, it is argued that demographic transition *itself* has strong implications for the economy, and has played an important role in the process of economic development.

In terms of demographic transition and the resultant age-structural change, the world can be broadly divided into three demographic regimes: *advanced economies* that are moving towards a low percentage of young people and a growing percentage of older people; *emerging economies* that are dominated by a large percentage of young and mid-life adults sitting between two smaller dependent groups—children and the elderly; and the *least developed economies* with a very large percentage of children, adolescents and young people. For example, while Europe, typifying a cluster of advanced economies, had more people over 60 than under 15 by the turn of the millennium; sub-Saharan Africa, part of the least developed economies, is projected to still have a third of its population under 15, and less than 10 percent over 60 by 2050.

The macroeconomic effects will differ depending upon the age composition of the population. It can be argued that large generations attract more societal resources than smaller ones. Countries with large young cohorts require resources to be diverted to housing, schooling, medical care, etc. As this population grows into young adults, a dynamic labour market with the right institutional structures can enhance economic growth. And as the large cohort begins to age, it draws on its own savings and societies' resources for old-age health and social care.

The effects may be mediated by market forces. For instance, rapid growth in numbers entering the labour market may depress wage levels; or an increase in the number of older people, who are likely to have assets, may reduce overall interest rates. Age structure can also influence public policy. In advanced economies, there is currently a need to transfer societal resources to the large cohorts of older adults, while governments in least developed economies often place emphasis on the very young. In emerging economies, the desire by governments to utilise the large cohorts of working-age people to drive the economy can threaten to reduce available resources for dependent generations. However, this reallocation to ensure intergenerational equity is often overshadowed by the huge inequalities within each generation—between those being able to access health, education and income, and those less able to.

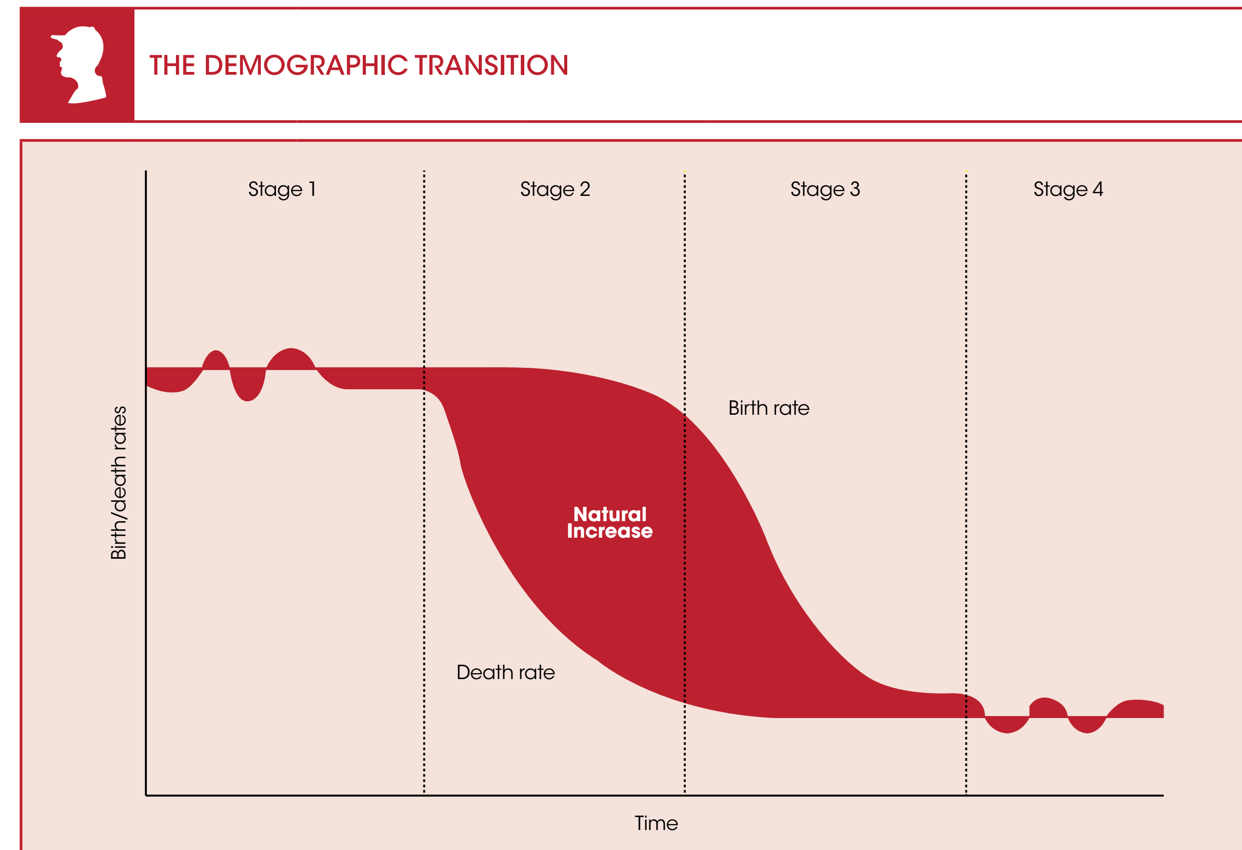

FIGURE 1

Source: How Population Change will Transform our World (2016)

In light of these changing age structures, the challenge in all three demographic zones is how to sustain and enhance economic growth and ensure the well-being of the population across the extended lifespan, while at the same time reducing the inequalities within each generation and ensuring an equitable reallocation of resources between generations.

Youth: resource or peril?

Currently, half the world's population is under 25, with some 1.2 billion aged between 15 and 24. This is the largest cohort ever to transition into adulthood. Youth represents a quarter of the global working-age population, but accounts for 40 percent of total world unemployment.

In 2012, a member of the U.S. Department of Defence wrote, "From continent to continent and across race and religion, the 'demographic' of insurgency, ethnic conflict, terrorism and state-sponsored violence holds constant. The vast majority of recruits are young men, most of them out of school and out of work. It is a formula that hardly varies, whether in the scattered hideouts of Al-Qaeda, on the backstreets of Baghdad or Port-au-Prince, or in the rugged mountains of Macedonia, Chechnya, Afghanistan, or eastern Colombia."[1] The same paper, among many others, also cited the 'youth bulge', that is, a large population now of productive age, as one of the major factors behind the 2012 uprisings in Tunisia and Egypt, referred to as the Arab Spring.

With two-thirds of its population between 15 and 29, the Middle East and North Africa (MENA) region has one of the largest youth groupings in the world. High fertility rates mean that many more will join this cohort over the next two decades. Although this should imply a huge economic opportunity for the region, the youth in this region face a variety of challenges: up to 40 percent youth unemployment, lack of education, soaring house prices, delayed marriages and youth dependency on families. The growing numbers increase competition for limited job and other opportunities. Poor access to mortgages, high rental costs and inadequate finances for dowry further inhibit men from marrying and setting up an independent home, thus excluding them from a stable adult life.

Youth represents 25 percent of the global working-age population, but accounts for 40 percent of total world unemployment.

But a large youth bulge need not always lead to unemployment, poverty and civil unrest. Southeast Asia, which had very similar demographics to MENA in the 70s and 80s, was able to harness its youth bulge and convert it into the successful economic growth of the Asian Tigers–South Korea, Taiwan, Hong Kong and Singapore. For instance, between 1975 and 1985, Tunisia's youth bulge coincided with that of Hong Kong. While Hong Kong's working population peaked at 70 percent in 2005 and 2010, Tunisia's was at 67 percent in 2010. Yet we know that both countries experienced dramatically different outcomes.

So there must be other things going on.

In Hong Kong, there was a heavy focus of public expenditure on health, education, social welfare, and public-private investment in infrastructure, with an emphasis on housing and transport. Hong Kong also pushed for low levels of taxation and subsidised public housing. Combined with this government intervention to develop a social infrastructure, it created a fertile ground for entrepreneurship. Furthermore, the flexible labour market allowed for a shift from manufacturing of textiles to technology, and then to becoming a financial centre. All these factors came together to contribute to Hong Kong's success.

Converting youth bulge into demographic dividend

In Asia today, we are seeing a decline in mortality rates and greater life expectancy accompanied by a sudden decline in childbearing rates of women, especially in urban areas. As this has come after a period of high birth rates, it has resulted in a youth bulge. Additionally, the delay of first childbirth has enabled women to increase the time they spend in education as well as in the labour market. Where both men and women have joined the labour market and have fewer children to look after, more of societies' resources get focused on economic activity.

While a large number of urban, mobile, young people can drive productivity and economic growth, the right economic structures and institutions, and the right policy environment, are required for this potential to be realised. Thus, a key challenge for these societies is to enable well-developed, flexible labour markets for these young adults. If successful, this youth bulge can get converted into a demographic dividend.

The demographic dividend is a composite of five distinct drivers of change in population age-structure: an increase in those of working age; a diversion of resources from young dependents to investment in physical and human capital; an increase in female economic activity following a decline in childbearing; an accumulation of capital by the working population to invest in the economy; and incentives to save with the realisation of longevity and an extended period of late-life, non-economic activity.

It is important that public spending on education and health should continue even as countries develop and the economy becomes richer. In some emerging countries, such as Indonesia, the Philippines and Thailand, increased taxation from the growing proportion of workers will offset the benefits needed as the populations age, but there is the danger that this might impact savings and the level of investment required to propel growth.

Additionally, good economic management, with efficient financial and labour markets, supported through strong governance and institutional structures, are essential. There must be flexibility in the labour markets to allow expansion and polices to encourage investment, and a skilled working population that is benefiting from good quality health and education systems. These are required to enable the demographic dividend; an increase in the working-age population is not sufficient by itself to ensure economic growth (refer to Figure 2).

THE CASE OF KOREA

In 1950, just over half the Korean population was of working age, with 42 percent under the age of 15. The country prioritised access to family planning throughout the 60s and 80s by promoting local health centres and home visits by care workers. Total fertility rate fell from 5.4 in 1950 to 2.9 in 1975, reaching a low of just one child per woman in 2005.

By 2010, the percentage of children had fallen to 15 percent while those of working age had risen to almost 75 percent. Emphasis was placed on expanding healthcare facilities and encouraging health insurance. Education was also prioritised with 99.2 percent of all children in primary and secondary schools.

By 2030, South Korea's labour pool is expected to shrink by about 11 percent and the cohort of young workers entering employment will fall by nearly one-third (refer to Figure 3).

TIGER CUBS

What the Asian Tigers achieved in the 60s and 70s can be glimpsed in other parts of Asia. China capitalised on its massive youth cohort. And now

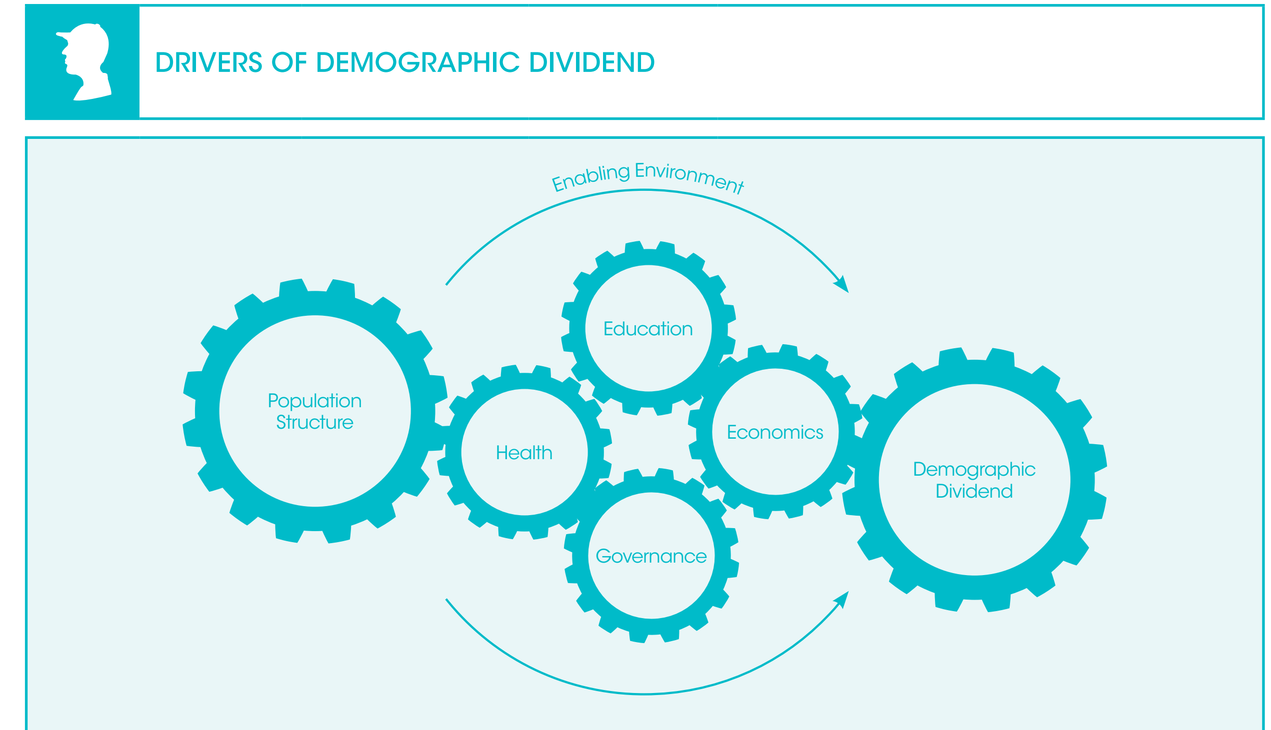

FIGURE 2

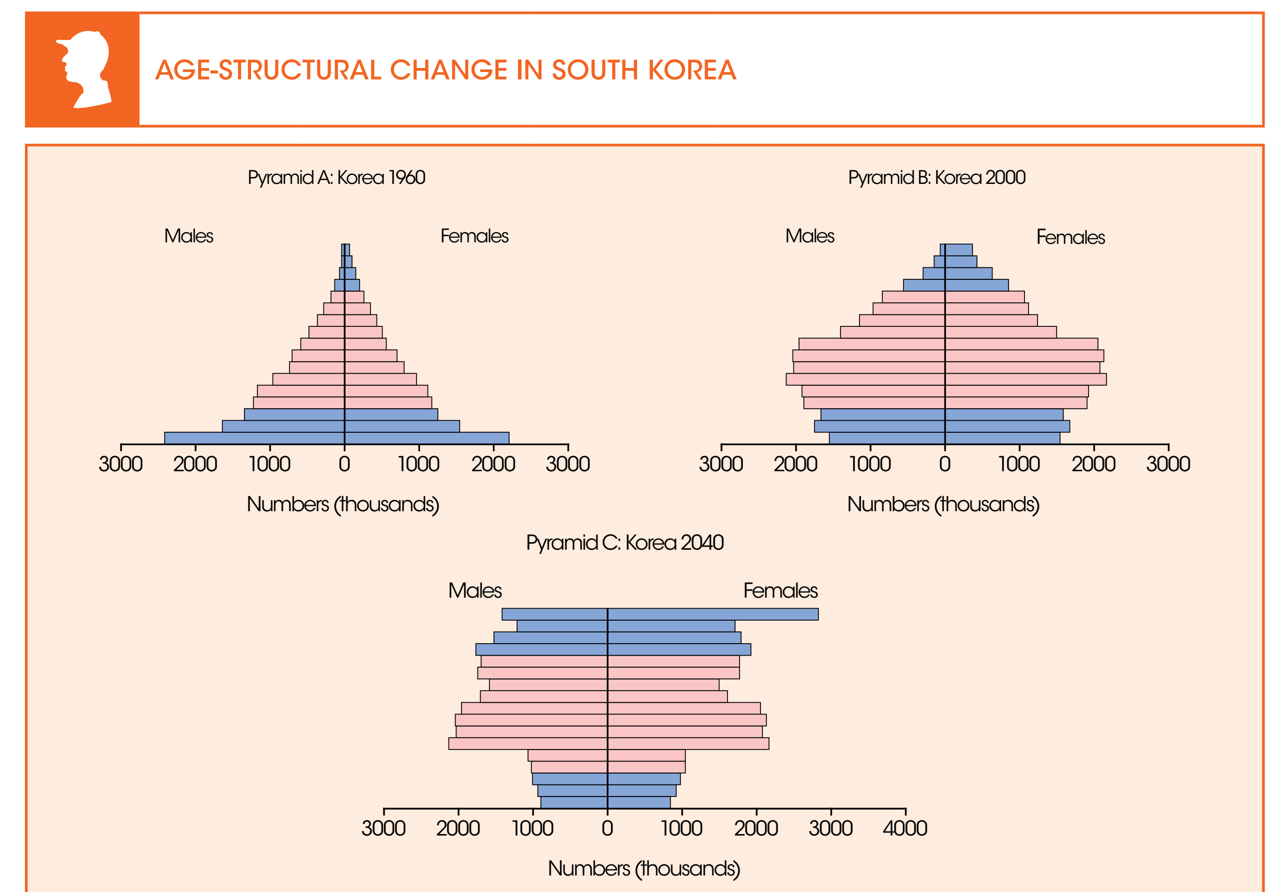

FIGURE 3

Source: Extracted from United Nations, Department of Economic and Social Affairs

there are early signs that the youth bulges in the Tiger Cub countries–Indonesia, Malaysia, the Philippines and Thailand–will replicate this success. The Philippines is set for a considerable increase in its labour pool, with a 34 percent increase in the next 20 years; and Malaysia and Indonesia expect a 20 percent growth over the same period.

Thailand is seen as a modern Southeast Asian economic powerhouse. Like the other Asian Tigers, Thailand prioritised health, education and family planning as part of its developmental goals–the result of which was a dramatic shift in age composition. By 2010, Thailand's working age population peaked at 71.8 percent, and is expected to shrink by about 12 percent over the next 20 years.

Many Asian countries will have the opportunity to convert their youth bulge into a demographic dividend over the next few decades. The demographic dividend period in China and Thailand is forecast to last until 2035 to 2040, Malaysia until 2045, and India and Indonesia until 2050. Vietnam, also poised for a demographic dividend, has a working-age population that is very similar to Thailand. At the same time, these societies will need to ensure basic education and health for children, women and the elderly, and tackle the growing inequalities between the burgeoning urban middle class and the often-neglected rural poor. They must also tackle the inequalities within urban areas, including providing the infrastructure for sprawling urban growth. All this, while maintaining the much-needed economic growth to support raising standards of living for all.

The technology factor

Historically, new technology, such as 19th century manufacturing advances or 20th century computerisation, led to a substitution of skilled labour through the simplification and replication of tasks. However, the modern relationship between technological development and employment seems to be different, as advances in robotics and digital communications will principally reduce low-skilled and low-wage occupations, while highly skilled jobs will stay protected. One estimation is that nearly half the jobs in the U.S. may become automatable over the next 20 years, with transport, distribution and manufacturing being particularly affected. Over the next decade, a 25 percent increase is predicted in the use of robotics for manufacturing.

Asia, in particular, has benefited from the availability of cheap labour and the subsequent offshoring of jobs from Europe and the United States. This promoted rural-urban migration, which in turn drove consumption, enabling the development of local markets and a thriving service economy–ultimately helping to convert the youth bulge into the demographic dividend. Unsurprisingly, it will be these countries that are likely to be most affected by the impact of technological change on employment.

There is a supply-side issue as well. With the steep rise in labour costs of up to 17 percent a year, countries like China are already pricing themselves out of the cheap labour market. Rather than these jobs moving to other Asian countries like Vietnam or Bangladesh, many are returning to advanced economies where they are being replaced by robots. In the 1990s, the U.S. textile industry was decimated when manufacturing moved to China and India to take advantage of cheap labour. Today, the U.S. textile industry is being revitalised with the help of robotics and advanced digital machinery, reducing labour requirements in some sectors by over 90 percent.

It is not only in manufacturing that such developments are seen. Advanced voice recognition systems will have the ability to replace human labour in call centres; wordsmith programmes are already undertaking copyediting tasks and composing news articles for agencies such as Associated Press. Skills in mechatronics–a combination of mechanical, electronic and computer skills–can adapt to these changes, but this will require a highly educated and skilled workforce. In a similar vein, IBM has created the Watson computer, which can scale or break down expertise into algorithms so that tasks can be easily learnt by computers and widely disseminated. Watson is described as a machine that can develop cognitive skills and improve its performance or 'learn' with feedback from humans and the computer itself.

> With the steep rise in labour costs of up to 17 percent a year, countries like China are already pricing themselves out of the cheap labour market.

When and to what extent the creative and social intelligence of humans will be easily and widely replicated by machines is still debatable, yet the trends are clear. The intersection of age-structural change and the digital revolution has very clear implications for emerging and advanced economies. In Asia and also in Latin America, the youth bulge and growing labour supply are being threatened by automation. The jobs that will be available in both advanced and emerging economies will increasingly be for highly skilled technicians, requiring greater investments in human capital and education.

Enhancing human capital

It may be argued that the most important policy that any government could introduce to ameliorate the negatives and promote the positives of age-structural change is to enhance the human capital of their population through education and training. The role of education in reducing childbearing rates by delaying childbirth is evidenced in the direct link between education and contraceptive use. The desired family size also declines with increasing education in most countries.

For emerging economies especially, the demographic dividend is made possible with a more highly educated population. In particular, high skill levels are required in the uptake and adoption of new technologies. And for the advanced economies, education can also help to keep open the window of opportunity as the percentage of working-age people starts to decline. Enhanced human capital across the population and throughout individual lifespans through lifetime education, training and learning enables a continuation of economic productivity.

Maintaining the well-being of an ageing population is another means to sustain human capital, especially given the demographic patterns. This includes focusing on healthy children, a healthy workforce and a healthy cohort of elderly. Adequate investments in health are required to ensure, not just longer lives, but longer, healthy lives.

20th century institutions, 21st century challenges

Over the next 15 years, globally, some two billion babies will be born, another two billion children will need to commence school, and 1.2 billion young adults will need to find work. "While the demographic transition produces favourable conditions, it does not guarantee the supply of workers will be gainfully employed. Nor does it ensure that those who wish to save will find themselves encouraged to do so."[2]

Increasing unemployment, youth dissent, inequality and the inequitable distribution of resources alongside economic growth, frame the major challenges facing the emerging economies of Asia today: 20th century institutions will not suffice to solve 21st century problems. Education, health and the ability of people to move in the light of population needs and pressures are important to adapt to age-structural change. And yet all three face constraints inherited from the previous century.

While the flow of people, resources and communications are increasingly cross-border, legal and political action is controlled in the main within national boundaries. There will be a quarter of a billion international migrants by 2030, yet there is very little international flow of health, education or welfare that transcends national boundaries, but which is essential for the well-being of the migrants and for ensuring the best outcomes for them and their host populations.

Education is still instituted in old systems, which emphasise foundation schooling to the neglect of advanced and lifetime learning and training. Similarly, health systems are still predominantly focused on tackling acute diseases in a world where chronic conditions and comorbidities will be the largest health challenge.

These policy-level changes will become even more critical as Asia's population ages and the workforce concomitantly shrinks in size, increasing the grey burden on healthcare and the need to update and upgrade skills through education and training. Acknowledging the importance of age-structural change and integrating it into national and international policymaking will therefore be a critical piece of the solution, today and in the future.

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This article is based upon her presentation at the 2016 Shaw Foundation Distinguished Faculty Lecture Series held at Singapore Management University.

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COUNTRY 2.0

UPGRADING CITIES WITH SMART TECHNOLOGIES

Advancements in technology are being used to transform our cities into smart cities, but the process is not without its risks.

By Steven Miller

The ability to collect, process and use information well–enabled by the necessary infrastructure of hardware, sensors, networks, data management and software applications–is what makes a smart city. Recently, I moderated a panel discussion at Singapore Management University with three recipients of the Turing Award (the Computer Science equivalent of the Nobel Prize): Vinton Gray Cerf, Google's Chief Internet Evangelist; Butler Lampson, a senior scientist at Microsoft Research and an Adjunct Professor at MIT; and Richard Karp, professor at the University of California, Berkeley. The fourth panellist was Tan Kok Yam, head of Singapore's Smart Nation Programme Office.

All four speakers shared their vision and views on how 'smart systems' can be used to enable more liveable cities now and in the future. They elaborated on what they meant by smart systems in the context of urban liveability and smart cities, and how smart systems should (or should not) be used to meet the challenges of making cities more liveable. As Karp explained, "The fundamental organisational structure of a smart city will involve advances in data management, communications, as well as the development of the Internet of Things and a large range of physical systems, such as sensors and other monitoring devices that allow more intelligent management of processes in the city."

The role of the government in delivering such infrastructure cannot be underestimated; and it must play an active role in smart city planning, implementation and operations. Tan discussed the need for more integrated data management systems for the civil service, and commented on Singapore's Smart Nation effort in working on ways to enable government units to share information and coordinate with one another with more speed and flexibility.

Risk factors

IMPLEMENTATION CHALLENGES

Smart systems technology for smart cities will face many practical issues in implementation. Cerf elaborated on these issues using an example that is close to home. "Consider a smart thermostat that learns. It will always infer a pattern from the data it collects, but only a subset of these patterns are the ones we want it to remember and learn from. So without deep understanding of context and user needs, the thermostat can easily end up learning the wrong things. How do we get the thermostat and the surrounding home environment

to be smart enough to know which patterns are the useful ones versus those that are just noise?"

"For example, the thermostat knows it is not supposed to heat or cool the house when nobody's home. But it is more complicated than you might realise to know if there are people in the house. One of the new brands of smart thermostat comes packaged with two sensors to detect the presence of people at home, but even this has a limited range of detection. In a bigger house with multiple rooms, the thermostat would think there are no people in the house when the inhabitants are spending extended periods of time in the other rooms, and would automatically shut off the cooling or heating."

Even this simple example of using an 'intelligent thermostat' in a multi-room house illustrates that it is not so straightforward for the smart system to have the full understanding required to make the right decisions for a specific situation. The smart thermostat would need to be integrated with sensors in other parts of the house. Also, the thermostat needs ways to learn which patterns it observes are the ones to be incorporated into its updated knowledge base versus those that are special situations and should not be used for updating decision-making rules. Not all of the activity data observed by the thermostat is equally important, and the thermostat has to be smart enough to know this.

In just one smart home, detection issues can be easily resolved by installing more sensors, and the range of different types of human activities that need to be understood and learnt is limited. On a city-wide scale, however, it becomes a much bigger challenge to provide the smart systems with the necessary deep understanding of the context they need in order to know how to make the right decisions in specific situations. It is a logistical and operational challenge to have sensors deployed across an entire city, although technological developments are making it increasingly possible and economical to do this. It is a much harder challenge to know how to evaluate the vastly expanded range of human activities and behaviours, as well as infrastructure and other physical data that would be observed and needed for monitoring, situation assessment and decision-making.

While progress has been steady and impressive, it will still take five to ten years, and perhaps even longer, to fine-tune the performance of these types of smart systems for supporting infrastructure maintenance that are now being deeply interwoven into the smart nation infrastructure.

MANAGING DATA PRIVACY

The potential for the loss of personal privacy when collecting data poses a wide range of complex challenges. Lampson explained that residents must be willing to share information in order for artificial intelligence (AI) to achieve results: "If you want more privacy, then it's bound to put constraints on how you can use the data."

As more information becomes available, people will face a trade-off between privacy protection and the benefits that can result from wider ranges of data usage. There will always be groups of people on both sides of this issue: those opposed to any trade-offs that result in less data privacy, and those opposed to trade-offs that restrict data usage or constrain possibilities for innovation. The government needs to be closely engaged with civil society groups and the business community to thoughtfully navigate these trade-offs.

COUNTERBALANCING ACCELERATED LEARNING AND CYBERSECURITY

Smart systems benefit from accumulated experience (lessons learned) to improve their contextual understanding and overall system performance. State-of-the-art software systems are increasingly enhancing their ability to automatically learn as a result of taking in more data and analysing more examples. Even so, there will still be many situations where software designers (let's assume it is mostly humans serving in the designer role) realise that they can further improve the capabilities of the smart system by making a change in programme design and implementing it via a software update. There will also be situations where system designers of one type of smart system in one location figure out a way to improve the software programme design, and want to share that performance-improving software change with similar types of smart systems in other geographic locations through software upgrades.

Cerf helped the audience to understand the power of this capability of smart systems to enhance learning and performance through this example. "The new generation of autonomous (without human drivers) vehicle fleets learn to improve performance much more quickly than our current cars with drivers. Once errors in understanding and decision-making are corrected and thoroughly tested based on the experience of one autonomous car or a small set of autonomous cars, these lessons learned can be distributed to all autonomous cars made by that same manufacturer via software updates on a regular basis. This type of phenomenon is expected to

be widespread, and true of a large range of physical systems, called the Internet of Things," noted Cerf.

We are all familiar with the benefits of software upgrades. Essentially, this is what happens every time we update our computer's cybersecurity software used to protect our machines from malware and viruses. Cerf asked the audience to think about a cybersecurity challenge that will become even more prevalent than it already is. Suppose the software update from the creator/manufacturer of the system is somehow 'infected' by cybercriminals, and the supposedly trusted update itself becomes the carrier of malicious software. As widespread and problematic as malicious software and hacking already is in our current world, the new generation of smart systems makes the challenges of new cybersecurity threats even greater. Cerf warns that the global community needs an ever greater effort to ensure that software updates, especially to smart systems that can result in life or death outcomes, have the strongest forms of authentication and absolute validation to ensure that the software has not been inappropriately altered from its original state.

PREPARING FOR THE UNKNOWN

Smart city improvements will also require preparing for unknown situations. Lampson raised the point when he questioned how, and to what extent, will the demand for existing modes of public transport be influenced by the increasing usage of autonomous cars? His question points us to related questions, such as what would happen if some of the buses were also to become 'driverless', giving us the option of mass transit autonomous vehicles? In addition to the positive benefits, there may be unforeseen negative consequences as well. Lampson cautioned that these are extremely complex situations. With so many unknowns, and so many possibilities for unanticipated interactions, it is inherently difficult to predict the impact of these types of profound technological changes and the accompanying socio-technical interactions.

In the past five years, deep learning systems have been commercially deployed across a broad range of applications, including image recognition, speech recognition, natural language processing, e-commerce recommendation systems and drug discovery. Deep learning technology has tremendously accelerated the deployment of machine learning systems in a number of specific real-world settings, including smart cities.

With deep learning systems in particular, some of the 'black-box' aspects of how they function may add further complexities to understanding and managing future impacts. Deep learning algorithms are often expressed in the form of neural network structures. While we may know the number of neural network layers, the number of artificial neural nodes at each layer, and the weighting of the nodes at each layer, the exact decision-making model used by the deep learning system to make decisions is not visible to the humans who create, train and support the system. No one really knows the exact steps being followed by the machine, although we know the structure and properties of the artificial neural network being used to convert the input data to output judgements.

"For example," said Cerf, "at Google, we trained our tensor processing units, which are application-specific integrated circuits tuned to improve machine learning performance, to control the cooling system for our data centre. We used to do this manually, but by training our deep learning system to figure out how to optimise the use of power for cooling purposes, we have cut the cooling power requirements by 40 percent. While deep learning has worked very well here, we do not really understand exactly how it works—and philosophically, I get nervous when I don't fully understand why things work. More generally, my view is if you don't fully understand why a deep learning AI system has been working so well, you will not be able to understand what happened when it does not work."

To minimise these risks, we need a careful and cautious approach to how we test, deploy, monitor and supervise our smart systems for our smart cities, especially as we create systems that have increasing degrees of autonomy.

Possible solutions

The transition from where we are now to a truly smart city will be an ongoing and gradual process. The government has to pace the rate of change in a way that balances the need to move quickly in order to maintain and advance the city's economic competitiveness, versus the need for transition time that allows for more engagement with residents and that gains greater acceptance. Government planners must also factor in the time needed to ensure the smart systems being deployed are carefully tested and validated. This includes making sure that those responsible for implementing these smart systems have the organisational capacity to monitor and supervise how this is all working out, and that they can prudently manage the risks associated with using smart systems. Another important consideration is to strike a balance between the protection of personal data and pooling individual level data (which can be anonymised) into population-wide data sets that can be used to arrive at more well-informed decisions for the benefit of communities, and overall society and economy.

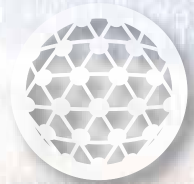
DECENTRALISATION

Some level of decentralisation can also enable the transition to a smart nation. Cerf explained, "Signboards for how many parking spots are available is a simple convenience made possible by smart systems. In this case, only local communication is necessary. This is a good example of the following principle: if the information that's required to make something usable or liveable is very local and does not need to be centralised in order to make it work, you don't necessarily need to centralise that." This type of approach, where applicable, could help reduce the complexity of the smart systems being implemented.

PUBLIC ENGAGEMENT

Tan commented on the importance of educating the public to get them familiar with changes that will come about as a result of the smart nation effort. He also highlighted the need to get the general public to better understand both the direct and indirect ways in which smart nation efforts are related to the ongoing changes they see around them. For instance, when people see an autonomous vehicle on our roads, they easily associate it with Singapore's Smart Nation effort. However, when they see a new pedestrian bridge that makes it easier for people, especially the elderly, to cross a street, most members of the general public view this as just another construction project, unrelated to Singapore's Smart Nation effort. They do not

> "If you don't fully understand why a deep learning artificial intelligence system has been working so well, you will not be able to understand what happened when it does not work."



realise that there may have been a smart nation element that was an important input into why and how this pedestrian bridge construction project was done. But this is increasingly the case, as Tan explained. "Data analytics and geographical information are used to ascertain where our elderly people are living, their visits to the neighbourhood market, and their other frequently used walking pathways. We use the results of this type of analytics to decide the most useful place to locate the new pedestrian bridge to meet the needs of the elderly."

Increasing opportunities for public feedback and improving the ability of various government units to analyse and make use of that feedback is a natural application area for smart nation efforts. In fact, Karp observed that it is something the government must do out of necessity, and commented, "The design of the smart city will have to account for the interests of the many subcommunities. Interest groups must have avenues to make their needs known."

While smart nation initiatives will be deployed to improve lives, and in some cases even to save lives, there will be specific subgroups of people who will be adversely impacted. For example, while Singapore's capacity for 'personal transportation-on-demand' has increased substantially as a result of Grab and Uber introducing their shared-economy transportation services and mobile apps, some drivers working for pre-existing taxi fleets are making less revenue due to the increased competition. As these types of technology-enabled disruptions continue, specific subcommunities and groups will be disproportionately impacted in adverse ways. The government will have to further strengthen its already existing network of feedback mechanisms to know what is happening on the ground, and use this social sensing insight to address the special circumstances of those whose livelihoods are upended in the name of progress towards a smart nation and global economic competitiveness.

ENSURING SAFETY AND RELIABILITY OF SMART SYSTEMS

Cerf also pointed out the need to have software engineering competency standards, especially for systems that could result in loss of life if there were malfunctions. "There are some types of programming that ought not to be done except by programmers who have demonstrated a high degree of professional competency, which essentially means professional licensing," noted Cerf. "In any society, we should not be releasing software that we don't have reasonable confidence is safe for people to use. The most important thing to be able to promise the consumer is that the device is safe to use."

Lampson had a clever idea of using software itself as a means of making complex smart systems safer and more reliable to use. Drawing on his own experience as a system designer and software developer of complex distributed systems, he observed that inserting new safety commands into a very large code base is complicated and takes a lot of time for the required testing. He suggested that the large complex system be surrounded by a very simple software system that is dedicated to monitoring safety mechanisms and enforcing a small number of basic safety conditions that would always make sure the full system was guaranteed to be working within acceptable bounds.

For instance, in a traffic light control system, he suggested, "Give the traffic light this type of 'executive monitor' that has to guarantee the enforcement of two simple rules: at least one direction of the traffic light is always red, and when the traffic light turns yellow in one direction, it stays yellow for at least three seconds. Also, give this executive monitor veto power over the 20 million lines of code of the full system with all the real time inputs and the smart decision-making algorithms." In short, Lampson highlighted the possibility of designing very simple and provably correct software systems to work in tandem with the full and highly complex smart system as a means of helping the people and organisations responsible for the smart system to monitor its behaviour and performance.

While this is just a hypothetical example, it illustrates that there may well be clever ways to manage the safety and reliability of this new generation of smart systems for smart cities. While this is a very promising strategy for monitoring and managing the decision outputs of smart systems, adding an additional 'part' to the overall system (the smart system plus the executive monitor) increases the possible pathways of interaction, which means increased complexity. So even with Lampson's approach, we have to exercise great caution.

From smart cities to smart nations

There is great potential in realising the vision of being a smart nation. For Singapore, successfully implementing and realising the Smart Nation vision is more of a necessity than just a possible option to consider, as this vision is a critical part of the transition to the future economy. While there are formidable challenges and obstacles, both technologically as well as socially, these challenges can be addressed. With a smart approach to designing, implementing, testing, supervising and managing our smart systems for a Smart Nation in Singapore, these challenges can be overcome. In summary, I believe these challenges are surmountable in Singapore and in many other smart cities in other locations, if we go about the learning and transition process in smart ways.

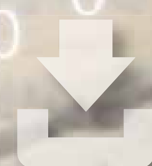
A truly smart city needs to be more liveable for everyone–and we can make Singapore into a more liveable smart city as technology improves and as our government and inhabitants continue to engage in ways that enable them to co-create the way forward.

Steven Miller

is the Vice Provost (Research) and Professor of Information Systems (Practice) at the Singapore Management University. He was the creator and moderator of the panel session, 'How Smart Systems Enable More Liveable Cities' held at SMU on 19 January 2017 as part of Singapore's Global Young Scientists Summit.

Quoted comments have been edited for clarity and to meet the needs of a written article versus a panel discussion.

The design of the smart city will have to account for the interests of the many sub-communities. Interest groups must have avenues to make their needs known.



Building Capacity in Asia

Policymakers need to be equipped with tools to analyse economic developments and make sound policy decisions.

By Julie Kozack

Asia is the most dynamic region of the global economy. High rates of economic growth are leading to rapidly rising living standards. Technological innovation–ranging from mobile banking to automation, robotics and cryptocurrencies–is transforming the way that economies function. And integration, both economic and financial, is making countries increasingly dependent on one another.

And while these changes have no doubt contributed to Asia's dynamism, they also bring challenges. A key challenge is for policymakers to adapt to this evolving environment, build on recent successes, and continue to lay the foundation for strong, sustainable and inclusive growth throughout the region. Meeting this challenge requires policymakers, at all levels of government, to be equipped with the know-how and capacity to formulate and execute appropriate economic and financial policies. This in turn requires a programme of capacity development geared towards addressing the challenges. Capacity development consists of technical assistance that helps governments put in place, or enhance the effectiveness of, institutions and policies; as well as training that helps strengthen the skills of government officials to analyse economic developments and formulate appropriate policies.

Asia encompasses economies from across the development and population spectra. High-income countries like Japan, Korea and Singapore share economic and financial ties with low-income countries such as Myanmar and Lao PDR. And global giants such as China and India with populations exceeding one billion sit alongside small states such as Palau and Tuvalu, with populations of less than 25,000. Capacity development activities in Asia, therefore, must take into account this diversity and the challenges therein.

Strong growth, but not without challenges

According to the International Monetary Fund (IMF), Asia continues to lead global growth and its economy is projected to expand by about 5.3 percent this year (refer to Figure 1).[1]

Asian financial markets have been resilient—despite volatile capital flows, stock markets are buoyant and capital flows into the region have resumed (refer to Figure 2). And Asia's exports are set to benefit as global growth recovers. But despite Asia's role as the global economic powerhouse, the region's economic growth has been slowing since 2010.

A key reason for the growth slowdown revolves around China's transition to a more service- and consumption-based economy from a manufacturing- and investment-based one (refer to Figure 3). The country's slower growth, while good for the region in the medium term, creates risks to short-term growth. Countries that are more exposed to China's manufacturing and investment-related sectors, or to regional value chains, are likely to be most affected. At the same time, China's rebalancing from investment to consumption will continue to create opportunities for exports of services, including tourism, and labour-intensive, low-cost production from other Asian countries.

On top of regional headwinds to growth, Asian economies are also grappling with higher interest rates—notably driven by monetary policy tightening conducted by the U.S. Federal Reserve Board—and continued sluggish growth in advanced economies. Since many Asian economies are highly open to international trade and finance, they are particularly sensitive to these global developments.

A possible shift toward protectionism in major trading partners is also perceived as a substantial risk to the region.

Climate change and natural disasters are an important challenge for the Small States and Pacific Island countries. The cyclone in Fiji in 2016 and the earthquake in Nepal in 2015 showed that natural disasters can severely disrupt economic activity in those economies.

Over the longer term, Asia's slowing productivity growth, ageing population and rising income inequality could weigh on economic prospects, giving rise to concerns about the so-called 'middle-income trap'—a situation in which countries are unable to continue to raise living standards once they have reached a level of per capita

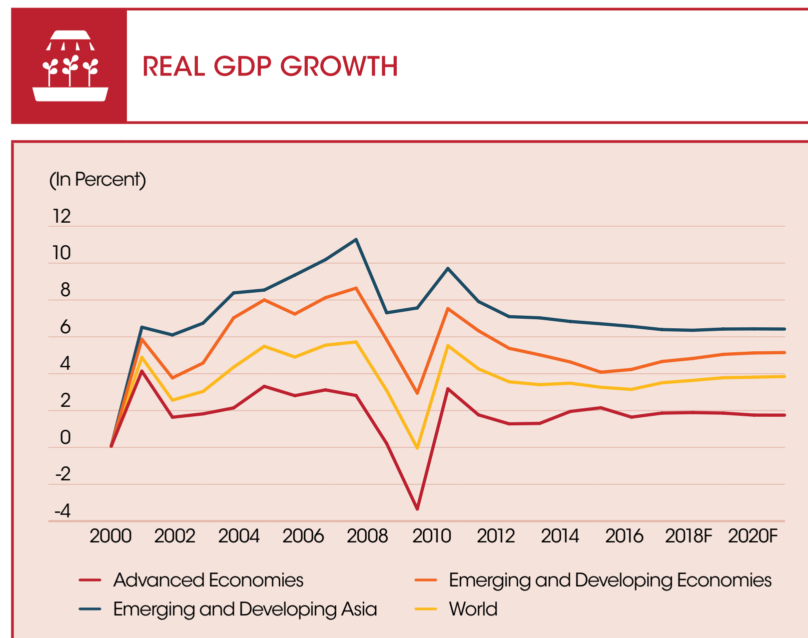


FIGURE 1 *Source: International Monetary Fund*

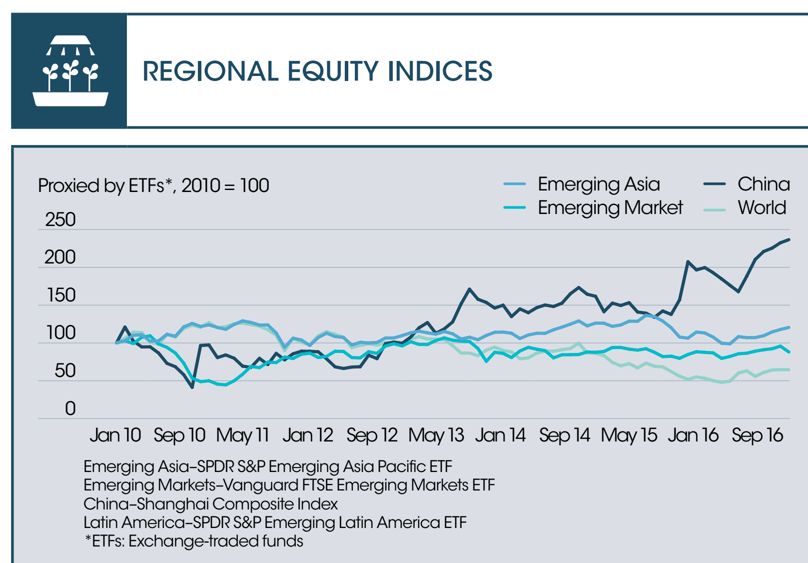


FIGURE 2 *Source: Bloomberg*

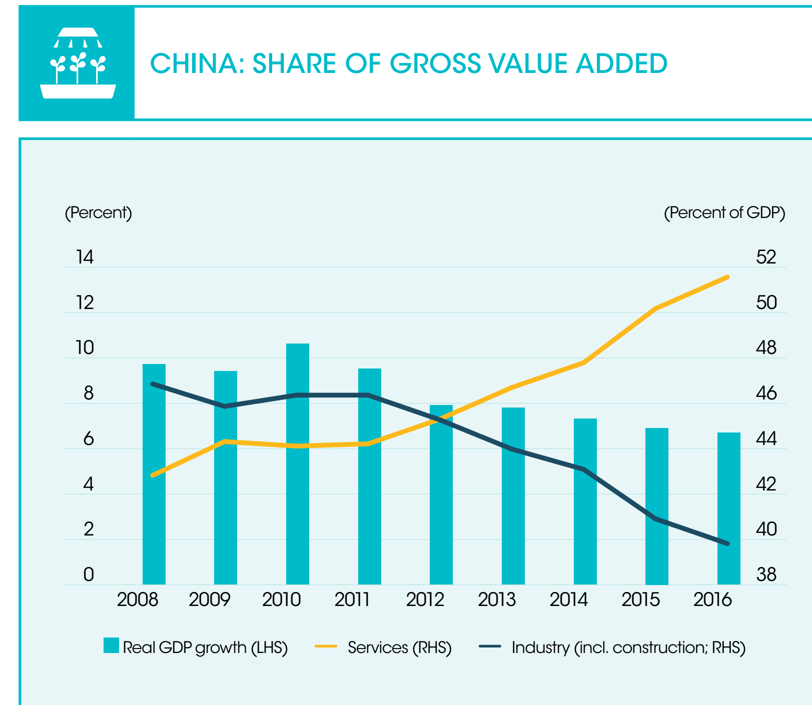


FIGURE 3 *Source: International Monetary Fund*

income of 30 to 40 percent of that of advanced economies. In addition, technological change will continue to transform economies and financial sectors, creating opportunities, such as expanding access to financial services; as well as challenges, like replacing low-skilled jobs with automation. This consequently disrupts economic development patterns that rely on the migration of labour-intensive industries from countries with higher production costs to those with lower costs.

In terms of macroeconomic policy, Asian policymakers are aiming to strike a balance between supporting growth and reducing vulnerabilities. Slower growth and, in some cases, low inflation, suggests that there is scope for fiscal and monetary policy support in many countries. At the same time, macroprudential policies—which aim to address risks to the financial sector as a whole—should be used to safeguard financial stability. Thus, while each country will need to find the right mix of policies for its individual circumstances, a comprehensive and consistent set of policies can contribute to sustainable and balanced growth.

Building capacity to meet challenges

Given the outlook and challenges for Asia, policymakers need to be fully equipped with the tools to analyse economic developments and make sound policy decisions. Capacity development is therefore essential, although there are differences in requirements based on the level of development of countries.

MIDDLE-INCOME COUNTRIES

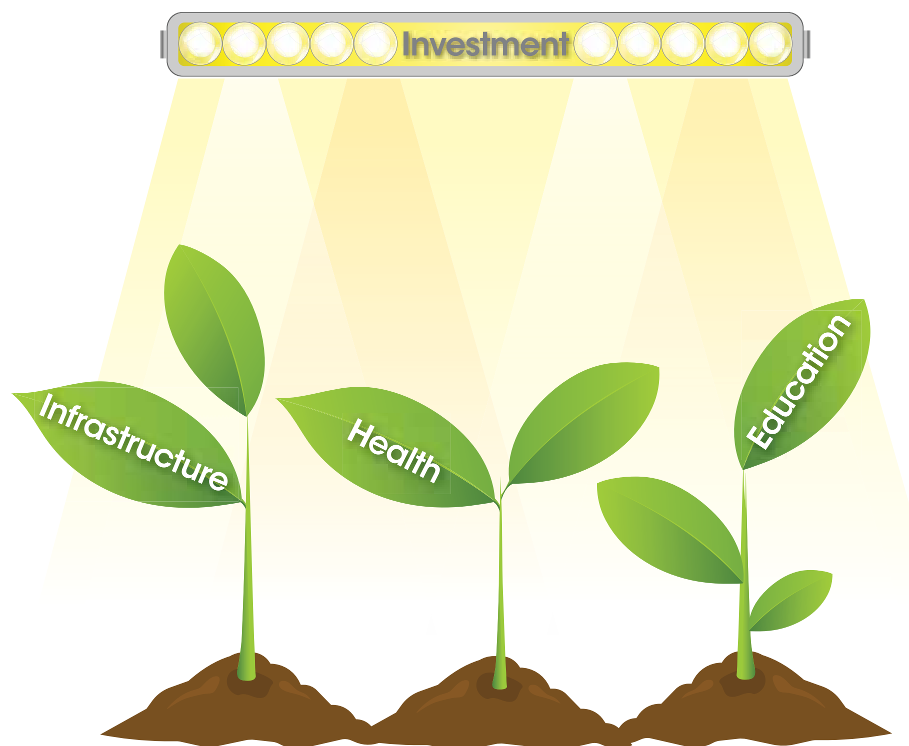
Emerging market countries (also known as middle-income countries) in Asia are looking to strengthen institutions and analyse risks—both of which are essential to maintain strong, sustainable and inclusive growth. Many of these countries are highly integrated into the regional and global economy and financial markets. Thus,

On top of regional headwinds to growth, Asian economies are also grappling with higher interest rates—notably driven by monetary policy tightening conducted by the U.S. Federal Reserve Board—and continued sluggish growth in advanced economies.

while they benefit from trade and financial ties with Asia and the rest of the world, they are also susceptible to global and regional shocks. Specifically, Asian emerging market countries are looking to improve financial sector regulation and supervision, strengthen the conduct of monetary policy, and enhance fiscal policy implementation.

The Asian financial crisis of the 1990s and the global financial crisis in 2008/09 underscored the importance of sound financial sector policies, notably regulation and supervision. Building capacity in these areas has been a priority for policymakers in many Asian countries. After the Asian financial crisis, countries like Indonesia, South Korea and Thailand undertook substantial reforms, including to their banking systems, to put them on a sound footing. This was one of the factors that enabled economies in Asia to weather the global financial crisis relatively well. The crisis also brought macroprudential policies to the fore. Thus, technical assistance, which provides specific advice on macroprudential policies or the institutional framework for them, has been important. Similarly, training on the implementation of these policies has been widely delivered in the region.

As Asian countries moved away from managed exchange rate regimes, they have increasingly looked to strengthen the conduct of monetary policy. For many countries, including Indonesia, South Korea, the Philippines and Thailand, this has meant moving to an inflation targeting regime or inflation targeting 'lite' regime. Inflation targeting (as well as inflation targeting 'lite') requires central banks to have the tools and mandate to conduct monetary policy with a view to achieving an inflation target. Technical assistance and training



in this area helps ensure that government and central bank officials are able to forecast inflation, manage liquidity, and understand how interest rate decisions taken by the central bank are transmitted to the broader economy (for example, through deposit rates or bank lending) in order to implement a forward-looking monetary policy.

Asian policymakers are seeking ways to increase public investment in infrastructure, health and education. These investments are critical for countries to continue to raise living standards and avoid the 'middle-income trap'. Creating fiscal space to increase spending in these areas often requires reforms and changes to budget implementation, including reductions in less efficient types of public spending and increases in tax revenue collection. This would make greater spending possible while still keeping fiscal deficits and public debt in check. For this reason, Asian officials are seeking to build capacity in the area of fiscal policy management by bolstering revenue administration, improving the equity and efficiency of tax systems, strengthening budget implementation, and advancing subsidy reform.

LOW-INCOME AND FRONTIER MARKET COUNTRIES

The capacity development needs of low-income and frontier market countries in Asia differ somewhat from those of emerging markets. Many of these countries are in a process of transition towards more market-based economies. Thus, they are focused on the fundamentals of institutional capacity to enable effective policy implementation in the core areas of monetary, fiscal and financial sector policies. This often involves technical assistance and training to develop skills for designing macroeconomic frameworks, with special attention to the issues facing low-income countries.

On monetary policy, low-income and frontier market countries in Asia such as Cambodia and Lao PDR are grappling with issues including dollarisation, building central bank credibility, and developing interbank markets (which are essential for the transmission of monetary policy to the wider economy). Often, there are structural impediments to the conduct of monetary policy as well, including thin liquidity in foreign exchange and other markets, segmented banking systems, and bank lending that is not always market-based. Technical assistance and training is therefore geared to building capacity to address these issues as reforms are implemented.

On fiscal policy, many low-income and frontier market countries in Asia are seeking to improve budget execution, tax collection and fiscal forecasting. Technical assistance tends to focus on country-specific advice to improve fiscal implementation, often in the area of public financial management and tax administration. Training in the fiscal area generally focuses on the fundamentals of fiscal policy design and methods for fiscal forecasting. Indeed, many low-income and frontier market countries in Asia—including Cambodia, Lao PDR, Mongolia, Nepal, Timor-Leste and Vietnam—have sought to develop capacity in the areas of tax administration, treasury management and budget planning.

Finally, on financial sector policies, low-income and frontier countries are seeking to improve financial regulation and supervision in underdeveloped, yet often rapidly growing, financial sectors. For many of these countries, the banking system, like the rest of the economy, is transitioning towards a more market-based system. And some countries, notably Cambodia, Lao PDR, Myanmar and Vietnam, face the added challenge of managing financial development and financial integration (with the rest of Asia or the rest of the world) at the same time. Technical assistance and training is therefore focused on strengthening regulatory and supervisory skills across all key agencies.

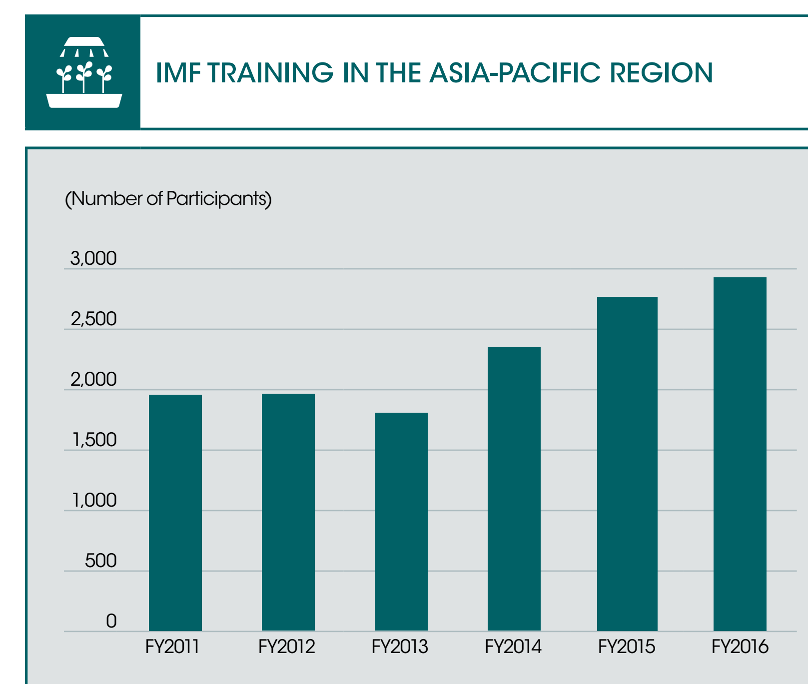


FIGURE 4 Source: *International Monetary Fund*

The IMF's contribution to capacity development in Asia

Capacity development is one of three mandates of the IMF, along with policy advice (regular economic 'health checks' of all member countries and the global economy) and lending. Building human and institutional capacity within a country helps governments implement more effective policies, leading to better economic outcomes. Between May 2015 and April 2016, low-income and developing countries received about half of all IMF technical assistance (versus about 40 percent for emerging market and middle-income countries), while emerging market countries received the largest share of IMF training (just over half).

The IMF provides technical assistance to countries in its areas of core expertise: macroeconomic policy, tax policy and revenue administration, expenditure management, monetary policy, the exchange rate system, financial sector stability, legal frameworks, and macroeconomic and financial statistics. Training is delivered to government officials in a number of areas, including macro-financial linkages, monetary and fiscal policy, balance of payment issues, financial markets and institutions, and statistical and legal frameworks. Within Asia, the IMF delivers technical assistance and training through Regional Technical Assistance Centers, Regional Training Centers, or technical assistance offices (refer to Figures 4 and 5). The IMF's Office of Asia and the Pacific, located in Tokyo, Japan also holds workshops and seminars for government officials in the region.

FIGURE 5

> To meet new challenges, policymakers in Asia will need the skills and tools to implement macroeconomic and financial policies prudently and nimbly.

Through these centres and offices, the IMF has helped countries strengthen capacity across a wide range of areas. The Pacific Financial Technical Assistance Center has supported the Pacific Island countries, such as Cook Islands, Fiji, Kiribati, Nauru, Palau, Samoa, Tonga and Vanuatu, to strengthen domestic revenue mobilisation and facilitate inclusive growth by promoting fairer, more efficient taxation. It has also supported Fiji and Vanuatu in upgrading their macroeconomic and projection frameworks and using them in policy analysis.

Training has been adapted to the evolving needs of the region. In addition to the training offered at its facility in Singapore, the IMF-Singapore Regional Training Institute has stepped up its delivery of in-country training customised to the needs of its course participants. Recent examples include the delivery of a one-day workshop for parliamentarians from Myanmar, a course on macroeconomic diagnostics for Indonesian officials, and another on monetary and exchange rate policies for officials from Cambodia, Lao PDR, Myanmar and Vietnam.

The Technical Assistance Office for the Lao PDR and the Republic of the Union of Myanmar (TAOLAM) has helped Cambodia, Lao PDR, Myanmar and Vietnam through a programme of country-specific technical assistance and training. For example, with TAOLAM's support, Myanmar has reformed its central bank and foreign exchange market, developed monetary policy tools, set up a large taxpayer office, begun modernising tax collection and expenditure management, strengthened the anti-money laundering regime, established a macroeconomic monitoring group, and built a statistics programme.

A strong foundation, but more work needs to be done

In many countries, macroeconomic policy frameworks have been upgraded and policy implementation has been sound. Going forward, the region will face new challenges. Some of these challenges will arise from the significant economic transition underway in China, while others will reflect global economic and financial developments. And over time, homegrown challenges—such as population ageing and income inequality—will also come to the fore.

To meet these challenges, policymakers will need the skills and tools to implement macroeconomic and financial policies prudently and nimbly. For all countries in the Asia-Pacific region, continued efforts to strengthen capacity in the areas of monetary, fiscal and financial sector policies will help support reform agendas aimed at making economic growth both sustainable and inclusive. Asian emerging market countries will also need to continue to boost capacity to analyse risks in today's rapidly evolving global economic environment, including the use of cutting-edge tools and models to capture complex economic and financial interlinkages. Low-income and frontier economies will need to continue to focus on enhancing capacity in the fundamentals of macroeconomic policymaking, such as by developing macroeconomic frameworks to assess policies and outcomes.

Capacity development activities can help these countries design and implement economic policies that foster stability and growth by strengthening their institutional capacity and skills. Stability and growth are essential for Asian economies to continue to raise living standards and build on their economic success to date.

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The views expressed in this paper are those of the author(s) and do not necessarily represent the views of the IMF, its Executive Board, or IMF management.

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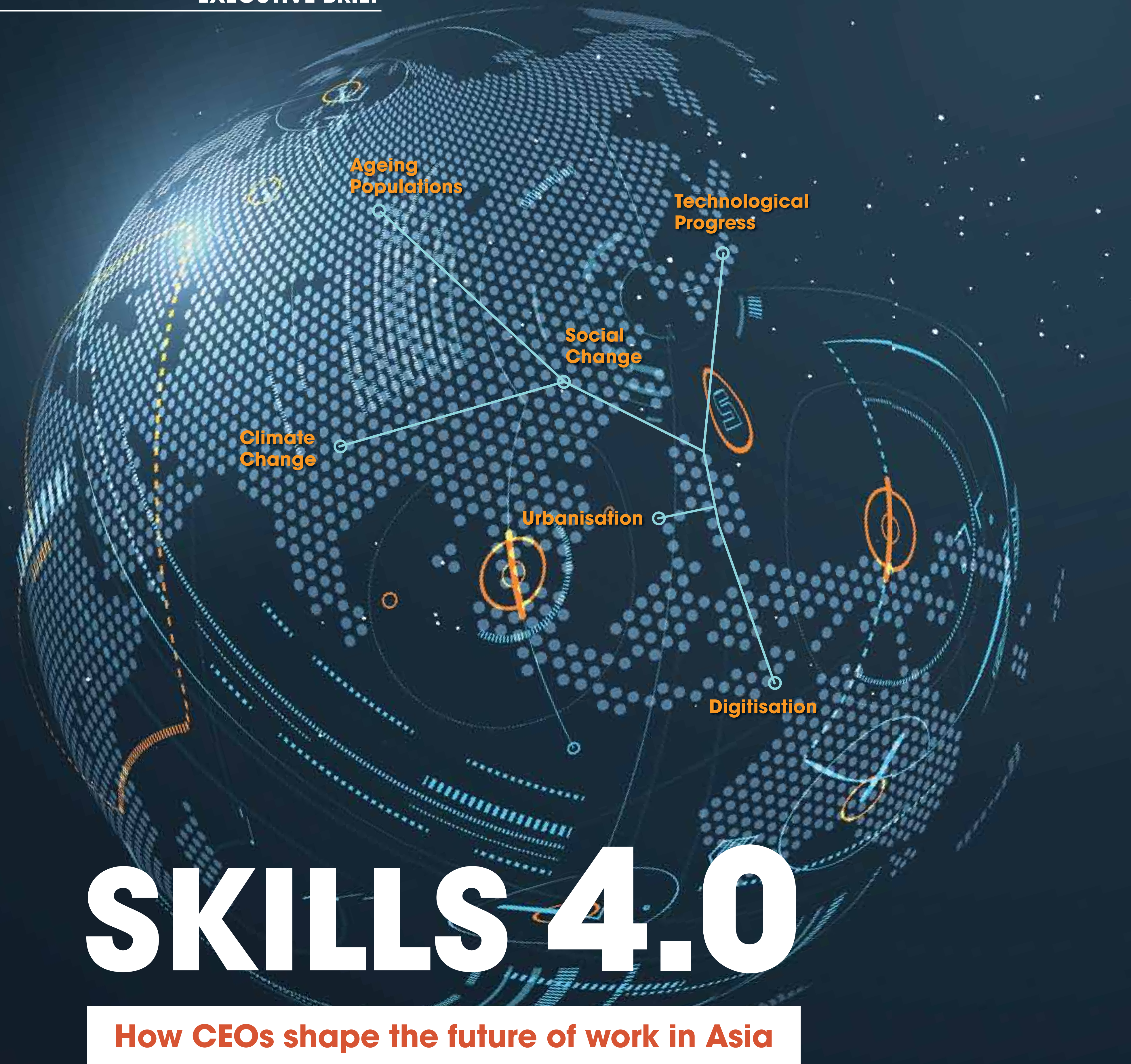
[1] International Monetary Fund, "World Economic Outlook Update", January 2017.



SKILLS 4.0

How CEOs shape the future of work in Asia

Companies need to ensure that they are ready to embrace disruptions and fend off potential skills gaps and talent shortages.

By Florian Kohlbacher

Skills are the essential resource in the knowledge economy of the 21st century. With the unprecedented economic developments in Asia and the dramatic changes rattling through many industries, managing the business responses to these changes and developing the organisation's human capital to equip employees with the skills needed in this environment is becoming a key challenge for businesses. The skills required are likely to comprise both soft and hard skills, that is, people skills, technological skills and business skills. At the same time, to be successful and sustainable, the responses need to be sensitive to the cultural and organisational realities of the Asian business environment.

Tomorrow's markets will be more complex. To thrive in this environment, businesses should be able to develop the ability to attract, develop and retain the best talent available to them.

Megachanges await us

Megatrends and the 'megachanges' they trigger have become more and more important–and are increasingly recognised as having a tremendous impact on societies, economies and businesses.[1] These megatrends comprise various social, economic, demographic and technological changes. Of these, the eight 'mega-important megatrends' are globalisation, demographic change/ageing populations, climate change, technological progress, social change, urbanisation, digitisation of the economy, and industry convergence. Managers all across Asia are becoming more sensitive towards these developments and, as a result, are looking for the relevant business intelligence to make sense of them.

A 2016 report from the Economist Corporate Network (ECN) examines how Asian CEOs perceive the challenges and opportunities that arise from these megatrends in terms of the organisation's skills and talent management, and explores the extent to

The top three megatrends effecting businesses are urbanisation, globalisation and technological progress.

which they are taking ownership of developing the skills that will be required in future and 'skilling-up' their workforce.[2] According to the report, more than 70 percent of executives surveyed presently spend more time identifying megatrends than they used to. A staggering 85 percent of them also spend more time thinking about the kind of skills their businesses will need in order to deal with these megatrends.

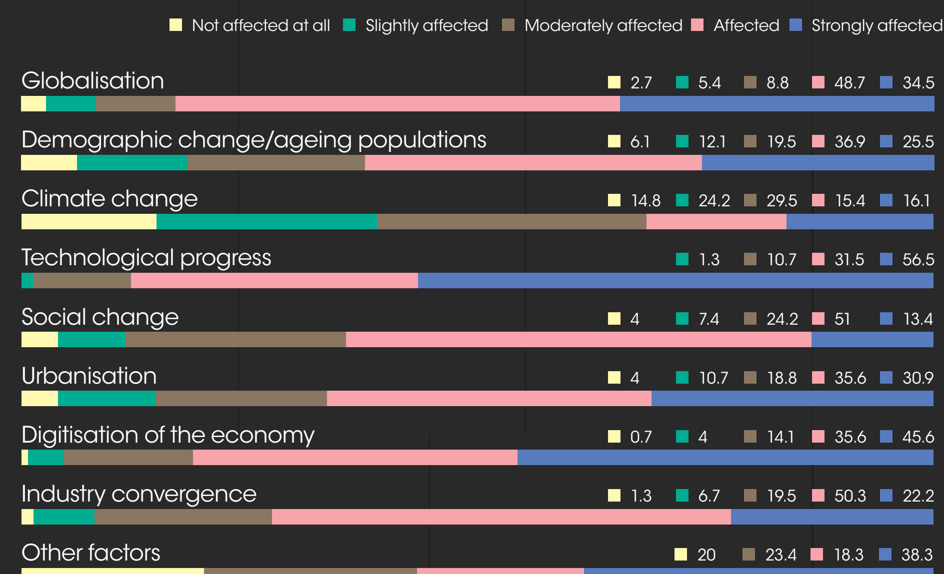
Megatech

Technological progress seems to accelerate at unprecedented speeds. Self-driving cars, three-dimensional printing, next-generation robots and artificial intelligence are at the cusp of establishing themselves in the business world and society at large.[3] This offers business opportunities, but also creates risks for companies and their workforce. According to some estimates, five million jobs will be lost by 2020 as technology renders human work redundant in some areas,[4] especially single-skillset jobs.[5]

To retain their place in the labour force, individuals have to acquire skills that match the socio-technological changes in the work environment. Companies thus have to retrain and reskill workers to avoid a crisis situation.[6] Technological changes require a workforce that is able to keep up with these developments. At the same time, they also challenge the workforce to surpass technological progress time and again in order to not be replaced by them. For this innovation of work, new and adapted skills are of fundamental importance.

Unpredictable

Complexities stemming from megatrends such as industry convergence, technological change and globalisation pose new challenges for managing businesses. A more unpredictable and complex social and business world requires more qualified workers who can adapt to a variety of situations and challenges. The challenges brought on by megatrends have, thus, long since reached companies and come to the attention of senior executives. While there is a certain level of awareness and understanding of the business implications of megatrends, plenty still needs to be done to ensure executives have the relevant business intelligence to interpret megatrends in a meaningful way and acquire the talent that can thrive in a changing marketplace.



The top three skills required for the future will be complex problem-solving, coordinating with others and people management.

Of the eight major megatrends surveyed, executives assign the most importance to changes stemming from globalisation, technological progress and digitisation of the economy. Over 80 percent of the senior executives surveyed think that the above-mentioned trends *affect* or *strongly affect* their companies. Among these, technological progress is seen as the most important trend, with 56.5 percent of CEOs stating that it *strongly affects* their company.

Only a small number of CEOs are confident that their company is *completely prepared* to deal with these trends. While urbanisation, globalisation and technological progress are among the megatrends that CEOs are most prepared for, they feel significantly less prepared for trends such as industry convergence and climate change. These are, in fact, perceived to be threats rather than opportunities to get ahead of the competition.

Skills 4.0: Mind the gap

A staggering 90 percent of the senior executives are confident that they know which skills are required to respond to global megatrends. This seems promising but does not guarantee that companies actually have these skills already in their workforce. Indeed, about 58 percent of CEOs believe that most of the skills required for their business to respond to global megatrends are new skills that they neither appreciate nor use today.

There is some regional variance to this. While 61 percent of the respondents in China agree that the skills needed in the future are new, only 48 percent in Singapore agree. In Japan, only one third of the CEOs believe this is so, with 47 percent disagreeing (the rest are unsure). This could be interpreted in two ways. On the one hand, these supposedly *new* skills might already be familiar to respondents in Japan–regardless of these megatrends. This might have to do with the Japanese business culture that generally places a lot of emphasis on soft skills; or with technological progress, as Japan tends to be a nation of tech-savvy, technologically-curious and open-minded people. On the other hand, the exposure to megatrends might be greater and more intense in Japan–to the extent that firms are already responding by acknowledging these new skills.

SOFT SKILLS RISING

Overall, most CEOs (72 percent) agree that it is mostly soft skills that are required to rise to the challenges brought on by the megatrends. Complex problem-solving, coordinating with others and managing people are seen as the three top skills for businesses presently and are expected to remain similarly important in the future. Taken together, this indicates a clear shift away from hard skills towards soft skills.

Abilities such as coordinating with others and active listening are considered as *(very) important* by an overwhelming number of respondents. Hard skills such as computer programming and machinery operations are considered significantly less important. Examples of critical soft skills that were highlighted during our focus groups included the ability to identify new opportunities and resilience, as well as the determination to close a deal or conclude a project. This also includes the capacity to learn, adapt, change, think critically, and challenge oneself, as well as the ability to turn insight into solutions.

Finding candidates with the appropriate hard skills is usually not an issue in both China and Japan. However, the education system in both countries was faulted for failing to encourage critical thinking and proactive risk taking, particularly amongst new graduates. One participant in Shanghai shared that the most effective hiring philosophy was based on 'hire for attitude, train for skill', and cited 'learning agility' as the most valuable (yet most elusive) quality in new hires.

Participants in the Tokyo focus group discussion seem to agree. The ideal profile is someone who not only has learning agility, but also the curiosity and desire to learn and venture outside their comfort zone. Various companies represented in both focus groups practiced a variant of triage for employees—those identified as lacking in commitment were weeded out quickly, while others showing the required talent and attitudinal grit were given special grooming to develop their soft skills and leadership potential.

Developing and acquiring the right skills

How can companies acquire the talent and skills needed to manoeuvre in the business world? Over 60 percent of CEOs responded that they prefer a combination of *buying* and *building* talent. Survey participants were of the opinion that hard skills can be more easily acquired, and often these skills can be developed through in-house training, if the

Managers should train and be trained for *skills* rather than for *specific tasks*, thus creating a flexible and adaptable workforce.

employee does not already bring them with him/her. But the soft skills are much more difficult to build, which makes it all the more important to identify, attract and retain the right talent. For example, it is much harder to find people who can implement new innovative technologies for the business than to find data analysts.

BUILD OR BUY?

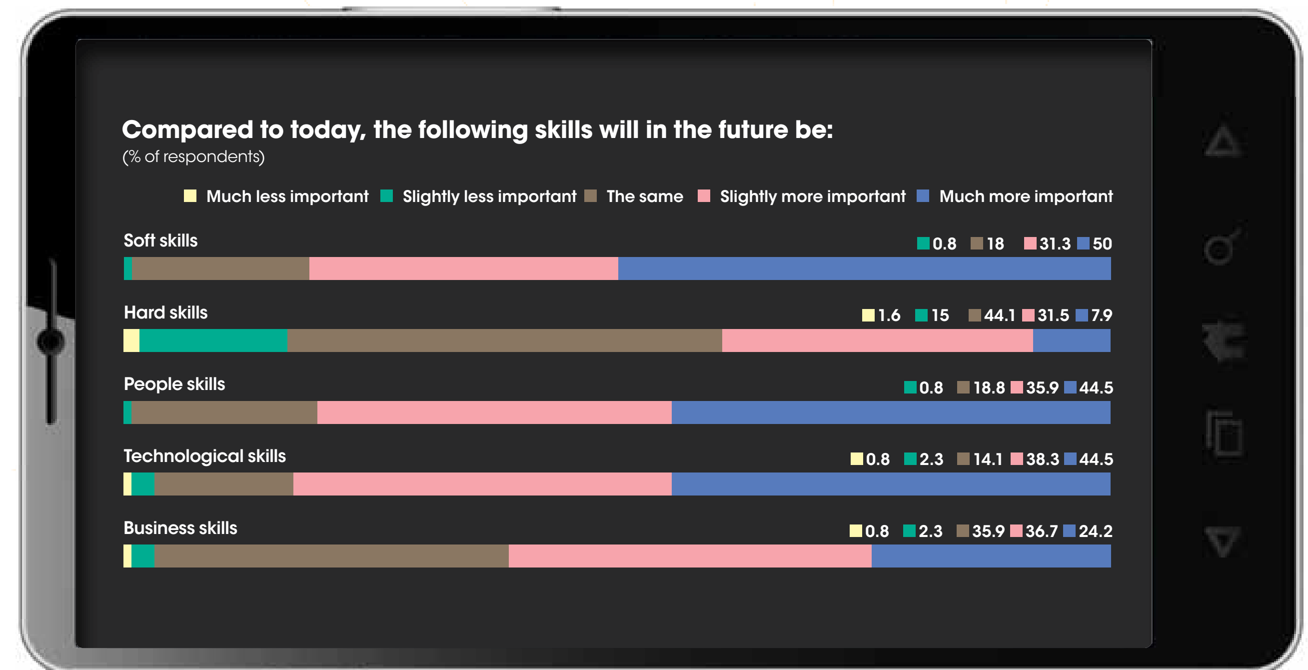
About a third of the CEOs surveyed build talent predominantly in-house. While training and retraining the workforce is seen as important by an overwhelming majority of the participants, buying or renting skills through outsourcing or recruitment firms are relatively less often used (only 5.5 percent of respondents said they outsource skills development on a regular basis). There seems to be a clear imperative for companies to develop the skills in-house. But given that CEOs actually prefer a combination of *build* and *buy*, there should also be a need for outside options offered by outsourcing or recruitment firms. The fact that the companies surveyed do not seem to use these options as much indicates scope for improvement. Service providers operating in this space may want to consider 'skilling up' their offerings.

TRAINING THE TALENT

Overall, a quarter of the CEOs surveyed are unsure whether their company has the right structures to 'skill-up' existing employees, while another quarter believe that they *do not* have the right structures in place. In Hong Kong, 64 percent of the CEOs surveyed believe that they lack the requisite structures to 'skill-up' their employees. This result is alarming and should serve as a wake-up call to executives to ensure they make their businesses ready for the skills and talent challenges of the future. Executives should work with their HR departments to carefully review their structures and their effectiveness on a regular basis. By analysing the available skills and future skill requirements, they can amend or build and continuously develop the structures needed for the future.

PROACTIVE LEADERSHIP

At the managerial level also, there is a need to teach managers new ways of thinking—which is an integral part of strategic skills management. It is imperative for executives to become more proactive in the communication process in order to drive their company's skills management. Top managers such as business unit leaders are telling middle managers to consider themselves the 'CEO of your own department'. Overall, there is increased emphasis on lateral thinking and encouragement to see things more in terms of *context* than *content*. Managers should train and be trained for skills rather than for specific tasks, thus creating a flexible and adaptable workforce.



DEVELOPING RISK-TAKERS

Risk-taking, failure-embracing and perseverance are some of the essential qualities businesses are increasingly looking for in a potential hire. However, in some Asian countries—Japan and China for example—CEOs observed that societal norms and values do not appreciate those who take risks, and even more so those who take risks and fail.

CEOs in the Singapore focus group expressed a similar concern about managing the 'strawberry generation', a colloquial term used to describe some generation-Y workers who bruise easily when put under slight pressure. This group of workers lacks the perseverance and commitment to solve problems and tackle challenges in their day-to-day work, and often get demotivated by failures and the lack of quick results.

The challenge then, is for businesses in Asia to either try to shape the local culture to the ideal, or to make the local culture work for their corporate culture. The answers probably lie somewhere in the middle. Businesses should encourage risk-taking and embrace failure. One executive in the Tokyo focus group explained how he and his HR team recorded videos of themselves dancing and showed them to other employees, illustrating that it is fine not to be perfect—that it is perfectly all right to be bad at something.

LACK OF LOCAL TALENT

Another issue that became evident is the lack of suitable local talent: 70 percent of respondents agree that a shortage of suitable skills is limiting the localisation of management positions in their companies in Asia. This often leaves companies little choice but to look for future talent globally. This can however lead to various inefficiencies due to increased costs and lack of local and cultural knowledge of talent coming from outside. The only exception here was Hong Kong, where the majority did not think that a shortage of skills in Asia is affecting their localisation of management positions. Nevertheless, almost 75 percent of the respondents in Hong Kong are increasingly looking globally for future skills. In Japan, 80 percent are increasingly looking globally, with a staggering 87 percent thinking that it is the shortage of skills that is limiting the localisation of management positions.

LOOKING FOR AN ADAPTABLE WORKFORCE: CHINA VERSUS JAPAN

The ongoing redefinition of job descriptions today has made flexibility and willingness to adapt to new roles the most essential skills employers look for in potential hires. In China, the country's rapid economic growth has generated challenges for workforce planning. High turnover and the need for constant hiring and training of replacement staff has resulted in skills shortages. This volatility has been compounded by technological changes and regulatory requirements that have redefined roles within the workplace. Some enterprise growth has been organic, but frequently has come about through mergers and acquisitions, often on a large scale and at a very fast pace.

Against this background, it is not surprising that many participants in the Shanghai focus group discussion commented on pressures due to post-merger efforts to integrate workforces, noting various examples of post-merger strategies—some successful, others less so. One example cited featured a high degree of autonomy for the acquired company, leaving it to keep its own corporate culture more or less intact. At the other extreme were examples of premeditated strategies to identify key employees at the target company prior to the acquisition, and crafting a proactive policy to retain them post-acquisition, within a three-year timeframe. In the example cited, the company routinely pursues a deliberate valuation of personnel 'assets' as integral to the value of the acquisition, and allows a generous timeframe to inculcate a new corporate culture.

Meanwhile, the challenges for corporate leaders in Japan stem not so much from rapid economic growth, but from persisting deflation and economic stagnation. Participants in the Tokyo focus group discussion remarked on how people in Japan have become increasingly inward-looking and averse to risk and failure, and how this has actually shrunk the talent pool. Part of this, they observed, is cultural and reinforced by society. Japanese workers tend to prefer to be perfect at what they do and dislike straying outside their areas of expertise or responsibility. This tendency is exacerbated by societal institutions and corporate practices that severely punish failure and downplay personal successes.

CEOs feel that the reasons for the talent shortage are often rooted in the local societies. For example, in the focus group interviews in Japan, participants highlighted that the Japanese education system does not adequately equip students with the skills needed in today's world. They also implied that a Japanese culture of perfection is at odds with the work requirements in modern multinational companies operating in emerging markets. Having the courage to fail and learn from failure was seen as a valuable skill in itself.

Leading the change

The challenges of acquiring, developing and retaining talent calls for the active involvement of C-suite executives who will help in bringing talent management issues onto the strategic agenda. In order to stay ahead of the curve in this era of megachanges, a more proactive role of senior leadership in driving the skills and talent agenda of their companies is critical. According to the focus group discussion in Tokyo, the role of the CEO includes gaining the trust of employees by being authentic, honest and frank, and leading by example. In a nutshell, the CEO needs to create a culture that motivates and drives success.

In today's ever-changing dynamic markets, companies need to ensure they are ready to address potential skills gaps and talent shortages. This calls for an adaptable, flexible workforce that is trained for skills, not tasks.

The change in corporate mindset, culture and processes that is required to acquire, train and retain the new workforce requires strong leadership. It is time that CEOs become more actively involved in strategically important decisions concerning the development of skills, and ensure that they regularly discuss these issues with HR and support HR's efforts by championing 'skilling-up' efforts throughout the company. It is the CEO's responsibility to bring HR back into the boardroom and onto the strategic agenda. Because a true leader recognises a trend, prepares for it, and leads the organisation through it.

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The material for this article is derived from the Economist Corporate Network Report "Skills 4.0: How CEOs shape the future of work in Asia". The report was sponsored on a regional basis by Hays.

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SKYSCANNER: GLOBALISING A BUSINESS MODEL

In order to compete in Asia Pacific's one-stop travel market, Skyscanner reinvented itself from the inside out.

By Rick Smith and Adina Wong

The number of websites and apps offering comparative pricing for travel consumers has grown hand in hand with advances in technology, enabling a rapid response to enquiries that were once calculated manually by teams of travel agents. Skyscanner, for example, provides an easy way to compare prices across different airlines when booking a flight. It combines proprietary search technology with content sourced from a comprehensive supplier base of airlines and online travel agents (OTAs) to create a technology platform that allows users to find and compare travel options quickly and accurately.

Now a global enterprise with a foothold in the Asian market, Skyscanner was founded in 2003 by three friends in Edinburgh, the United Kingdom. Initially, the company relied primarily on word-of-mouth marketing. The founders pursued a conservative expansion strategy that accepted slower growth in the early years, but also enabled them to maintain control and ownership while building a solid foundation for the firm's unique product offering. Once Skyscanner had established itself in the European market, it looked to expand into Asia.

In June 2011, Skyscanner opened an office in Singapore, which was to serve as a sales and marketing hub for the region. It gradually became a full-fledged service office with engineering and technology development capabilities. However, the move was not without its challenges.

Bringing the business model to Asia

Although the business potential was readily acknowledged, Asia was often perceived by western companies to be just as homogenous a region as continental Europe, with most not readily comprehending the diversity of Asia. This posed an opportunity and a challenge for Skyscanner. It needed to adapt its offering to individual Asian markets, as well as make its Asian business nimbler and more responsive to the needs of local customers.

CUSTOMER BUYING PATTERNS

Important differences in the behaviour and preferences of customers throughout Asia, as compared to Europe, included a preference for accessing the Internet from mobile phones instead of computers. In 2013, globally, more than 50 percent of the company's traffic was accessed from a mobile device, like smartphones and tablets. As Andy Sleigh, Skyscanner's General Manager for Asia at that time, discovered, this figure was higher in certain Asian markets. "It's probably 60 percent or more. A lot of our new customers in Asia will never access the Skyscanner site on their desktop computers."

Differences in online browsing and payment habits were also present. In the western model, people generally started their search using a search engine, such as Google, or would go directly to a website that they trusted. But in Asia, not everyone starts off a search on a search engine, says Sleigh. In China, for instance, people spend almost all of their Internet time on WeChat. Buying habits too are unique. Most people in Asia prefer to book directly with the supplier–be it an airline or a hotel–because they believe that customer service will be more reliable.

Another point of difference relates to the popularity of package holidays. "If you go to any online travel site in Asia, they always lead with packages," noted Sleigh, "Whereas in most of Europe, while package holidays are popular, they are not something that we've ever focused on and made much revenue from."

PARTNERS FOR DOMESTIC TRAVEL

Improvement in the company's domestic travel offering in Asia was another challenge. Skyscanner's platform did not always have comprehensive information on local travel agents, who sometimes offered better prices than the local or international airlines. It also took Skyscanner longer to convince the Asian airlines to partner with it for local flights because they were used to working with their network of trusted online travel agents.

Sleigh cites the example of South Korea, where 98 percent of the searches on Skyscanner related to international travel, or for travel between two destinations outside the country. Nevertheless, the domestic market in South Korea was significant—for instance, Jeju Island to Seoul was the busiest air route in the world, with ten million people travelling the route annually.

Two sides of the same coin

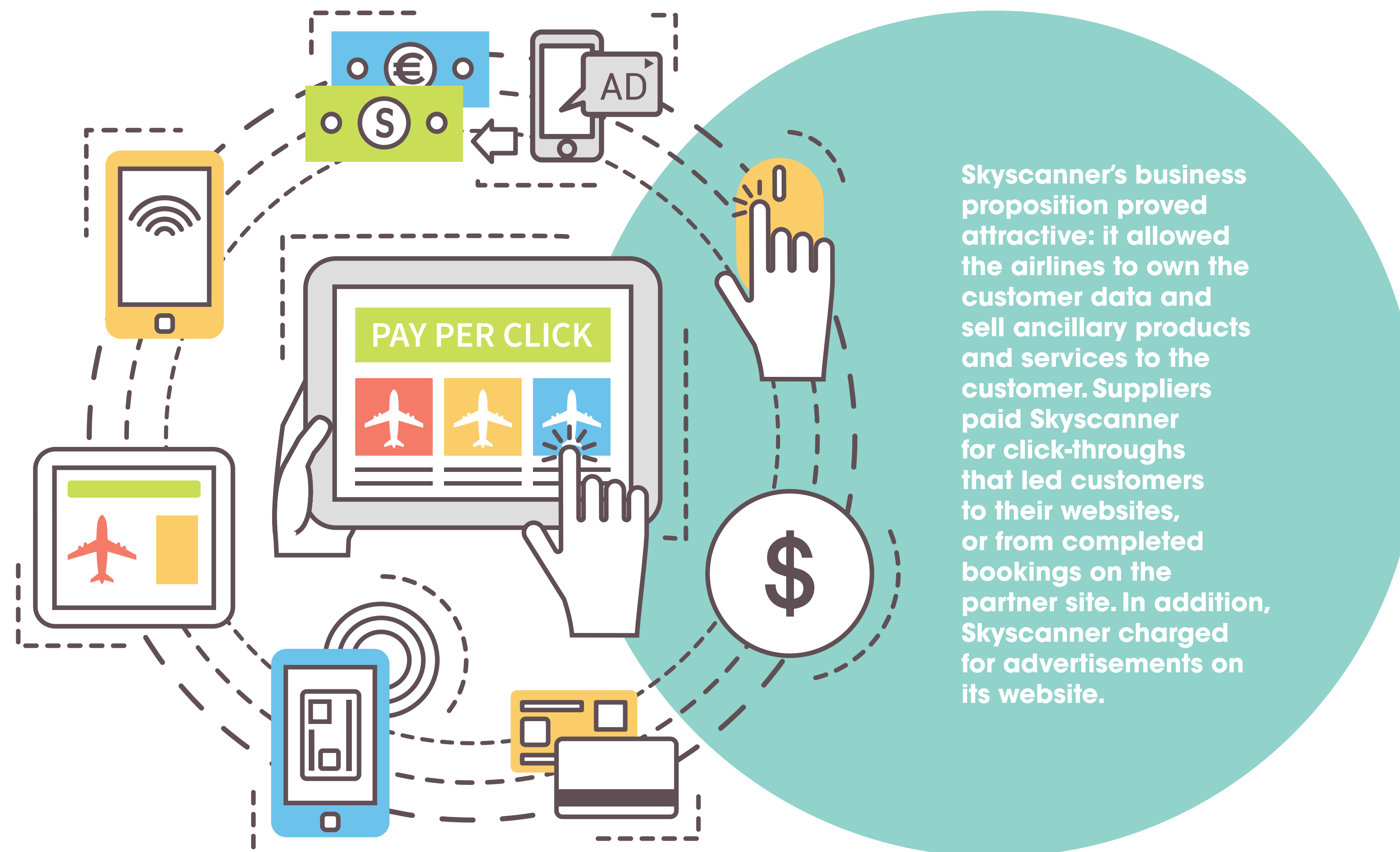
Skyscanner entered Asia with the same business approach it had adopted in Europe in 2003, a direct-connect model where the company worked with airlines to connect them to potential customers. Strengthening both sides of the platform in a new market as complex as Asia posed a chicken-and-egg problem that the company had to learn to tackle.

"This is a two-sided platform", explains Sleigh, "You cannot go to a commercial partner, such as an airline, and say, 'Hey, can you pay us for these referrals in terms of traffic?', unless you have significant traffic coming to them from your website. And you can only get significant traffic, if you have great content for your users, and that comes from the commercial partners."

Initially, the commercial partners that Skyscanner approached were the direct suppliers (airlines) or OTAs that uploaded their flight information onto the Skyscanner platform. The airlines and the OTAs benefitted from being on the Skyscanner platform because it enabled them to receive 'qualified' traffic at a low cost. As Sleigh explains, "When I say 'qualified', it means that someone who comes to the suppliers from a Google search is much less likely to complete a transaction than someone who comes from our website. People who start on the Skyscanner site generally have a real intention to buy."

Skyscanner's business proposition proved attractive: it allowed the airlines to own the customer data and sell ancillary products and services to the customer. Suppliers paid Skyscanner for click-throughs that led customers to their websites (cost-per-click deal), or from completed bookings on the partner site (cost-per-acquisition deal). In addition, Skyscanner charged for advertisements on its website.

The more comprehensive Skyscanner's website was in terms of partners on the platform, the more attractive it proved to be for customers who wanted a one-stop portal for travel-related information. Skyscanner's powerful technology platform enabled the company to return search results on its site faster than most competitors—sifting through about four billion data points in seconds.



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Organisational structure in Asia

Overall, the Asia business took its cue from the Edinburgh head office. For example, marketing campaigns originated from the head office and were pushed to Asia through the Singapore office, with minor adaptations for each country. However this centralised approach was often inadequate when it came to trends in Asia.

Singapore was seen as the regional hub for Asia, the same way Edinburgh had been developed into a hub to serve Europe, and Miami for the Americas. All Asia Pacific employees were based in Singapore, unless they were needed elsewhere for local relationship building and local knowledge gathering.

In Australia, where the business culture was relatively casual, it was possible for a Skyscanner salesperson to pick up the phone, explain the product and make a sale, all without even meeting the person on the other end of the phone. So the company was able to do well in Australia without a local team on the ground. In contrast, the industry culture was more formal in Japan and China, and Skyscanner had to adapt accordingly. Commercial discussions with suppliers in these countries had to take place face-to-face.

Capturing the Asian skies

By 2014, Skyscanner had achieved global reach. As of October 2014, it had become the number one travel search site, with 71 million visits and 35 million visitors a year from 45 countries, with 56 percent of them being repeat users—huge numbers in the Internet industry. Within 12 months, the company moved to hotels, car hire and data products under the brand 'Skyscanner for Business'. It also acquired four companies and expanded from four offices to nine in just one year.

By February 2015, Skyscanner was achieving solid performance in Asia Pacific; the region was contributing almost 20 percent of the company's global revenue and bringing more than 20 percent of visitor numbers. Its 2016 target was to become the biggest region in terms of revenue and traffic.

Marketing at scale

Although Skyscanner had rolled out local websites for 14 countries in Asia Pacific by May 2015—a testimony to the powerful tool for savvy travellers it had developed—Sleigh felt that the company still had some way to go in terms of brand positioning, particularly in Asia. "The challenge for us was that a lot of people are booking online travel for the first time...How do they discover us and why should they use us? And why should they keep using us?"

He saw the travel booking process as a 'booking funnel', where people tend to book flights first, followed by hotels and then cars and other ancillary products. Skyscanner's strength was that it had the best content at the top of the booking funnel—in flights.

While airlines enjoyed the highest volume of sales through Skyscanner, flights offered the lowest margin among all travel products. Most OTAs sold flights at cost or at a loss, and then added on a hotel or car hire, where they made money. Nevertheless, flights still contributed to the majority of Skyscanner's revenue—well over 50 percent—although this proportion was gradually decreasing. Hotel services was the next biggest item, followed by car rental. While the data products business was still relatively small, it was probably the fastest growing of all of Skyscanner's business divisions.

Being able to 'market at scale' involved two of the company's biggest challenges to date. Firstly, the portal needed to shift from being a source of information primarily for flights to that of all travel products. Secondly, the frequency with which people returned to the Skyscanner website needed to be increased. This meant that Skyscanner had to work towards providing more relevant and contextualised content for users of the site.

'Squadification'

The rapid growth in the company also precipitated many internal challenges. In 2014 alone, staffing levels grew from 200 to 500 people globally, expanding to a point where it started to create bottlenecks. "Different teams were becoming clogged with just too much stuff to do, with repercussions on other parts of the business," recalled Sleigh. The solution was 'squadification' in which interdisciplinary teams were tasked with a long-term goal of designing, developing, testing and releasing new functionality into production. Squadification was rolled out at the end of 2014 to selected areas of the business.

In a rapidly scaling Internet business, Sleigh notes, one needed to allow people to own specific bits of the website or app, so that they can just get on and optimise it. "The beauty of the Internet is that you can continually optimise, and you could be running thousands and thousands of tests concurrently in a very short period of time to see what works and what doesn't. For example, we have a team of eight people that just focuses on decreasing bounce rate from our website. And that is all about increasing the first impression a new visitor has when they land on our site."

Squadification also led to a decentralisation of technology development from the global head office in Edinburgh to the regional head office in Singapore. In addition, decentralisation required product innovation to be driven partially from Asia, and eventually at the country level.

Sleigh believed that the combination of squadification and decentralisation would help Skyscanner become nimbler and more competitive, and his efforts paid off. In May 2015, the global search site became Scotland's first US$1 billion Internet economy business. By the end of that year, with 60 million monthly active users, Skyscanner went on to record revenues of US$146 million, up 29 percent from the previous year. A year later, in November 2016, just 13 years after its founding, Skyscanner was acquired by Ctrip.com International Ltd, China's biggest online travel company, for US$1.7 billion.

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Building Negotiation Capital

Today, unlike the marketing or supply chain tasks, the negotiation task remains unstructured, sporadic, often improvised, and rarely analysed critically in the post-deal stage.

By Michael Benoliel

In 1716, Francois de Callieres, a French diplomat wrote: "The art of negotiation with princes is so important that the fate of the greatest states often depends upon the good or bad conduct of negotiations and upon the degree of capacity the negotiators employed." This sound advice is yet to be appreciated in the business environment and the work of negotiation in modern organisations is valued much less than it should be.

To appreciate the important role of negotiation, one has to look no further than at the disappointing record of several large conglomerates. In the megamerger between America Online (AOL) and Time Warner, for example, about US$200 billion in shareholder value vanished.[1] In another mega deal, Robert Campeau, a Canadian businessman, overpaid to acquire Federated Department Stores and he declared bankruptcy two years later. In the US$5.8 billion acquisition of Rubbermaid by Newell, the former CEO of Newell admitted that his company had overpaid for this acquisition.[2] In another case, the US$39 billion acquisition agreement between AT&T and T-Mobile included a reverse termination fee clause. This meant that if AT&T failed to close the deal, it would pay T-Mobile US$4 billion in compensation, which was 10.25 percent of the total value of the deal, while the industry standard was only four to five percent. Because AT&T failed to anticipate the formidable resistance to the proposed acquisition, it had to pull out of the agreement and pay the hefty termination fee.

Likewise in small-scale deals, negotiators sometimes fail to pay attention to important details. For example, Brian Overstreet, the agent of Tarrel Brown, the football player with the San Francisco 49ers, negotiated successfully Brown's US$2.93 million salary for the 2013 football season. In July 2013, Brown failed to show up for after-season fitness training, and as a result, received a penalty of US$2 million. Brown, unaware of the penalty clause in his contract, was surprised. Needless to say, he fired his agent. One has to wonder why Overstreet agreed to such a huge penalty clause–68.3 percent of Brown's salary–in the first place?

Certainly, not all deal-makers perform poorly. Successful ones in companies like Cinven, a leading European private equity firm; Nestlé, a Swiss conglomerate and textbook acquirer; and Bain Capital, a top-tier private equity company, create great value because they have invested in building negotiation capabilities. Given the countless transactions that are carried out each year by organisations globally and the billions of dollars that these transactions are worth, one can easily see that even a fraction of a single percentage point improvement in a negotiator's deal-making capabilities can result in substantial value creation.

I suggest that building *negotiation capital* should be viewed both from the perspective of the individual (negotiator) and the organisation.

Negotiator's capital

Negotiators should have cognitive, emotional, social and cultural capabilities in order to create value in negotiation. I elaborate on these below.

COGNITIVE CAPITAL

Cognitive capital refers to the negotiator's ability to understand, analyse and synthesise the substance or the issues of the negotiation. Cognitive capital is particularly necessary in complex negotiations that require managing a vast amount of information, designing a negotiation strategy, formulating bundled trade-offs, creating multiple proposals, and making rational decisions. It is also important in ambiguous situations that present either risks or opportunities. Imagine an ongoing and unhappy business partnership among four partners who have different levels of power and priorities. The strongest partner is pressing hard to buy out the other three partners. As the weakest partner among the four, you are not sure whether to negotiate with the most powerful partner first, second or last. What should the negotiation sequence strategy be?

> Even a fraction of a single percentage point improvement in a negotiator's deal-making capabilities can result in substantial value creation.

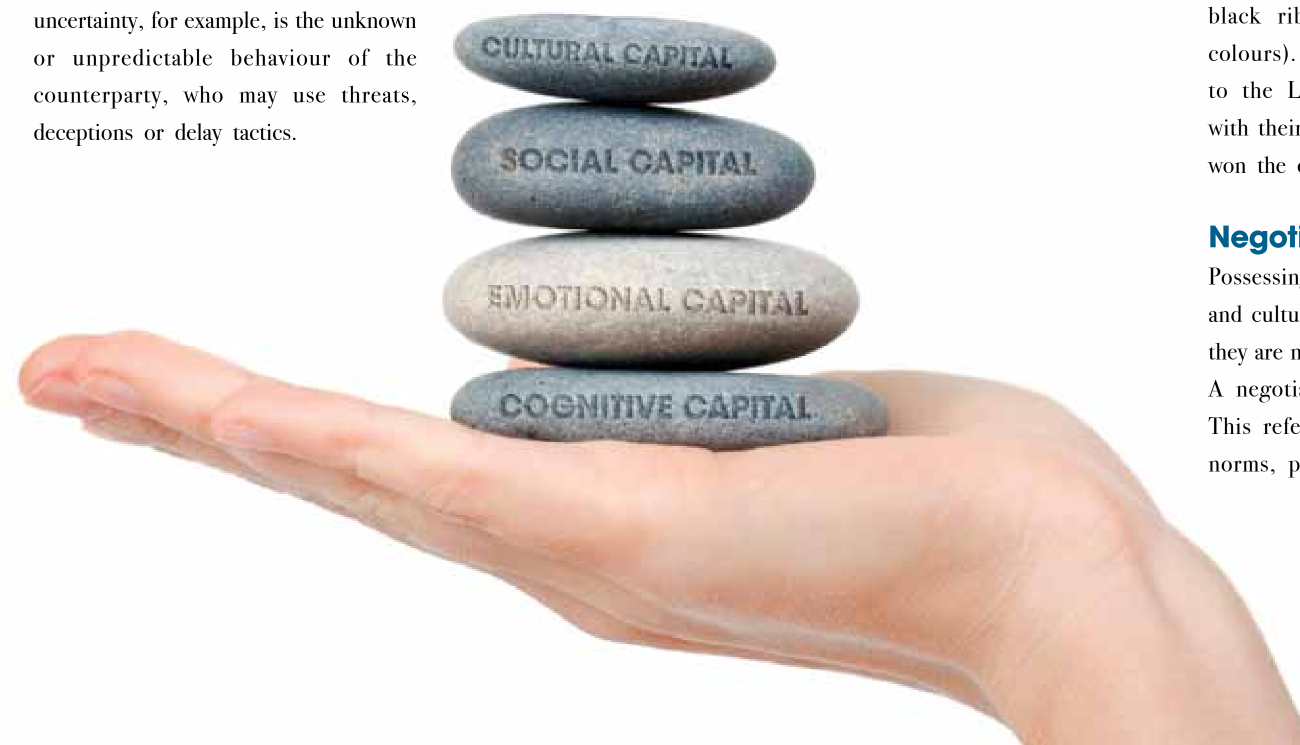
EMOTIONAL CAPITAL

The modern rational approach to negotiation overemphasises the value of logic and rational decisions. Much less attention, until recently, was given to understanding the role of emotions in negotiation. Emotional capital refers to the value inherent in the negotiator's ability to perceive, comprehend, analyse and regulate emotions in the face of emotional challenges in negotiation. These challenges, such as anxiety, stress and frustration, are triggered by the inherent uncertainty and risk in any negotiation situation. A source of uncertainty, for example, is the unknown or unpredictable behaviour of the counterparty, who may use threats, deceptions or delay tactics.

> The modern rational approach to negotiation overemphasises the value of logic and rational decisions. Much less attention, until recently, was given to understanding the role of emotions in negotiation.

SOCIAL CAPITAL

Negotiation, at its core, is relational. Effective negotiators recognise that they are people first and negotiators second. Social capital refers to the inherent value in the negotiator's ability to develop relationships, nurture trust, show respect, be flexible, play fair, and build a positive reputation over time. Some of the benefits arising from having social capital include better access to information, greater ability to influence others, and increased solidarity that creates mutual obligations and reciprocal behaviour of give and take.



> A culture of negotiation excellence should first and foremost promote relentless mastery of the art and science of negotiation; support measured risk-taking and doing value creating deals only; and recognise publicly excellent negotiators by setting several award categories.

CULTURAL CAPITAL

Increasingly, companies operate in complex multi-cultural environments. Cultural capital refers to the inherent value in the negotiator's ability to understand the nuances of the stated and unstated values and norms of different cultures, and negotiate effectively in complex cultural contexts. It is, for example, the ability to understand subtle cues of verbal and nonverbal communications; to understand the different approaches to expressing emotions; and to appreciate how different cultural patterns of relationships and trust building affect the negotiation process and outcomes.

For example, when Armand Hammer, the culturally sensitive CEO of Occidental Petroleum, presented his bid to get a Libyan oil concession, it was written on a sheepskin parchment, rolled up, and tied with green and black ribbons (the Libyan national colours). Hammer had demonstrated to the Libyans that he was familiar with their culture and respected it. He won the oil concession.[3]

Negotiation ecosystem

Possessing cognitive, emotional, social and cultural capitals are necessary, but they are not sufficient to ensure success. A negotiation ecosystem is required. This refers to a set of organisational norms, processes and structures that are designed to support negotiators in the negotiation task. Below is a brief description of the elements of an effective ecosystem.

MANAGEMENT SUPPORT

Excellence in negotiation has yet to gain enough momentum to appear on the managerial radar screen. The full benefits of negotiation capabilities will materialise only when senior executives recognise, independently or through imitation, the criticality of the negotiation task. Only then will they make it a strategic thrust and allocate substantial resources to its development at the individual and organisational levels.

CULTURE OF EXCELLENCE

A culture of excellence in negotiation, championed by senior executives, is propagated by shared values, ideas, success stories and celebratory rituals. Recently, and in contrast, I witnessed how the shared stories among a group of managers were about the failed acquisitions by the organisation. It was a source of cynicism and laughter. The message was clear: we don't know how to negotiate value creating deals.

The founders of Google, Larry Page and Sergey Brin, have been promoting a culture of innovation by encouraging risk-taking and legitimising failure as an integral part of the innovation process. Unique to the company, Googlers (Google's employees) can use 20 percent of their working time engaging in tasks that are not necessarily directly related to their daily activities. This example illustrates that senior executives' support and a supportive culture go alongside each other.

A culture of negotiation excellence should first and foremost promote relentless mastery of the art and science of negotiation; support measured risk-taking and doing value creating deals only; and recognise publicly excellent negotiators by setting several award categories.

REWARD SYSTEM

There is a difference between doing deals and doing the right deals. Robert Kohlhepp, the vice chairman and former CEO of Cintas, a supplier of uniforms, observed that negotiators in mergers and acquisitions, for example, are evaluated on how many deals they seal. Senior executives are also motivated by deal completion because they are paid bonuses for closing deals. A case in point are the Boston Scientific executives, who received a special bonus of US$1.98 million in cash plus options and deferred stocks, following the acquisition of Guidant by Boston Scientific in 2006. These bonuses were not contingent on the future value that this acquisition might create.

Some experts suggest that rewarding deal-makers for merely closing deals offers a perverse incentive to undertake deals that may even destroy future value. Self-interested external agents, such as investment bankers or real estate brokers, who are compensated only for closing deals, also may not create the right deal. For example, Prudential-Bache, an investment firm, recommended that Rawson Food Services, a major supermarket chain in Florida, the United States, acquire 43 supermarkets from Pantry Pride Enterprise Incorporated. Rawson accepted the recommendation and paid Prudential-Bache millions of dollars in agency fees, but, unfortunately, had to file for bankruptcy shortly afterwards. It seems that it was a deal that should not have been made. Rawson sued Prudential-Bache and was awarded about US$26 million by a Florida jury.[4] Therefore, organisations should develop a well-designed system that rewards negotiators or agents for closing the *right* deals that will create both short- and long-term value.

PERFORMANCE-BASED METRICS

What is negotiation success? What should be the specific success criteria? Each organisation has to define for itself what it considers a success. And a negotiator's performance and rewards should accordingly be based on clear success criteria that are well-defined and 'translated' into specific metrics that capture the true nature of negotiation events.

In general, the metrics should first encapsulate measures related to the negotiator's behaviour before and during the negotiation, such as those related to planning and preparation. More specifically, it should identify interests; state clearly the 'must have' and the 'like to have' objectives; develop scenarios and multiple alternatives (including the no-deal ones); as well as articulate several deal design options. Second, the measures should be related to the negotiation process itself. This could include the duration of the negotiation cycle from beginning to end of different types of deals, and the average cost of each type of deal (including personnel, travel and accommodation costs) associated with negotiating the contracts. Costs should be measured both in total and as a percentage of the deal amount. And third are measures related to the negotiation outcome. For example, the ratio of the target value to the actually achieved value of each deal; the average price of the deal over a given period; the conversion ratio of deal leads; the net value of the deal and type of deals; and outcome-based ranking between negotiators.

EFFICIENT PROCESS

The outcome of a deal depends on many factors including the efficiency of the negotiation process. For instance, Hewlett-Packard's contract negotiation process was previously long and troublesome, involving two stages of negotiation. It was only after procurement officers completed the first stage of negotiation, which focused mainly on price, that the senior legal staff could begin the second stage, which focused on legal issues such as intellectual property and privacy matters. Motivated to create a more efficient negotiation process, Hewlett-Packard created a Global Contracts team in which legal experts worked together with procurement officers in a single-step negotiation process.[5]

As compared to the routine and structured process of say, production or supply chains, the negotiation process is 'tailored' to a specific context. It cannot be completely uniform or formalised across all negotiation events. Therefore, the negotiation process should be a blend of structure, when possible, and flexibility, when necessary. At Nestlé, for example, the acquisition deal-making process is structured with a standard template to ensure that key aspects of a deal are covered. However, the standard template serves as a stimulant rather than an impediment to making a deal. The process is flexible and adaptable to the uniqueness of a given deal. Organisations should hence periodically review their negotiation processes and examine the degree to which they are efficient.

DEAL CREATION AND IMPLEMENTATION

A negotiated deal is no more than an exchange of promises between parties that is codified in a legal agreement. Once a deal is signed, the negotiators who have their own goals to achieve move on to the next deal or tender, leaving the implementation to others who also have their compelling goals to achieve. It is in this space between deal creation and deal implementation that challenges and conflicts arise.

At Nestlé, the operations people are involved early on in the acquisition process; they participate in the evaluation phase of a potential target for acquisition. Closing a deal by the deal formulators is only half of the story. To avoid the typical disconnect between deal negotiators and deal implementers, the full set of interests (e.g., budget, quality standards, deliverables and schedules) must be fully represented and secured in the deal-making phase.

POLICIES AND PROCEDURES

Concerned with control, organisations tend to centralise and standardise their activities by developing uniform policies and procedures across divisions, product lines and geographical locations. Sometimes, however, they ignore the specific needs and demands of customers or suppliers in certain segments of the market or geographic areas. For example, a multibillion dollar company issued a new global pricing policy of its commodities, which was transparent, indexed (subject to fluctuations), and not discounted. However, commodity buyers from Asia disliked it and continued to insist on negotiating a fixed and discounted price.

To be more responsive, organisations should periodically conduct a fitness test to examine the extent to which their policies and procedures fit the challenges of the negotiation task in different contexts. The question to ask is: Do our negotiation-related policies and procedures fit the needs and demands of our stakeholders in different markets?

CORE NEGOTIATING TEAM

Recognising the value of having a strong in-house negotiation capability, Nestlé established a core team of experienced deal-makers to be involved in every large-scale deal. Standing in contrast to Nestlé are the many organisations that have not created national or global teams of negotiators.

For example, a global consumer product company with more than 3,500 retail outlets around the world delegates the task of negotiating many millions of dollars worth of commercial real estate leases for its retail stores to country managers, some of whom may not be fully skilled in such negotiations. Given the financial scope of these

negotiations, this organisation and others could benefit from establishing a core unit of first-class negotiators who will work closely with the country managers, procurement personnel, salespeople and the business development experts to create more favourable outcomes.

The expertise of the core negotiating team should not be limited to negotiations only. When appropriate, it should also include expertise in auctions, negotiauctions (a combination of negotiations and auctions), tenders and negotitenders (a combination of tenders and negotiations).

RESEARCH UNIT

In a recent survey, 250 global executives involved in mergers and acquisitions admitted that there were breakdowns in their due diligence processes such that important deal-related issues were undetected.[6] In contrast to this case, the findings of a study of 1,700 mergers show that the executives in the highest performing mergers conducted more effective due diligence research, including superior investigations and analyses.[7]

The value of sound research is self-evident to all, including negotiators. Unfortunately, many negotiators fail in this task for three reasons. Firstly, busy negotiators do not always have the time to do the necessary research in order to prepare and plan well. Secondly, many negotiators are not familiar with sophisticated and systematic preparation and planning frameworks. Thirdly, many organisations do not provide their negotiators with easy-to-use templates–structured documents on how to research, prepare or plan.

NEGOTIATION INFORMATION SYSTEM AND NEGOTIATION PORTAL

The purpose of establishing a negotiation information system is to facilitate the recording, storage and analysis of all the negotiation events and experiences of the negotiators. The database can include all information that is impactful, and directly or indirectly related to the negotiation process and outcomes. It should include, for example, the profiles of all the negotiators, issues of concern in the negotiation, objectives, interests, options, designed processes, various deal designs, outcomes, lessons learned, and implications for future negotiations.

A virtual and closed negotiation portal can provide a secure platform for negotiators in the same organisation to network. The portal would effectively facilitate an ongoing internal learning community of deal-makers. Hewlett-Packard, for example, created the 'Negotiator's Garage', an online negotiation resource library that includes training resources, templates for planning and preparation, stories of negotiation histories, and much more. Other organisations could similarly benefit from a negotiation portal uniquely designed for their needs that would include training content, industry-specific articles related to deal-making, tailor-made templates, chat rooms for consultation, and discussion boards.

Recognising the value of negotiation

In many organisations, the negotiation task has yet to be recognised as an important value creating task. It still remains a discrete, unstructured and improvised event. I believe organisations can become more competitive by rethinking the value of negotiation and investing in building negotiation capabilities at the individual and the organisational levels.

The combination of negotiators' capitals and organisational ecosystems, which together constitute negotiation capabilities, can help build strong organisations that can overcome the challenges of the negotiation task in an increasingly complex and interconnected global environment.

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one-north FESTIVAL

THE SANDWICH APPROACH

By Tomáš Klvaňa

'Doing good' requires execution of sound strategies that effectively engage stakeholders.

Though rarely expressed explicitly, the corporate calculus behind 'doing good' through corporate social responsibility (CSR) initiatives is simple: *We know that we pollute, take away precious resources, or make you obese, but we are doing our best to mitigate the downsides of our business and want to position ourselves as the good guys; part of the solution, not the problem. We hope that one day, especially when we need it (say, in a corporate crisis), you will appreciate it and cut us some slack.*

Although the premise is correct, what is often lacking is the execution of strategies.

A decade ago, Porter and Kramer pleaded for a more thoughtful approach to CSR, arguing that companies should create a shared value for themselves and society by designing their programmes much as they sell products and services–as a carefully crafted value proposition.[1] Since then, many corporations have gone that way, and some have even achieved the status of a gold standard. To name just a few, Coca-Cola with its water neutrality initiative, Siemens with its sustainability drive, or Nestlé with its introduction of genetically modified cocoa plants in Africa, are examples of immense value contributed to company brands.

At the same time, the corporate world found out that, despite generous funding of shared value initiatives, the anti-corporate social and media pressure has not gone away–indeed it is on the increase, especially after the financial crisis of 2008. A significant portion of opinion-leading audiences still considers CSR and sustainability programmes as mere exercises in public relations.

Corporates can avoid these pitfalls in two ways. First, they should target their responsibility message more strategically at those stakeholder groups that disproportionately help or harm a company's reputation in a given market. Second, they should change their language, abandoning quasi-professional semantic in favour of ordinary, direct and easy-to-understand messages.

I have identified two social groups that appear to be decisive in shaping the atmosphere, and attitudes of people towards business in the near future: young people between 18 and 25, the so-called 'millennials', and active seniors who are a naturally growing slice of developed or emerged societies, referred to as the 'silver wave'. The millennials and the silver wave are already playing a key role in shaping the environment in which businesses thrive or perish.

The two groups are distinct. In today's hyper-communicative environment, where messages travel from one context to another and from one culture to another at the speed of light, a business cannot use the same message for all its stakeholders; but neither can it use contradictory messaging. A good brand is all about consistency. I propose a response that can be likened to a sandwich–engage actively with the two groups on the polar ends of the age distribution and tie it to the corporate brand. In other words, make it consistent–both in terms of content and language–with who you are as a firm.

Strategic CSR: Adding value to the company name

Proper management of stakeholders involves a patient, steady and gradual fortification of the corporate brand. In the distant past, firms competed on price and quality. Then they connected their products and services to a style, atmosphere or attitude. Today, it is the impact of a corporation on the world beyond its market that is becoming an important tool for differentiation. Significant consumer segments in the West expect corporations to behave well. The driving force behind these new sentiments are young people active on social networks, who spread the message and organise campaigns capable of reaching a substantial portion of the customer universe. A strong corporate brand connected to forces of good can in tranquil times give you the necessary edge, and in times of crisis it could mean the difference between survival on one side and litigation, adverse regulation and bankruptcy on the other.

Some corporations have discovered this the hard way. SeaWorld Parks & Entertainment initially underestimated the fallout from an activist documentary film, Blackfish,[2] and a subsequent campaign to free the captive orcas (killer whales) led by activists and celebrities. By the time it got its crisis communication act together, it was too late. After a sharp drop in park attendance and a heavy beating of its stock price, Sea World finally announced that it would phase out the orca shows.

On the other hand, Chipotle, the fast-casual restaurant chain, went through a nasty e-coli and norovirus scandal relatively unscathed. The drop in its stock price was at least in part mitigated by the reservoir of goodwill created by smart, integrated and consistent engagement of key stakeholders. The company had built solid loyalty with university students and health-conscious urbanites, who appreciated the company's emphasis on fresh ingredients and local sourcing. The eventual crisis was viewed more as a by-product of a fresh and nutritious supply chain rather than cost-cutting efforts by the restaurant chain.

CSR should be seen as a strategic commitment, not short-term operational spend dependent on the whim of who happens to occupy the C-suite. CSR does not work as a short-term tactic, but must be a long-term commitment. Immediate, operational introduction of a do-good programme during a crisis tends to be seen largely by the cynical as an attempt to divert attention with new talking points. On the other hand, a continuous commitment designed for stakeholder needs has a much better chance of becoming an integral part of the firm's good name and its corporate identity as a good citizen. Too often, CSR is segregated and isolated in departments of corporate affairs or public relations and is not seen as a crucial part of stakeholder engagement on par with, for example, investor relations.

POSITIONING YOUR BRAND

Smart thinking about stakeholder engagement starts with an analysis of the company brand. Ask yourself pointed questions: Who are you? What do you stand for? Except for a few global brands, most Asian names would mean little to stakeholders in the West. Companies would therefore be well advised to think about their corporate brand reputation at home, the brand personality, and its strengths and possible weaknesses. They must decide whether to position themselves the same way as at home, or do brand pivoting in Europe and the U.S.

Asian corporations should capitalise on their diverse backgrounds and unique cultural characteristics to send easily understood value messages to their stakeholders. One often cited good corporate branding example is Singapore Airlines that has long bet on Asian-style politeness and bulletproof service. Similarly, Shiseido, the cosmetics maker, took advantage of its long Japanese heritage linked to elegance and exotica.

These cases present a strong starting point in corporate brand positioning based on differentiation, but they are no longer sufficient. Corporations must go beyond their products and services, and must address their impact on the world outside. An example of a company that has long done good and well, but not in a strategic way, is Whole Foods, the American food store chain. Whole Foods has long stressed the value of organic produce, and ethical and socially responsible business practices. Yet in the last couple of years, it has come under strong criticism for its pricing policies and the inability to communicate it to customers.[3] With a little foresight and a good analysis of key stakeholder needs, such problems could have been prevented. The company's subsequent bolstering of poverty alleviation programmes could therefore be seen as an all-too-easy attempt to alleviate its own conscience. Failure to address key stakeholders was probably among the various reasons for its stock price stagnating for over a year.

The sandwich approach

Consistent engagement of key stakeholders, growing out of the strong and weak points in the corporate brand, presupposes knowing who the key stakeholders are. Each company should periodically perform a thorough stakeholder mapping. This process ought to pay special attention to the

> CSR should be seen as a strategic commitment, not short-term operational spend depending on a whim of who happens to occupy the C-suite.

very young segment of millennials and the group of active seniors, each like a piece of bread enveloping society on both ends of the age spectrum.

The first group is generally overlooked in corporate communications except by firms producing goods for this market segment. There is an untapped potential in appealing to this segment via corporate brand communication, especially through social media. These young people are not politically active in a traditional sense. They vote in small numbers and do not follow current events on a regular basis, but they are aware, socially conscious and animated by social justice. And they have grown up in the Age of the Brand: they are fans of firms like Patagonia and Ben & Jerry's, known for their excellent treatment of stakeholders. If I were an executive, I would pay closer attention to this opinion-shaping cohort. I would conduct an ongoing company dialogue with them and adjust my responsibility outreach and communication to them.

On the other end, the silver wave of active seniors is a growing and influential group in the West due to the demographic trend of an ageing population. A booming portion of civil society institutions, including governments, NGOs and corporate foundations focuses on active seniors. Corporations market their products and services to them with vigour. Some observers speculate that the cult of youth that was characteristic of the post-World War II baby boomer generation will be replaced with the decisive impact of the silver wave, their lifestyle and needs. Active seniors enjoy more free time due to advancements in medicine and healthier lifestyles. And they possess more disposable income than ever before. Top managers themselves, not through external agencies, should have a continuous discussion with active seniors. Such stakeholder talks can be flexible, informal and free of the traditional awkwardness of externally-audited social dialogue. After all, companies are looking for high-quality information about themselves, not for an exercise in public relations.

Naturally, companies need not accept all stakeholder demands. What Porter and Kramer advised a decade ago,[4] and others later,[5] still stands–CSR/stakeholder outreach should be creating a shared value in a strategic way, and should therefore not be a hodgepodge list of disjointed activities.

Wherever possible, corporations should gear their responsibility outreach towards the young and old. They could also think of creative ways to combine the two audiences. One can imagine a pharmaceutical corporation devising a project in which the young would be encouraged to help seniors be more active in society, an entertainment corporation sponsoring youth theatre group activities with elderly in senior citizen homes, or a consumer electronics company encouraging millennials to spread social media literacy among seniors. The activities could also be streamed in a reversed order–a media firm, or an agricultural company dependent on migrant workers, might encourage seniors to help the young understand better–perhaps through personal stories–the history of civil rights or the anti-war movement.

Mind your language

The last point about the sandwich approach is one about corporate communication. The backlash against globalism alerts us to the cultural change around us. Politics in the West and beyond are now more divisive, emotional and nastier than at any time in living memory. Populists are riding the wave of nativism and xenophobia. They are also reinforcing the public communication trend characterised by directness, informality, the common touch and loathing of what they see as the inhibitions of political correctness; a trend that originated due to the influence of social media. They prefer unbridled authenticity to suave professionalism. The changes in culture over the last two decades point towards a more honest and less calculated form of expression–witness the mainstreaming of TV reality shows, for example. Company executives should pay close attention to this wave.

While there is much to be criticised in the substance and style of the new populists, there is no denying that they have tapped into something real. Corporate communication will be affected. A significant portion of the stakeholder base is tired of vacuous and faux-sophisticated corporate speak. The PR industry, in my view, is at the threshold of a revolution. By no means do I recommend abandoning professionalism in communication, but its rethinking is warranted.

Those speaking on behalf of companies should simplify their messaging to stakeholders, avoid corporate clichés and generally have a direct, informal, no-nonsense discussion. They should feel free to say 'no' and 'we don't know' when appropriate. They should not particularly focus on engaging with disaffected rebels as a separate stakeholder group, but must draw lessons from them on their tone and style of speaking, as these are changing the communications landscape. Importantly, this generation demands engagement through interactive content and not just a unidirectional push of ideas.

Brand differentiation through stakeholder engagement

Asian corporations entering Western markets should adopt a strategic mindset when it comes to social responsibility outreach. CSR should be seen as an integral part of stakeholder engagement and must tie into corporate brand building. A strong corporate brand is especially crucial today when businesses are competing for attention from politicians, civil society organisations, legacy media and a vast array of citizens on social media.

A strong company brand creates goodwill among consumers, gives social license to operate in the anti-corporate climate and helps attract young talent in the recruitment process. Talented young people today prefer companies that provide good remuneration and career opportunities, and are on par with companies with strong brands operating as good corporate citizens. These companies enjoy a reputation for caring equally about customers, communities and employees, all of whom can be their best ambassadors. Thus, CSR becomes a key instrument in the corporate toolkit for brand differentiation that can help companies stand out in the crowd.

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Management Education Out of Africa

Is a distinctive African management education model possible, achievable, or even advisable?

By Howard Thomas

Little has been written about management education in Africa and yet there exists a huge demand for managerial skills in order to leverage the potential of Africa's economic growth. For the most part, the existing management education programmes reflect the evolution of schools of thought from a variety of countries, mostly from Europe and the United States. Limited attempts have been made to create uniquely African management education programmes, with some questioning whether an African model is even feasible or desirable. This is just one of the issues explored in a recent study undertaken by the author[1] and outlined in this article.

The role of and challenges facing educational development in Africa at every level can only be understood in terms of the varied history, contexts, cultures and issues that exist in its 54 very different countries. It is a continent with a population of more than one billion, with 3,000 distinct ethnic groups speaking 2,000 languages, each of which has its own political, economic, and socio-cultural structure inherited from both their unique traditions as well as their respective colonial legacies.

Some of the world's fastest growing economies–Ethiopia, the Democratic Republic of Congo, Ivory Coast and Mozambique–are African. And so are some of the world's poorest. Although Equatorial Guinea has a 94 percent literacy rate (the global average is 84 percent), in South Sudan it is 24 percent. Africa remains the world's least developed continent with the greatest proportion of economic growth concentrated in just 10 countries, including Nigeria, Kenya and South Africa. About 80 percent of African states can probably be best described as 'developing'.

While there exist acute shortcomings of infrastructure across the continent, infrastructural development is not consistently poor across Africa. In cities that have attracted foreign direct investment, there is now greater ease of doing business. Chinese interests, for example, are building the Nairobi airport and roads in Lagos. Despite the challenges, Africa is now considered an attractive investment destination, described by *The Economist* as the world's 'hottest frontier'.[2]

Private sector investment in Africa is generally the result of foreign direct investment. Despite this, some African countries have tried to adapt and formulate a range of strategies for economic growth management, and pursue international and interregional trading opportunities arising from globalisation.

Funding is challenging for many African nations, while an additional constraint is the relative poverty of 70 to 80 percent

of African countries. This means that new African management education paradigms must be low-cost, efficient and capable of leveraging mobile technology to allow such education to be available in both urban and rural areas. The impact of corporate involvement in the education process–a factor that is often taken for granted in developed countries when designing programmes and setting curricula, is also relatively unknown.

With these concerns in mind, the research undertaken included a range of in-depth, two-hour, open-ended, face-to-face interviews with leading management educators and stakeholders. In addition, perceptions of a representative subset of 20 interviews with key players provided a retrospective view of the evolutionary pathways of management education in Africa over the last two decades. The interviews themselves reflect the wide range of environmental, cultural, contextual and regional characteristics exclusive to the African scene that have clearly shaped African approaches to management education.

Africa's management education landscape

African countries and their business schools are developing at different rates of growth. They exist within an environment that can be characterised as volatile, uncertain, complex and ambiguous, with turbulence and change constantly present, as well as one where there is an urgent need to generate many new employment opportunities.

In some African nations, there are few, if any, business schools. The Association of African Business Schools (AABS) and others suggest that Africa is clustered into (at least) five sub-regions: North Africa, Southern Africa, West Africa, Central Africa and East Africa. There is huge variation in the ways of doing business, both within regions, and within individual countries, and a range of different forms of business schools across Africa is thus expected. Additionally, the schools should not necessarily be thought of as carbon copies of models from distinctly different contexts such as the United States or Europe. One size does not fit all.

Many universities are vocationally oriented while others seek to model the West. The diverse set of business schools that exists has attempted to achieve a balance between mimicking western models, and country and regional factors of differentiation. Only a relatively few elite schools in Africa have an orientation and resource profile that matches, or even approaches, the best American and international business schools–although that may not necessarily be an appropriate benchmark for an African identity and approach in the field of management education.

Where African schools have an international mindset that involves a strategic intent to achieve international accreditation and favourable media rankings, they stand in almost complete strategic isolation from the typical vocationally-oriented African business schools.

African management educators have generally emphasised management practice over theory. They have tended to de-emphasise strong analytical rigour and the pursuit of scientific management research, which is perceived as offering little immediate practical relevance for a managerial audience.

They also prefer a closer relationship with business and practice, favouring a faculty role as teacher-first, and offering a blend of practical experience and knowledge to students. Teaching methods vary sharply, as do the minimum educational requirements in regions where literacy and schooling levels are disparate.

COUNTRIES LEADING IN MANAGEMENT EDUCATION

Countries and regions that were mentioned by respondents as being at the forefront of management education in Africa over the last two decades were: South Africa, Kenya, Nigeria and Egypt.

Business schools in South Africa, for example, were perceived as 'top tier' because of their similarities to western business schools in terms of pedagogy and programmes offered. Second tier schools aspired to become first tier. The third tier comprised schools that operated within universities and were very traditional in their approach and offered vocationally-oriented courses. Interestingly, Kenya was perceived by two-thirds of respondents as the country at the forefront of management education in Africa.

Slightly more than half of respondents placed Nigeria as the third leading country for management education. Egypt, straddling the Middle East and European regions, was placed closely alongside Nigeria, perhaps due to its close proximity to Europe or its contribution to the development of management education in the Middle East. All four countries mentioned shared strong education systems.

Current issues

Although there are approximately 100 management and business schools throughout Africa, only 10 or so are of international standard. Important issues cited by respondents included the need to develop a management education ecosystem, to design new business models for African management education that would offer strong practical and entrepreneurial training, and to address a skills shortage among the one million lower- or middle-level managers.

Large-scale management education and development is needed to provide managers with key skills such as drive, ethics/integrity and practical experience. Given that the most significant job growth tends to result from entrepreneurial activity, there is also an urgent need for training entrepreneurs and small and medium enterprises.

The issues raised in the interviews could be classified as either more broadly contextual, or as issues specific to management education:

CONTEXTUAL ISSUES

Dominant role of governments

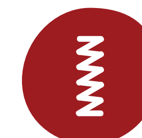
This relates to heavy regulation, including government involvement in the admissions criteria and course delivery, which is seen as intrusive and burdensome. Generally speaking, it involves the relative dominance of non-academic stakeholders.

Competency levels of students

It was noted that, often as a legacy of colonial rule, different educational systems existed within different countries. This inconsistency was also reflected in the levels of functional literacy existing within the continent. In many cases, there was a need to get students 'up to speed'.

Diversity

Africa's diverse environment calls for diversity in approach. The colonial legacy, apartheid, and issues of gender, faith, poverty, etc., have made developing management education for those other than affluent, white males a challenge.



Inadequate infrastructure

Much of Africa continues to face the challenges of unreliable electricity, inadequate buildings, poor roads and limited Internet accessibility, despite pockets of development in several major cities.

ISSUES WITHIN MANAGEMENT EDUCATION

Lack of quality in African business schools

Africa faces a scarcity of business schools, with standards in some existing institutions not always inspiring confidence. This tends to tie in with difficulties related to faculty recruitment. Pedagogy and curriculum may emphasise rote learning than active student engagement, and vocational needs may be given more focus than problem-solving, leadership and other higher-order people skills, and project-based, practical experience.

Faculty issues

Industry or practical experience plays a dominant role in the selection criteria used by African business schools. This is in contrast to research ability, which is rated highly in North American and European business schools. Attracting faculty (and international students) is difficult.

Changing competitive landscape

Competition is in the form of foreign entrants, and partnerships between local and foreign schools. In order to compete effectively, there is also further pressure to create 'global' graduates with the knowledge and skills to operate both inside and outside Africa.

Respondents stressed a more practical focus on 'getting things to work', compared with esoteric issues such as the meaning and purpose of management education. The impediments to achieving high quality in business schools, and concerns about how management education could be made more relevant and responsive to the business world, were also mentioned frequently.

Many business schools are part of larger state universities that do not necessarily understand the business of management education and are somewhat divorced from the world of business. This raises some fundamental questions: For whom is management education intended, and what is the purpose of business schools in Africa? The relative dominance of non-academic stakeholders may also mask a more serious

and enduring feature of the political landscape of the continent–political instability and a lack of co-operation among countries.

Events in management education

As an increasing number of world-class institutions are attracted to Africa, African business schools have had to raise their game. Over the last 20 years, a significant number of important events in management education have taken place. Four main events, or themes, were identified by the deans and stakeholders. These were:

Partnerships

The establishment of AABS, which provides a platform to unite African business schools, was seen as very important. Partnerships and relationships have been formed between business schools based within the African continent, as well as business schools outside the continent, including Harvard, IESE Business School, Insead and London Business School. Such partnerships were viewed as highly valuable in terms of building capacity to meet the strong demand for trained managers, and for sharing information and knowledge about teaching pedagogy and research.

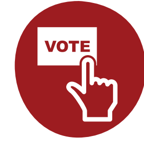
African growth

Another event, or theme, that was considered critical was the widespread recognition of the need to deal with the outside world. This has encouraged African nations to rethink the way they do business with globalisation viewed as an enabler in securing better relationships with international businesses and organisations. However, economic growth and wealth inequality are also seen as raising the possibility of unequal access to management education, and confining the benefits of management education to select groups in African society. Moreover some considered globalisation to be a double-edged sword in that it brought external competitive pressures on rankings, accreditation and the need to form international networks.

> Some people considered globalisation to be a double-edged sword in that it brought external competitive pressures on rankings, accreditation and the need to form international networks.

Technology

Not surprisingly, technology was seen to have had a huge impact, especially mobile technology and the Internet. Greater access to the Internet, in some but not all countries, has also made online education possible, although growth has been at a moderate pace.



Political change

Politics were also considered to have had a major impact on management education. Nelson Mandela's release from prison in 1990 and the end of the apartheid era in 1994 were cited as important political events that opened up new possibilities in Africa and greater connectedness among business schools, greater interaction between schools and increased exposure to international practices. This was seen by some as opening up opportunities for academics to go overseas and see and experience tertiary education at other institutions. Another suggested that an unstable and uncertain environment has become the catalyst for establishing new views and new identities, particularly among the young.

Towards a proposed African-oriented business school curriculum

Those interviewed were asked whether it was realistic to think in terms of an African model for management education. And, if not, what local adaptations might be appropriate?

Although some respondents indicated that, if certain adaptations were made, there could be some form of an African model for management education, slightly less than half of respondents said that such a model was not realistic. Of interest was the comment by one respondent who said that the most important thing in launching an African model was, "not to isolate Africa even more by having our own model". Only a very small minority of the interview panel favoured a single African management education model.

Some respondents also expressed the possible inappropriateness of the western business school model in the African cultural context–while there is an emphasis on individualism in the western context, African culture strongly promulgates 'Ubuntu' or communitarian ethos and collective unity. Nevertheless, foreign management education schools and academic partnerships with the world's leading universities and business schools continue to be significantly present. The broad differences between European, U.S., Asian and African business schools are outlined in Table 1.

BROAD DIFFERENCES BETWEEN AFRICAN, ASIAN, EUROPEAN, AND U.S. BUSINESS SCHOOLS

		Europe	United States	Asia	Africa
Institutional Differences	Language	Many languages	Single language	Many languages	Many languages
	Culture	27 nations; Multicultural	More homogenous culture	Mix of mature and newly emerging countries	54 nation states; Multicultural (micro trending)
	Regulation	Heavy regulation	Low level of regulation	Heavy government involvement (China, Singapore)	Increasing public school regulation
	Standardisation	Slower acceptance and institutionalisation of business schools	Fast acceptance and institutionalisation of business schools	Rapid growth of business schools since 2000	Relatively slow growth of business schools (about 100)
	Size	Small to medium size (about 250) business schools	Medium to large size (about 800) business schools	Generally small size (but growing number)	Public sector funded large; Private sector small
Competitive Differences	Governance/ Values	Predominantly public funding; Strong public-sector linkages	Predominantly private funding; Weak public-sector linkages (state government)	Strong public funding	Primarily public funding; Increasing private sector investment
	Funding and endowment	Small endowments; Weak resource base	Large endowments; Strong resource base	Some endowment funding; Resource base strong in mature economies	Virtually no endowment; Weak resource base
	International mindset	International in outlook; Students/faculty more international	International in outlook; Students/faculty more international	Regionally focused; Mix of local and foreign faculty 50/50	Tend to be country/ regional focused; Mainly African students; Some international partners in top tier schools
	Innovation	Practical problem-based learning; Critical, reflective thinking; Range of models: one year MBA, distance learning, action-oriented learning	Two-year model for MBA; Discipline- and research-based	Range of models but generally one-year Asian case development; Mix of U.S. and local models	Mix of U.S./European models with local adaption; Some online/blended learnings; Attempts to leverage mobile technology
	Knowledge transmission/ Corporate links	Knowledge conveyed in books and practice-oriented journals; Greater reliance on executive education; Closer to business	Knowledge conveyed in discipline- and research-based journals; Fewer schools promote executive education	Focus on A-journals, peer review, and publications; Relevance to business and corporate linkages important; Executive education growing	Practical/vocational relevance; Executive education important for upskilling; Practically-oriented research
Social Capital Differences	Rankings	Lower overall rankings in league tables; Favoured for international outlook, career progress, value for money	Higher overall rankings in league tables; Favoured for initial salary, salary progress, alumni and research quality	Six Asian schools in *Financial Times* rankings; Strong on research quality, student quality	Hardly any schools in *Financial Times* rankings; Largely African rankings (e.g. *Financial Mail*)
	Reputation	Some strong brands but generally lower brand identity and reputation	Many strong brands-particularly private schools; High brand identity and reputation	A few strong brands, but social/reputational capital growing	A few strong brands in South Africa, Egypt, Ghana, Kenya, Nigeria, North Africa (about 10 in total); Social/reputational capital growing slowly

TABLE 1

Source: Derived from Thomas, H., Lorange, P., & Sheth, J., "The business school in the 21st century", 2013, Cambridge: Cambridge University Press.

UNIVERSAL OR SITUATIONAL?

Respondents debated whether or not the theory and practice of management itself is universal. Two-thirds of respondents argued that it is a global model that transcends continents, including Africa. A smaller group of respondents considered management to be local and situational, although the many differences among different regions and groups of people might rule out the possibility of a coherent African model.

Respondents also considered the role that other models of management education play in enabling or constraining the development of an African model. For some respondents, the western model embraces institutional, academic and business power. One respondent questioned the relevance of Harvard business case studies that talk about innovation. Another raised the issue of the relevance of the short massive open online courses (MOOCs) presented by the world's leading universities, "while we don't have [adequate] electricity in Kenya". Some respondents felt that, in the face of a western-dominated sector, some variety of an African model should be seen as aspirational, "Maybe not building a model but setting up our own set of criteria as a beginning? So that we don't compete with the rest of the world initially but we compete with ourselves."

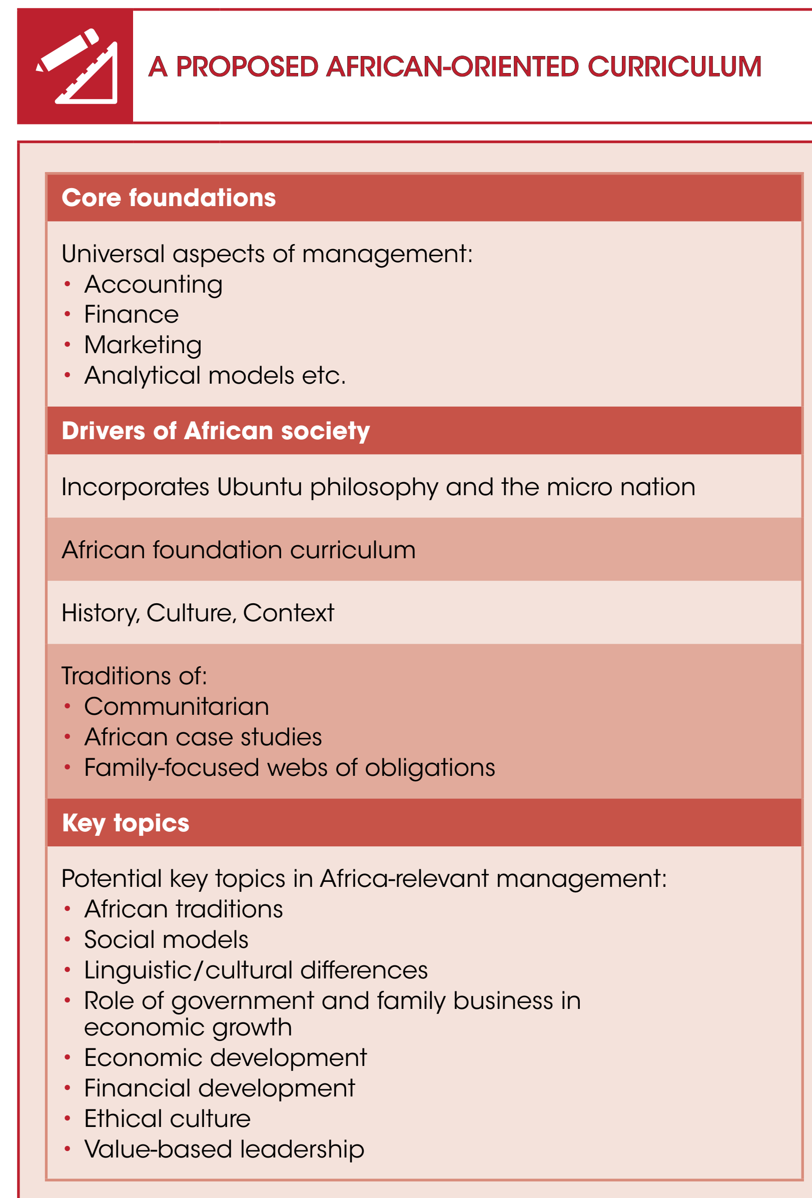
Ultimately, any discussion of an African model requires a clear and thoughtful definition of that proposition. As one respondent noted, "The importance of understanding Africa's needs is there, but we're still on a journey of understanding what these true needs are."

What would an African management model look like?

Although there is broad agreement that better managers and management are essential for Africa, the precise form that management education should take—a model that would impart knowledge and skills relevant to Africa and tailored to the needs of Africa—is unresolved.

While one respondent spoke of an African business school model as one that focused on social innovation, business model innovation, inclusiveness, and entrepreneurship, others were still considering what should be included.

A holistic African-oriented business school curriculum design is proposed in Table 2. This design suggests that there could be a range of African business school models rather than a single African paradigm.



A PROPOSED AFRICAN-ORIENTED CURRICULUM

Core foundations
Universal aspects of management: • Accounting • Finance • Marketing • Analytical models etc.
Drivers of African society
Incorporates Ubuntu philosophy and the micro nation
African foundation curriculum
History, Culture, Context
Traditions of: • Communitarian • African case studies • Family-focused webs of obligations
Key topics
Potential key topics in Africa-relevant management: • African traditions • Social models • Linguistic/cultural differences • Role of government and family business in economic growth • Economic development • Financial development • Ethical culture • Value-based leadership

TABLE 2

Source: Howard Thomas, Michelle Lee, Lynne Thomas and Alexander Wilson, "Africa: The Management Education Challenge (Volume 1)", 2016, Emerald Group Publishing.

Conclusions

African business schools face several fundamental challenges, perhaps even before a specific African model can be considered. As noted by Abdulai[3] and some of the African deans interviewed, such challenges include the need to identify high-quality faculty and overcome faculty shortages, as well as address the potential influences of globalisation and innovation on curricula. Account must also be taken of the impact of new technologies on management education in areas such as MOOCs and distance/blended learning. Another challenge is that management education may not be affordable for all due to cost and capacity constraints.

Funding permeates the management education challenge. Not only is there a lack of resources for sustainable quality management education and inadequate funding for areas such as management research, there is also an imbalance between public and private ownership in the management education sector.

Meanwhile, in considering a specific African model, several African academics including Abdulai, De Jongh, Naudé and Nkomo have argued for Ubuntu—'I am, because we are'—as a guiding principle and moral philosophy. Ubuntu is able to offer a different framework, although further research is needed to establish what is required by, and of, managers throughout Africa.

And as the business schools in Africa seek to grow, they will need to strive for a balance between international, regional and local demands. More importantly, African business and the management education communities need to build an even, fair and strong relationship both among themselves and with the government and the wider society that, in turn, is able to reflect the fulfilment of mutual expectations about the potential value and impact of management education. It is a work in progress.

> A proposed African-oriented business school curriculum design suggests that there could be a range of African business school models rather than a single African paradigm.

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The material in this article is derived from the author's recently published book: "Africa: The Management Education Challenge (Volume 1)", co-authored with Michelle Lee, Lynne Thomas and Alexander Wilson.

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By
Jovina Ang
and Jochen Reb

WHY EVERY MANAGER NEEDS A SPONSOR

What do successful managers have in common?

The truth is—apart from being great in their jobs, many successful managers often credit their success to someone, somewhere along the way—who not only gave them a pivotal career break, but also pushed them, inspired them and helped them grow.

Such is the story of Sheryl Sandberg, Chief Operating Officer of Facebook, who got a shot working at Google when Eric Schmidt, the then CEO of Google, asked her to get on board the 'rocket ship';[1] or that of many other successful managers who we spoke to in our recent study of 40 managers and 100 global senior leaders.

Take the example of Yen, a successful executive at a market leading multinational. When asked about how he got to where he is, he credited his success to David, his very first manager—who not only gave him opportunities to work in multiple domains from engineering to finance, operations, sales and marketing—but also provided the opportunity for this young rising talent to earn an MBA at the prestigious University of California, Los Angeles. Or Jac, who rose rapidly from being an employee relations officer to a senior director of a major institution because there were people throughout her career who gave her multiple opportunities to learn and grow—whether this was to lead the HR department in a global organisation or hire 10,000 people from scratch in a subsidiary of Singapore's investment company, Temasek Holdings.

Whether you talk to a successful manager in the United States, Asia or anywhere in the world, you will find similar stories. Successful managers get to where they are because there were people who gave them guidance, personal counselling and opportunities. People who gave them exposure and stretch assignments. People who advocated for them and fought for their promotion. People who opened doors for them, expanded their networks, and developed their leadership skills. These are the people whom Sylvia Ann Hewlett, the founder and CEO of a successful think tank, the Center for Talent Innovation, calls 'sponsors'.[2]

Undoubtedly, hard work gets you far in your career. However, having a sponsor can get you further. Hewlett certainly knows the importance of having sponsors. One of her sponsors, Harvey Picker, helped her to land a top job at the Economic Policy Council (EPC) in New York by recommending her to the chairman of the EPC while highlighting her credentials as a top-notch academic with international exposure.[3]

Establishing what sponsors do is the first of the three related objectives we hope to accomplish in this article. We describe how sponsor relations are developed and what prevents them from occurring. Finally, we'd like to give managers a framework for establishing sponsorship programmes.

No doubt hard work gets you far in your career. But having a sponsor can get you further.

What sponsors do

Sponsors are often confused with mentors, but they perform a different set of tasks in the success of rising talent. While mentors give advice, direction, and emotional, psychological and social support,[4] or could be role models,[5] they often fall short of making a significant difference in your career because mentors are not accountable for your success. They also typically do not have the power to help you advance.

In contrast, sponsors are people in positions of power. They are senior leaders who stick their necks out for you. They are both accountable for and committed to your career success. And they spend time investing in your career. In other words, mentors *give* and sponsors *invest*.

Our in-depth qualitative study reveals that sponsors can aid their charges in up to 15 ways. The things that sponsors do are wide-ranging, from giving visibility and exposure, to nurturing and teaching leadership, and developing traits of executive presence such as confidence and image. They often provide the air cover to enable their young rising talent to have the confidence and safety to try new things.

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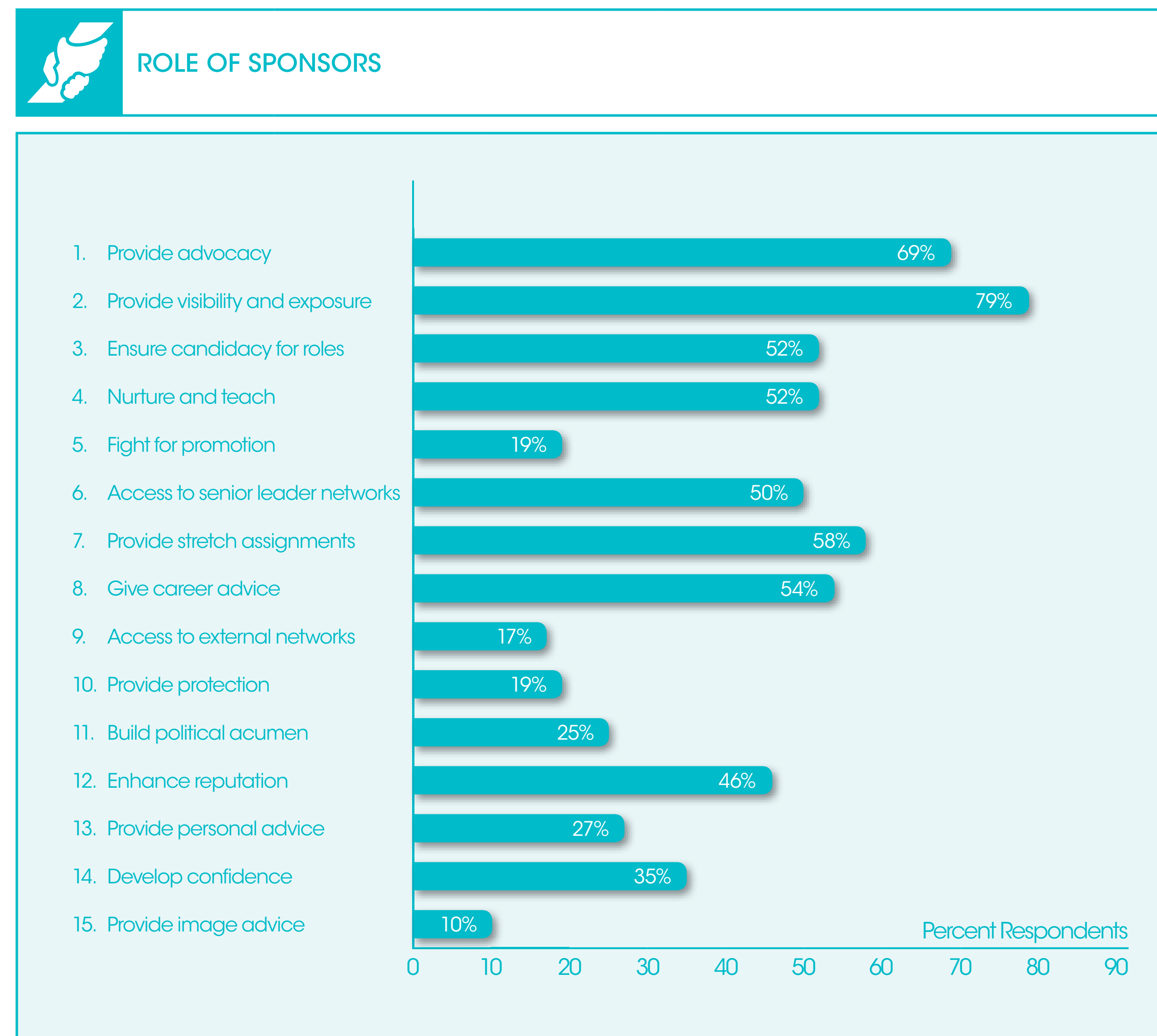

FIGURE 1

Source: Authors' research

While having a sponsor can help at any career stage, the importance of having one or more sponsors increases as one rises in the organisational hierarchy and the competition for a few top jobs becomes more intense. In the words of one of the sponsors we talked to, "A quarterback looks exactly like another quarterback physically, as they all may be the same size". How a person gets noticed is when a sponsor starts talking about him or her–what they can do differently, uniquely and how the sponsor has personally witnessed, observed or trained that person. This is why sponsorship can be an important step in getting promoted or moving towards a more senior role. In short, having people to back you up makes a difference at senior levels. You want people to talk about you positively; differentiating you from the rest of the good candidates. This is, in large part, how a company's management seeks consensus and reduces their risk of a wrong appointment.

The results of our research also show that having a sponsor not only helps one get a top job, but in the long run, it accelerates careers by one to three levels in the organisational hierarchy. Interestingly, only slightly more than 50 percent of senior managers (defined as those at the director level and above) were discovered as having sponsors.

Sponsorship comes with risks

There are several arguments as to why sponsorship is a practice still relatively unsubscribed to within organisations. Firstly, there are risks associated with being a sponsor. When a sponsor sticks their neck out for someone, they are attaching their own brand and reputation to that person. In the event something goes wrong, such as underperformance, there is a reputational risk for the sponsor: "If she succeeds, it's good for her. But if she fails, I will have egg on my face. People are not going to blame her because she is 'bad'. People are going to blame me for the failure."

Secondly, misperceptions might arise. Rumours of an affair could circulate, for example, especially when the sponsor relationship is between a senior leader and a younger employee of the opposite gender. Some male sponsors specifically told us that they shy away from sponsoring a younger member of the opposite gender precisely because such a perception could potentially taint their reputation, and consequently put a damper on their own careers.

Then there is the issue of showing favouritism. Sponsoring someone could carry the connotation of being personal and biased, which is why some leaders avoid it. They also do not want to be accused of being discriminatory or be seen to play favourites: "I don't think managers should play favourites, and the tendency for sponsorship is more likely towards favouritism."

Additionally, sponsors have to be the right people in the organisation with the right goals and the right tools. A good sponsor should not see their sponsee (the person being sponsored) as a future rival who should be kept down or subservient. The sponsor should also possess the wisdom, organisational scope and power to help develop, guide and challenge the sponsee. One of the most common reasons for a sponsor-sponsee relationship to fail is that the sponsor is not familiar with, or adequately engaged in, the relationship.

Why sponsors sponsor

Nevertheless, there are still many senior leaders who are willing to sponsor. There are a variety of reasons for this. Some will want to pay it forward for other people, just as someone had paid it forward for them. In doing so, they fulfil their own psychological need for feeling good, as well as moving up Maslow's hierarchy of needs to attain some form of self-actualisation.

Other managers sponsor because of empathy. Research has shown that empathy drives people to engage in pro-social behaviours, not because of what it does for other people but what it does for them.[6] Empathy also enables the cultivation of deep, powerful and meaningful relationships that fulfil a basic human biological need for social connection.[7] And then there are others who sponsor because they see sponsorship as a way of developing talent, or of tapping into resources to get things done.

Getting a sponsor

Given that sponsors play a critical role in giving people their shot at a career break, how do you get one? Our research shows that there is one fundamental action that a potential sponsee could do, that is, demonstrate a strong track record of performance. Fundamentally, a strong performance record is crucial for success because "performance trumps everything in the world of practice".[8] It is also what the potential sponsor might notice in the first place. As one of our respondents aptly said: "You've got to show that you can deliver because this is what makes or breaks your career."

Such a sound track record also provides a 'safeguard' against the risk of reputational erosion for the sponsor. In the exact

Sponsors have to be the right people in the organisation with the right goals and the right tools.

words of one sponsor, "No one wants to sponsor a 'dud' because it is a quick way to burn your reputational capital".

The 'character of leadership' is another helpful attribute. This is essentially a compendium of traits such as leadership potential, passion, commitment, enthusiasm, drive and emotional intelligence. These are the traits that contribute to long-term organisational success. Frances Hesselbein, whom *BusinessWeek* labels as the 'grande dame of management', describes the character of leadership as the ability of the leader to behave in a way to show 'how to be', rather than 'how to do it'.[9] These leaders often look beyond short-term gains to drive long-term advantage and sustainability for their organisations.

Sponsor-sponsee relations might also emerge from supervisor-employee relations or mentor relations. Here, potential sponsors have an opportunity to observe and assess the potential of the employee before deciding to sponsor them. Thus, those seeking a sponsor should utilise every relationship opportunity to impress.

Finally, another way to obtain a sponsor is to ask for it. Interestingly, our research shows that many male sponsors would not consider sponsoring a person unless they are first asked. This finding is in contrast to that of female sponsors, who would often reach out to people to sponsor them, without them asking for it. So, when seeking a male sponsor, you may need to ask for it. Asking does two things for you: first, it signals to the potential sponsor that you are keen to be sponsored; and second it suggests you trust the senior leader to help you progress.

Framework for sponsorship

Sponsorship is a good way to develop and retain top talent. Managers who establish sponsorship programmes in the workplace reap multiple benefits compared to those in organisations where sponsorship is left to the privileged few who get noticed, or who ask for it. We suggest four key approaches for a successful sponsorship experience.

Firstly, a careful selection and matching process is needed. Even though a list of top talent normally exists in most organisations, it is important that managers exercise scrutiny when matching each of the top talents to a senior leader. Factors like chemistry and attraction are important. As Bryne's theory of attraction demonstrates, people with similar attitudes experience more rewarding and positive interactions.[10] Managers also need to pay attention to organisational needs such as the critical skills needed in the volatile, uncertain, complex and ambiguous (VUCA) world of work.

Secondly, an engagement process needs to be agreed upon to set the rhythm for the sponsor relationship to progress. Factored into the engagement process would be the start and end dates, the mid-point date and the frequency of meetings. Given that it takes time for the relationship to grow, as well as to develop and position the sponsee, we recommend that a sponsor relationship should be set for a minimum period of 12 months.

Thirdly, metrics need to be established to measure progress. As Peter Drucker rightly pointed out, "what gets measured gets managed".[11] While metrics measure progress and outcomes, they also drive accountability and commitment to the programme.

And lastly, strong support from the executive team is needed to ensure the programme continues to thrive.

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THE GLOBAL IMPACT OF CHANGES IN U.S. TRADE POLICY

Be prepared for tectonic shifts.

By Jagdish Sheth

Heralded as the next big economic partnership, the Trans-Pacific Partnership (TPP) received a setback when U.S. President Donald Trump withdrew from the pact on his very first day of assuming office. The withdrawal indicated an underlying current of changing global trends, and the American agenda of shifting focus from building trade relations to creating a gateway for foreign investments.

The TPP, a trade agreement between 12 countries that border the Pacific Ocean and represent roughly 40 percent of the world's economic output, was aimed at lowering non-tariff and tariff barriers to trade among the member nations. A collaboration among five Asian nations, three South American countries, Australia, New Zealand, the United States and Canada, the objective of the pact was to stimulate economic growth among the participating nations through greater productivity, increased employment and opportunities for innovation.

With the U.S. withdrawal from the trade agreement, it seems unlikely that the agreement can and will continue to operate as planned. Vietnam, for instance, is likely to be negatively affected by the exit of the U.S. from the TPP, but it is noteworthy that, like most of the other TPP member countries, it still has strong bilateral ties with the United States–thus providing the U.S. with greater bargaining power over exports from these countries than might exist in a multilateral agreement.

Trumpanomics

So what happened? The 2016 presidential campaign in the U.S. touted the perception that international trade was a double-edged sword. Though expanded trade had tremendously helped in increasing the supply of goods and services at significantly lower cost to consumers, it had simultaneously affected wages and led to growth in financial inequality. In the U.S., globalisation had contributed to wage stagnation, even though it had brought about a huge surge in productivity over the last few decades. This had led to a brewing dissatisfaction among the working class in the country and fuelled a rise in protectionist attitudes.

Another important point to note is the long term impact of the global financial crisis of 2008 on the world economy in general. Most leading world economies, with the exception of China and India, have experienced sluggish growth after the recession. This has acted as a catalyst for the adoption of various trade restrictive measures to manage rising debt loads and infrastructure challenges, a trend that will likely continue to gain momentum in the coming years.

Reglobalisation

The death of the TPP is an indication of significant changes in trade policies not just in the U.S., but globally. In future, regional trade will be replaced more and more by bilateral trade agreements. For instance, the U.S. will sign agreements not with the European Union (EU), but separately with Germany, France and the United Kingdom. This is also likely to be the case with Japan, Canada and Mexico.

A related global trend that we expect to see is that foreign investments will replace international trade. This is not so much 'deglobalisation', but a 'reglobalisation' from trade to investment. Interestingly that is how we used to trade before we liberalised and formed the World Trade Organization. But with decreasing restrictions on foreign ownership in many countries, it will make more sense to set up businesses in a country that has a large consumer base–be it the U.S., Mexico, China or India–because one can make in and sell to, and service that market.

Even before Trump's election, German automobile makers had moved their manufacturing units to the U.S., and corporate giants like Siemens had invested heavily in the country. The German economy is not as big as the American economy, but still relatively big. In addition, German-headquartered multinationals are currently looking at avenues of de-risking from the EU because of the uncertainty there.

I believe the biggest change that is going to happen is the change in the flow of investments from the East to the West. Under this scenario, companies from the East will park their manufacturing units in the U.S. to cater to the demand of both the foreign and home countries. In other words, while many U.S. multinationals have formed Asia Pacific subsidiaries to focus on Asia (often located in Hong Kong or Singapore), Asian companies from Japan, South Korea, China, and ASEAN will now either establish subsidiaries or make acquisitions and focus on the U.S., Canada and the United Kingdom.

Where manufacturing units move, their suppliers follow. European automobile manufacturers, along with their suppliers, are already hubbing in America. And Atlanta is rapidly becoming the Detroit of the 21st century. Eventually, American manufacturers will also shift their capacity to the southern or 'right to work' states. These states provide more business-friendly environments to operate in, often providing incentives for investment in manufacturing, labour is relatively cheap, and land is easy to get.

The Korean companies too are moving their manufacturing units to the U.S., much like what Japan did in the 1980s. It is likely that companies such as Samsung will start making phones in the United States. Kia Motors is already in Atlanta, and Honda recently upped its investments to strengthen its North American operations.

The brighter side of Brexit

Contrary to popular belief, I have confidence that the U.K. will come out much better after Brexit. The U.K.'s new (but in many ways, oldest) partner

> Globally, foreign investments will replace international trade. This is not so much 'deglobalisation', but a 'reglobalisation' from trade to investment.

will be the United States. Large British companies such as BAE Systems or British Telecom will now begin to focus on the U.S. and not across the English Channel. The two countries have been politically, militarily and economically aligned since World War II, so that is another reason why there will be a shift from trade to foreign investment. This is also why continental Europeans are not happy with the Brexit decision as they are more adversely impacted by it than Britain. Important to note here is that the U.K. also has access to another big market–the Commonwealth nations. Australia, South Africa, India and Canada are among the larger economies that can offer a lucrative market for British products and services; and there is also an element of familiarity in doing business with these nations.

The EU will certainly be in the doldrums for quite some time, although some smaller nations like the Scandinavian economies will continue to do well. The economies that would suffer the most will be France and Germany, and Italy to some extent; they will be desperate to tap into growth pockets outside their continent. Also, given the monetary controls and the labour mobility issues, there is imminent fear whether the EU will survive. The common currency seems to have further locked in the EU countries, while having an independent currency made it relatively easy for the U.K. to walk away from the EU.

> The EU will be in the doldrums for some time…The common currency seems to have further locked-in these nations.

It takes two to tango

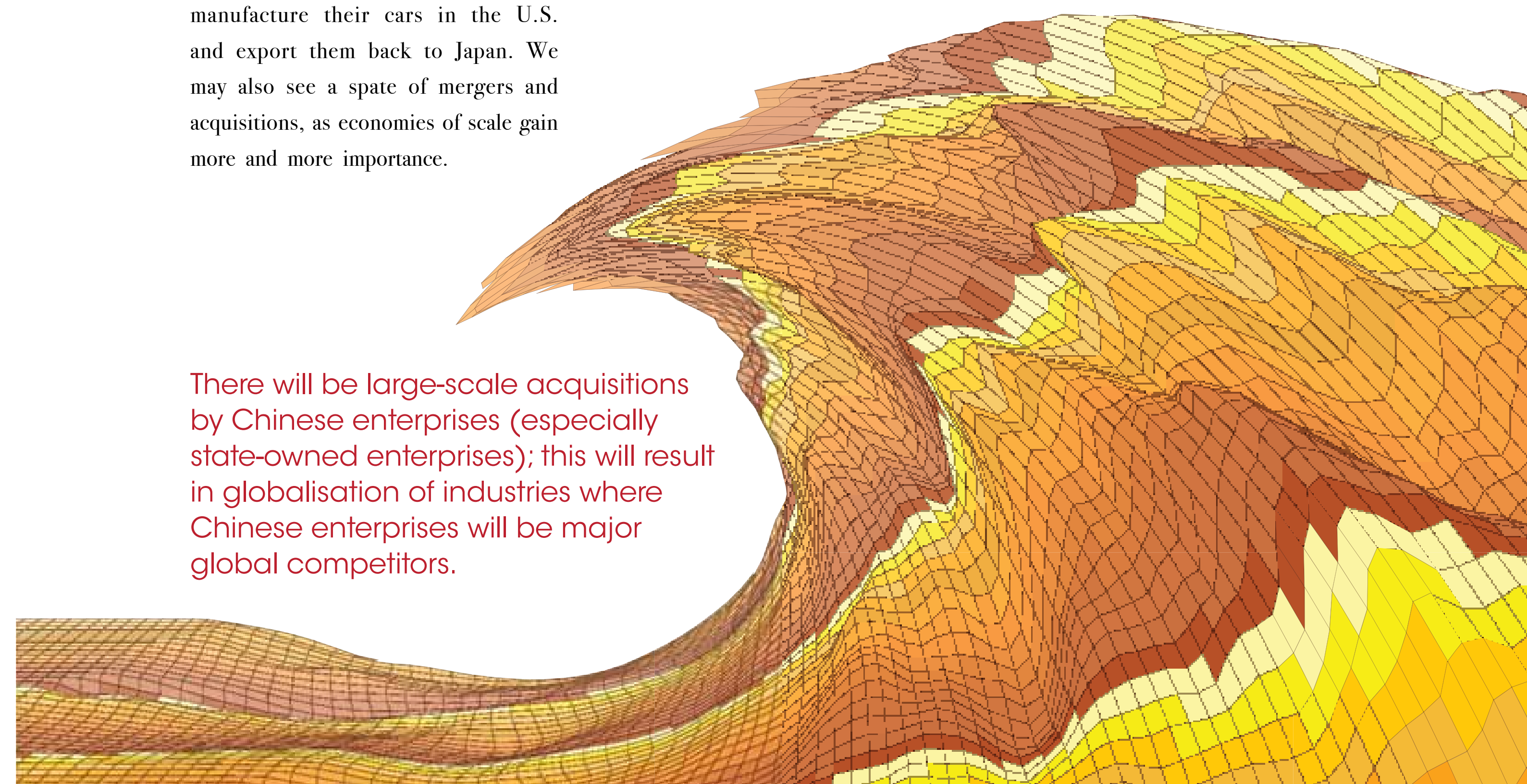
We also need to consider the impact of the changing U.S. trade policy on China, Asia's biggest economy and the second largest economy globally. We will see China investing heavily in the U.S., as it shifts its policy from export trade to more and more investment. Despite the strong anti-Chinese propaganda, the U.S. will continue to allow large local Chinese enterprises to invest in the United States. For example, General Electric sold its appliance business to Haier, a Chinese appliance manufacturing company, and not to Electrolux. These investments are made not only to serve the American market, but also the Chinese market. So Chinese companies will invest and manufacture in the United States in order to export to their home market in China–this is fascinating. We saw a similar pattern in the 1980s when Honda announced that they would manufacture their cars in the U.S. and export them back to Japan. We may also see a spate of mergers and acquisitions, as economies of scale gain more and more importance.

Public debt converted into private equity

As interest rates rise, it places an increasing burden on the fiscal budget. And this is financed through public debt. In the 1980's, Japan held U.S. treasury bonds. These were used as credit for the Japanese *zaibatsu* such as Mitsubishi, Mitsui and Sumitomo groups to acquire or build their own manufacturing plants. Japanese firms also bought many assets including consumer electronics, steel, and even portions of islands like Hawaii. When a company gets capital at zero or low interest rates, it finds it easy to invest abroad. And that's exactly what the Japanese did.

Today, the buyouts will most probably be by China, primarily, and U.S. treasury bonds will be used by Chinese state enterprises to own large corporations in America. This again means that mergers and acquisitions will become large scale very quickly. There will be large-scale acquisitions by Chinese enterprises (especially state-owned enterprises); this will result in globalisation of industries where Chinese enterprises will be major global players/competitors.

We are also likely to see massive infrastructure investments financed through the fiscal budget in the coming years. Current forecasts for infrastructure investments in the U.S. are of the order of US$1 trillion over the next decade, but I feel it may go up to US$3 trillion, or US$300 billion per year. This will require public-private partnerships since the fiscal budget cannot invest so much purely out of tax income. Thus, these partnerships will become yet another important way of converting public debt into private equity.



> There will be large-scale acquisitions by Chinese enterprises (especially state-owned enterprises); this will result in globalisation of industries where Chinese enterprises will be major global competitors.

Singapore's strategic advantage

Amidst this scenario, Singapore sits strategically in the right place, ready to capitalise on its competitive advantage in Asia. Singapore has advantages over its peers in that it is a city nation that is fairly neutral. I call Singapore the 'Vienna of Asia'. Like Vienna during the Cold War, Singapore could potentially become a city to host negotiations and provide a platform for track two diplomacy.

Singapore also has several other advantages including strong intellectual property (IP) rights, low tax rates and good governance. The island state is already the Asian hub for private equity but so far it has been focused on investments in Asia, notably China, India and the ASEAN countries. As the flow of capital from East to West increases, Singapore has the potential of being the investment gateway for Asian enterprises investing in the U.S., Canada and Mexico. In order to take advantage of these opportunities, Singapore will first need to reposition itself from being a trading capital to an investment gateway looking out to the West.

Strong governance and ease of doing business have also made Singapore an attractive spot for Asian companies to set up regional offices. The city-state is therefore in a strong position to facilitate yet another reverse trend of attracting American investment into Asian conglomerates. Finally, the country has extensive infrastructure experience, from its landfill projects to ports and even botanical gardens. Its expertise in running massive infrastructure projects is well known and emulated throughout the world. So Singapore has the potential to bid for large infrastructure projects in the U.S., leveraging on its expertise.

> Like Vienna during the Cold War, Singapore could potentially become a city to host negotiations and provide a platform for track two diplomacy.

Asia: The new battleground?

I foresee a change in world geopolitics whereby Asia will become the new economic, political and military battleground. The country (Russia) that has been an enemy in the Cold War with the U.S. for many years will become its friend, and the U.S. will accept this friendship. The U.S. is very likely to move out of West Asia and the Arab countries and shift its attention to Asia. China will replace Japan as America's major competitor both economically and, of course, militarily.

However, despite its current and potential economic growth, the brittleness of Asia can be seen in the political instability of countries like Thailand and the radical changes taking place in the Philippines. This, coupled with China's increasing prominence as a global economic and military power, will most likely push Asia towards a global tension point; and experts will be closely watching how the U.S.-China relationship develops.

Change is imminent. The global economic playing field is witnessing a radical shift—what I call a tectonic shift—from being western-centric to Asia-centric. While opportunities exist, it will be interesting to see how changes in the way global business is conducted impact not just economies, but even political and military regimes across the world. No doubt, there will be winners and losers.

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