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Urbanisation, Technology and the Growth of Smart Cities

Borderless Markets
A boon or bane for marketers?

Ethical Leadership
An interview with the Nobel Peace Laureate, Dr. José Ramos-Horta

On The Edge of Disruption
FinTech innovation

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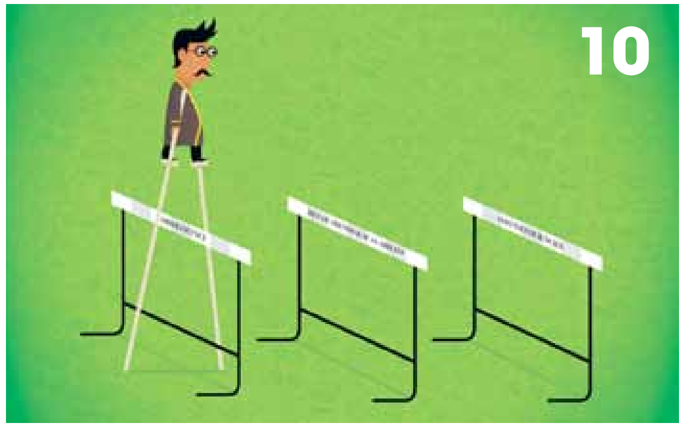
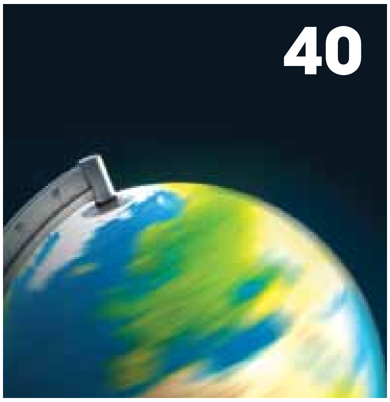


> Humility and compassion are the two greatest qualities of a leader.
>
> *- Dr. José Ramos-Horta, Nobel Peace Laureate and former President of Timor-Leste*



Innovation is impacting our lives in ways that go beyond flat screens, driverless cars and new apps on smart phones.

- Philip Zerrillo, Editor-in-Chief, Asian Management Insights

VANTAGE POINT

CASE IN POINT

EXECUTIVE BRIEF

PARTING SHOT

ASIAN MANAGEMENT INSIGHTS

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FROM THE EDITOR

From smart drones to smart leadership: lessons in innovation

The evolution of the word 'innovation' is an interesting one. It has gone from a description of any number of unique selling propositions for dishwashers and door locks to the whole change in mindset necessary for business (and life) in the 21st century. A relatively long semantic journey has seen it transform from the patois of hawkers on late night television to the parlance of heads of state. In the pages that follow, the prevalence and importance of innovation cannot be denied.

Our own Singapore is in the process of travelling from an efficiency-driven 'little red dot' to an innovation-driven smart city-state. In this issue we explore how innovation is impacting our lives in ways that go beyond flat screens, driverless cars and new apps on smart phones. As one of our contributors notes, technology alone does not make a city or community smart; it needs smart governance, smart businesses and smart citizens.

American companies like Apple, Microsoft, Google and Facebook are a top-of-mind presence for many people when it comes to the subject of innovation. But as our authors point out, the local Internet players in the Chinese digital market have had to innovate and improve well beyond the cloning of western originals.

Innovation is also making its presence felt on our borderless markets, and as geographical borders become more porous, the threat of 'grey markets' continues to grow with firms having very different philosophies when dealing with these markets. One thing we can be sure of is, as borders become porous and contiguous markets are effected by new business solutions, adaptions, mutations and innovation are inevitable.

You will also see how a pan-Asian mobile remittance platform could just be the next big disruption in global remittances. Global bankers are finding themselves on the edge of disruption as they nervously anticipate the waves of FinTech and serious innovation lapping at their vaults.

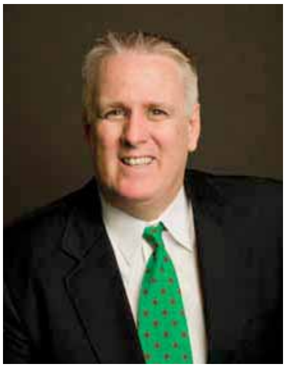
Few industries are immune to the pressures of innovation and change as some of the stodgiest, low investment and most traditional industries are being transformed. The lack of IT-based systems in India has impacted her 'kirana' stores, or traditional retailers. But the problem is not insurmountable, say the authors of a study that proposes social supply chain innovation to connect the unconnected 'kirana'.

In this edition, you will likewise discover how Unilever noticed the importance of the mom-and-pop store to the fabric of Thai society. Applying its insights and experience in merchandising, the company developed the 'Platinum Store' concept as an innovative step to empowering small retailers for the community, by the community.

For most people, digital innovation and its association with Big Data, closely followed by the drying up of long-term career prospects due to changes in the hiring landscape, is one that sets off the alarm bells. Digital genomics (read: use of Big Data) is one of the frontier technologies in machine intelligence that is being applied to improving business performance, and is now proving to be a central basis of competition. And yes, steady careers and linear or vertical patterns towards upward mobility in organisations are gone–but as one of our authors point out, 'barbell' strategies serve as a means of addressing the issues arising from increasing marketplace disruption.

Despite, or in spite of, being digitally intelligent in an age of innovation, one cannot detract from the *sine qua non* of effective leadership. Our authors explore the issue of innovation governance–a holistic approach to steering, promoting and sustaining innovation.

And finally, in our interview with Nobel Peace Laureate and former President of Timor-Leste, Dr. José Ramos-Horta, the concept of ethical leadership was brought to the fore. Humility and compassion are the two greatest qualities of a leader, he says. Leaders must make a conscious effort to be accessible, and should never forget that countries are not statistics: "Countries are people with feelings." In other words, leaders can be competent technocrats and deliver results, and yet just as easily fall from grace if they are perceived to be lacking in humility. A timely reminder.



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WATER SOLUTIONS THAT IMPACT LIVES

Hyflux is dedicated to delivering solutions for a sustainable and secure water future.

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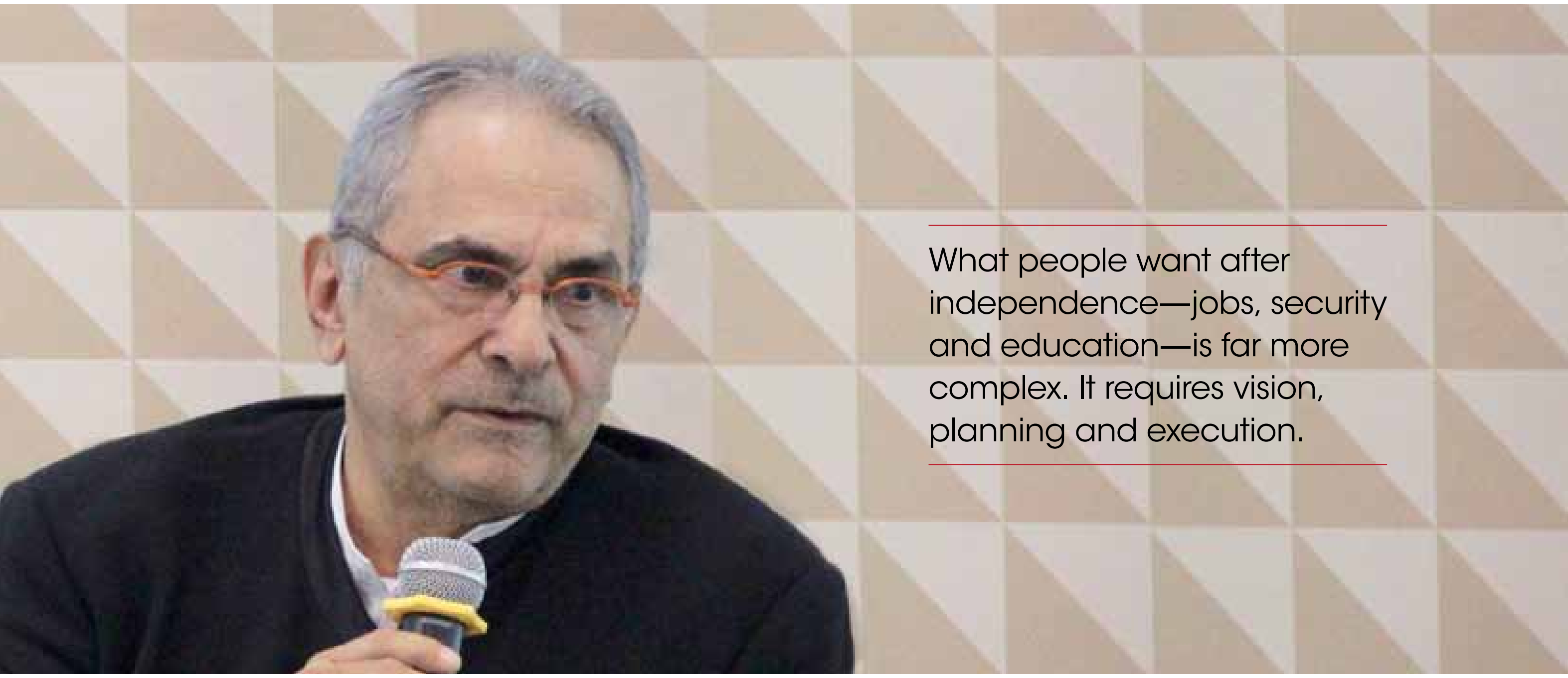
HUMILITY AND COMPASSION:
the pre-requisites of moral leadership

The Nobel Peace Laureate and former President of Timor-Leste, Dr. José Ramos-Horta talks about ethical leadership and Timor-Leste's post-independence development in this interview with Havovi Joshi.



What people want after independence—jobs, security and education—is far more complex. It requires vision, planning and execution.

From 1975 to 1999, almost a quarter of a century, you were exiled from your country and lived overseas, fighting for its independence. Then in 2002, Timor-Leste gained independence, and you were appointed Minister for Foreign Affairs and Cooperation. In 2006, you were sworn in as the Prime Minister of Timor-Leste and, within a year, elected President of the country. How did you work through the transition from an independence activist to head of state?

There is a lot of difference. When you fight for independence or for a cause, you don't have responsibilities of any kind in delivering results, stability, peace, security or jobs to people. You just talk, advocate and shout. But as head of state or minister in your own country after independence, you can no longer shout for independence—that is done, you have achieved it, and now it is time to build the nation, deliver, and meet the expectations of the people. What people want after independence—jobs, security and education—is far more complex. It requires vision, planning and execution. And execution means you need dedicated and qualified people, who are not always available. And if you don't deliver, the people protest.

When I became Prime Minister in 2006, I had to deliver on what was the need of that time, safety and security. And when I became President just a year later, my main priority then was to build bridges, bring people together, and heal the wounds. I saw my role as the conciliator and the bridge builder to restore tranquillity and faith in the people, and to create conditions for the government to be able to govern. That's what I did, and I was proud and happy that when I handed over power to my successor, the country was dramatically different from what it had been in 2006-2007. My conscience was completely at ease.

In 2006, when there was an internal crisis with rebel soldiers, why did you believe that you had to resign as Foreign Minister?

This has to do with the core attribute of leadership, or what I call ethical leadership. When you have a problem in your country or your organisation, you should always first look inwards to understand the cause of the problem rather than blame others outside. You should take responsibility for your problems, as that is what leadership is about. You take credit for what is good, and accept that you are responsible if it goes wrong. It takes courage and real statesmanship to acknowledge your own faults, your own failings. It took courage in 2006 to say that we alone were at fault, not anyone else. It was our collective failure.

I was soon after called back to serve as Prime Minister, which I did for about a year. I made every effort to reconcile the differences and calm the tension. And then we had elections, and I was compelled to run for President. I felt that I had to continue the process of healing the wounds, since you need peace and security for the government to run well. And for that to happen, I had to engage in a dialogue with everybody—because I believe that leadership is all about being humble and compassionate.

> Leaders should never forget that countries are not statistics and economics. Countries are people with feelings. Humility and compassion are the two greatest qualities of a leader.

I recollect that in 2003, just six months after we achieved independence, there was a government retreat and I told my leadership compatriots, "When we are in power, we should show humility and descend from the mountains to the valleys and talk and listen to those on the fringes of the privileges of power. Because often, you can be a competent technocrat and deliver results, but if you are perceived to be arrogant, you will go down one day. You don't win by being arrogant." And the second quality of a leader is compassion, which goes hand in hand with humility.

When I look at say the explosive situation in the Middle East—I believe it all goes back to failure of ethical leadership, failure of dialogue, and failure of humility. Regimes that are entrenched for decades assume for themselves messianic powers and create situations where there is a complete absence of dialogue and place for people to voice their grievances. So what can they do? They take to the streets.

Hence those who have been in leadership for many years tend to lose touch with the people. Leaders have to make a conscious effort to be accessible. They should never forget that countries are not statistics and economics. Countries are people with feelings. Humility and compassion are the two greatest qualities of a leader.

Talking about compassion, in 2008, you were wounded in an assassination attempt. And you extended a personal pardon to all of them. And similarly, when we look around us and see the wounds of history where nations and people cannot forgive one another, the cordial relationship between Indonesia and Timor-Leste is truly unusual and impressive. How did you manage this, and what else does it tell us about the qualities of leadership?

I think what happened in 2008 was just an extension of the leadership crisis of 2006. We as leaders had failed. So was I going to condemn them?

Two days after I was shot, the attackers, who had at that time fled, said they would surrender to me and no one else. After the surrender, they went through the legal process and were sentenced to many years in prison. That was when I exercised my presidential prerogative and pardoned them. It was a political decision. I was aware why the incident took place in the first place, and so I set them free. And Timor-Leste has been free of unrest since then. And while I have been accused by some of pardoning too easily, the truth is that I understand the difficulties of post-conflict societies. I believe that justice cannot be so blind that you ignore the social and political complexities in a given society, because that exacerbates conflict in the society and deepens polarisation. That was my philosophy as President.

Similarly, today no two countries in Asia have as good a relationship as Indonesia and Timor-Leste. How did this come about? We never fell into the temptation of demonising the Indonesian people or their religion. After independence, the leaders of the two countries said that we must look forward, we must build bridges. And we in Timor-Leste opposed the idea of a War Tribunal that was being hypocritically forced on us by the United States and the United Nations. We refused because we felt that Indonesia was itself in a difficult position, trying to build its democracy in the post-Suharto era. And Indonesia appreciated our stance. And they too showed great maturity and statesmanship, and managed their humiliation at being pushed out of a small country like Timor-Leste. After all, it is easier to show humility as a victor, and far more difficult to be humble when you are defeated.

> I believe that justice cannot be so blind that you ignore the social and political complexities in a given society.

When you are developing a new country or have just gained independence, as in the case of Timor-Leste, there are certain institutions, sectors and decisions that you have to prioritise. What sort of decisions did you feel were important and how did you prioritise in these contexts?

Well, in our country, because of the way it was totally destroyed, everything was a priority. But in practical terms, you cannot make everything a priority because the money is not there. Can you imagine our budget in 2002-2003? It was US$68 million. We did have money for development projects that was separate from the budget, but we had to pay the salaries of civil servants, teachers, the army and the police; and at the same time invest in infrastructure and job creation. But our desire, as also of the people, was that education should be the number one priority, followed by health. So that's what we did. And as we generated more income from our oil and gas, we spent more on education and health. Now a lot more is being spent on infrastructure development. Roads are being built, or those that are built are being improved. There is some beautification of the towns and cities, with monuments built to honour the victims of the past.

The decision-making process on priority always starts with the Council of Ministers, where each minister puts forward his or her priorities based on their respective portfolios. Then it goes to the Parliament, and there is debate in the Parliament because the government has published a limit and you cannot go beyond that. We do have a lot of consultation with the people... sometimes too much. After all, do we really need a consultation to understand that education should be a priority? Don't we know that illiteracy is high? Don't we know that without the best quality of educated people, the country is doomed? But we are doing it anyway. People want to be part of it, people want to be heard. And that is what a good leader does. A successful leader is one who really connects with his people. But while leadership is to be sensitive to opinion, it must be remembered that leadership is not to follow—leadership is to lead. If you have a vision and you believe this is what is for the best of the country, even when it's against the sentiment of a lot of people, you have to do it. And that is what we did. And time has proved that we were right.

Looking ahead, what are the long-term plans to develop the Timor-Leste economy?

The government drafted, adopted and submitted for consultations throughout the country, a Strategic Development Plan that ran from 2011 to 2030. The vision is that by 2030, Timor-Leste will be an upper-middle income country, with a per capita income of US$10,000, where illiteracy has disappeared, child and infant mortality has ended, life expectancy is up, and so on. That is the plan, and many parts of the strategic development plan are being pursued, and some milestones have been achieved. We have expanded enormously in medical coverage. Electricity too. So many of the goals in the strategic development plan have been achieved, although we still have a lot to do. I think we can do far better in education and health. I am generally very critical of ourselves, but then when I think of what we inherited in 2002, I would say we have achieved far more than most countries in similar circumstances.

I hope that Timor-Leste remains stable, peaceful and a model of solidarity. I tell the security people and the local police that, if from anywhere in the world a human being flees extreme poverty or war and lands on our shores, we must welcome them, shelter

While leadership is to be sensitive to opinion, it must be remembered that leadership is not to follow—leadership is to lead.

them, look after them, with no questions asked. In my country, we do have quite a few illegal migrants, but I tell my people that these individuals had to leave their country to come here, and each one of them, like you, must have been attached to their country, their villages, their family. People have to be really desperate and helpless to leave their country. So we cannot mistreat them, we cannot abuse them—we should welcome them.

What is your view on ASEAN and the AEC? What does it mean for Timor-Leste?

Joining ASEAN is Timor-Leste's birth right, in the sense that we are a part of Southeast Asia, so the geography gives us this right to join ASEAN. And, in fact, member ASEAN countries, including Singapore, have done their best to train and prepare us to better live up to the privileges and responsibility of being part of ASEAN. I think ASEAN membership will happen, maybe in 2016–2017, I hope. We were hoping for it to have happened many years ago, but that is also our fault and not entirely the fault of the members as we had a lot of challenges and difficulties to have our economy and other conditions improve to a minimal level of preparedness.

I don't know if it will have any economic financial benefit or impact, but yes, it will matter politically. We will become part of a larger group that is unified, that has prestige internationally, and eventually, as part of ASEAN, we might see more mobility for the Timorese, who may benefit in terms of opportunities to study and travel in the region.

To conclude, based on your long experience, what advice would you give other leaders today, not just in Asia but across the world?

I would say that many conflicts that are happening now would have not happened if those in power had done more to listen to their people, connect with them, and invite those who disagree with them for round table conversations, asking, "What do you want me to do that can change your perception of me or my policies?" Because leaders are supposed to set examples and inspire people to respect each other. But some leaders just cannot resist the temptation of taking sides.They support one faction over another. I would say avoid getting entangled at any cost. Be an honest broker. And when you are able to do that, your people will welcome you.

And for the leaders in my country, I would hope and advise them to never fall prey to arrogance, corruption and the trappings of power. Also, don't overstay your time in office. Leave gracefully when you can. Don't wait to be chased out of office. If you leave gracefully with humility, you are respected.

Nobel Peace Laureate
Dr. José Ramos-Horta
is the former President of Timor-Leste, and currently co-chair of the International Commission on Multilateralism

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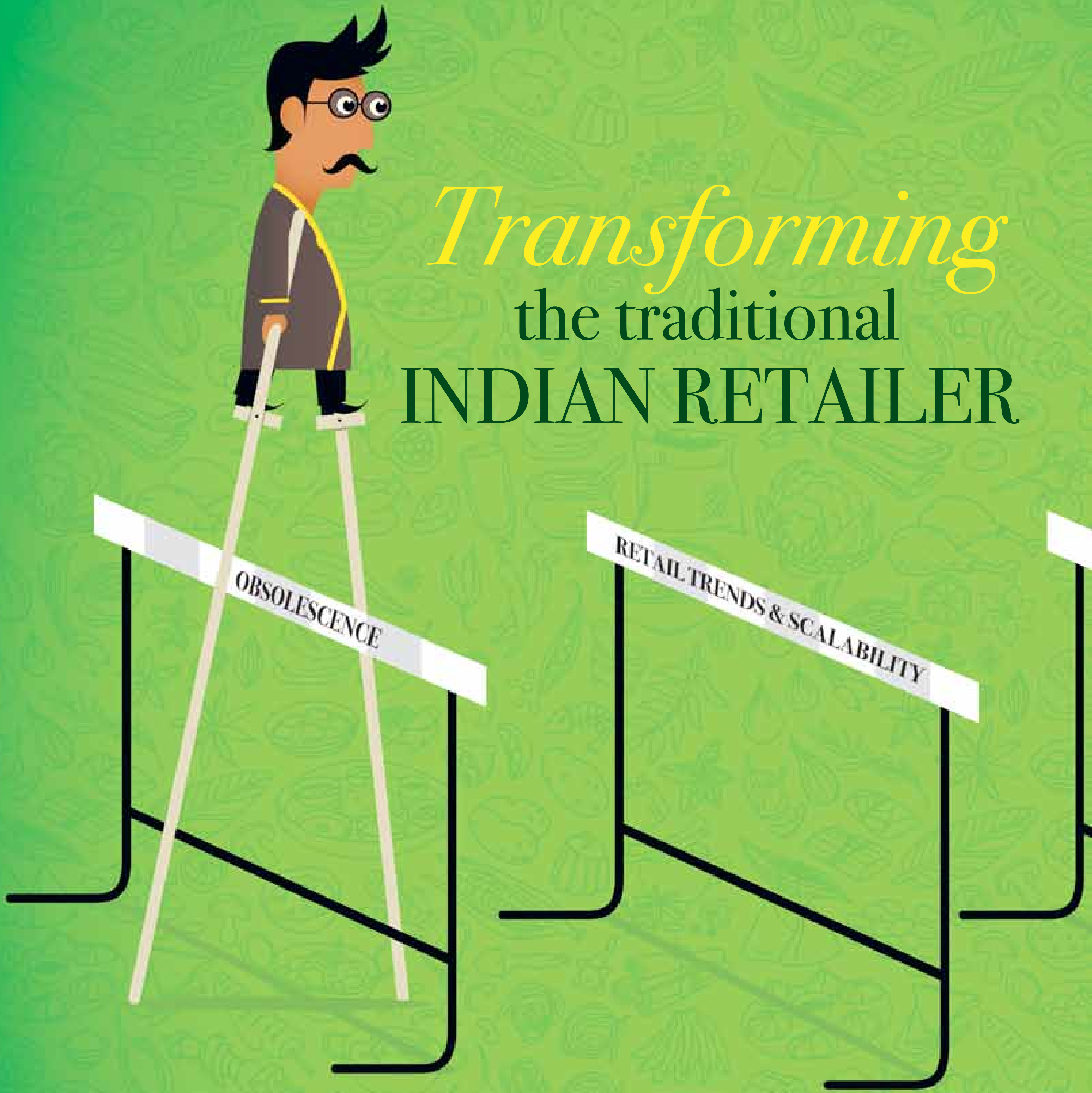
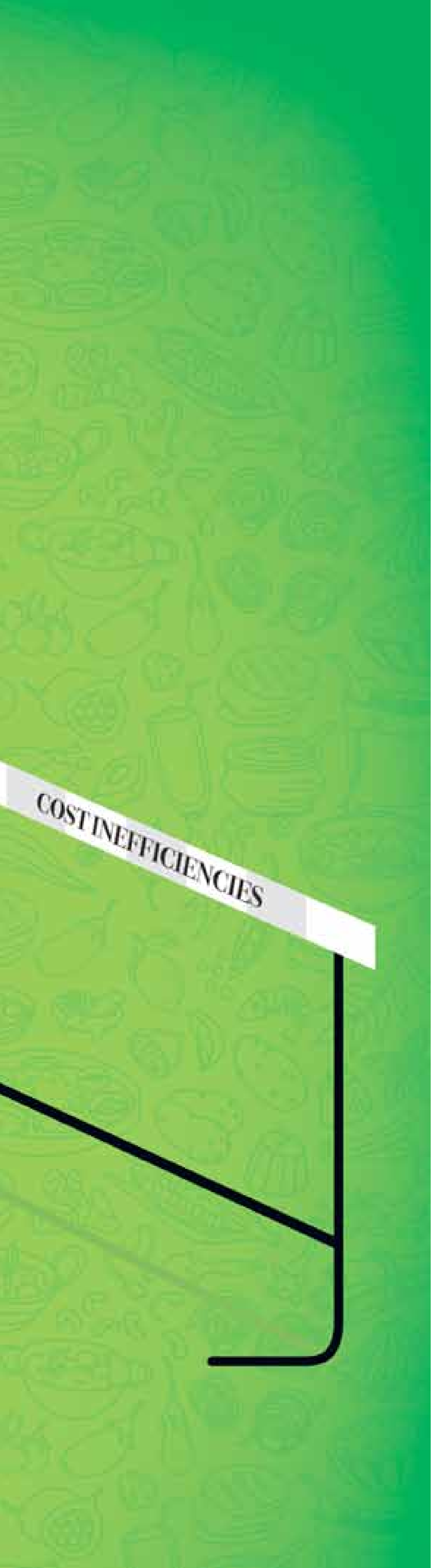
Transforming the traditional INDIAN RETAILER





Connecting the unconnected 'kirana' stores through social supply chain innovation can help small Indian businesses draw more benefits from the increasing purchasing power of consumers.

By Ashish K. Jha, Varun Jain, Vridhi Chowdhry and Indranil Bose

The rise of modern organised retailing and e-commerce has seen India's traditional retailers, known as 'kirana', and other small businesses take a major hit. But while the lack of IT-based systems in current retailer supply chains is impacting their performance, the problem is not insurmountable. One solution is to implement an effective IT-based supply chain innovation system within the traditional retail format. We propose a system that can also be easily adapted to other emerging economies with fragmented retail systems.

Efficient and responsive supply chain management is an essential requirement for any retailer, organised or unorganised. The availability of goods and assurance of their quality are the two basic elements that can enable traditional retailers to win over formidable competition from modern organised retailers. The organised system for management of operations that we propose in the Social Supply Chain Management System (SSCMS) has the potential to significantly benefit India's traditional grocery retailers, which make up the unorganised market for grocery retailing, despite their lack of access to technology. An effective SSCMS is able to integrate the vast network of retail and wholesale businesses—information serves as the integrator between the supply chain and customers, and allows various processes, departments and organisations to work together and provide a better value proposition to all stakeholders in the community.

Traditional retailers versus organised retailers

Although traditional retailers still dominate the grocery business in India, organised retailers are growing much faster–a 22 percent annual growth for modern retailers compared to 13 percent for traditional retailers in 2013.[1] Traditional retailers are slowly losing out to the more efficient modern organised retailers due to the lower number of customers per store and high stock-outs. For instance, the stock turn for global giant 7-Eleven is 50, as against the normal range of four to ten for traditional Indian retailers, and stock-out levels among local retailers range from five to 15 percent, compared to a global average of less than five percent.[2]

Despite the proliferation of organised grocery retailers in the urban areas of India, the semi-urban and rural population in India continues to prefer traditional vendors due to their familiarity with the channel, favourable pricing, relationships, package sizing and easy accessibility. The availability of credit facility, which is an important contributor to the popularity of a particular kirana store, varies from store to store. In the absence of display shopping at such stores, there is not much to differentiate between a high margin luxury brand and a low margin one. As a result, all brands get equal exposure. Branding is also not the criterion used to attract customers in kirana stores as customers typically prefer low priced products. In addition, the retailer's suggestions and recommendations regarding any product play a significant role in influencing the customer's purchase decision.

The semi-urban and rural population in India continues to prefer traditional vendors due to their familiarity with the channel, favourable pricing, relationships, package sizing and easy accessibility.

The consumer to retailer ratio is very low due to the presence of several kirana stores in a given locality, all carrying nearly the same assortment of products.

The current value chain

In a typical grocery supply chain, a 'carry and forward' agent picks the goods up from the manufacturers and takes them to distributors, who, in turn, sell the goods to wholesalers and retailers via dealers and agents. There are a few independent super-stockists too, as well as individual entrepreneurs, who buy groceries in large quantities to procure higher discounts and then sell it to sub-stockists and wholesalers. Super-stockists, stockists and wholesalers generally keep multiple brands and offer a wide range of products –unlike distributors who are not allowed to operate with competing products. For the purpose of this article, we assume that the super-stockist, stockist, wholesaler and retailer make up the traditional sector. Figure 1 shows the value chain of a typical kirana store in India.

Figure 2 shows the flow of information and goods in existing supply chains of a typical kirana store. Here, the sequential information flow creates a problem for manufacturers and wholesalers because they do not have up-to-date information about the demand, stocks, etc. This creates a major information gap in the system that leads to inherent structural inefficiencies. Information inefficiency has been advanced as one of the major reasons for stock-outs leading to customer dissatisfaction.

An efficient supply chain strategy, based on sharing of high-level information about all the other players in the chain can remove this information asymmetry. The retailer would gain competitive advantage in terms of leaner supply chains, lower costs and the ability to select the right suppliers.

An efficient supply chain strategy, based on sharing of high-level information about all the other players in the chain, can remove this information asymmetry.

Social Supply Chain Management System

The IT-based system that we propose consists of a trading platform for wholesalers and retailers that seeks to bring information symmetry and transparency to the market–thereby enabling better decision making for all participants, including the producers. Figure 3 shows the proposed model together with the interaction between stakeholders.

The model derives its strength from social interaction and participation in feedback by all parties. The identities of the players revealed in the interaction and negotiation process create a social network layer over the transactional layer, providing greater strength and reliability to the complete system. The success of this business model depends on the volume and variety of products being traded on the exchange, while the network effect encourages participants to register and be a part of the system. There may be a few remaining gaps in the supply chain due to non-participation of some players in certain segments, but the system will be able to accommodate late registrants by keeping their transactions data and relationships up-to-date in the system.

VALUE CHAIN OF A TRADITIONAL KIRANA STORE IN INDIA

FIGURE 1

FLOW OF INFORMATION AND GOODS IN THE EXISTING SYSTEM IN KIRANA STORES

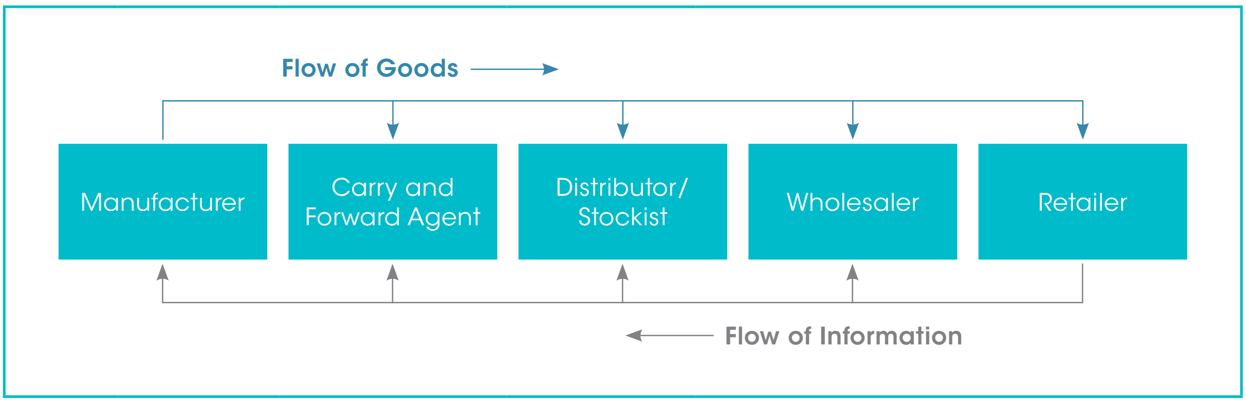


FIGURE 2

PROCESS FLOW OF THE PROPOSED SSCMS

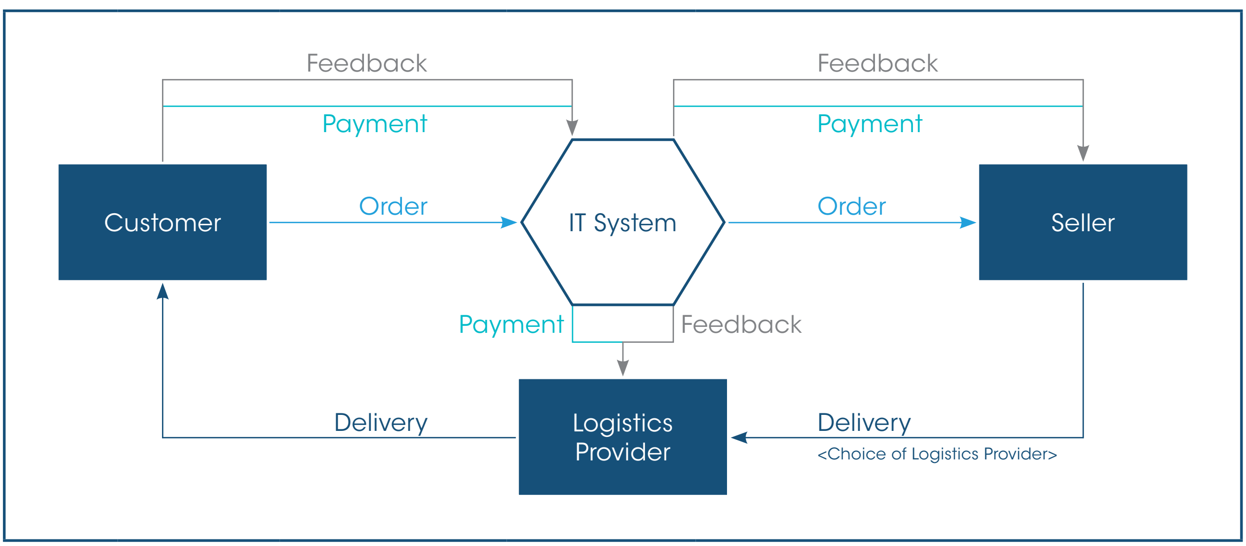


FIGURE 3

Implementation of the SSCMS is based on an Enterprise Resource Planning (ERP)-like solution provided to the owners of the kirana stores to help them track inventories and sales. The user is able to select from product categories in the central product database, and update the price and inventory status for each product.

The proposed system uses a double auction system. This is one where the buyers offer bids and sellers enter competitive offers simultaneously, as opposed to the over-the-counter market where trades are negotiated. It is in addition to a price-quantity based matching algorithm that finds the best matches between buyers and suppliers.[3]

The double auction method also contains a negotiation option to increase similarities with the offline transactions currently prevalent in the market. While the double auction method is followed in a stock trading platform, the difference here is that the identity of all participants is revealed. This is important as the merchants in traditional markets rely on relationships. Trading parties are thus allowed to communicate with others, online as well as offline, to negotiate and bargain iteratively to arrive at a mutually acceptable solution.

Hyperlocal innovations in India

The recent hyperlocal solutions implemented by firms are attempts to solve some of the problems discussed in this article. These content services, offered by both large scale firms as well as start-ups, tap into the immense potential for a truly social and completely linked supply chain. They are small steps in the right direction.

Some of the best known examples in the Indian space are Amazon India's Kirana Now, Grofers, MySmartPrice

AMAZON INDIA: FASTER DELIVERIES THROUGH 'KIRANA NOW'®

Amazon India, in its bid to achieve maximum customer satisfaction, has gone the hyperlocal way. Amazon's new service, called Kirana Now® aims to connect the kirana stores to the end user through Amazon India's platform and web interface. The primary aim of such a tie-up between one of the world's largest e-commerce players and the small omnipresent kirana stores of India is to ensure quick end-user product delivery. Amazon is utilising this network to cut down delivery times and is able to offer its customers a delivery time of two to four hours.

MJUNCTION: INDIA'S LARGEST E-COMMERCE COMPANY

Information asymmetry in the B2B sector is even higher than in the retail space—small businesses are harder to locate and most products are not locally available. MJunction caters to such businesses by making the products of various small businesses available on an online marketplace. It has an inbuilt double auction mechanism for best price discovery, enabling buyers to locate the best suppliers for a product at their expected price, or sellers to locate interested buyers for their product at a quoted price. Services like MJunction in India and Alibaba in China have transformed the way small players trade in the B2B domain.

MYSMARTPRICE: RESOLVING INFORMATION INEFFICIENCIES

MySmartPrice is one of the latest entrants in hyperlocal services. MySmartprice attempts to solve one of the primary issues of information asymmetry in the domain of traditional retailers in India. It supports end-consumers in finding the best deals and helps many kirana stores by making their best deals visible to a large section of consumers outside their immediate neighbourhood. MySmartprice does not own any logistics services or the goods itself. It lists prices of a wide range of products on its websites that it draws from its database of networked retailers.

and MJunction. Through innovative solutions, these ventures aim to solve one or more of the inefficiencies inherent in the retail system. For example, while MySmartPrice is focused on reducing information asymmetry by comparing prices across websites, Grofers takes it to the next level and completes the transaction. It not only lists the product prices of various retailers but also provides them with IT support as well as delivers the product to the end consumer. Amazon attempts to do the same through the aptly named service Kirana Now.

However all of these services are in the business-to-consumer (B2C) segment. These services primarily try to reduce the information asymmetry between end-consumers and retailers. The level of ubiquity for logistics providers that we have hypothesised in the ideal framework currently does not exist. One firm attempting to do a similar thing in the business-to-business (B2B) domain is MJunction, which offers an e-commerce platform for bulk traders; but small kirana stores are not included.

SSCMS: Taking integration to the next level

A key limitation of the retailing innovations introduced so far is that despite the traditional retailers benefitting from a higher number of orders and becoming more accessible to consumers who may not have otherwise visited the store, the power of information does not transfer to the retailer directly. However, in a social supply chain, the traditional retailers can see and analyse for themselves the opportunities in a market, and reduce inefficiencies for their own benefit–thereby lessening any opportunity of arbitrage by third party players.

There are multiple benefits of a SSCMS, such as making the choice of logistics players available to users. In addition, a higher amount of information is provided to all users. Buyers will have the option to place orders with remote sellers if the price offered by them, along with the freight charges, turns out to be lower than that offered in the nearby market.

The major focus of the model we have proposed is to improve supply chain integration by creating a supple and information-efficient supply chain. The large number of kirana stores that are already present in India provide the necessary scale, and therefore make it attractive for players to enter and invest in this segment.

The major objective in supply chain integration has always been the removal

GROFERS: COMPLETING THE TRANSACTION

The demand for quick delivery of fresh fruit and vegetables in India is very high and Grofers, a hyperlocal start-up, has capitalised on this by offering a delivery time of less than 90 minutes for all grocery and food items. This requires a close tie up with the kirana stores and superior back-end technology systems to connect users with retailers and provide prompt service. The success of Grofers within one year of its launch—it is one of the largest retailers in the New Delhi metropolitan area in terms of number of transactions per day—shows the appetite for a quick, technology-enabled service delivery for e-commerce users in India.

INFORMATION AND GOODS FLOW OF THE PROPOSED SSCMS

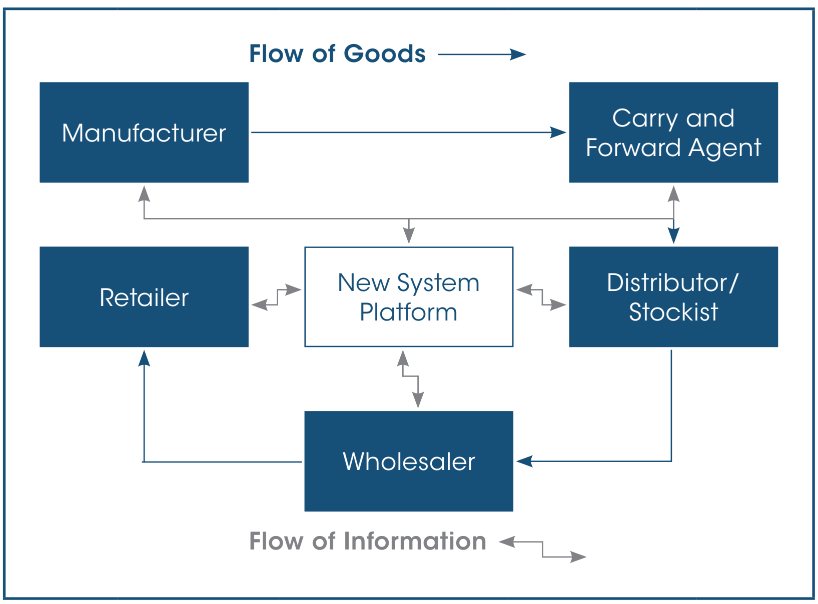


FIGURE 4

of information asymmetry. As can be seen in Figure 4, the SSCMS proposes to separate the information flow and goods flow. While the goods may flow between only two points (parties), all parties will possess up-to-date information about the complete network–making it a more information-symmetric system than any other system that exists at present.

Even though the initial set-up costs of an IT system to support this strategy may seem prohibitive, the high penetration of mobile phones makes it possible for this initiative to become rapidly scalable. As can be expected, most new-age IT-based disruptions in developing economies are designed along mobile technology.[4] And although a few players have attempted to use mobile-based IT solutions in the retail space, these are mostly the distributors of fast moving consumer goods (FMCG) brands who use these innovations for maintaining order books.

We propose a more open social supply chain management solution as a framework that would enable the traditional retailers to offer better solutions to consumers.

WHO BENEFITS AND HOW?

A comparison of Figure 2 and Figure 4 shows the revolutionary capabilities of the new system. The most profound impact is seen in the information domain, where each participant of the system has real time information about the other participants. We compare the benefits of a social supply chain management system with the existing system in Table 1 below.

The high penetration of mobile phones makes it possible for the Social Supply Chain Management System to become rapidly scalable.

BENEFITS OF SSCMS OVER THE EXISTING SUPPLY CHAIN

	Current system	SSCMS
Pricing	Private negotiation	Two-way auction based on public listing. Public listing of prices provides perfect information in the market and helps both buyers and sellers find the best offers.
Transaction cost	Very high due to physical movements	Low and Internet enabled, which would support a huge reduction in transaction costs. Currently retailers often call or visit wholesalers to get quotes on prices. If price and availability information is shared with the retailers, they can pre-order products or check the availability of products without having to visit or call.
Forecasting	Limited forecasting capabilities for retailers and suppliers	A closely integrated IT system would enable forecasting of demand based on the purchasing behaviour of the buyers, and greater ability to adjust orders accordingly.
Arbitraging	Limited opportunity for arbitrage	An online trading platform can provide individuals an opportunity to arbitrage. These arbitragers can provide uniformity across markets by setting off the excess demand in one market with the excess supply in others. This can help solve issues related to an imbalance in demand and supply of specific products.
Aggregation	Very difficult to aggregate orders and arrange logistics	In the proposed system, aggregators are able to add immense value by reducing the transaction costs.
Impact on supply chain	A static supply chain, which cannot react to fast paced changes in the retail context	This model makes a grocery supply chain more dynamic as every individual has access to a higher number of buyers and sellers. With the introduction of third party logistics partners, buyers are able to evaluate and compare the time and cost of procuring products locally versus buying from other markets.

TABLE 1

Where to from here?

The integration of supply chain has been a challenge for a variety of businesses. In this article, we have proposed the basic architecture of an IT-enabled system that can provide traditional retailers with easier access to desirable information. Such an integrated system has huge potential when it comes to transforming the traditional retail landscape of many emerging economies with similar trade supply chains.

The system we propose is a social network of supply chain participants from retailers and wholesalers to manufacturer and logistics providers that can enable transparent transactions and provide greater benefits to multiple stakeholders. An integrated SSCMS helps businesses draw more benefits from the increasing purchasing power of consumers in India and other such economies. Since the technology itself is an ever-evolving phenomenon, it is to be remembered that a framework that may suffice today can become outdated tomorrow. An ideal retail scenario of the future will be one where the traditional and modern retail outlets both move ahead together, and in a seamless fashion. An effective SSCMS can be the first step toward that goal.

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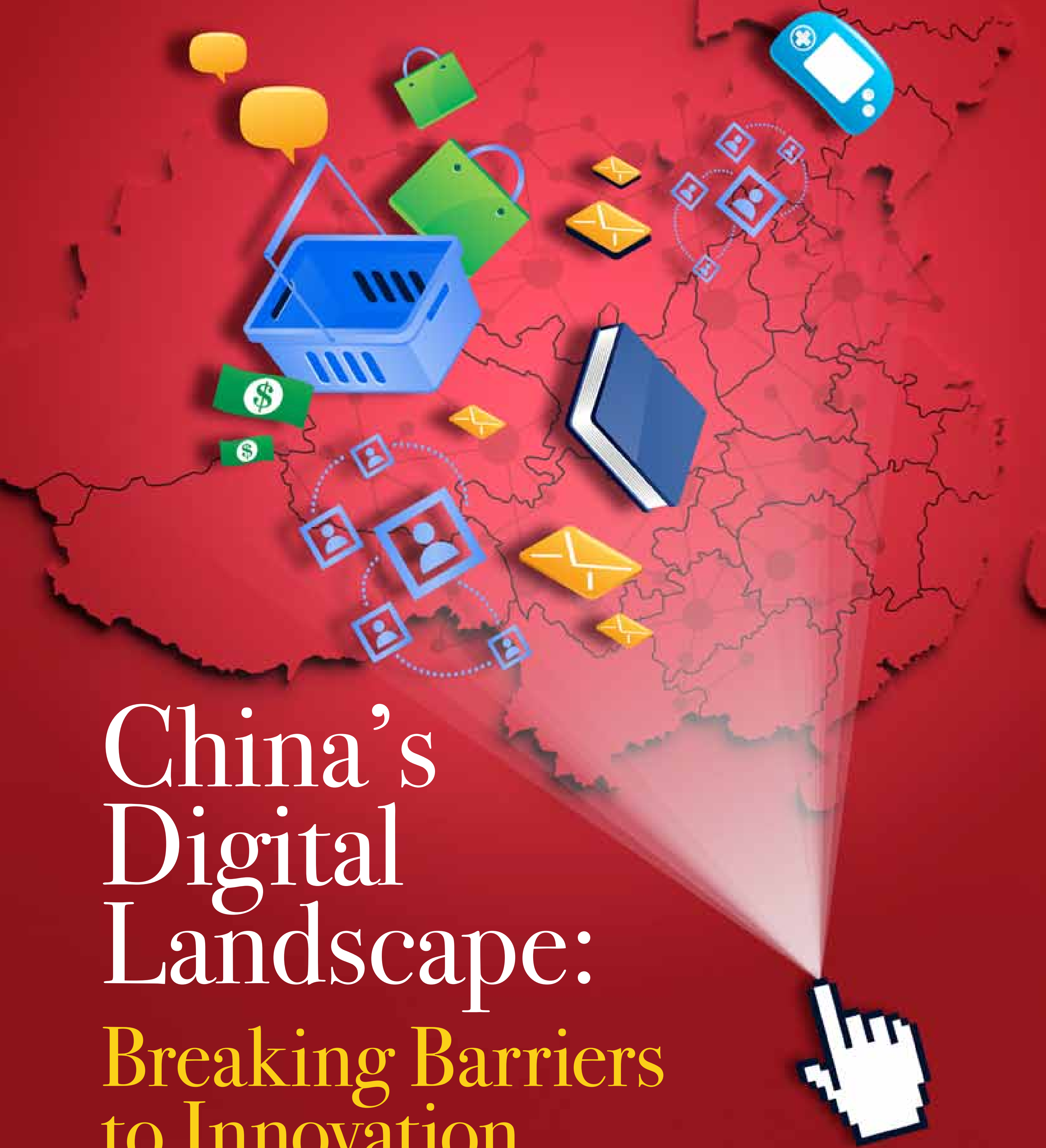


China's Digital Landscape: Breaking Barriers to Innovation

Will we see western clones of Chinese originals?

By Srinivas K. Reddy, Zack Wang Zheng and Deckie He Dong

When e-commerce giant Alibaba went public on the New York Stock Exchange in September 2014, its market capitalisation rocketed to roughly US$219 billion—a sum greater than any record previously set by its American contemporaries, Facebook, eBay and Amazon. It was a historic event that led many to believe that China's digital economy was echoing the Middle Kingdom's own meteoric rise onto the world-stage.

China ranks high in digital connectivity. In 2015, almost half of the country's population, or 649 million people, were online. Its fast-growing Internet economy generates about US$100 billion annually and is predicted to reach US$277 billion by 2017.[1] And for every popular site in the rest of the world, there is a Sino-doppelganger lurking behind the Great Firewall of China: Taobao, Youku, Sina Weibo, WeChat and Baidu being among the most well-known.

For every popular site in the rest of the world, there is a Sino-doppelganger lurking behind the Great Firewall of China: Taobao, Youku, Sina Weibo, WeChat and Baidu, being among the most well-known.

Within China, local Internet players hold more than just a home-team advantage. Global dot-com companies operating in Internet search, e-commerce, news and social media, particularly U.S. and Japanese companies such as Google, Rakuten, Facebook, and Twitter (among 3,000 others), are blocked under the Chinese Communist Party's Internet censorship policy.

Yet Chinese Internet companies face stiff competition from local rivals. Rapid innovation and improvement are essential for survival, perhaps even more so than what is experienced in the 'outside' world. Weibo and WeChat both incorporated certain functionalities well before their respective western developers, Twitter and WhatsApp. This environment has vigorously accelerated the development of China's digital landscape. The question is who is imitating whom...And where will the next wave of disruptive innovation originate? This article examines three key categories: search engines, online market space, and online payments.

Online search market

In the early- to mid-1990s, the global search engine market witnessed a surge of competition amongst a number of players, including Yahoo, Netscape and AOL. The situation changed with Google's entry into the market in 1998—its disruptive search algorithm stood out from the crowd, offering faster and more accurate search results. Google grew exponentially, quickly becoming the world's leading search engine company by the mid-2000s. It is now the dominant search engine in most countries. However, four large markets remain outside Google's reach—Russia, South Korea, Japan and China.

In 2000, Google started offering its search engine in Chinese. This was in direct competition with Baidu, which had been founded a few months earlier in late 1999, by China-born entrepreneur Robin Li. Baidu understood the local Chinese market far better than Google, and quickly took the lead. In 2004, Google bought a 2.6 percent stake in Baidu for US$5 million. In 2006, Google changed its business strategy in China by rolling out its own search engine, Google.cn, and sold its stake in Baidu for around US$60 million. Yet Google soon found that it was difficult to navigate China's complex regulations and culture, eventually exiting in 2010.[2] By August 2014, Google had a mere 0.34 percent market share in China's search market,[3] as compared to a 36 percent share in 2009.[4]

NEWCOMERS IN CHINA'S SEARCH MARKET

Google's exit gave Baidu an opportunity to dominate the search engine market in China, but this was short-lived. In 2012, Qihoo, a local software company known for developing antivirus software, pushed out a search engine, so.com, and

Baidu is committed to investing in innovation with the goal of international expansion, stating that half of its revenue will come from outside China by 2020.

soon became a major competitor to Baidu. In its first year of business, Qihoo captured an impressive 10 percent market share, which subsequently rose to nearly 30 percent in 2014. During this time, Baidu's market share declined to 59 percent. Qihoo's impressive growth lay in its Internet browser, 360, which had 357 million monthly active users and its proprietary built-in search.

Another key player in the search market in China is Sogou, which was backed by the Chinese Internet megazord, Tencent. Sogou gained an 11 percent market share by 2014,[5] and along with Qihoo's so.com, terminated Baidu's monopoly on search, driving the industry to new competitive heights.

BAIDU LOOKS AHEAD

While the situation in the PC-based search market is becoming increasingly competitive for Baidu, the company leads in mobile search applications. Baidu invests heavily in marketing efforts to consolidate its position across the mobile ecosystem, and has ensured that its mobile applications come pre-installed on most smartphones sold in China. Between 2012 and 2013, Baidu had paid pre-installation fees of US$350 million to smartphone manufacturers, and plans to continue investing in this space over the coming years.[6] By the end of 2014, Baidu had garnered 80 percent of China's mobile search market.

In 2014, Baidu hired Andrew Ng, the chief scientist who previously headed Google's Artificial Intelligence projects. The company intends to invest US$300 million in its new artificial-intelligence lab and a development office over the next five years.[7] This has sent a clear signal that the company is committed to investing in innovation with the goal of international expansion, stating that half of its revenue will come from outside China by 2020. As part of its international growth strategy, Baidu made a foray into Brazil in 2014, where Google maintains a 98 percent market share.

Baidu also invested significantly into big data analytics and other new technologies, such as cross-screen optimisation, cloud computing, location-based services, and online to offline services, providing innovative marketing solutions to its clients. A case in point was the launch of the Mini-Self Campaign with Coca-Cola in November 2013. This campaign leveraged largely on Baidu's extensive outreach to customers through its image editing app. Baidu's image editing app allowed participants to design a photo which showed them as a 'mini-self' standing by a Coca-Cola Mini bottle, and this photo could be shared via social media. By the end of the first month, the number of participants had reached 1.4 million, and Coca-Cola Mini sales had grown by 30 percent.[8] Another example was a campaign for McDonald's. This campaign was a location-based service that allowed customers in the vicinity to get a free ice-cream at their nearest McDonald's outlet through a Baidu Map. The scheme was an immediate hit—site traffic for Baidu Map reached 20 million people, while user coverage touched 70 million through social media channels.[9]

Online marketplace

Online marketplaces offered alternative shopping avenues that were fast, cheap and convenient for both merchants and customers. According to eMarketer's December 2014 report, worldwide retail e-commerce sales would exceed US$1.3 trillion in 2014. It also forecast that the U.S. e-commerce market would hit US$349 billion by the end of 2015.

However, the largest business to consumer (B2C) player in the U.S., Amazon, has witnessed decelerating revenue growth and is working to make its business turn profitable. Another consumer-to-consumer (C2C) player, eBay, was highly dependent on its online payment business—PayPal, which accounted for nearly 50 percent of its revenue.[10]

ONLINE MARKETPLACES IN ASIA PACIFIC

While the e-commerce market was undergoing turbulence in the U.S., the situation was quite different in Asia Pacific, especially in China. In fact, the value of B2C e-commerce sales in Asia Pacific surpassed those in North America in 2014, making it the largest regional e-commerce market in the world. In 2014 alone, B2C e-commerce

The value of B2C e-commerce transactions in Asia Pacific surpassed those in North America by 2014, making it the largest regional e-commerce market in the world.

sales reached US$525.2 billion in Asia Pacific, compared with US$482.6 billion in North America.[11] Within Asia Pacific, China accounted for more than 60 percent of the value of these transactions, and was estimated to overtake the U.S. as the largest B2C e-commerce market in terms of spending by 2016.[12]

In the early days of online marketplaces, foreign players such as Amazon and eBay made a foray into China's market through acquisitions, and grabbed a significant share of the market. In 2004, Amazon acquired Chinese online bookseller Joyo.com for US$74 million, which was later transformed into Amazon China.[13] Similarly, eBay acquired the once-popular Chinese e-commerce site, EachNet, and commenced its operations in China. The similar start also brought the same end for both companies—neither could adapt to the Chinese business environment.

THE BIRTH OF THE ALIBABA EMPIRE AND JD.COM

Alibaba was one such local e-commerce company, which grew to become the market leader in both B2C and C2C markets in China. Founded by Jack Ma in 1999, Alibaba was initially positioned as a business-to-business (B2B) hub that linked Chinese suppliers to foreign merchants. However, the company soon swiftly expanded into C2C (Taobao), B2C (Tmall) and payments services (Alipay), and became a market leader in the respective segments within a span of five years or less.

Taobao, for example, was founded in 2003 to compete with eBay in China. The platform served both sellers, who could list their products, and customers, who could buy products, on the platform. With 500 million registered consumer accounts and 800 million listed products, Taobao grew to account for a staggering 90 percent share of China's C2C market by 2014.[14] Its B2C arm, Tmall.com, which held roughly 50.6 percent of market share, partnered with high-end international brands such as Lamborghini, Apple, Zara and Lenovo to target affluent middle-class consumers in China.[15] Another B2C giant in China was JD.com, appropriating 23.3 percent of China's B2C market. The company entered into a strategic alliance with rival Tencent to accelerate its initiatives in mobile marketing and mobile commerce spaces.[16]

> "In other countries, electronic commerce is a way to shop, in China it is a lifestyle", commented Jack Ma, founder of Alibaba.

ONLINE SHOPPING AS A LIFESTYLE

Despite the short ten-year history of China's online marketplaces, its dynamic local players have significantly surpassed western markets in terms of influencing consumer shopping behaviour and outreach. Online shopping has become the norm for Chinese consumers, leading Ma to comment, "In other countries, electronic commerce is a way to shop, in China it is a lifestyle."[17]

Forty percent of China's online shoppers read and post reviews on products—double the number of those in the U.S.,[18] and it has become apparent that mobile commerce is an obvious trend when it comes to enhancing the shopping experience. In 2015, revenues from mobile commerce in China were forecast at more than US$41.4 billion, representing eight percent of global e-commerce transactions.

Innovative sale strategies from leading players have led to China's surge in e-commerce transactions. In 2009, Alibaba created the concept of 'Singles Day'. Taking place on the 11th of November each year, Alibaba offers steep discounts on the products they sell. This has been an outstanding success, and in 2014, Alibaba reported record-breaking sales

COMPARISON OF THE ONLINE MARKETPLACE IN 2014

	WEST		CHINA	
	AMAZON	EBAY	JD.COM	ALIBABA
Active Users	270M	157.3M	96.6M	334M
Gross Merchandising Volume	$95.2B	$82B	$43.3B	$379B

Source: Statista

of US$9 billion on Singles Day, delivering more than 500 million parcels to shoppers.[19] Alibaba's success and cross-border expansion attracted the interest of its local rivals, including Tencent and JD.com, both of which plan to offer discounted deals on Singles Day for the first time in 2015.

Online marketplaces also boosted other industries such as transportation and logistics. In addition, they helped bring China's flourishing retail industry to rural areas that previously lacked bricks and mortar retail due to limited transportation and communication access. Seventy percent of the areas in China where online sales were booming were the rural, less developed parts of the country.[20] It was believed that as Internet penetration increased, China's rural areas would show even greater potential for revenue growth for online marketplaces.

Online payments

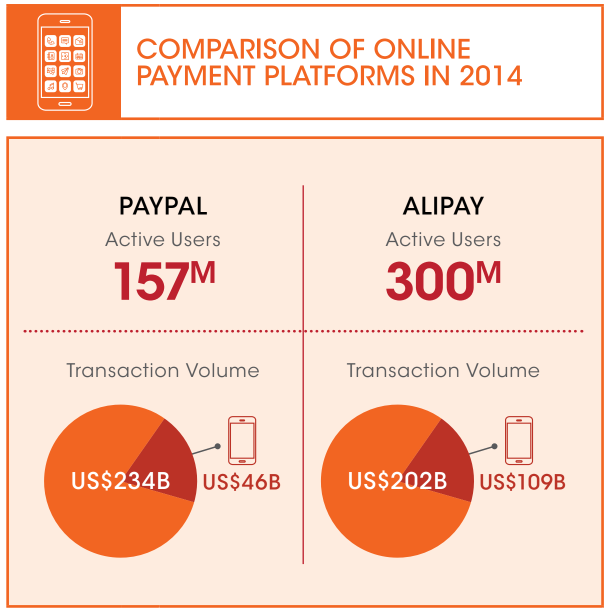
The growing online sales market requires a payments system that could build trust for buyers and sellers as well as one that could be managed by a fair and safe third party. Online payments companies acted as such a third party. PayPal, one of the world's largest online payments companies, was founded in 1998 and was one of the forerunners in this business. In 2014, PayPal had 157 million active accounts in 203 markets.[21]

In China too, the online payments industry was growing tremendously. The volume of transactions rose to more than US$300 billion by the end of 2014, from US$2.47 billion in 2007.[22]

ALIPAY, AN INTEGRATED ONLINE PAYMENTS PLATFORM

Similar to other business segments, China also had its own online payments companies that dominated the market. These were Alipay and Tenpay, owned by Alibaba and Tencent, respectively. Alipay had a market share of 48.7 percent, followed by Tenpay, which ranked second with 19.4 percent of the market in 2013.[23]

Alipay had several features and functionalities that set it apart from western payments platforms. For instance, its users could transfer money from Alipay to any bank account within just two hours; they could pay credit card bills and utility bills at no extra charge; and they could buy bus tickets and top up mobile phones using Alipay. In addition, Yu'e Bao, Alipay's mutual fund, enabled users to earn interest on the spare cash that lies idle in Alipay accounts. Alipay was the payment method of choice for almost every major website in China. Compared to PayPal, a company which had a bigger international



Source: PayPal Factsheets, Business Insider.

presence, Alipay provided more integrated services that covered people's needs comprehensively, as well as maintained strong user stickiness.[24] Tenpay, on the other hand, focused only on the mobile gaming market.

MOBILE PAYMENT

Looking ahead, mobile payments are on the rise world over, with major players such as Alipay and PayPal offering mobile payments services to their users. In fact, Alipay became the largest mobile payments platform, recording mobile transactions of US$150 billion in 2013.[25] In 2014, mobile payments accounted for 54 percent of all its transactions.[26] In addition, the company had launched a new solution through which users could make payments in brick-and-mortar shops. Once retailers were registered with Alipay, users could make a payment using the Alipay app on their phone via a barcode scanner.[27] To further boost its usage, Alipay is planning to use soundwave technology to enable offline payments. This new feature is expected to be available at vending machines at train stations, shopping malls and schools.

With Alipay's dominance in China's online payments market, the next item on Alibaba's agenda will be to enter foreign markets including the U.S. and Europe. However, the differences in policies, as well as shopping and payment behaviours, are seen as potential hurdles that the company needs to consider in order to compete with PayPal in the global market.

WECHAT: INNOVATIVE SOLUTIONS IN INSTANT MESSAGING

WeChat, launched in January 2011, was very similar to WhatsApp, a communications app that enabled text and voice messaging to be sent between users via their mobile phones. Compared to WhatsApp, WeChat offered a host of additional functionalities, which allowed users to make video calls, share messages on a micro-blog, transfer money, pay bills, and even call a taxi. One of WeChat's most successful innovations carried out during the Chinese New Year of 2014 was to allow users to gift actual money in virtual red envelopes ('Hong Bao') to friends and family. On Chinese New Year's Eve of 2014, WeChat recorded 120 million Hong Bao sent per minute or 1.2 billion red envelopes each hour.[28]

It is therefore not surprising that, when Facebook initially launched WhatsApp in China, the uptake was quite low, with 23 million users on the mainland compared to 450 million users of WeChat. The majority of users commented that WhatsApp was "clearly an outdated product".[29]

Learners turned leaders

The global digital landscape may have inspired a generation of Chinese entrepreneurs such as Jack Ma and Robin Li, who started off with learning and imitating business models and digital solutions developed in foreign markets. However, having gone through nearly two decades of evolution, the Chinese digital market has developed sophisticated preferences of its own and local Internet players have had to innovate and improve well beyond the cloning that took place at the beginning.

However, just as the Great Firewall of China has served as a nascent-industry incubator of sorts for Chinese companies, it has also made international expansion that much more difficult. Nonetheless, leading Chinese Internet firms are large, flush with cash and, more importantly, have proven themselves as innovators. But will these companies ever expand internationally and become globally competitive, or are they doomed to stay Sino-centric? Should Facebook and Google be worried? And will we start seeing western clones of Chinese originals?

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Real Estate Investments in Asia:

Real estate investment in Asia is currently trending. But what does the future hold?

By John Lim

While some see real estate as an opportunity for making large financial gains, others find the hefty capital outlay, long-term outlook, high transactional costs and market volatility quite a challenge and a lot more complicated than investing in stocks and bonds. Although the past few decades have witnessed a surge in its popularity, seasoned investors will tell you that buying real estate is much more than just finding a place to call home. For those too cautious or cash strapped to take the plunge in an actual property, real estate funds offer an attractive balance, as they enable investors to participate in the ownership of real estate, yet with a small capital outlay over a diversified and liquid portfolio that is tradable in the equity capital markets.

Asia is spearheading the trend

Since the turn of the century, growth in Asia has far exceeded that of the western countries. In the quarter century up to 2013, the six Asian nations now in the G20 saw their share of world gross domestic product grow from 20 percent to 31 percent, while the four European Union countries in the G20 saw their share fall from 20 percent to 12.7 percent.[1] The expanding economies and rising purchasing power in Asia have naturally led to a higher propensity to save and invest, and much of this investment is being channelled into the property market. This is evidenced by the escalation of property values in major cities in Asia.

During the 2008–2009 economic downturn, property prices and interest rates fell dramatically the world over, and Asia was no exception. However, immediately after the crisis, money poured into Asian countries in search of better returns, and, more often than not, found its way into the property market.

Local and international investors with sufficient cash reserves and financing means took advantage of the low prices and interest rates, and invested in Asian property for the long-term. As a consequence, property prices in Hong Kong, for example, have more than doubled in the last ten years, and the same trend is also observed in Singapore (refer to Figure 1 and Figure 2).

In countries such as China, the rising economy and growing affluence of its people have led to higher demand for different types of properties, including residential, commercial, and retail. With access to cheap liquidity, we are also seeing a growing number of investors from China investing in properties around the world, particularly in gateway cities of Australia, the United States and the United Kingdom. In 2014 alone, Chinese global property investment hit US$15 billion, and four out of the top 20 insurance companies in China had significant offshore investments.[2]

REAL ESTATE PRICES IN HONG KONG—2005 TO 2015

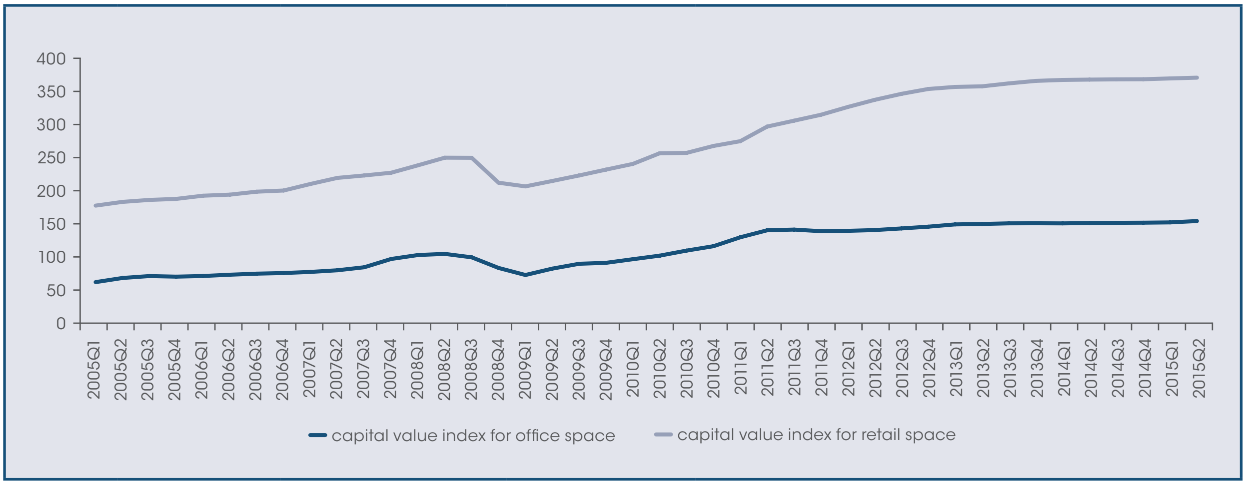

FIGURE 1

Source: Jones Lang LaSalle

REAL ESTATE PRICES IN SINGAPORE—2005 TO 2015

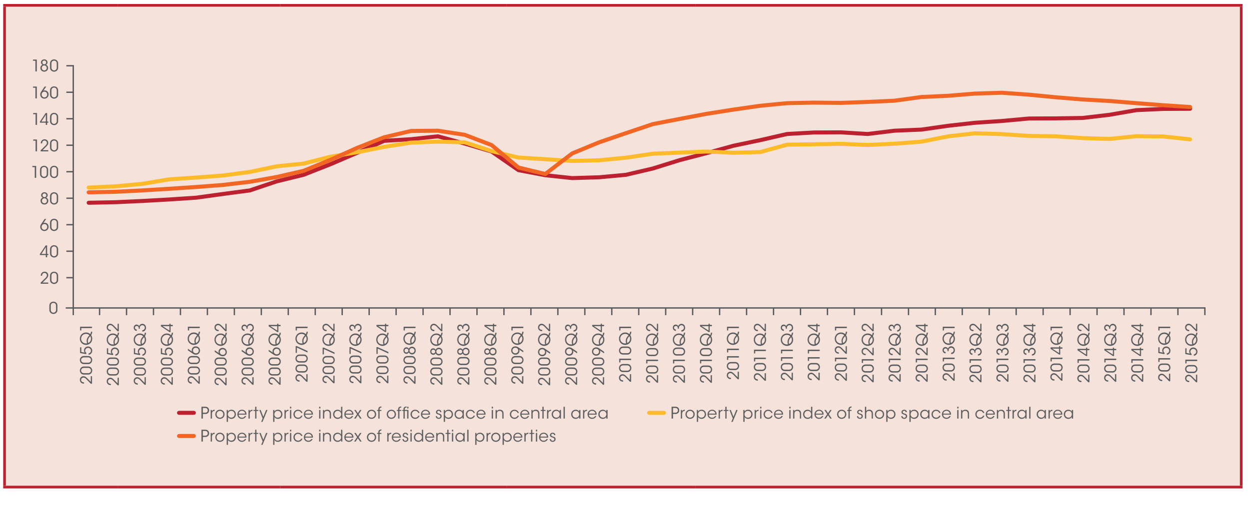

FIGURE 2

Source: Urban Redevelopment Authority, Singapore

In general, real estate investing is very popular in Asia. It requires capital, patience, and a sense of being very down-to-earth as owning a roof over one's head is more important than anything else. These are traits that fit well with the virtues inherent in many Asian cultures, where it is considered preferable to own a property rather than paying rent to outsiders. Very often, buyers look to invest for the next generation as a form of inheritance. The popularity of property investments has also risen because they become a form of passive income for ageing couples, who can rely on rental income and gains from capital appreciation, after retirement.

Opportunities for the risk-averse investor

Despite its attractiveness, property investment usually requires a huge capital outlay, which may not be accessible to most individual investors. In addition, properties are also typically mid- to long-term investments. While the general consensus is that property prices always go up, there are instances where property may not perform as well as expected. In Singapore, for example, the ten-year Urban Redevelopment Authority (URA) property price index from 2005 to 2014 returned an average 6.1 percent per year (excluding rent and dividends) versus 5.3 percent per year for the STI index.[3] However, while Singapore property prices may have tripled between 1989 and 1996, from 1996 to 2014 the return was less than even one percent per year. In fact, from 2013 to 2014, property lost 1.5 percent while the STI returned 3.1 percent per year.

In addition, since the 2008 global financial crisis, investors—both individual and institutional—have exhibited a general distaste for a high debt-to-equity ratio, as the crisis taught the market not to be over leveraged and susceptible to situations where liquidity may dry up quickly and at short notice. And as investors become increasingly risk averse, their investment and funding periods also appear to have shortened. In fact, many investors, particularly institutional investors, have started to shift their property exposure from direct property holdings to real estate investment trusts (REITs) and other real estate funds.

REITs are an attractive investment vehicle for the smaller, more risk-averse investor, as they enable them to own a share in properties of different types and classes. The key benefits of REITs are that they allow investors to participate in the ownership of real estate with a small capital outlay. Moreover, REITs offer flexibility, as they can be traded easily in equity capital markets.

Another key advantage of REITs is that they typically comprise a geographically diversified portfolio of properties, thereby spreading the risks for investors. These funds are professionally managed, and for the individual investor, the cost of monitoring REITs is much lower than managing a property itself, making them highly attractive investment instruments. REITs are also a good hedge against inflation.

As an investment option, REITs inspire trust and confidence among investors on account of their governance structure. In a REIT structure, assets are held under a Trustee, who is responsible for holding the properties in trust for unitholders. The Trustee exercises due diligence and care over the REIT, and the REIT manager safeguards the interest of unitholders. In Singapore, for example, representatives working for REIT funds are licensed by the Monetary Authority of Singapore, and have to undergo examinations and other on-going educational requirements to ensure that the REIT is managed by knowledgeable professionals.

REITs in Singapore, known as S-REITs, are subject to additional regulatory requirements and continuous mandatory disclosures, so corporate governance is essentially a non-issue. In fact, according to a recent ACCA-KPMG survey, Singapore ranked third in the world for its corporate governance requirements, after the United States and the United Kingdom.[4]

Currently, S-REITs enjoy the added advantage of tax transparency as long as more than 90 percent of the taxable income is distributed. As at end July 2015, there were more than 35 listed REITs and property business trusts in Singapore, with a combined market capitalisation exceeding US$50 billion, which is close to about seven percent of the total market capitalisation of the Singapore stock exchange (SGX), and is testimony to their popularity as an investment vehicle.

Impact of changing regulations

Prior to the 2008 global financial crisis, property markets in many parts of the world flourished due to the availability of cheap and almost unlimited credit. There was also limited understanding of the complexity of financial instruments used in these investments. After the crisis, many countries rushed to tighten financial monitoring rules and regulations, and today there are a plethora of regulations in place, from Basel III to the Dodd-Frank Act. In the coming years, regulatory obligations and their corresponding compliance costs on companies will only increase.[5] In the financial sector, Basel III is expected to place increased capital requirements on banks. At the same time, given the slowing economic growth in the post-crisis world coupled with the changing regulatory landscape and increased risk aversion, the cost of debt is expected to increase as a result of a possible hike in interest rates by the U.S. Federal Reserve (the Fed). This too may squeeze the funding streams available to the real estate sector.

Are we moving toward the next property bubble in Asia?

Many would say that the property bubble in Asia is on its way to bursting, especially in China and Singapore. Since end-2008, according to research from Nomura, housing prices across Asia have, for the most part, tracked those in the U.S. during its bubble years. This is the result of the flight of money from the West after the crisis, a large part of which saw its way into Asian property markets.

> The various forces at play, along with the uncertainty of when the Fed raises rates, make it difficult to predict how property markets in Asia will evolve.

This is why we see some Asian governments stepping in to control over-leveraging and curb property speculation in their respective countries. In Singapore, the Total Debt Servicing Ratio (TDSR) framework, stamp duties, resale levies and a whole slew of other control measures have deterred property speculation by both locals and foreigners, and to a large extent, these have been keeping property prices from rising further over the past couple of years.

In China, the property market has been a growth drag, rather than driver, since early 2014. The property and construction boom post-crisis has brought about a massive oversupply of real estate, particularly in cities that are not within Tiers 1 and 2. From January to June 2015, investment in property development slowed to 4.6 percent, a third the pace of the same period in the previous year.[6] To stop property prices from sliding further, the Chinese government has been loosening measures to encourage homebuyers to upgrade or buy a new property for self-occupancy. These measures have brought about a temporary respite as evidenced by the sharp rise in home sales since April this year. That said, the sluggishness is mostly seen in cities in Tiers 3 and below. The investment opportunities for real estate in Tier 1 and 2 cities remain high, with the rapid development of more sophisticated transportation infrastructure.

BUILDING BRIDGES BETWEEN ASIAN AND WESTERN MARKETS

Companies such as ARA Asset Management Limited (ARA), which has more than S$27 billion assets under management and over a decade's experience in real estate fund management in Asia, have continued to outperform the broader property market, with a return of approximately 118%.[7]

ARA offers a diverse range of private equity products that cater to different institutional investors' risk appetites and target returns, as well as listed REITs in various jurisdictions that invest in various real estate sub-sectors from retail malls to commercial offices to logistics warehouses.

The philosophies that underpin the company's strategy and processes include finding ways to add value to every phase of asset life from deal sourcing and structuring through to asset enhancement to disposition and leveraging on its real estate operational expertise to enhance asset value and overcome market volatility.

There are still many opportunities for real estate investment in Asia, but two things are important—location and sector.

There have also been several repercussions of the recent devaluation of the Chinese yuan. The engineered fall in the yuan will reignite criticism of China's tight control over the yuan's exchange rate. China's currency move could prove challenging for the Fed. The U.S. dollar has been strong this year, which has resulted in dampened exports and has kept U.S. inflation below the Fed's target. China's currency devaluation puts further upward pressure on the dollar, and this could get aggravated if and when the Fed decides to raise interest rates.[8] This will have an impact on capital markets globally as we have seen in recent market swings. In the property sector, S-REITs and developers with significant geographical exposure to China will most likely be impacted in terms of foreign exchange translation in asset valuations and earnings. Thus far, China's surprise lowering of the yuan reference rate has negatively impacted property funds with China exposure, as some of them do not hedge their incomes and balance sheets. However, falling interest rates that are likely to follow will support asset valuations over time. The various forces at play, along with the uncertainty of when the Fed raises rates, make it difficult to predict how property markets in Asia will evolve.

Future investment opportunities: Looking into the crystal ball

There are still many opportunities for real estate investment in Asia, but two things are important–location and sector. New growth countries like Malaysia, the Philippines and Vietnam have significant potential given their growing domestic demand and stage of economic development. Moreover, in some countries, the government has taken several initiatives to boost the real estate sector. In Vietnam, for instance, the real estate sector has grown considerably since the government allowed foreign ownership of real estate in the country over the past couple of years. In 2015, foreign investment in real estate reached US$111.4 million, accounting for 9.3 percent of the US$1.2 billion foreign investment in Vietnam.[9] In the Philippines, the 2015 outlook for the property market remains optimistic, backed by continued demand for business process outsourcing services, political stability and positive economic growth indicators.

However, the biggest risks in these countries are always the political risks, where policies related to investment and real estate development may change overnight, making long-term planning a difficult proposition. Moreover, rampant corruption, coupled with young and inexperienced legislative systems and financial markets in some countries, makes it more difficult for foreigners to navigate the real estate space without getting their fingers burnt. Thus, foreign investors are more likely to invest in properties in countries that have greater political stability and lower risks. Hence, Singapore continues to be an attractive location to do business, live, work and play–and this is evidenced by its high rankings in several global reports on the ease of doing business, quality of living and competitiveness, among others, including being ranked number three in PricewaterhouseCoopers's Cities of Opportunity.[10]

Which sectors show the greatest potential for the future? One of the popular sectors is logistics. According to the research company CBRE, in the third quarter of 2013, transactions of the order of US$3.1 billion were reported in Asian industrial and logistics assets, a year-on-year increase of 75 percent.[11]

Most existing logistics facilities throughout Asia are fairly basic in nature, and also in short supply. At the same time, the distribution strategies of international and domestic manufacturers have become more sophisticated. As a result, there is a growing demand for facilities that are able to offer more complex services, and to cater to the needs of third-party logistics providers who have now become the major drivers of demand for new logistics facilities.[12] In addition, as e-commerce takes off in this region, demand is growing for new inward-focused infrastructure to serve domestic consumer demand. As a result, logistics has become one of the most sought-after sectors for real estate investors in all markets as investors continue to seek higher yields.[13] A case in point is RRJ, one of Asia's largest private equity funds, which has invested US$250 million into Shanghai-based warehouse developer, Yupei, betting on China's growing demand for logistics services.[14]

To conclude, with six years of monetary easing in the U.S. and a continuous flow of capital out of the West, Asian property markets have become attractive destinations for global and local property investors. And this trend is expected to continue as stubbornly stagnant growth in the U.S. and Europe has forced monetary policy makers to prolong their easing policies. The growth in investment will be supported by new private real estate equity funds, an increase in institutional investors' allocations for Asia Pacific, and growing activity by Asia-based institutional investors. Nevertheless, as and when quantitative easing tapers off in the U.S., we expect it to snare some of the money that has gone overseas looking for higher returns. Combined with conscious efforts on the part of some Asian governments to contain a property bubble, it could then put further pressure on Asian markets that are already witnessing sluggish housing prices.

As quantitative easing tapers off in the U.S., we expect it to snare some of the money that had gone overseas looking for higher returns.

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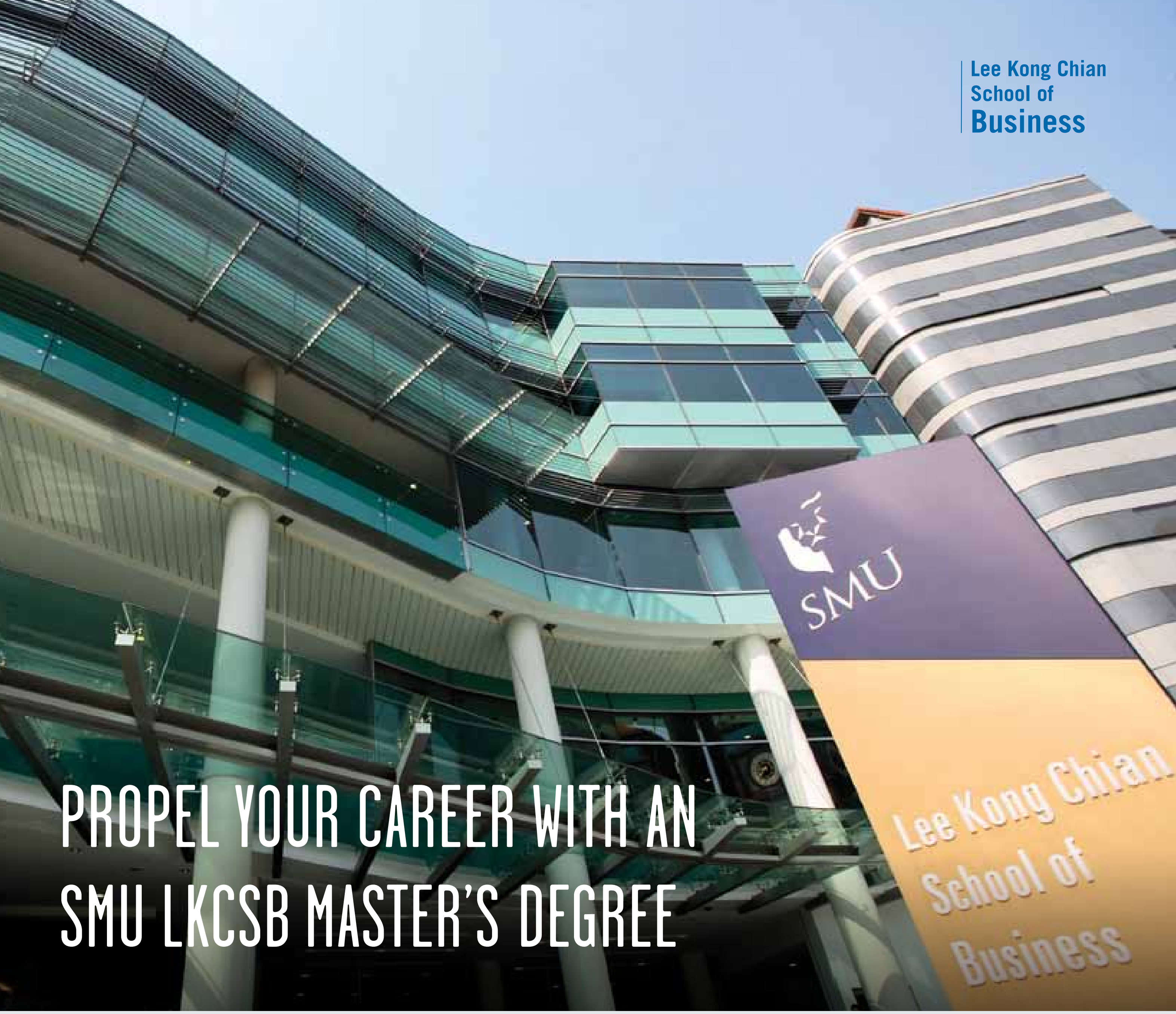

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REMITTANCES *without Borders*

A Pan-Asian Mobile Remittance Platform might just be the next big disruption in global remittances.

By Tan Swee Liang, S. N. Venkat and Anil Kishora

One out of every 28 people lives in a country that they were not born in. As migrants, they are estimated by The World Bank to send home US$636 billion in 2017, with three-quarters remitted to developing countries.[1] These remittances form a significant percentage of the Gross Domestic Product (GDP) of many of these developing countries. Given their magnitude and contribution to national economies, even a small reduction in remittance cost adds billions to these local economies. Mobile-to-mobile cross border remittances have recently shown that not only can the remittance costs be significantly brought down, but the money can also be delivered virtually in the hands of the beneficiary. We propose that with six of the top 10 remittance receiving countries of the world located in Asia, it is time to set up a Pan-Asian Mobile Remittance Platform that would enable migrants to remit money home at low cost using their mobile phones.

According to The World Bank's 'Migration and Development Brief' report in April 2015, the number of international migrants is expected to exceed 250 million in 2015, some three million more than two years ago.[2] As a result of the strong flow of migrants, total remittances in 2014 rose to US$583 billion, a six-fold increase over the last two decades (refer to Figure 1). India and China were the top recipients of these remittances at US$70 billion and US$64 billion, respectively, followed by the Philippines at US$28 billion.

A comparison of OECD and World Bank statistics shows that international remittances received by developing countries–US$418 billion in 2013–were three times greater than their official development assistance. In countries like Bangladesh and the Philippines, the share of remittances to GDP is around ten percent, while in other smaller nations like Nepal the share is as high as 25 to 30 percent of GDP, with remittances received by Tajikistan standing at a whopping 49 percent of GDP.

International remittances received by developing countries–US$418 billion in 2013–were three times greater than their official development assistance.

MIGRANT REMITTANCE FLOW (US$ MILLION)

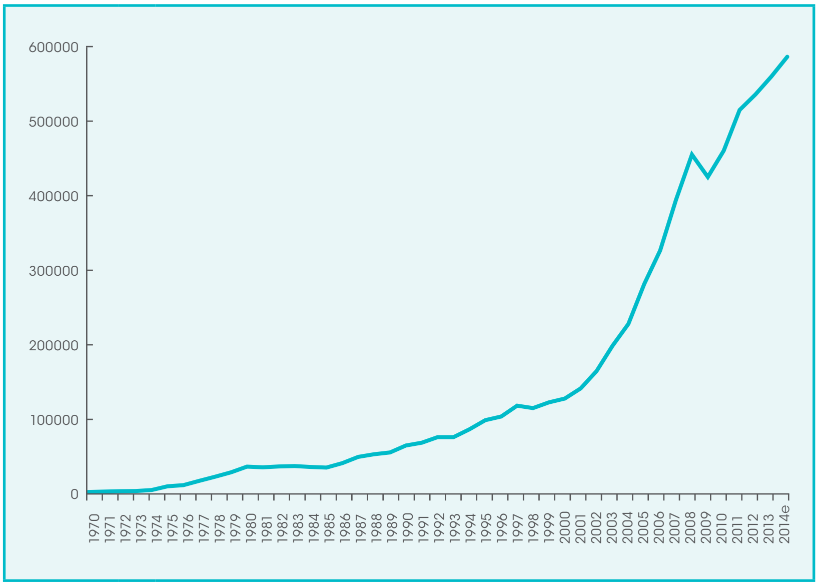

FIGURE 1 *Source: The World Bank, Migration and Development Brief, April 2015*

The impact of remittances is noticeable even at a country level within recipient states. Illustrating the case of Kerala, a southern state of India, *The Economist* pointed out that "2.4 million Keralites were living and working overseas in 2014. The money they send home is equivalent to a full 36 percent of the state's domestic product...It is now about 50 percent wealthier per head than the national average."[3] To put this in perspective, with its GDP of about US$77.5 billion, the state received US$28 billion in remittances.

In 2013, international migrants from developing countries held about US$497 billion of savings in their home countries.[4]

Cost of remittances to be brought down

According to estimates provided by The World Bank, the global average cost of remittance has been trending downwards over the last six years. Currently, the cost of sending remittances to sub-Saharan Africa is about 9.7 percent of the amount remitted–which is among the highest in the world and about two percentage points higher than the world average. The average cost of remitting to China is also high at 9.8 percent, due to the lack of competition in its remittance market. By comparison, the average cost of remitting to most nations in South Asia is around 5.7 percent.[5]

According to the same report, "The cost to consumers of these remittance transactions is expensive relative to the often low incomes of migrant workers, the amounts sent, and the income of remittance recipients. Therefore, any reduction in remittance transfer price would result in a significant increase in money remaining in the pockets of migrants and their families, and would have a significant effect on the income levels of remittance families." It further stated that "if the cost of sending remittances could be reduced by five percentage points relative to the value sent, recipients in developing countries would receive over US$16 billion dollars more each year than they do now. This added income could then provide recipients more opportunity for consumption, savings, and investment in local economies."

> Cross border mobile phone-based remittance services offer low-cost, convenient and instantaneous transfers of funds with the added facility of being able to 'store' money.

What is the cost of remittance from Singapore to a major remittance destination like India? Total costs typically comprise the transfer fees and foreign exchange margins. This remittance corridor is one where the rates are lower compared to the global rate of 7.7 percent. According to The World Bank, for remittances equivalent to S$280 (US$200), the total costs charged by money transfer operators (MTOs) and banks are, on average, 4.1 percent and 3.4 percent of the amount remitted, respectively. Indeed, the entrance of new technology-driven players and the move from cash to e-money have generated innovative business models that can lower the cost of remittance services. These internet-based players earn from foreign exchange margins only, and do not charge service fees. The online remittances company, Remitguru, and online remittance portals of banks in Singapore, such as the State Bank of India, follow this business model.

Mobile remittance to be a key driver behind financial and social inclusion

According to the December 2014 report, 'Sending Money Home to Asia–Trends and opportunities in the world's largest remittance marketplace' by the International Fund for Agricultural Development (IFAD) and The World Bank, about two-thirds of remittance centres are located in urban areas, making it time consuming and costly for rural recipients to travel the long distance to collect their remittances.

The report further highlighted that cross border mobile phone-based remittance services offer several benefits over the traditional brick and mortar payment centres, such as low-cost, convenient and instantaneous transfers of funds with the added facility of being able to 'store' money. Such mobile remittance and payment mechanisms are thus an effective way to extend financial inclusion to the unbanked and under-banked populations in Asia, as people in rural areas are increasingly able to adopt the use of mobile phones even though they may be living miles away from the city.

These 'mobile wallets' enable recipients to make retail payments and purchases, as well as withdraw cash, at a remittance service provider which could be a shop, post office, bank, MTO, or even an Automated Teller Machine (ATM). As the receipt of overseas remittance, along with its storage and dispensing of cash are all conducted using the same mobile phone, the 'last mile problem' faced by the recipient is eliminated. These simple financial innovations also create opportunities to up-sell other financial services, such as credit, savings and insurance schemes to these populations. So what was until yesterday a 'last mile' remittance problem can in effect be converted to an opportunity of financial inclusion to the 'last millimetre' in the hands of the customer.

Despite its potential to lower costs, and the added social benefits, the use of mobile technology in cross-border transactions remained largely limited until a couple of years back. International remittances sent via mobile technology, according to The World Bank, accounted for less than two percent of remittance flows in 2013, primarily due to the regulatory burden associated with such transactions.[6]

In Africa, large phone operators such as Vodafone, with established mobile payment networks, are slowly changing the game. With average revenue per user falling for basic voice and even data services, these companies are looking to increase their revenue from value added services, and the remittance market offers such opportunity. In 2007, Vodafone launched M-Pesa, a mobile phone payment and money transfer service in countries in East Africa. The service enabled millions of people in these countries to send and receive money, and make local payments, even though they had limited or no access to a bank account. Recently, cross-border mobile remittances were added to the national mobile payment service. With M-Pesa, the remittance costs between Tanzania and Kenya have dramatically reduced to around one percent of the transaction (plus a foreign exchange fee), even for small amounts ranging around US$50, and has made international remittances instantaneous with cash-like liquidity.

Similarly, India's Airtel, a global telecom operator that has operations in 20 countries across South Asia and Africa, offers a payment service called Airtel Money in 16 countries in Africa. It allows its customers to transfer money across some of the markets where it operates. While using the Airtel mobile payment services, customers simply have to select the country where they want to send the money, enter the mobile number and the amount in local currency, and complete the transaction with a confirmation. According to the company, the Airtel Money service "generates a monthly average of 30-million transactions valued at US$1 billion from an active base of five-million customers".[7]

We believe that mobile network operators in Asia can also play a wider role as remittance service providers by taking a share of the mobile money

transfers market. A multi-currency, multi-country remittance platform can augment foreign exchange flows to the countries that are plugged into the platform. A case in point is 'HomeSend', an international mobile money transfer platform set up by MasterCard, eServeGlobal and BICS (Belgium's carrier, Belgacom). Initially it operated between Europe and Africa, but now it is extending its reach to Asia.

A multi-currency, multi-country remittance platform can augment foreign exchange flows to the countries that are plugged into the platform.

A Pan-Asian Mobile Remittance Platform

The success of mobile-to-mobile payment platforms in other parts of the world suggests that setting up a Pan-Asian Mobile Remittance Platform linking major Asian recipient nations can bring enormous benefits to the individuals and economies in Asia.

Any Asian nation with a well-developed foreign exchange market and a sizeable immigrant population that carries out a considerable volume and value of remittance transactions to other Asian countries could potentially take the lead in developing such a platform. A country like Singapore is well-placed to lead this effort, as it fulfils many of the criteria for a good platform host, as listed in Table 1.

KEY ATTRIBUTES OF THE REMITTANCE PLATFORM HOST NATION

1.	Strong information and communication technology ecosystem.
2.	Excellent international mobile telephony connectivity with Asia and the rest of the world.
3.	Proximity and well-established diplomatic, business, and travel links to the top recipient nations in Asia.
4.	Strong presence of global and regional banks to provide foreign exchange and clearing house support. Being a major global or regional foreign exchange trading centre will be an added advantage.
5.	Well-developed legal and financial regulatory systems, including elements for combating money laundering and terrorism financing.
6.	Strong ties between telecom companies of the host country and those of other Asian countries.

TABLE 1

Singapore is already the largest foreign exchange centre in Asia, and the third largest in the world after London and New York.[8] If a Pan-Asian Mobile Remittance Platform that links major Asian remittance recipient nations is set up in Singapore, it can become the payment and remittance gateway to millions in Asia. The country has a robust global financial services sector, coupled with strong IT and telecom infrastructures, which are prerequisites for such a platform (refer to Table 2).

Singapore also has strong trade, investment, and historical relationships with China, India, Indonesia, and the Philippines. Together with Bangladesh, these are also the countries from which migratory blue and white collar workers come and work in Singapore. As these countries are among the top ten remittance-receiving countries, their national telecom companies are assured of billions of dollars of remittances that can flow through this platform and through their network to their mobile subscribers. They also have a social role to lower remittance costs by participating in the Pan-Asian Remittance Platform. In addition, they can facilitate cashless transactions in their countries, with their own mobile networks being the enablers.

In addition, some of Singapore's leading telecom companies have stakes in other telecom companies in the region, and the connectivity to link up with a critical mass of these national players. For example, Singtel has a 32 percent stake in Airtel India, which is itself building a pan-African mobile payment platform–and those experiences and lessons learned in Africa can be useful in developing a platform in Asia. Singtel also has a 47 percent stake in Globe Telecom of the Philippines, a 45 percent stake in Citycell of Bangladesh, a 35 percent stake in Telekomsel of Indonesia, and a 23 percent stake in Advanced Info Service of Thailand. Australia's second largest telecom operator, Optus, is fully owned by Singtel, and Australia is an important source of remittances with destinations to India, the Philippines, Indonesia and Thailand. Similarly, Starhub, another Singaporean telecom service provider, is also very well connected with other similar companies in each of these countries.

ESSENTIAL PREREQUISITES FOR SETTING UP THE PLATFORM

1. A significant population of immigrant workers who remit small amounts 'home' every month, coupled with a smart phone savvy population that uses mobile technology to make higher value remittances, using the same platform. This would enhance the overall value of the remittance transactions on the platform.

2. The current need for remitters of small amounts to travel to areas where banks and money transfer operators are normally present, who charge a high fee for such small remittances.

3. Mobile remittance systems in remitting countries, such as Singtel's mRemit in Singapore.

4. Existence of mobile payment operators and systems in recipient countries. Examples include Globe GCash and SMART Money in the Philippines; M-Pesa and Airtel Money along with setting up of Immediate Payment Service in India; and bKash and SureCash in Bangladesh.

5. Existence of a wide network of shops and other establishments, small and big, across the urban and rural centres, where mobile payment is accepted.

6. A highly dispersed payee (recipient) population in recipient countries, that is in rural or semi-urban areas where access to banks and ATMs is difficult.

7. Secure mobile-to-mobile payment and remittance technology ecosystem operating on a secure infrastructure backbone.

8. Financial ability of the telecom service provider or consortium setting up the platform to invest upfront and in the future.

9. Partner banks providing foreign exchange and clearing house support.

10. Compliance with Anti-Money Laundering and Financial Action Task Force frameworks.

11. Access to all overseas mobile operators joining the platform, and to all other members of the platform, without going through individual bilateral agreements.

12. Presence of representatives of participating nations' central bankers and financial regulators on the platform to ensure conformity to their regulations.

TABLE 2

Some progress has already been made in this direction. Singtel has launched in Singapore a mobile remittance service called 'Singtel mRemit'. This self-service remittance mechanism allows the users to remit to the Philippines, Indonesia and India using their mobile phone. For a fee ranging from S$2.50 for the Philippines, S$4.00 for India, and S$7.50 for Indonesia, customers can remit money to most major banks and partner ATMs in these countries.

A Pan-Asian Mobile Remittance Platform set up by Singapore, together with these national telecom companies in the region, would create a huge remittance-recipient network with many millions of subscribers. It may possibly be the largest such remittance aggregation and distribution network anywhere in the world. Once such a network is formed, one can expect the telecom service providers of the United Arab Emirates, Saudi Arabia and other middle-eastern nations to also establish strong ties with such a network.

A white paper produced by SWIFT in May 2012, 'Mobile payments: 3 winning strategies for banks', argues that "mobile payments are rightly a top investment priority for banks globally –unsurprisingly, since out of a world population of seven billion, more than five billion (70 percent) have mobile phones, while only two billion (30 percent) have a bank account. This fast-growing market is predicted to carry US$1 trillion in transaction value by 2015." The SWIFT report also cautioned that "deploying mobile payments is not as straightforward as legal frameworks

ASIAN MOBILE REMITTANCE PLATFORM IN SINGAPORE

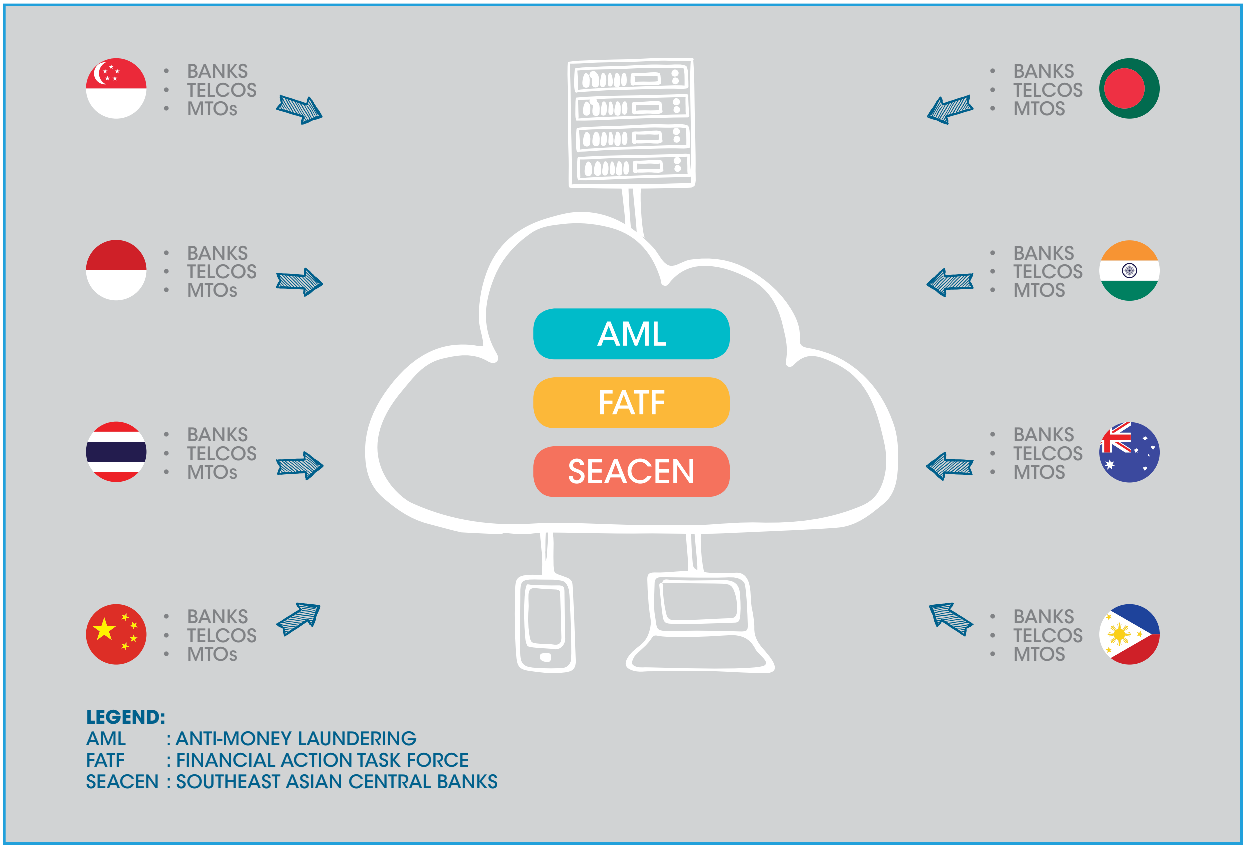

FIGURE 2

across countries are not harmonised, technology is still evolving, [and] there is a need for multiple partnerships…”.[9]

We agree that such cross border payment platforms must conform to legal and regulatory frameworks to ensure that they do not become a means for money laundering and terrorist financing. Herein the central bankers and financial regulators have a strong role to play to facilitate formation of such cross border mobile payment and remittance platforms across South and Southeast Asia. Fortunately they do not have to start from the scratch. Central banks of the region have already come together under the banner of The Southeast Asian Central Banks (refer to Figure 2). This grouping could bring the central bankers' perspectives of facilitating cross border remittances to this platform. After all, as many of these nations are major recipients of the international remittances, it is in their interest to make it cheaper, easier, faster and safer for their residents to receive money.

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BORDERLESS
A boon

MARKETS:
or bane for marketers?

Economic integration and free trade is not always a panacea for businesses.

By Philip Zerrillo

Many prognosticators and pundits have extolled the virtues and concerns of the impending ASEAN Economic Community (AEC). The blending of markets and the reduction of trade and entry barriers are being hailed for bringing long-term competitiveness and attracting foreign investment into a fast-growing market of over 600 million consumers. For policymakers, a common market helps lower prices over the long run, which in turn benefits consumers.

On the flip side though, the coming together of the AEC brings about a series of fundamental changes in the nature of competition at the firm level. The reduction of tariffs and the hypothetical free flow of goods and services across borders will certainly open up opportunities, but equally, will inevitably change the competitive dynamics of many industries. Much of this competition will be felt in the marketing function, particularly in the distribution sector, and will lead to radically changed roles for marketers. Economic theory would imply that market homogenisation would simplify the marketing function as a potentially large market size should mean that marketers would be able to sell large quantities of their products, thereby benefiting from economies of scale—however, this is a rather simplistic description.

In reality, the coming together of ASEAN economies will strip the marketing function of one of its most important levers—the ability to price discriminate across markets. Pricing is a key tool in the marketer's arsenal as it allows them to customise prices to regional and local market conditions, in this manner extracting the maximum value for their products and services across markets and geographies. It also enables marketers to use prices to adjust supply levels to changes in demand, thereby optimising manufacturing and delivery scale. Moreover, marketers often use incremental cost plus pricing as a means to achieve efficiencies and enter new markets, as prices are set according to what each market will bear. But an integrated market takes away this ability to differentiate the product through price discrimination. This may not only lower the price, but also sets the stage for severe price competition if the company chooses to continue using price as the basis of competition, or continues to allow different levels of the channel the latitude to set prices. Businesses would then have to find other ways to differentiate their product offerings to their customers—which makes the task of marketers far more difficult and complicated.

Arbitrage: A key driver of grey markets

Let's take, for example, something as simple as music CDs or movie DVDs. In the past, producers would create the intellectual property and sell it in their home market (which, let us assume, is native English-speaking) at a price that would maximise the firm's earnings. Other regional markets would be treated as incremental, and the producing firm would sell the music and movies at a discounted price in order to attract international followers in those markets where English is a second language. Small to moderate sales levels would be achieved, but the cost of intellectual property development is already sunk, and thus the manufacturing, or in this case, mere duplication, costs would be trivial. These secondary market sales would be profitable when analysed on an incremental cost-to-revenue basis.

However, when markets integrate and borders become seamless, the goods that are intended for the second language market can be shipped back to the home market if there is an opportunity for price arbitrage. Thus the prospect to penetrate distant markets with low prices (supported by the previous investment in intellectual property development) is more difficult as the integrated market migrates, on its own, to a single, low price.

This gives rise to 'grey markets'—defined as goods, which show up in a market or channel for which they were not otherwise intended. Grey markets arise due to the potential for price arbitrage, whereby a product can be bought in one market or geography and sold in another, with a monetary gain to be realised from the prevailing price differential. Borderless markets inherently face the challenge of grey markets, as they tend to crop up the moment there is a difference in pricing and availability across markets. Because of this market imperfection, a very important marketing tool for developing secondary and emerging markets, namely price, is blunted.

Borderless markets inherently face the challenge of grey markets, as they tend to crop up the moment there is a difference in pricing and availability across markets.

While the example of movies or music CDs does not evoke great sympathy from either lawmakers or consumers, the concerns rise when one considers the potential implications that can come about in the distribution and marketing of say, medical devices, pharmaceutical products and even healthcare itself. Currently, pharmaceutical and medical device companies look at markets according to their ability to pay. With heavy upfront R&D costs and a patent period that shields them from competition for some time, these companies generally look to the highest priced markets first, and try to secure the distribution and usage in those markets at an appropriate price that balances (relatively lower) volume with (relatively higher) price to maximise gross margin. As they already own the intellectual property, these firms would then sell those products at lower prices in developing economies, looking towards higher volume to enhance their overall margins—a strategy that is mutually beneficial for the company and consumers. The company gains by getting a foothold in those markets, and the populace of these lower income markets are able to receive discounted drugs and devices that could improve the standard of medical care.

However, if markets are seamless and these goods can be purchased and arbitraged across borders that price differently, then medical device and pharmaceutical firms may choose to avoid these lower priced markets completely, or at the very least, choose to price at the same high price of the developed markets. This would not only inhibit the company's future expansion, but also deprive patients in lower income nations of the latest medical technology.

How grey markets develop

As geographical borders become more porous, the threat of grey markets grows tremendously. In addition, there are other contributing factors that drive these

WHAT ARE GREY MARKETS?

Grey market goods, or 'parallel imports', is a term used to refer to genuine branded goods obtained from one market (that is, a country or economic area) that are subsequently imported into another market, and sold there without the consent of the owner of the trademark.

The goods are genuine goods (and not counterfeit items), in that they have been manufactured by or for or under license from the brand owner. However, they have been formulated or packaged for a particular market, and then imported into a market not intended by the brand owner.

Source: International Trademark Association, Factsheet

> As geographical borders become more porous, the threat of grey markets grows tremendously.

grey opportunities. The **innovation and enhancements in packaging materials**, and their acceptance over the past 20 years, has been nothing short of staggering. The development of better, safer and more protective packaging (as well as advances in shipping services) allows for the transportation of goods erstwhile considered impossible. Today, medical waste, syringes and even controlled substances can be shipped in approved containers via common mailing methods. Admittedly, this option can work only if the additional cost of packaging and shipping does not reduce or offset the gain from the price differential. The Internet has made possible seamless **access to information on product prices and availability**. Consumers today have visibility on the price, selection, terms and availability of products in distant markets—and all this is taking place in a manner that has never been witnessed before, and will only continue to progress. Finally, **movements in currency exchange rates** are also a common trigger for price arbitrage, thereby creating a potential for grey markets. A confluence of these four factors—regional integration; packing and shipping efficiency and effectiveness; information immediacy and transparency provided by the Internet; and currency exchange fluctuations—has fuelled the growth of grey markets worldwide.

Grey markets can manifest themselves in several ways. One such form is referred to as **International Distribution Diversion**, whereby a product that is meant for one country or region ends up in another. For example, when Unilever left Myanmar in 2000, Lux soap continued to make its way into the country from Thailand. Another form is **Domestic Distribution Diversion**, which happens when a product is sold in the same country, but in a different outlet than the one it was intended for. For instance, Courts, the electronics retailer, may decide to offload some products that it has not been able to sell (or have not proved popular with its clientele) to a discount store. The same is the case when luxury brands are sold through discount retailers. And finally, yet another manifestation of grey markets is **Reseller Position Change**, which refers to grey markets that develop when a company changes its position in the distribution channel. An example here would be say, a reseller of IBM laptops, who may decide to pool together the orders of smaller resellers in order to benefit from the discount IBM offers on bulk purchases. The reseller is able to fulfil a bulk order on laptops at a heavily discounted price, and the gains are shared between the main reseller and the smaller resellers. By doing so, the reseller changes his position to that of a distributor.

Repercussions of grey markets

The resellers that choose to trade in grey market products generally see the opportunity for easy profit with limited risk. Therefore, the category of products that are most likely to attract grey markets are typically branded goods, and those where the legitimate channel adds considerable value, that is, commands high margins. These are usually popular goods from well-known brands, as their significant margins can be adjusted to gain sales volume, often at the expense of the legitimate channel.

While grey markets expand the distribution reach of products, they do not in any way contribute to the building of the brand. The looming problem for brand owners is that as the grey market emerges, the legitimate channel starts to see a reduction in their sales volume as these free-riding grey market sellers add very limited support to building the brand—choosing to compete purely on price, rather than adding on services such as product support, warranty and training.

The retailers that truly add value begin to lose confidence in the brand and would either lower their level of services or stop selling it altogether, both of which put the owner in the difficult position of presiding over an eroding brand that has declining channel support. Worse yet, they have a brand that is increasingly dependent on the efforts of resellers who have no relationship or contractual commitment to the manufacturer. Companies thus go to great lengths to circumvent grey markets in order to protect their brand from being diluted, especially when value-adding services are needed.

Emerging channel strategies for the AEC

As stated earlier, AEC integration does indeed provide opportunities for access, but it also provides great opportunities for the spirit and intent of existing distribution arrangements to be challenged. A multinational company targeting this region will need to consider the advantages and disadvantages of selling in an integrated market. Much of the decision has to do with volume of sales versus consistency of the overall offering. Some firms will crave sales and market penetration while others will seek greater control of their distribution channel so as to provide a coordinated positioning in the market.

CONTROL

For those looking at coordination, we are beginning to see the emergence of multi-market, multi-brand distributors such as the Primer group out of the Philippines. Primer works across 18 countries and represents roughly 80 premium brands and 160 free-standing stores.[1] The geographical expanse of such a firm provides an opportunity for a one-stop distribution agreement with the brand owners. They can place their brands in the hands of one distributor who is in touch with the multiple markets and has the same interests as the brand owner. Instead of having two resellers in neighbouring countries competing to offer the lowest price, the distributor (Primer) now works to find the 'right price' while protecting the integrity of markets.

The Primer group operates both free-standing store formats as well as multi-brand stores. This provides an opportunity for both Primer and their brand partners to experiment with the brand and determine the best distribution format. This format also offers nascent brands an opportunity to test new markets in multi-brand formats before going to full scale, free-standing stores.

PENETRATION

Multinationals often struggle to effectively penetrate emerging markets. Many folks will chalk this up to the price of products and purchasing power in the local markets. But this is instead often a problem of finding distribution partners that can take products to the countryside beyond just the Tier I and Tier II cities. In many cases, with a large part of the country still living in primarily rural settings, multinationals find that the integrated market helps to get them to the Tier I cities, but beyond that, it is a challenge.

The Masan Group, one of Vietnam's leading fast moving consumer goods company, has realised the virtues of this path. The company has leveraged customer data and customer insights to determine its growth markets in terms of product categories, with a particular emphasis on dominating rural distribution networks.

Going with the flow

Firms can have very different philosophies when dealing with grey markets. At

Firms will consider different strategies for rural versus urban distribution, and will also understand when it is better to work across regions rather than by countries.

one end of the spectrum, companies such as Chanel and Tommy Hilfiger have a team of highly-paid web trawlers who scour the Web looking for sites that offer their products at heavily discounted prices. At the other end, some businesses find it easier to not only tolerate, but even benefit from the existence of grey markets. This is especially true for products that move into mass channels.

For instance, Minolta sold cameras to its distributors worldwide for roughly the same freight-on-board price. The sales channels in Asia retailed the product for approximately 60 percent more than the purchase cost, while their U.S. counterparts ran a very high-service channel and marked the product up by over 200 percent. When Minolta found that their home market cameras were washing up on the U.S. shores, the company preferred to turn a blind eye as it helped prop up sales and also gave it the much required volume to recover its fixed costs. This is not unusual for a stable product that no longer requires the service levels that it did once upon a time. When Minolta was a newcomer to the U.S. market, it needed strong reseller support to stand by its products, assist the customer and make sales. But as the product became technically stable, well known and easy to support, the company began to question whether the 200 percent margins were justified, or whether they were just limiting sales. Similarly, Wrigley chewing gum began printing prices on its gum packages when it saw that the convenience outlets were marking up the product so much that its volumes were beginning to reduce drastically.

Most companies will tolerate some grey market activity up to the point that it leads to incremental profits. However, it is a thin line to cross between an acceptable amount of 'leakage' into grey markets and jeopardising relationships with the trade or, worse still, customers' perception of the product in the high-priced segment. Beyond a certain level, all grey market activities damage the long-term profitability of a business.[2]

Tapping into the opportunities: Lessons for the future

With the advent of the AEC, distribution strategies and grey markets will need to be re-thought. In the presence of grey markets, managers will find themselves moving to a one-price policy across a homogenised market. But the great opportunity for marketers lies in their ability to recognise and satisfy the great heterogeneity that will continue to exist in these markets even as borders become porous and tariffs come down.

The winning firms will find alternate ways to differentiate their product offerings to their customers, such as bundling of products and services, product warranties and differentiated packaging. They will consider different strategies for rural versus urban distribution, and they will also be the firms that understand when it is better to work across regions rather than by countries.

There are other opportunities too. The AEC will allow companies to operate in multiple locations and therefore develop local specialties. So it will become easier for companies to source, manufacture and sell their goods in different countries across the region. Countries like Vietnam and Indonesia offer attractive manufacturing bases due to their low labour costs, and others like Singapore are attractive markets to sell in. However companies need to recognise that the distribution systems in those countries may not always be their best friends—retail laws and channel regulations may not always work in their favour. But for those prepared, the new economic bloc serves as an opportunity to differentiate themselves and drive long-term business performance.

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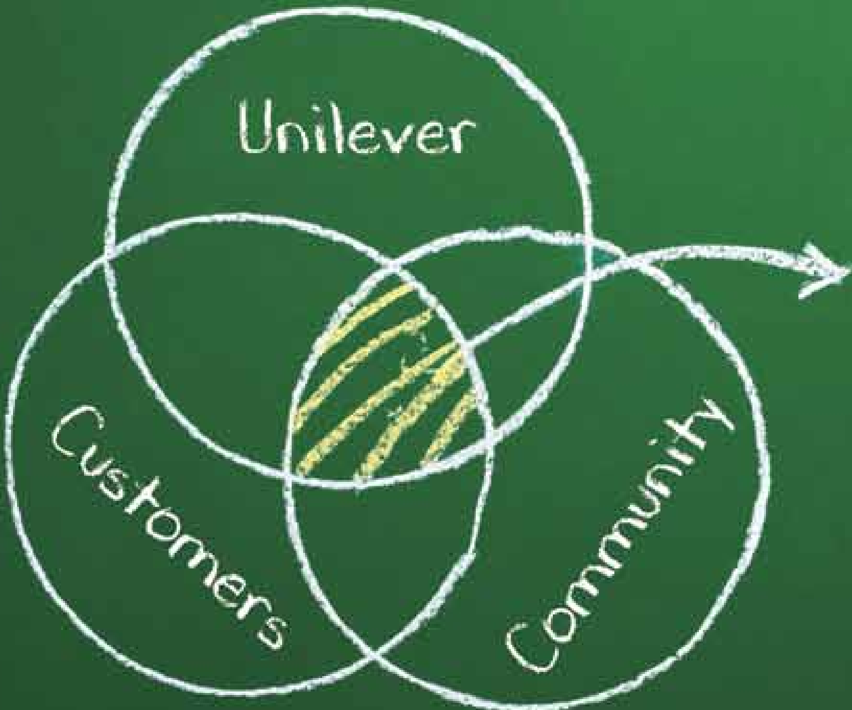


Unilever Platinum Stores: Building a Brand for the Community

A new branded store concept by the community, for the community.

By Pannapachr Itthiopassagul

In 2011, Bangkok, and most of Thailand, witnessed one of the worst floods in over 60 years. Heavy rainfall in the last quarter of the year caused much damage to property and left millions of Thais homeless or displaced. Against this dismal backdrop, the head of business development for general trade at Unilever, Thailand, came up with an idea of assisting a flood-stricken owner of a local mom-and-pop shop. What started out as a wish to help a single shop owner soon spawned into a branded store concept under the Unilever Sustainable Living Plan (USLP), which sought to benefit the local community and Thailand's general trade.

A tug-of-war between modern and general trade

Since the initiation of the trade liberalisation regime in 1996, general trade in Thailand—comprising wet markets and small-scale, independent mom-and-pop shops—had been squeezed out by modern convenience store chains. Multinational retailers like Carrefour made their foray into Thailand in 1996, followed by Auchan in 1997. A year later, Lotus, which was part of the CP Group, launched into the hypermarket format in partnership with Tesco. And in 1998, Groupe Casino entered into a partnership with Big C and also took over Auchan's stores after the latter decided to exit the Thai market.[1]

As these players expanded into Bangkok and beyond, Thailand witnessed a phenomenal increase in the number of hypermarkets, supermarkets and convenience stores. Within a decade (1997 to 2007), the balance shifted in favour of modern trade. Specifically in the food retailing sector, its share rose from 5 percent to over 50 percent, causing a dramatic change in the market dynamics for both general trade and the suppliers. The number of mom-and-pop shops declined from 400,000 to roughly 280,000 during this period.[2] The suppliers too were up in arms as they needed to adjust their operations in the face of the retail giants.

In 2006, a military coup took place in Thailand, and the caretaker military government endorsed a new retail law allowing local governments the right to assess and approve the entry of new supermarkets and hypermarkets. There were also attempts to enforce zoning laws, whereby hypermarkets had to be located in the outskirts of the city.

The announcement of the new regulations resulted in yet another spurt of new stores being opened, as international retailers hastily expanded their presence. Some also looked to morph into smaller store formats, a strategy that soon caught on.

Smaller store formats, such as convenience stores, minimarts and discount convenience stores, required less investment, shorter time to build and circumvented the regulations imposed on hypermarkets and supermarkets. Tesco launched Tesco Express, Big C added on the Mini Big C format, and CP launched CP Fresh Mart. Between 2002 and 2007, the number of convenience stores in Thailand more than doubled to 5,550 and the number of discount convenience stores grew from hardly any at all to over 700.[3]

The 'convenience' of convenience stores

The evolution of international retailers into smaller store formats brought them head-to-head in competition with general trade. The mom-and-pop shops were traditional convenience stores typically run as small and independent family businesses that stocked daily use products such as packaged (non-perishable) food and drink, along with household, health and beauty products. Typically located in prime residential areas of urban Thailand and in the heart of rural communities, the mom-and-pop shops were known for their familiarity with the local community and flexibility of service.

In the remote rural areas, these shops were often the one and only village shop where the community went for all its non-perishable purchases. In urban areas, while competing with a variety of retail formats, the mom-and-pop shops found their niche as being the retail outlets closest to residential neighbourhoods that catered to the needs of top-up and emergency/distress shopping, food-on-the-go (drinks, snacks, ready-to-eat meals, etc) and newsagent services (newspapers, magazines and cigarettes).

In 2012, there were over 302,000 open trade stores (including mom-and-pop shops and local minimarts) spread across Thailand. In 70 percent of cases, the 'mom' of the family owned and managed the shop single-handedly, with limited or no help from her children who, once well educated, did not find the family business attractive in terms of its income stream or status. A typical mom-and-pop shop averaged gross sales between THB 3,000 and THB 9,000 per day (US$97 and US$291 respectively) in 2012. In a country with an average per capita income of THB 162,225 (US$5,250) in 2012, these families typically came out at the lower end of the economic spectrum.[4]

The mom-and-pop shops varied in size, though most were smaller than the average modern trade convenience store. But while smaller, these shops were normally well stocked. However, being independent retailers (as opposed to retail chains), these shops sourced on a small scale and lacked proper warehousing facilities. Consequently, they were unable to exercise power over the supply chain, which often left them at the mercy of distributors.

A typical customer experience would involve walking through the dimly lit, cramped, unmarked isle of the shop, stocked floor to ceiling with hundreds of goods, many in unlabelled packaging. Often they would find the product they wanted to purchase on the highest shelf, which could only be accessed using a stepladder. If for some reason the product was not in stock at that

Typically located in prime residential areas in urban Thailand and in the heart of rural communities, the mom-and-pop shops were known for their familiarity with the local community and flexibility of service.

time, the shop owner would have it delivered to the customer's home by the end of the day.

Although the mom-and-pop shops were lacking in sophisticated merchandising, category management, loyalty schemes, and what was propagated in modern trade as customer-friendly environment (air-conditioning, shelf labelling, store planning for ease of mobility, automated check-out counters), each was unique and unparalleled in its relationships with customers. These family stores were a part of the community; they provided on-the-spot package sizing, extended credit, local knowledge and, often, a ear to listen.

According to Rob Rijnders, vice president of customer development, Unilever, Thailand, "Unless general trade re-invents and re-brands itself, it will be extremely difficult to survive in the market."

Flooding in 2011: An opportunity unfolds in the midst of despair

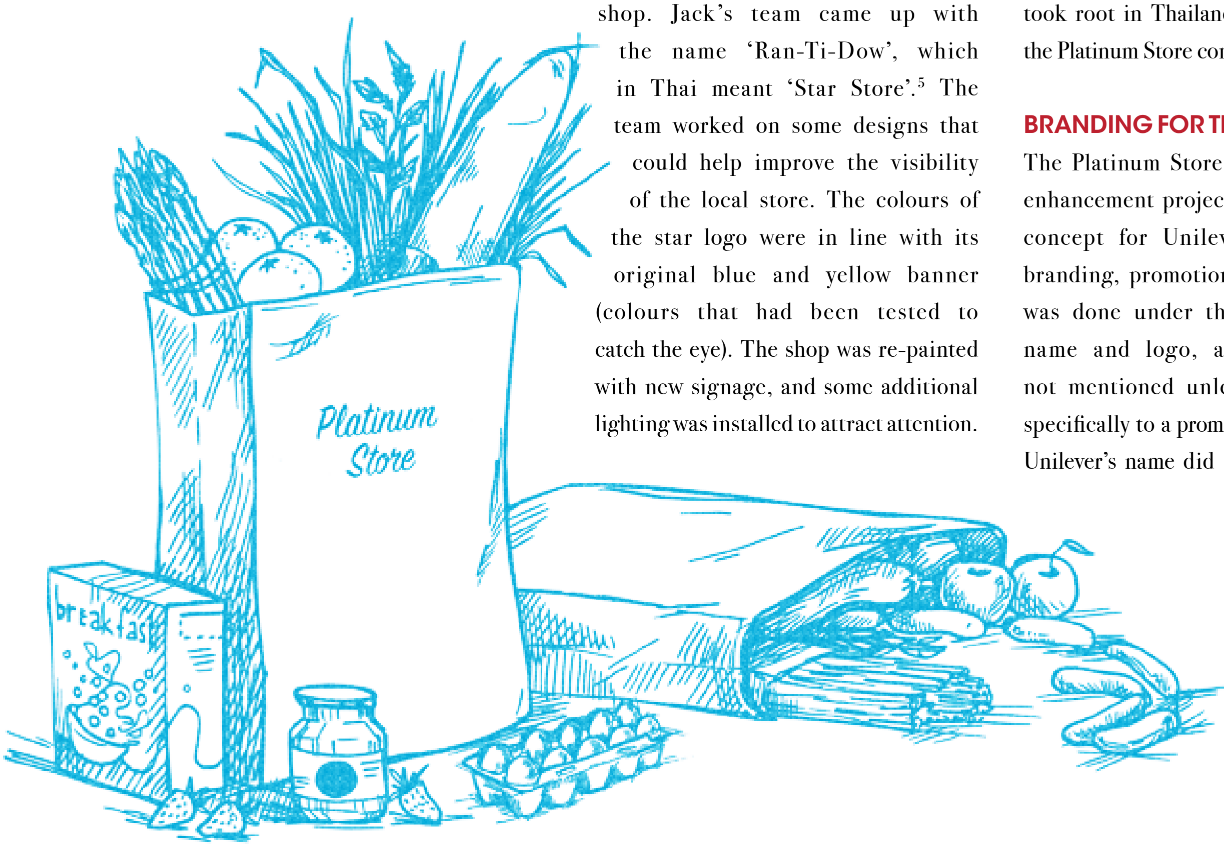
When floods hit Thailand in 2011, almost 900 people were killed and millions of residents were either left homeless or displaced following significant flooding. That year, many mom-and-pop shops were destroyed, and their owners lost their only source of livelihood. It was at that time that Unilever, one of the world's leading fast-moving consumer goods companies, came up with an innovative idea to restore, modernise and re-brand such a convenience store.

It started with the idea to help just one mom-and-pop store that had been severely impacted by the floods. The shop owner had opened the store just over two years ago with money borrowed from relatives. Heavy rains had caused water to seep into the shop late one night, destroying all his goods. The floods had left the shop owner penniless and in heavy debt.

Despite its destruction, this mom-and-pop shop had an excellent location–it was at the corner of a busy street in a residential area with high customer foot traffic. Unilever's head of business development for general trade, Ratchtar Karasuddhi ('Jack'), saw this as an opportunity–he believed that with a bit of remodelling and better visibility, the shop could not only be revived, but become a serious alternative to the modern trade convenience stores down the road.

When Jack approached the shop owner with the idea to renovate his shop, he was initially hesitant to accept the offer. After the flooding, the distraught shop owner had made up his mind to sell the store to pay off his debts. He was also not convinced that the renovation would actually help revive his business, as the 7-Eleven and CP Minimart located just a few blocks down the road posed a continued threat. But Jack persevered and explained that customers preferred the softer conveniences of the familiar surroundings, personal service and informal ambience of a mom-and-pop shop to that of the more 'clinical' conveniences offered by modern trade convenience stores.

Finally, the shop owner agreed, and the Unilever team got to work. The company bore all the costs of the renovation and remodelling, and also decided to create a branding for the shop. Jack's team came up with the name 'Ran-Ti-Dow', which in Thai meant 'Star Store'.[5] The team worked on some designs that could help improve the visibility of the local store. The colours of the star logo were in line with its original blue and yellow banner (colours that had been tested to catch the eye). The shop was re-painted with new signage, and some additional lighting was installed to attract attention.



The fresh branding was an immediate success–within the first six months, sales grew by 400 percent.

In March 2012, the first Star Store opened its doors to customers. The fresh branding was an immediate success–within the first six months, sales grew by 400 percent.[6] The good news caught on, and within four months, another four shops in the same neighbourhood were converted into Platinum Stores, as the Star Stores came to be known within the company.

The Platinum Store concept takes roots

Jack sought the support of Unilever Thailand's leadership to expand the scope of the programme, and it was fully supported. Under the USLP, the seeds of developing sustainable business practices took root in Thailand. Key elements of the Platinum Store concept were:

BRANDING FOR THE COMMUNITY

The Platinum Store was a community enhancement project, not a new retail concept for Unilever. As such, all branding, promotions and advertising was done under the Platinum Store name and logo, and Unilever was not mentioned unless it was related specifically to a promotion of its products. Unilever's name did not appear on the

> "We wanted the Star Store to be the place where the local community can not only do their shopping in a convenient manner, but also 'hang out'. It could, for instance, be the ice cream shop for the village, so we added a table and some chairs. We also created a breakfast counter where customers could educate themselves on how to prepare a healthy but quick morning meal."
>
> – Rob Rijnders, Vice President of Customer Development, Unilever, Thailand

shop signage—the original name of the mom-and-pop shop was retained and the Star Store logo was added to it. Advertisements promoting Platinum Stores also did not mention Unilever. The standard external facade of the shop, consisting of the signage, bunting, sunblind and light box, created a consistent look and helped send a strong signal to customers about the Star Store brand.

ENLISTING THE MOM-AND-POP SHOPS

The eligibility criteria to join the Platinum Store programme were simple—Unilever targeted those mom-and-pop shops that were in a good location with high customer traffic, and also willing to convert to a Platinum Store. Despite the locational advantages, many were not running their businesses to their full potential. The aim was to help the neediest mom-and-pop shops improve their income and competitiveness.

In fact, what proved to be a challenge was to convince some of the families of the benefits of revamping their businesses. Unilever worked closely with individual shop owners to explain the benefits of the programme. After some initial hesitation, most shop owners bought into the concept, which had begun to show results amongst peers.

LEVERAGING NETWORK BENEFITS

A major drive to expand the reach of Platinum Stores was done with the help of distributor-owners. Unilever operated through a network of 70 concession-based distributor-owners, seen as 'ambassadors' of all Platinum Stores in their respective territories. Their responsibilities went beyond making timely deliveries, and their regular store visits now included surveying the store, assisting with shelving and signage, engaging in a dialogue with the shop owner and customers, and providing feedback to Unilever on areas of progress or concern.

As Rijnders explained, "Even our distributors have an opportunity to make a difference in the community. Many have embraced the ethos behind Platinum Stores and are inspired by their empowered role and engagement with the community."

EMPOWERING THE COMMUNITY

In remodelling the stores, the Unilever teams were at all times conscious that the conversion was a cooperative effort between the shop owner and the company, and care was taken to ensure that the shop owner was involved in all decision making. The aim was to make the mom-and-pop shop more akin to the modern trade convenience stores, without losing the family elements of local trade.

The end game was all about empowering the shop owners and building their capabilities. Unilever not only sold its products to these shops, but also trained shop owners on store planning, category management, promotions and assortments.

Store design and layout: Same, but different

Unlike a 7-Eleven or a CP Minimart, where each outlet was almost exactly the same in terms of size and layout, the mom-and-pop shops varied greatly in size and had very distinctive characteristics. So, when planning the store layout, instead of developing a handful of prototypes that could be replicated, each Platinum Store had to be planned individually. As Jack explained, "Creating a consistent external facade was straightforward, but developing a standard planogram for Platinum Stores proved to be quite a challenge. We could not use a cookie-cutter approach."

Each Platinum Store was designed keeping in mind five essential elements that were mandatory in every store: health and home care zone, beauty zone, breakfast corner, super tray (promotions of the month) and wall cabinets (the happy corner). There was also a range of other products and service counters which were discretionary and differed depending on the location (rural or urban), size and customer traffic.

In addition to the five essential elements, most Platinum Stores also had a food corner where customers could prepare a ready-to-eat meal or soup; a coffee machine furnished with cups, hot water, milk and sugar; a Lipton ice tea kiosk; an ice cream corner; and a stamp redemption counter. The Platinum Store owners could also opt to provide an additional range of services for their customers, including mobile top-up facilities, washing machines, weighing machines, and automated teller machines. Pointing to market development as being one of the goals of the Platinum stores, Rijnders stated, "We wanted the Star Store to be the place where the local community can not only do their shopping in a convenient manner, but also 'hang out'. It could, for instance, be the ice cream shop for the village, so we added a table and some chairs. We also created a breakfast counter where customers could educate themselves on how to prepare a healthy but quick morning meal."

The variety of products and services offered by the Platinum Stores aimed to increase foot traffic into the shop, thereby enhancing the possibilities of a higher sale per purchase and a better chance of customers engaging in impulse shopping. A typical Star Store carried about 90 Unilever SKUs (stock keeping units), and on average, Unilever products had more than a 50 percent share of assortment in the store. The company's products were stocked on the top two or three shelves in the store for competing categories, and enjoyed enhanced visibility with the help of banners, placards and signage for promotions.

Defining success: A win-win formula

What started out as a simple wish to help a single distressed shop owner, soon turned into a mammoth project for uplifting general trade in Thailand. A total of 7,800 Platinum Stores were inaugurated between March 2012 and July 2014. Sales of the converted stores on average grew by 14 percent. Working with the community, Unilever was able to create a new distribution channel that helped enhance the livelihood of the shop owners, develop a sustainable solution for their fledgling businesses, and create a community ecosystem under a common brand. It had also enhanced Unilever sales. It was evident that through the Platinum Stores, Unilever had achieved the twin goals of 'doing good and doing well'.

The principles of consistency, availability, assurance and value are at the heart of every brand. And while building a brand for others, i.e. owners of Star Stores, is certainly not easier than building it with all resources under the company's control, empowering a community to build such a brand can have a powerful impact.

For Unilever, the Platinum Stores were much more than just a good business proposition. It was meant to be an initiative of the community, by the community and for the community. The success of the project exemplified the fact that one can gain by giving. Looking ahead, what would determine the success of the Platinum Stores? According to Rijnders, "We must ensure 'star' quality service in our Star Stores. Standardisation and good service quality are the key ingredients in establishing a strong retail brand, and they are also our greatest challenges. When the Star becomes a surrogate for quality, I think we would have achieved our goal."

> Unilever was able to create a new distribution channel that helped enhance the livelihood of the shop owners, develop a sustainable solution for their fledgling businesses, and create a community ecosystem under a common brand.

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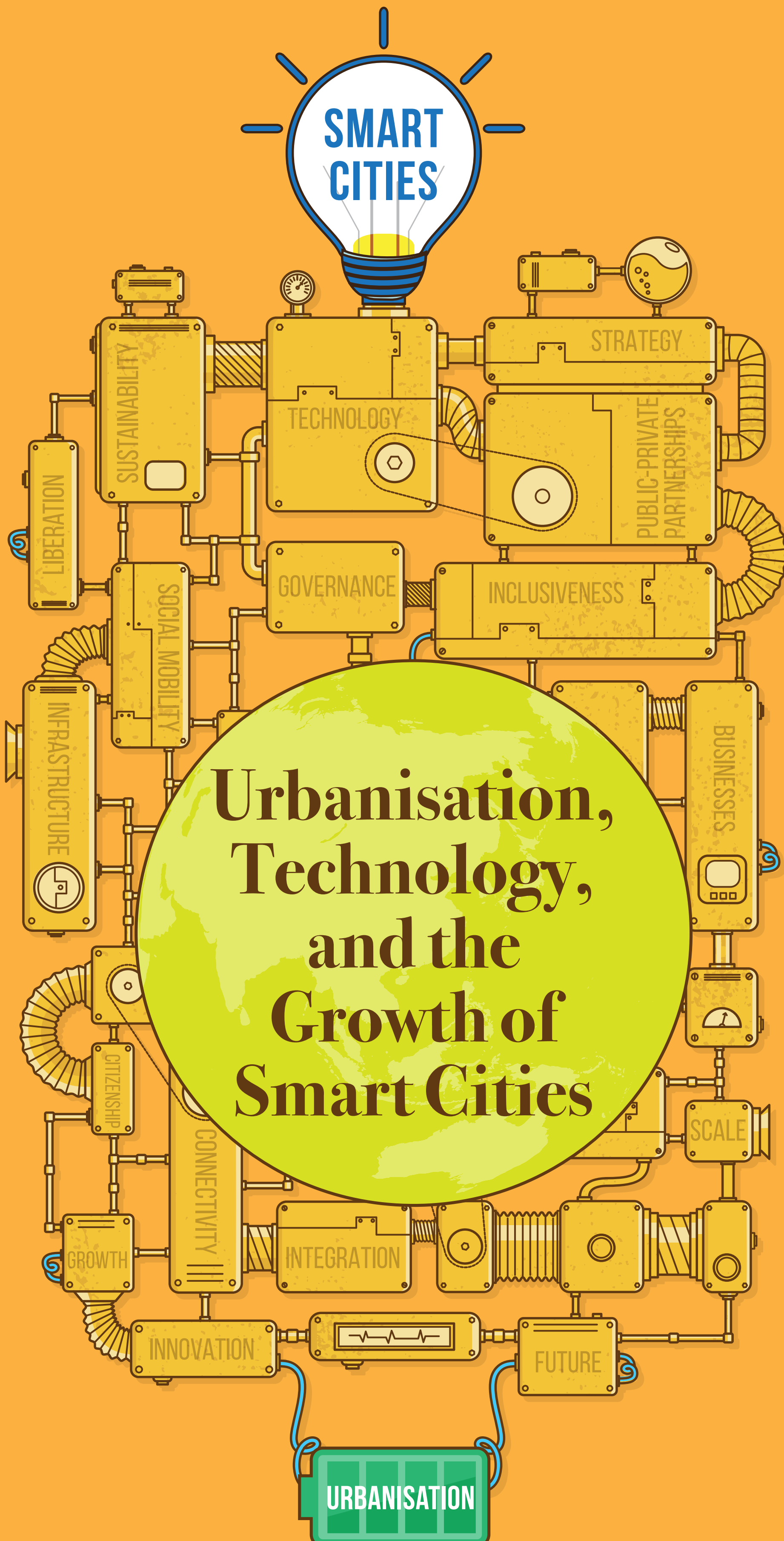
EXECUTIVE BRIEF

Urbanisation, Technology, and the Growth of Smart Cities



The dual trend of rapid urbanisation and sophistication of technology will eventually give rise to smart cities around the world. As new challenges emerge, what are Asian cities doing to ensure their success in the future?

By Parag Khanna

Imagine a city that has enough information about you such that it adapts to you in real time. The city's billboards change as you walk past, displaying advertisements based on your recent shopping patterns. Restaurants present menus tailored to your taste and health. Streetlights brighten or dim depending on whether you are walking or driving. You receive traffic alerts on your phone that are tailored to your journey. And as soon as you book your flight for a trip, you start to receive alerts about the weather, traffic and even political updates of the city you are to visit.

These are the kind of images that often come to mind when we think of smart cities. While there is some truth in these–and our future cities might well incorporate soft infrastructure that is dynamic and customised to each citizen–we argue that technological connectivity is just one part of a bigger whole of what we call a smart city.

Rapid urbanisation over the past two decades has led to the mushrooming of megacities (accepted as those with a population in excess of ten million) around the world. The sheer size and scale of these cities place huge pressure on infrastructure development, public services provision, and environmental sustainability. If we add economic, social and ethnic stratification, as well as health, safety and security risks to the list of challenges, the task facing the leader of any megacity seems overwhelming, and is certainly one that cannot be solved by technology alone.

We believe that technology alone does not make a city smart; it needs smart governance, smart businesses and smart citizens. A smart city is one that can effectively leverage technology, infrastructure, public policy and citizen engagement to create an urban environment that fosters economic growth and productivity, innovation, social mobility, inclusiveness, and sustainability.

This article shares some thoughts on what it will take to plan, run, manage and provide for the cities of the future; and how some innovative megacities have already made headway in the right direction.

Technology alone does not make a city smart; it needs smart governance, smart businesses and smart citizens.

The birth of urban archipelagos

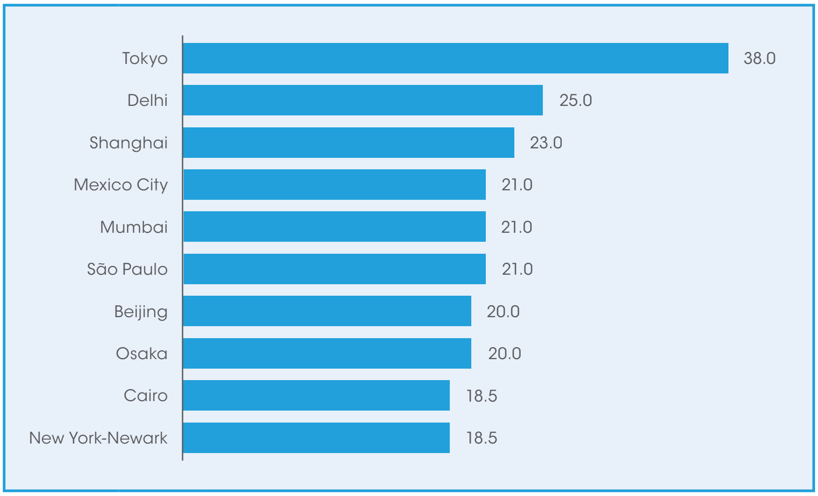
This is the century of transformational cities. According to the 2014 World Urbanization Prospects by the United Nations' Department of Economic and Social Affairs, 54 percent of the world's population currently lives in urban areas. This number is projected to increase to 66 percent by 2050, adding a further 2.5 billion people to our cities.[1]

Asian cities have become the centre of the world's urbanisation. Especially since the 2008 financial crisis, migration to emerging markets has been on the rise, and Asia's largest cities have been large recipients. Contrary to perception, Asia is home to 53 percent of the world's urban population, and these cities tend to be much bigger when compared to major cities in the West, both in terms of population and area. Sixteen of the 28 megacities of the world are in Asia (there are four in Latin America, three each in Africa and Europe, and two in North America).[2]

Unsurprisingly, China and India are leading the trend. By 2025, a sixth of all megacities will be in China, and by 2030 the country will have 400 million city dwellers, equivalent to the population of the United States. Similarly, 215 million people will move to the cities in India by 2030, adding the equivalent of Brazil's population to the already teeming urbanites. As urbanisation continues to grow at the current rate, in less than a decade from now, 70 percent of Chinese and 46 percent of Indians will be living in cities with more than one million people.

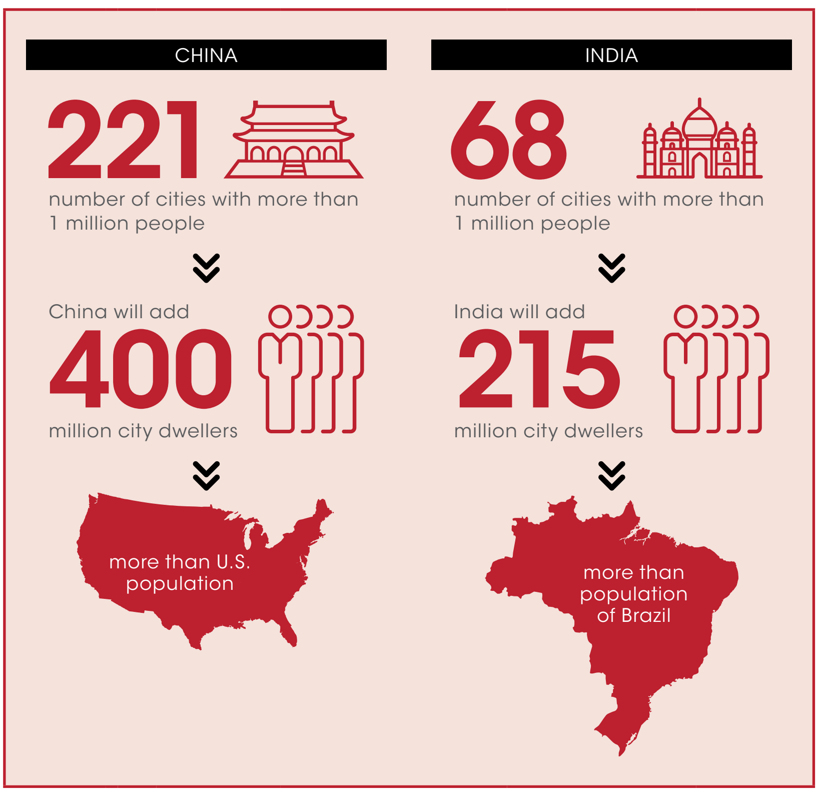
In cities where investments in infrastructure have improved rail and road connectivity with surrounding areas, we see the rise of city clusters that bring together several adjoining cities—these areas are no longer dots on the map, but rather patches that are rapidly integrating in terms of supply chains, commercial flows and

WORLD'S MOST POPULOUS URBAN AREAS (APPROXIMATE NUMBER OF INHABITANTS IN MILLIONS, AS OF 2014)



Source: UN Department of Economic and Social and Affairs, "World's population increasingly urban with more than half living in urban areas", July 10, 2014

SPEED OF URBANISATION BY 2030



Source: Parag Khanna, Future Trends in the Century of Cities, New Cities Summit 2014, Dallas, Texas labour mobility. These cities have expanded not only vertically, but also horizontally, to merge with each other to form what we term as 'urban archipelagos'.

Today, we find almost 600 such city clusters or urban archipelagos—examples include the Pearl River Delta in the Hong Kong area; Shanghai to Nanjing, and Chongqing to Chengdu in China; Tokyo to Osaka in Japan; Greater Delhi, and Mumbai to Pune in India; Dubai to Abu Dhabi; and Los Angeles to San Diego in the United States.

URBAN ARCHIPELAGOS: COUNTRIES UNTO THEMSELVES

Some city clusters or urban archipelagos are so extensive that they transcend multiple municipal jurisdictions. The Pearl River Delta in China is an outstanding example of how cities under separate political jurisdictions have come together to create an integrated urban cluster with full connectivity and free movement of labour.

Hong Kong is the region's financial hub and offers an open and liberal environment, Shenzhen is more state-directed, Dongguan is heavily industrial, Guangzhou has transformed itself from an industrial centre to a major financial hub, and Macau, with its free-wheeling spirit, is known for gaming and entertainment.

These potentially diverse geographies come together to enjoy benefits of scale—this was witnessed during and after the 2008 financial crisis, when this cluster proved to be far more resilient compared to many other cities in the region and around the world.

Source: Parag Khanna, Future Trends in the Century of Cities, New Cities Summit 2014, Dallas, Texas

The potential of megacities: economic growth with resilience

Cities have historically been the centres of economic power of a nation–and the megacities of today continue with this trend, becoming economic powerhouses, both at a national and international level, primarily due to the economies of scale that they command. The demographic and economic weight of some Asian city clusters exceed that of most countries–for example, the combined gross domestic product of the Pearl River Delta would make it a member of the G20. These megacities are able to attract foreign investment, global businesses and top-notch talent from around the world. It is hence not surprising that cities such as Shanghai, Singapore and Dubai have become magnets for hard working people around the world looking for top jobs and a positive work-life balance. Success feeds itself, and these cities are able to invest in better infrastructure and technology that further improves their physical and virtual connectivity, and ease of operation. Ultimately, the virtuous cycle of prosperity and progress leads to microeconomic resilience and improves the ability of the megacity to cope with, recover from, and reconstruct itself after external and internal shocks such as financial downturns, social unrest, natural disasters and epidemics.

> Cities such as Shanghai, Singapore and Dubai have become magnets for hard working people around the world looking for top jobs and a positive work-life balance.

> In pockets all over the world, politicians, citizens, businesses and consumers are working together to develop innovative solutions for smart cities—with or without the help of technology—to address the challenges faced by our cities.

Tackling the challenges of megacities: innovative ideas for smart cities

The potential of megacities is incredible, but so are the challenges of delivering public services and managing their political, economic and social complexities. The local head or mayor, frequently referred to as the CEO of a megacity, is more often than not the most popular politician in the country. It is often said that the competencies of these local- or municipal-level politicians make them leading candidates to govern the country and become future international leaders.

The unique nature of megacities around the world, and the urban archipelagos of Asia, calls for some equally inimitable solutions to tackle their accompanying challenges. In the age of the Internet, technology seems to be one obvious answer. But in pockets all over the world, politicians, citizens, businesses and consumers are working together to develop innovative solutions for smart cities–with or without the help of technology–to address the challenges faced by our cities.

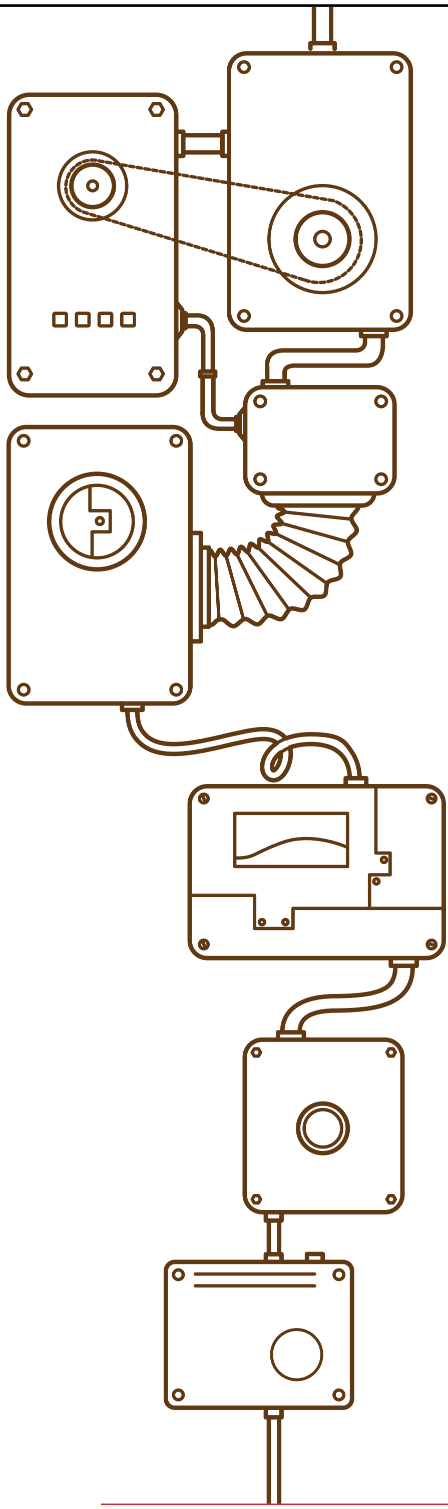
INFRASTRUCTURE DEVELOPMENT

Asian cities often find their infrastructure development lagging behind urbanisation. The sheer size of megacities can cause complex challenges for local governments when delivering basic services such as housing, water, electricity, waste management and efficient transport. Today, Jakarta is said to be the world's most congested capital, Manila struggles to provide sufficient housing for the growing population, Bangkok faces severe water pollution, Mumbai is home to the world's largest slum, and Beijing's air quality levels have plummeted to a historical low.

Leaders thus need to plan ahead and invest in the physical infrastructure that forms the foundation of a well-functioning city. When the responsibility cannot or will not be picked up by the public exchequer, businesses need to step up to the plate. While investments in heavy infrastructure naturally need to be the responsibility of the governments, they can choose from a range of successful and innovative financing models that emerge as a result of public-private partnerships. Besides the tangible or physical infrastructure needs, it is equally important to invest in intangible elements, such as widespread broadband Internet and mobile connectivity.

MANAGING CONGESTION AND THE ENVIRONMENT

Megacities tend to grow vertically first, and then horizontally. Asian cities have shown unique adaptability in that we typically find not just one, but multiple 'downtown' or central districts. Singapore, for example, has built several business hubs, and the 2030 plan of the country's Urban Redevelopment Authority, the organisation responsible for the island state's land use planning and conservation, is looking at heartland areas such as Jurong, Changi and Tampines to become business centres in



their own right. Such efforts certainly help to contain congestion and spread economic development. Similarly in India, Gurgaon and Noida have come up as major business hubs in what were earlier considered remote suburbs of Delhi. So the sheer scale of cities in Asia means that there is a trend toward multi-cluster, multi-hub cities, which is quite unlike that seen in the West.

Despite this, we find all major cities in Asia (and in the West too), struggling with the challenges of traffic and congestion, and the symptomatic outcomes of pollution and environmental damage. To address these issues, both policy and consumer/citizen behaviour need to be altered.

Singapore offers a great example of smart policy. The establishment of the Housing and Development Board, water management policies, and the Electronic Road Pricing (ERP) system are all examples of state directives that have made the island-state a smart city. For example, the ERP system is a variable pay-as-you-go scheme that charges motorists for the usage of some key roads during peak hours. ERP rates vary for different roads and time periods depending on local traffic conditions. Additionally, plans are on the cards to offer a rebate of up to 40 percent on the purchase of low-emission vehicles.

Some smart cities have gone beyond large-scale investments, and taken initiatives to produce innovative and disruptive business models that may be equally effective. For instance, when Bogota's mayor observed that the city's traffic police was not effective in regulating traffic, he put mime clowns to tame the city's unruly traffic. The mimes ridiculed reckless driving and traffic violations, and handed out thumbs-up/thumbs-down cards to help people shame bad drivers. The social experiment worked, with traffic fatalities dropping from an average of 1,300 per year to about 600.[3]

There are also many cases of private companies working in conjunction with city governments to solve chronic issues. In San Francisco, for instance, Streetline decided to help address the city's parking problems by installing wireless sensors that detect the availability of parking spots. The information is available through a mobile app, which drivers can download to find the nearest available parking spot.

Finally, as the service sector grows, there will be greater opportunities to telecommute—it is estimated that three times as many workers will telecommute one decade from now as employment in this sector grows and broadband Internet access spreads.[4] Such trends suggest the possibility of a virtuous circle of greater employment, less congestion and more innovation.

IMPROVING PUBLIC AND EMERGENCY SERVICES

Owing to the high population density, even a minor hitch in the delivery and management of public services impacts a large number of residents, and is susceptible to a domino effect with broader implications. The ultimate concern for any politician of a megacity is the risk of natural disasters, health epidemics and breach of national security. Most megacities have been built on ocean coastlines, and these heavily populated urban areas are susceptible to rising sea levels. Moreover, the high population density means that any risk of a natural disaster leads to a much greater loss of life and material assets.

If we have decided to put all our eggs in the megacity basket, then we must plan efficient and effective relocation strategies for unforeseen events. Technology is a key enabler in this regard, and cities the world over are leveraging mobile connectivity to keep in touch with citizens and responsible public authorities. So for instance,

If we have decided to put all our eggs in the megacity basket, then we must plan efficient and effective relocation strategies for unforeseen events.

in Jakarta, a new era of proactive urban governance has emerged, creating a city administration that is more open to citizen participation. QLUE, a crowd-sourcing mobile app, allows every Jakarta resident to report immediate local concerns, such as flooding, waste collection and road conditions, to the government. Simultaneously, a similar mobile solution, *Cepat Respon Opini Publik*, notifies the nearest and most relevant government officials of the complaint, and allows them to respond directly to the public. The app already has over 30,000 users and 100 daily reports.

A similar initiative was taken by New York City, which started a complaints hotline called '311' through which residents could register a fault or complaint about city infrastructure or public services. From the citizens' point of view, the initiative did not involve a high-tech solution, but the borough council used the information from the calls to develop a database, work out patterns, prioritise and chalk-out solutions for the most common and frequent complaints.

In the future, we may envision having smart utilities (smart objects) that can sense a problem and relay the information to the council database directly—machines talking to machines. For example, a faulty traffic signal will be able to send a wireless message to the city government, eliminating the need to file a complaint. As the cost of technology becomes cheaper, these vanilla sky ideas will one day become real.

There are two important learnings here. First, moving to a smart city is an iterative, phased and gradual process. Second, despite the advances in technology, success still depends on how the authorities respond to complaints. Technology is a great tool, but clearly not the be all and end all of all our problems.

MANAGING SOCIO-ECONOMIC STRATIFICATION

Megacities are a melting pot of many nationalities, ethnicities and religions—the percentage of foreign-born population in Dubai is 80 percent, in Toronto it is 49 percent and in Singapore 40 percent. Leaders of megacities must hence have the ability to manage multi-ethnic societies that are socially, economically and even ethnically diverse. Second, city leaders must also come to terms with the fact that this immigration is not a temporary phenomenon, but a permanent reality. So eventually, they have to find a way to make every economic contributor become a stakeholder in society, even though they might not be able to offer citizenship.

An added challenge that comes along with the economic growth and prosperity of Asia's urban clusters is that of economic stratification. While we celebrate urbanisation as a huge economic opportunity, we need to remind ourselves that rapid acceleration of urbanisation in recent decades also correlates directly to the rise in income inequality within nations, even as it diminishes between them.

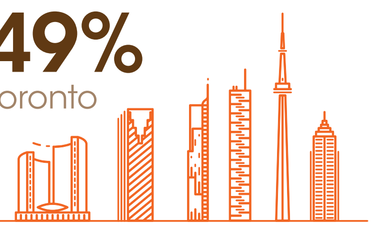
Indeed, big cities are inadvertent drivers of income inequalities, which manifest at three levels: First is the widely recognised rural-urban income gap—the larger the urban cluster, the higher the Gini coefficient for the cities and rural areas of that country. Second, there are also inequalities between megacities and second tier cities. Unlike western countries, which typically have anywhere from six to ten major cities or city hubs that support the population even in the inner frontiers of the country, countries in Asia (think Indonesia, the Philippines or even Malaysia) may have just one or two cities that are financially viable. Levels of labour productivity, and consequently income, differ widely, further exacerbating economic inequality. Finally, there exist growing degrees

What will increasingly differentiate cities is not how 'smart' they are in terms of technology penetration, but the extent to which they leverage technology to bring about innovation, sustainability and inclusiveness.

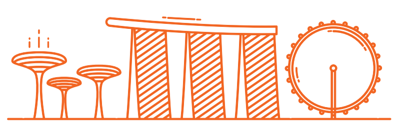
FOREIGN-BORN POPULATION

80%
Dubai

49%
Toronto



40%
Singapore



of inequality within each megacity—these large city clusters often become stratified into two, three, or even four cities divided on the basis of access and income.

Governments need to work much harder to ensure that appropriate safety nets are in place so as to achieve a more balanced economic development. In Mumbai, new housing is being developed to help shift residents of the city's largest slum, Dharavi, into permanent settlements. And in Rio de Janeiro, cable cars have been put in place to connect favelas to central districts, increasing both mobility and economic opportunity.

Balancing the mission with execution

Smart cities existed even before we coined the term, which was just five or six years ago. Today, we use the term smart city to add technology, Big Data and the Internet of Things to fundamental smart policies, smart governance and smart citizenship. The technology platforms used by megacities need to be designed in such a way so as to enable government efficiency and public access to useful data. This can include cloud computing services, sensor networks and data centres, and traffic management systems for both road congestion management as well as public transportation systems such as subways and light rail. Policies built on top of these platforms include e-government portals and e-government services that allow citizens access to data on shared Application Programming Interfaces, leveraging the information for community benefits.

As the price of technology falls and data analytics become more widespread, what will increasingly differentiate cities is not how 'smart' they are in terms of technology penetration, but the extent to which they leverage technology to bring about innovation, sustainability and inclusiveness.

The numbers seem staggering, the possibilities endless. So why is it that even today, we find only a handful of truly smart cities around the world? For many local governments, it is the short-term economic realities that deter plans to develop smart cities. The lack of resources (budgetary constraints) may constrain efforts to invest in the infrastructure and technology required to support a seamless, smart city. In fact, for cities with smaller populations, the investments may not prove efficient as the real benefits are derived from economies of scale.

Notwithstanding these challenges, there are still many options to leverage the existing infrastructure and plummeting costs of technology to develop smart concepts and innovation in public service. The megacities of Asia have to prove to the world that their potential is greater than the challenges they face, and that they can become a model of urban development in the 21st century.

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is the Managing Partner of Hybrid Reality Pte Ltd., a geostrategic advisory firm based in Singapore

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THE VIRTUAL BIG BROTHER?

Rather regrettably, the name smart city has become one of the most polarising terms in the world of urbanisation. Some view it as a form of salvation and a means to cope with the pressures of urbanisation—and it was in this light that the Indian Prime Minister, Narendra Modi, recently announced, "I want to build 100 smart cities"—hoping to spread economic growth more evenly and enabling residents increased access to a wide range of public services. At the other end, smart cities are also viewed as spectres of Big Brother, of a surveillance society and an all-powerful government that perpetuates inequalities and social non-inclusivity. At a more basic level, there are concerns about privacy and security breaches, and the possibility of personal data landing in the wrong hands.

It is true that smart cities cannot operate without gathering data on citizens. However, privacy and security are less of a concern as most of the data used in the smart city context is anonymised meta-data that is used to track traffic conditions, bus routes, electrification, and other public utilities. As such this data is innocuous, and the benefits of convenience and security should certainly outweigh any unease of sharing personal data. Notwithstanding, as these technologies develop, we can and should invest in better regulation for how this data is used.

Protean Career

The increasing career risks associated with global volatility and shifting personal desires, as well as the reduced career rewards that come from specialisation and lower social mobility, threaten an individual's financial success and happiness. No current career strategy protects the individual from all of these potential negative impacts, or leverages them to benefit the individual.

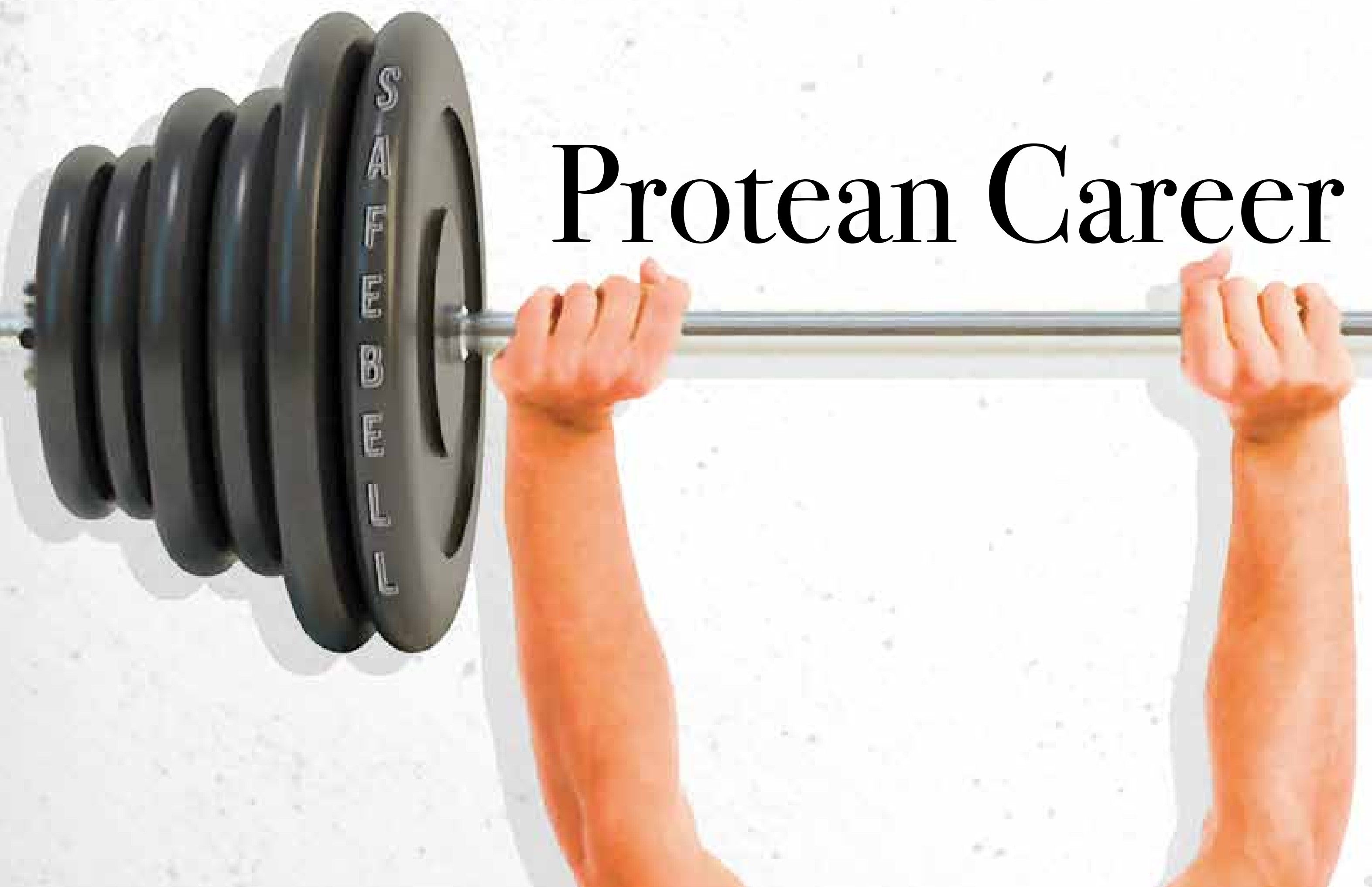
In this article, I review some common problems that afflict most people's careers, examine why current career strategies fall short and suggest a barbell career strategy as a new choice with the potential for higher rewards and lower risks.

The problem: current career strategies are not delivering success

Consider the following situation:

Don King[1] *was the head of HR for Asia Pacific in a large Geneva-based multinational. He was valued by the organisation, but was unhappy with his job and career. He then found a new passion: executive coaching.*

He took several courses, did numerous supervised sessions and became certified as an executive coach. During his spare time, he started to coach and soon he was able to sign up a few high-profile clients and earn lucrative fees.



The more coaching he did, the more excited he got and found himself pondering if he should just transition full-time into coaching. After all, if coaching worked out for him full-time, he would be extremely happy, while making very good money.

However, the more he thought of it, the more he worried about giving up his existing career and reputation, and the financial safety that came with it. He would be starting a new profession with no guarantee of success and quite a bit of pressure.

Don realised that the roller-coaster of an entrepreneur's life was probably not what he was looking for. But staying as a corporate executive seemed to doom him to a grey life of selling his soul for money and security, but no growth or happiness.

What was Don to do?

A career is a central part of an individual's identity, status, search for meaning, financial security, social network, personal growth and ultimately survival and happiness. And yet few career strategies seem to deliver on these goals. As such, an improvement in an individual's career can have a great positive personal impact, and an improvement in several individuals' careers may have an even larger positive societal impact.

The diagnostics: unstable risks vs. rigid rewards

Most individuals have been trained to think of their career as a steady state within an organisation, or a linear or vertical pattern towards upward mobility, with opportunities for hierarchical advancement and specialisation. Moreover, career management and success are seen as the organisation's responsibility and an external achievement. However, given growing marketplace disruption, such passive career strategies seem to be increasingly riskier and less rewarding than they once were.

Strategies

By Horacio Falcão

The barbell approach treats careers like an investment portfolio; a little diversification does you good.

INCREASED RISKS: UNSTABLE WORLD AND AN EVER CHANGING LIFE

Most individuals expect their careers to follow a linear path within an organisation. Most will want to stay, or will end up staying in the same organisation due to their expectations, fears, inertia or other factors. However, as the world becomes increasingly volatile, more external career 'disasters' such as corporate restructuring, globalisation and technological advances threaten career stability. As a result, employees find themselves forced to leave the company, or become commodities, and move away from the linear career path that traditionally leads to personal growth and financial success.

However, it is not just external threats that put jobs at risk. While our parents were content to work for salary and stability, individuals nowadays expect much more from their jobs. The new mantra is to seek jobs where one can find meaning or even fun. However, such intangibles may vary immensely for individuals, who may suddenly find themselves demotivated with their current jobs or linear career prospects. Besides, as interests and performance may not walk hand-in-hand, we may have successful individuals high in the organisational hierarchy who may be happier doing a more technical job as opposed to the more usually valued managerial responsibilities or vice-versa. As a result, such internal career misalignment can lead to an individual feeling like Don King in the situation outlined above.

REDUCED REWARDS: SOCIAL MOBILITY AND SPECIALISATION RIGIDITY

The old rewards that individuals could expect from a linear career path are also diminishing rapidly. A little under one century ago, as social mobility increased, a good education and job coupled with hard work and maybe a little bit of luck could lead to a successful career. Further, job specialisation allowed individuals to become experts within their organisations and claim higher rewards.

Specialisations operate as 'golden handcuffs' that prevent individuals from pursuing different careers.

However, the context has been changing for the worse and true social mobility is becoming increasingly rare. Piketty & Goldhammer (2014), in their book "Capital in the Twenty-First Century" made a strong, even if very contested, argument that in many countries capital is accumulating at levels pre-World War I.[2] The consequence is that wealth seems to be more the result of intergenerational inheritance than of hard work and intelligence. Consistently, most countries, including equalitarian societies such as Scandinavia, are creating an ever more entrenched upper class, thus reducing overall mobility and, more specifically, the potential of linear careers to generate upward social mobility.

On the other end, while high-level job specialisation can still command above-average rewards, it does so at what is being increasingly seen as a very high price: an expert becomes stuck within his or her expertise. As such, specialisations operate as 'golden handcuffs' that prevent individuals from pursuing different careers. Besides, the time taken to develop world-class expertise, as opposed to local-level, is potentially a decade or more and keeps on increasing, which makes developing a second specialisation a costly or an unrealistic endeavour. In a career where one would retire in their 50s, this was less of a problem—but people are now working well into their 70s and such interest shifts are more likely to happen. Additionally, the lifecycle of specialisations is becoming shorter, that is, few areas of specialisation reap abnormal rewards for extended periods.

The strategies: from fragile to resilient to anti-fragile

Nicholas Nassim Taleb (2012) recently coined the term anti-fragility in his book "Antifragile: How to Live in a World We Don't Understand".[3] He argues that anti-fragility, and not robustness or resilience, is the opposite of fragility. While the fragile breaks under stress, the robust or resilient remains the same. The anti-fragile does not break or remain the same under stress, but rather becomes stronger up to a certain extent.

Taleb argues that we cannot truly measure risk. Since risk lies in the future, we cannot perfectly predict it no matter how complex our instruments or how vast our data can be. Even if we studied an event for 200 years, who is to tell if a disruptive event does not take place every 201 years? Or worse, that a Black Swan event—a term also coined by Taleb to mean an unexpected event of large magnitude—will not take place? However, he argues that we can measure fragility. A strategy can be seen to be fragile, resilient or anti-fragile depending on how it potentially reacts to Black Swan or other majorly disruptive events. Now let us apply this concept to career strategies.

FRAGILE CAREER STRATEGIES

Fragile strategies dislike volatility, since volatility means change and change means the chance that a fragile strategy may fail. And since markets and individuals have become more volatile with time, linear or vertical career strategies have now exposed their fragility with significant dilemmas to individuals and societies alike. A fragile career strategy cannot deliver on its prior objectives, be it financial success, psychological success, a strong sense of identity, job security, growth, flexibility, satisfaction or individual happiness.

A strategy can be seen to be fragile, resilient or anti-fragile depending on how it potentially reacts to Black Swan or other majorly disruptive events.

RESILIENT CAREER STRATEGIES

By the late 1970s, scholars began to realise the drawbacks of linear career paths and started to research protean career strategies where the individual, not the organisation, manages his/her own career choices and the search for success is internalised (psychological success). As a result, protean careers tackle several linear career risks, but can be less attentive to financial success, status or other external goals which, especially under volatility, give individuals satisfaction and security. The most common protean career strategies are: self-employed, contract worker, boundary-less and portfolio career strategies.

According to the International Labour Organization, in most industrialised countries, part-time employment has grown from 25 percent to 50 percent of total employment over the last 20 years.[4] These workers are basically one-person businesses with no employees other than the owner-operator. However, most do not choose these as career strategies, but rather pursue them as stop-gap reactions to being laid-off or fired. While similar to entrepreneurial career choices, self-employed or contract workers suffer from a negative stereotype in that they do not create a company with a long-term view and several employees.

Boundary-less careers are like serial monogamists, where individuals with a 'free agent' mentality break the devotion to a single organisation in favour of hopping across organisations and jobs. They may build broader networks and enhance their marketability, as well as gain new skills, more work-life balance and control over one's own success. However, at any given time, individuals still have all their eggs in one basket and, by changing jobs often, may find it harder to build an expertise or a deeper network, engage in long-term professional projects or command a higher salary, while finding themselves in constant change, restart and redesign mode.

Individuals pursuing a portfolio career sell their skills and knowledge directly to several clients, thus creating a 'portfolio' of paid activities for themselves. Portfolio careers are different from other independent contractors, because they are committed to their portfolio as a long-term career choice, based on a specialised expertise and a unique identity.

While these career strategies are more resilient to volatility, they are not anti-fragile; partly because they operate as a spin-off from the linear career paradigm and thus are rooted in some of its fragile assumptions. Self-employed and contract (part-time) workers are basically a reactive response to the fragility of traditional career choices. Boundary-less workers often trade growth, depth and even financial security for diversity, while portfolio workers are experts potentially fragile to market shifts. These protean career strategies are clearly more resilient than traditional ones, yet in the presence of volatility they do not necessarily make the individual's career 'stronger'.

ANTI-FRAGILE CAREER STRATEGIES

Individuals cannot be expected to do the same job for 50 years and be happy. However, they can develop flow and a sense of happiness when doing something they are really good at. So the answer lies not in reducing expertise or specialisation, but in allowing multi-expertise to emerge.

How many 17- to 21-year-olds know what they would like to do in 30 years' time? How can anyone know what will be professionally relevant or lucrative 30 years from now? Anti-fragile career strategies avoid these questions by resisting the temptation to predict the unpredictable and by offering rational optionality so that individuals can adjust their careers as they gather more information. An anti-fragile career strategy also needs upward volatility or the chance that even if just a few odd events take place this positive volatility will create large gains.

> Anti-fragile career strategies resist the temptation to predict the unpredictable, and offer rational optionality so that individuals can adjust their careers as they gather more information.

The barbell career strategy

Taleb argues that an anti-fragile strategy is a barbell strategy, which, based on the shape of a barbell, combines two extremes, one safe and one speculative. Much like a diversified investment portfolio, the barbell strategy advises investing a lot in the safe option (which will give you steady returns and create a cushion for your risks), and a little in the highly speculative option (which could deliver very high returns on rare occasions).

Under linear or even protean career strategies, the individual takes either a safe or speculative path, depending on the nature of their job and organisation. If it is a start-up, the individual is speculating on the survival and success of the venture. If it is a steady job, the individual is playing it safe with a stable salary and guaranteed pension. That is what makes them either fragile or, at most, resilient strategies.

However, a barbell career strategy would mean that the individual takes two or more jobs simultaneously, where at least one will fall on the safe extreme ('Safebell'), and at least another on the speculative extreme ('Specbell'). In the example above, Don King does not need to drop his corporate career to pursue coaching exclusively with all of the romantic illusions and the very real risks such a choice entails. He can now opt for a barbell career strategy combining the mainstream corporate job, or a new one (Safebell) with a parallel, though smaller coaching practice (Specbell). Notice that the returns from coaching, or the Specbell, are not just measured in terms of financial success, but also in terms of psychological success, which can include diversity, personal growth and satisfaction.

Other hypothetical examples of barbell career choices might include that of Nur Zaidi, who as a corporate lawyer, found herself disillusioned after years of extreme hard work and personal sacrifice, just to find out that she did not make partner. After some thinking, she negotiated to stay in the firm as a senior counsel (Safebell), while being able to take three months off per year to work in an non-government organisation (Specbell) for a cause close to her heart under the pro-bono banner of the law firm. Another example is Barry Ratz, who as a banker moved into a financial services company (Safebell) and opened a bed and breakfast business (Specbell), which he subsequently grew into four establishments. Finally, Ulrike Smith, who has been a successful personal coach (Safebell) for years, recently started to write and sell customised songs (Specbell).

Choosing the right strategy: to barbell or not to barbell

With multiple career objectives, the barbell career strategy takes advantage of the potential convexity of market and individual volatility, social mobility and specialisation. For example, a barbell career choice can allow Barry Ratz to become a full time entrepreneur if his business takes off, Much like a diversified investment portfolio, the barbell strategy advises investing a lot in the safe option (which will give you steady returns and create a cushion for your risks), and a little in the highly speculative option (which could deliver very high returns on rare occasions).

but at only a small risk in case it does not. It can also allow individuals to change one Specbell for another, return to the Safebell with renewed interest and expertise, or just enjoy the anti-fragile combination of Safebell-Specbell.

A barbell career strategy also allows for the diversity, parallel development of multi-expertise and, in many cases, synergies between both ends of the bell. For example, Don King's new coaching expertise can help him better perform his corporate HR functions or Nur Zaidi's pro-bono effort can improve her law firm's image.

A Specbell can help those close to retirement maintain a sense of identity and purpose, independence, an active network, allow them to contribute to society and reduce the burden on the pension system. Similarly, a Safebell may free up individuals to become more entrepreneurial at lower cost, while opening more places at the top for youngsters to learn and grow within an organisation.

Managed well, barbell career strategies can provide a viable option in an environment of stress and volatility to make the individual's career 'stronger'—returning more of what the individual wants out of a career, be it financial or psychological success.

Yet the barbell strategy is not without challenges—the individual may find himself/herself juggling time between multiple jobs, incur transition costs, and create further work-life imbalances. However, individuals may in fact have more energy to do their Specbell and thus being able to find time which would be otherwise unproductive, such as TV time, to invest in it. Thus, Barbell careers can lead to increased focus and energy and make individuals happier and more productive, positively impacting their private lives.[5]

Some Safebells demand very fixed and potentially long hours or may present peak demands that make a Specbell virtually impossible during that period. In such instances, a barbell career strategy could find both jobs 'fighting for resources', namely the individuals' time, commitment or ideas. Such conflicts of interest, if poorly managed, can risk jeopardising one or both jobs, or even one's reputation.

Finally, we do agree that barbell careers are not for everyone. If you are the kind of person who either loves your job or is seeking to instil passion within your daily work routine; if your work or professional passions help to shape and define your identity; if you are someone who enjoys achievements and getting things done; if you feel fulfilled, rested, energised and satisfied because you are doing things that you like; then barbell careers may be for you. But only you can truly know, since barbell careers are all about experimenting and finding the right balance for you, and no one else!

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Using Digital Genomics to Create an Intelligent Enterprise

By Mario Domingo

Every business knows that it needs to leverage customer data, but few know the potential it has to transform business processes, decisions and performance.

We live on the cusp of a new age in machine intelligence. At no point in history has data processing been so affordable and algorithms, formulated years ago, so readily applicable to day-to-day problems. Today we have the capability to take big leaps in digital intelligence-driven business innovation.

Machine generated data is exploding. Big Data is a much-quoted term today, and more and more companies are looking for useful applications of the volumes of data they generate daily. Many enterprises also struggle with this trend, as traditionally they have not captured data that is generated in the course of doing business. As companies look for ways to differentiate themselves in their markets, efficiency in using Big Data has become a central basis of competition.

For businesses that are more data savvy, the dawn of new techniques in data mining and analytics is beginning to help them respond to their consumers' needs more accurately. Enterprises are also starting to use these technologies to enhance their value chain and internal operations to new levels of efficiency. Recognising its importance, telecommunication companies have become more guarded with their data as over-the-top (OTT) service providers (companies who emulate the subscription services of a telecom) like Viber, Line and WhatsApp look for ways to build a stronger bond with the same customers. By lapping up a rapidly growing share of loyal customers, Internet players such as AirBnB, Uber and Lazada are giving hotel chains, car rental companies and department stores with traditional business models a run for their money.

Traditional approaches in feature detection and data prediction that use modelling and optimisation are steadily being taken over by machine intelligence—allowing for multiple layering of knowledge and evolved learning—ultimately leading to more accurate insight for making business decisions. Digital genomics is a key tool in developing such intelligence.

Digital Genomics: Taking smart analytics to the next level

Genomics—the study of genes and their inter relationships with the aim of identifying their combined influence on the growth and development of the organism—dates back to 1995, when the first free living organism was sequenced using new computing tools by The Institute for Genomic Research.[1] Digital genomics, as the name suggests, gets its inspiration from concepts in natural science and applies it to the world of digital data. A digital genome, or profile of any person or object, is created through algorithms that encode hundreds of traits or characteristics of a person or object based on the digital content that has been left behind through interactions in the virtual world (refer to Figure 1).

Similar to deciphering a chromosomal map, much can be learned by first mapping digital trails and then merging them with transactional data to determine or identify the traits and behaviours of people and things that are most significant in particular situations or contexts.

Although the task seems complex, technological advancements in Big Data analytics—finding concealed patterns, correlations and commonalities within huge datasets, often with the aid of advanced Big Data platforms—make this possible. Advanced Big Data platforms work similar to the Insights tab for Facebook pages and the Insights feature of blogs, with enhanced functionality and the ability to make educated inferences about users from the patterns found within the data. The rationale behind their functions may be complex, but using them is easy.

Big Data analytics

In movies, secret agents and super spies are always after delicate pieces of information, whether it is for snooping on the plans of villains or preventing disaster. Remarkably, the same precept applies to a business that is getting to know its customers' tastes, preferences and spending habits, or trying to improve its processes to cater to the needs of those customers. As such, the concept of data on customer information is not new; businesses have always been generating, collecting and using information from their interaction with customers, both formally and informally. What is different today is that the volume, velocity and variety of this data have significantly increased with the ubiquitous use of the Internet and other machines that rely on sensors.

THE PROCESS OF CREATING A DIGITAL GENOME

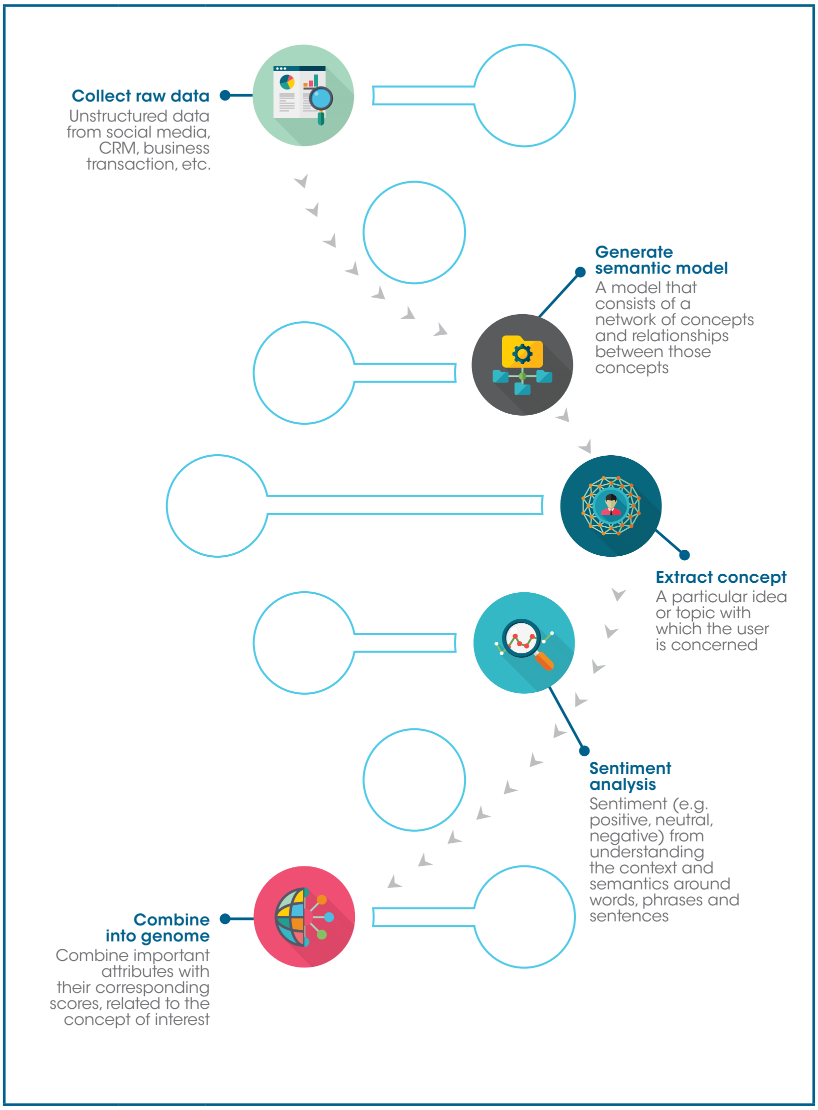

FIGURE 1

Source: Iloopp™ Natual Intelligence Solutions

A digital genome, or profile of any person or object, is created through algorithms that encode hundreds of traits or characteristics of a person or object.

Structured versus unstructured data: New techniques and vast opportunities

The data that we receive today is either structured or unstructured—structured data are those coming from transactions while unstructured data are generated from social media platforms and other websites. The majority of the world's data is structured, meaning that it appears in rows and columns and can be labelled. In recent times, however, there has been a rapid growth in unstructured, unlabelled data in the form of blogs, posts, texts, tweets, images, audios and videos.

While it is easy to recognise and interpret structured data, the same does not hold true for unstructured data. Unstructured data comes in many varieties such as images, video, audio, languages, and locations from GPS, iBeacon, WiFi and mobile networks. New technologies such as object and facial recognition, emotion detection, as well as advanced methods of classification are required to understand images and videos. There are similar issues with audio files where modern voice and language recognition along with inflection detection are needed to analyse sounds.

Converting unstructured data into structured and searchable forms is just the beginning of the problem for computers and analysts. The power of Big Data lies in the ability to collate, compare, analyse and interpret this rapidly accumulating heterogeneous volume of data to reveal trends and patterns so that it can be used in decision-making. The question then arises: Are there technologies that can help us?

Even until just a few years ago, we did not have the capability to efficiently and affordably isolate patterns and fashion data to fit a company's processes and audience. Owing to strides in technological innovation, some advanced Big Data platforms are now equipped with features that allow them to draw inferences that extrapolate from the gathered information. Big Data technology allows companies to analyse images and manipulate them to deliver a differentiated customer experience. For instance, Ikea allows its customers to download a mobile app that takes pictures of its products like furniture, and virtually position them in their living room as augmented reality. Simply put, these platforms do some of the thinking for you.

Digging for digital gold

I like to compare Big Data analytics to gold mining. We have a rich seam of gold deposits and we need to cut through the rocks and boulders and sieve

What makes Big Data 'big'?

Big Data is a term used to describe the availability of massive amounts of structured and unstructured data generated through business and social interactions. The **'three Vs'** that make data **'big'** are:

Volume

The sheer volume of data being generated today challenges businesses to determine its relevance and how to analyse it. The Internet has been a single most important contributing factor to this trend.

Velocity

Data is streaming in at unprecedented speed through multiple channels, with the total quantity of accessible data doubling every one and a half years. This triggers the need for businesses to react quickly to deal with bulks of incoming information in real time.

Variety

Data can be found in a variety of forms—documents, audio, video, e-mail, financial transactions, and social media, among others. This poses the difficulty of comparing apples with oranges, and businesses are faced with the challenge of collating, governing and merging the various types of data to be analysed and interpreted.

Source: SAS, "Big data: What it is and why it matters"

FACEBOOK: DYNAMIC ADAPTATION

One of the most evident uses of smart inferencing is the Facebook algorithm. This programme is responsible for what Facebook users see on their news feeds every time they check their accounts on a device. The algorithm is able to detect patterns in a user's behaviour by screening the friends and pages the user engages with frequently, the types of content the user responds to regularly, and the places the user is usually at or often visits.

For instance, when the algorithm detects that the user expresses interest in another user's posts, or begins to interact with another party more frequently, the news feed will begin to show more of the other user's content and activities, which are perceived as points of interest.

through the rubble to reach the gold buried underneath.

Today, social media is one the most significant digital resources for market-related information. Individuals share personal information and their likes and dislikes through their regular engagement with social media, be it on Facebook, Twitter or Instagram. When this information is organised and interpreted, useful inferences can be drawn about the interests, hobbies, dislikes and preferred brands of people who belong to a certain demographic (age, gender, location, etc). For a business looking to learn about its existing and potential customers, this seemingly mundane data becomes a wealth of actionable information to better target its customers, and the use of Big Data platforms makes this possible.

> The power of Big Data lies in the ability to collate, compare, analyse and interpret this rapidly accumulating heterogeneous volume of data to reveal trends and patterns so that it can be used in decision-making.

Take the example of an online news portal in the Philippines, which uses digital genomes to match reader preferences to content, generating customised news and advertisements for each registered user. In this case, a digital genome can be created in two ways. First, if the user registers with the news portal through Facebook, then the Big Data platform is immediately able to churn out a digital profile of the person based on Facebook content–personal details, photographs, locations, likes and dislikes, friend groups, etc. These data prompts are then matched to the news content. So, for example, under the health section of the news site, a nutritionist may receive news and features tailored around diets, recipes and alternate remedies, while a sports buff may receive articles on fitness and exercise. In case the user does not sign up through Facebook, the digital genome is created with the help of some personal details that are required at the time of registration and then, through a dynamic process, the genome 'learns' and enhances the profile of the user by tracking the type of content the user reads more frequently.

The potential of this technology for businesses is enormous. Digital genomics has become a powerful tool for marketers looking to better understand their customers and develop intimacy with them. A department store can use transactional and browsing data to profile a customer. For instance, a young lady buying infant clothes, white textiles and cotton swabs may be registered as 'pregnant' in the store's database. With this information, the store can offer customised products and promotions in the customer's virtual and non-virtual worlds, bearing in mind her budget, information on which is also gleaned and predicted from the price points of past purchases.

Tesco, the British grocery retailer, attributes its business success in part to insights generated through Big Data and advanced analytics. As early as the 1990s, Tesco used its loyalty card

> I like to compare Big Data analytics to gold mining. We have a landmine of gold deposits and we need to cut through the rocks and boulders and sieve through the rubble to reach the gold buried underneath.

as a tool to systematically collect and analyse customer data. The company has since, in addition, mined online and social media information, using a breadth of advanced analytics–encompassing more than 20 analytical tools–to support day-to-day decision making. Tesco's insight-driven commercial strategy has contributed to its performance: Since 2000, the retailer has improved its profitability every year, more than tripling its profits between 2000 and 2012.[2]

Individual digital genomes can also be re-processed and aggregated into group genomes. By understanding the interrelationships between individual attributes, cohort analysis can be done in order to create a deeper understanding of individual personas and how they relate to other personas. This is very helpful in designing group offers or member-get-member marketing campaigns (refer to Figure 2). Moreover, understanding the group sentiment and being able to influence that sentiment is an important step in managing social networks.

The applications of Big Data analytics goes beyond understanding the customer; it can be used internally to monitor operations data and offer suggestions on how to improve business processes–from how goods move through the supply chain to how operations are carried out on the factory floor and in the back offices. This is made possible by developing digital genomes for specific products, objects or functions. For instance, a company may be looking to reduce costs and improve the efficiency of its warehousing function.

UNDERSTANDING MARKETING SENTIMENT THROUGH COHORT ANALYSIS

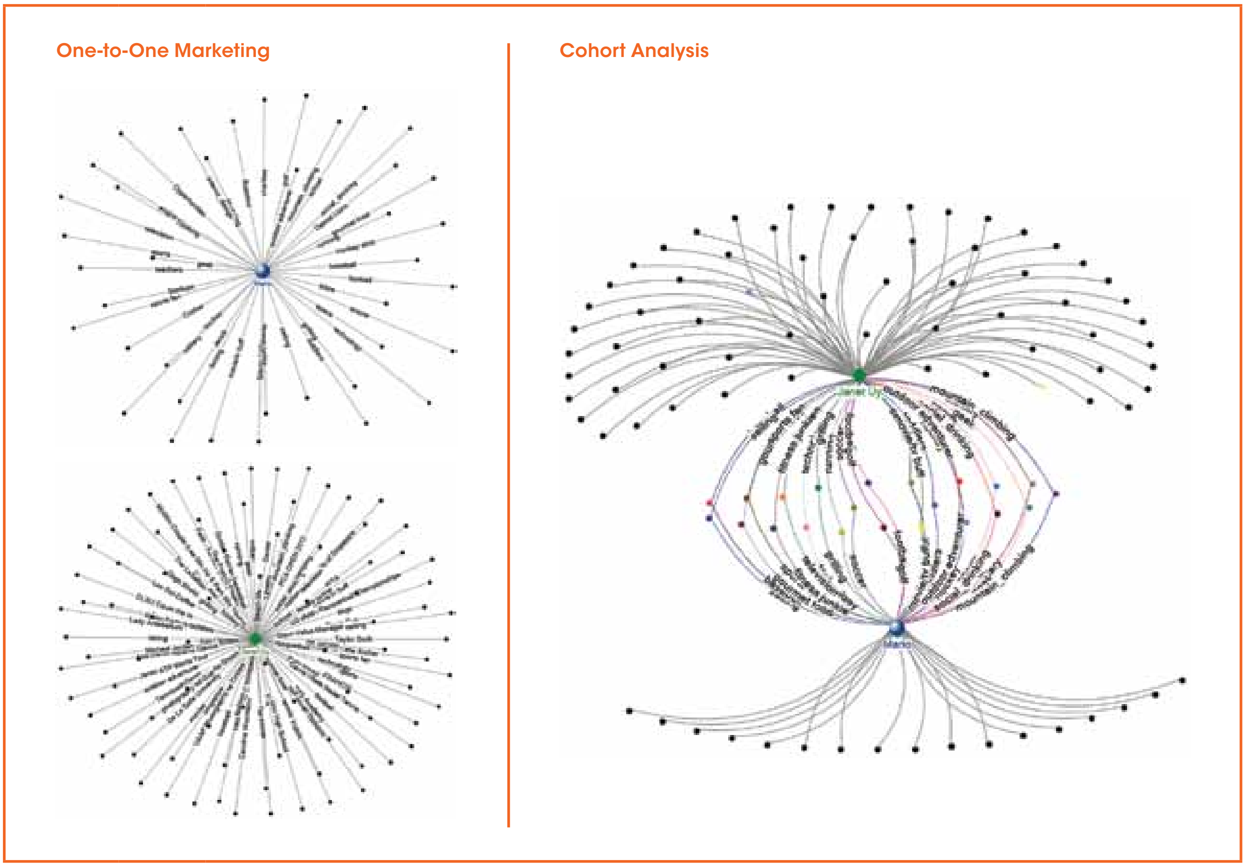

FIGURE 2

Source: Ilooopp™ Natual Intelligence Solutions

A digital footprint of the warehouse—which would include features such as the floor area, number of gallantries, pallets and forklifts, number of stock-keeping units, number of workers, as well as a schedule of movement of cargo, its frequency and timing—works wonders in understanding the existing processes and determining which processes could be improved upon, added or removed to enhance efficiency. The solution is equally relevant for seaports that track marine fleets and handle cargo shipments, as well as airports that deal with hundreds of flights a day.

Employers can leverage data analytics to understand not only the turnover rate of their employees, but also the reasons for their departure. Predictive analytics can also determine the length of time an employee is likely to spend with the company before leaving. The company, then, is able to structure programmes to prevent employee attrition, saving time and resources devoted to training. Given the same data combined with personality tests, companies can also hire better and more efficiently.

Digital genomics based on Big Data analytics have proven useful for different business models, spanning nearly every type of industry, be it telecommunications, airlines, marine, retail, or hotels and hospitality. Even governments have begun to leverage the masses of data they collect to build efficient, sustainable communities. Information is taken real-time, allowing users to act and react to any scenario. The Los Angeles Police Department uses data analytics to predict crimes and catch criminals red-handed. Adding Big Data to its operations has actually lowered the crime rate in the state. Similarly, digital threat maps are being used in the Philippines to improve response times in emergencies stemming from natural disasters.

> Companies such as Google, Facebook, Amazon and Netflix have grown to become among the largest and most valued businesses, primarily because of their understanding of a crucial truth that data is everything.

Building an intelligent enterprise

Information is the gold of the future. Already companies such as Google, Facebook, Amazon and Netflix have grown to become among the largest and most valued businesses, primarily because of their understanding of a crucial truth that data is everything. The functions of Big Data are versatile and can be adapted to address each market and each operation. Simply put, the proper use of Big Data will be a game changer for businesses as they begin to leverage it in sales and marketing, supply chain management, and other back-office functions.

Digital genomics is one of the frontier technologies in machine intelligence that is being applied to improving business performance. But this is just the beginning. The technological possibilities are illimitable. Further advancements in information technology will enable the use of even more sophisticated analytics and task automation. We have already seen the advent of smart drones and robotics, the gradual switch from artificial intelligence to natural intelligence, and the beginnings of deep learning solutions. These, I think, will be topics that we will have to address in the very near future.

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EXECUTIVE BRIEF

INNOVATION GOVERNANCE:

How proactive is your board?

Ten good board practices on innovation.

By Jean-Philippe Deschamps

All global business and technology trends point in the same direction: there is a need for more proactive and far-sighted management of innovation. Innovation for business reinforcement and growth, and transformation in particular, are, of course, the prime responsibility of top management. Innovation governance–a holistic approach to steering, promoting and sustaining innovation–is thus becoming a new management imperative.

Boards of directors, too, need to be more than just observers of this renewed management interest in innovation, because so much is at stake. In a growing number of industries and companies, innovation will determine future success or failure. Of course, boards do not need to interfere with company leaders in the day-to-day management of innovation, but they should include a strong innovation element in their traditional corporate governance missions, that is: strategy review, auditing, performance review, risk prevention and, last but not least, CEO nomination.

It is therefore a healthy practice for boards to regularly reflect on the following questions:

- To what extent is innovation, broadly defined, an agenda item in our board meetings?
- What role, if any, should our board play vis-à-vis management regarding innovation?

To facilitate their self-assessment, boards should answer a number of practical questions that represent good practice in the governance of innovation. I have put the following ten questions across to several board members, and surprisingly, only a small minority of directors stated that their board had adopted these practices. A lot therefore remains to be done to ensure that boards embrace their innovation governance role more proactively.

Here are the ten good-practice questions that I would ask:

1. Have we set an innovation agenda in many, if not most, of our meetings?

Board meetings are always crowded with all kinds of statutory corporate governance questions, without talking about the need to handle unexpected events and crises. So, unless innovation issues are inserted into the board agenda, they would not be covered. It is a good practice to include innovation as a regular and open agenda item in at least a couple of board meetings per year. It should also be a key item in the annual strategy retreat that many boards set up with the top management team. Many of the following questions will provide a focus for this open innovation agenda item.

2. Do we regularly review 'make-or-break' innovation projects?

In some industries, like pharmaceuticals, automotive, energy and aerospace, company boards regularly review the big, often risky innovation projects that are expected to provide future growth. They do so because of funding issues, and some of these projects may require extraordinary and long-term investments that need board approval. But in other industries, boards may be only superficially aware of the new products or services under preparation. Yet, I would argue that several projects that may be small in terms of investments could become 'game-changers', and it would be wise for the board to review them regularly in the presence of R&D leaders and innovators.

3. Do we regularly review and discuss the company's innovation strategy?

Boards are generally aware of, and discuss, the company's business strategy, particularly when it involves important investments, mergers and acquisitions, and critical geopolitical moves. But what about the company's innovation strategy (if it exists and is explicit, which is not always the case)? There are indeed important decisions that might concern the board in a company's innovation choices because of their risk level and impact. Think of the adoption of innovative new business models, the creation of totally new product categories, or the conclusion of important strategic alliances and partnerships for the development, introduction and distribution of new products. Management's adoption of a clear typology of innovation thrusts in its board communication would definitely facilitate such reviews and discussions.[1]

> Innovation governance–a holistic approach to steering, promoting and sustaining innovation–is becoming a new management imperative.

4. Do we regularly review and discuss the company's innovation risk?

Boards usually devote a significant amount of time to risk assessment and reduction. But their focus tends to be on financial, environmental, regulatory and geopolitical risk. Innovation risk may be underestimated, except in the case of large projects involving huge investments and new technologies. But internal innovation risk is not limited to new project and technology uncertainties. It can be linked to the loss of critical staff, for example. Innovation risk can also be purely external. Will competitors introduce a new disruptive technology that will make our products and processes obsolete? Will new entrants invade our market space through different, more effective business models? Will our customers expect new solutions that we have not thought about? Assessing innovation risk is critical to avoid what author Ravi Arora calls "pre-science errors"—underestimating the speed and extent of market or technology changes and, even worse, "obstinacy errors"—sticking to one's solution too long after markets or technologies have changed.[2] It is the duty of the board to prevent such errors.

5. Do we set specific innovation goals for management?

Boards often exert strong pressure on management by setting performance goals. But most of these goals tend to focus on financial performance: top and bottom line growth, earnings per share, capital utilisation ratios, etc. Some companies add other goals to focus management's attention on worthwhile new objectives, such as globalisation or sustainability. But what about innovation if it increasingly becomes a growth driver? A number of highly innovative companies have indeed included innovation goals in the CEO's balanced scorecard. One of the most commonly found is the percentage of sales achieved through new products, typically those introduced in the past few years. But there are many other innovation goals to incite conservative management teams to take more risk, for example, the percentage of R&D spent on high risk/high impact projects. Innovation goals are interesting because they actually determine much of the company's long-term financial performance. It is therefore good practice to discuss these goals with the management team and retain the most meaningful ones.

6. Do we review innovation management issues with the CEO?

Most sustained innovation programmes raise many issues. Some of them are managerial—how to keep innovators motivated and reward them? Others are organisational—how to decentralise our R&D to tap the brains of our international staff? Many deal with intellectual property (IP)—how do we practice open innovation while maintaining our IP position? Others deal with strategic alliances and partnerships—how do we share the efforts and risks of new ventures with our partners? And there are many more issues.

The question boards should ask is: Are we aware of the most acute issues that management faces as it steers the company's innovation programme? The board's mission is of course not to interfere and become too deeply involved in these innovation issues. However, its mission *is* to keep informed and help the CEO and top management team reflect on their options. This is why it is essential to keep a short open agenda item—'innovation issues'—in board meetings with a specific innovation agenda.

7. Do we expect management to conduct innovation audits?

Many companies embarking on a major innovation boosting programme rightfully start with an internal audit and, sometimes, a benchmarking exercise against best-in-class competitors. Where are we deficient in terms of strategy, process, resources and tools? Do we have the right type of people in R&D and marketing, and do we tap their creativity effectively? Do we cover all types of innovation, ie, not just new technologies, products and processes? Are our projects well-resourced and adequately managed? Are they under control? How good is our innovation climate? These audits are extremely effective for highlighting priority improvement areas, and it is therefore good practice for the board to suggest that management undertake such audits and keep them updated. These audits will provide the board with a rich perspective on the company's innovation performance issues.

8. Do we expect management to report on innovation performance?

This question is directly related to the questions on innovation goals (5) and innovation audits (7). Once innovation goals have been set and an audit conducted, it will be natural for the board to follow up and assess innovation performance. To avoid having to delve into too many details, innovation performance reviews should be carried out once or twice a year

CEOs often fall into one of two broad categories: *fixers* and *growers*.

on the basis of a reasonably limited number of innovation performance indicators.

Good practice calls for these indicators to cover several categories. A couple of them should be *lagging indicators*, ie, measuring the current result of past efforts—the percentage of sales achieved through new products being one of them. A couple of others should be *leading indicators*, measuring the level of efforts done today to ensure future innovation performance—for example, the percentage of the R&D budget devoted to high risk/high impact projects mentioned above. One or two others should be in the category of *in-process indicator*—the most usual measure being the percentage of projects managed on schedule and on budget. Finally, it is always interesting to include a *learning indicator* to measure the reactivity of management and its ability to progress on key issues.

9. Do we know and occasionally meet our main corporate innovators?

Nothing conveys a company's strong innovation orientation better than a visit by the entire board to the labs and offices where innovation takes place, both locally and abroad. Such visits, which are often carried out by innovative companies, have a dual advantage. They enable board directors to be aware of the real-world issues that the company's innovators face, and provide them with a good understanding of the risks and rewards of innovation. These visits also motivate the frontline innovators, who often lack exposure to top management.

10. Do we take innovation into account when appointing new leaders?

This last question is probably the most important. The nomination of a new CEO is undoubtedly one of the board's most visible and powerful contributions to the company. It can herald a new and positive era for the company if the capabilities of the CEO match the company's strategic imperatives. But it can sometimes lead to damaging regressive moves if the values of the new CEO are innovation-unfriendly. Management author Robert Tomasko notes that CEOs often fall into one of two broad categories: *fixers* and *growers*.[3] The former are particularly appreciated by boards when the company needs to be restructured and better controlled. But *fixers* often place other values and priorities ahead of innovation. *Growers* are more interested in innovation because of its transformational and growth characteristics.

This does not mean that boards should always prefer *growers* over *fixers*. There are times when companies require drastic performance improvement programmes and an iron-handed CEO is needed. The board should, however, reflect on the impact the new CEO will have on the company's innovation culture and performance. This is why it is so important to look at the composition of the entire management team. How many *growers* does it include and in what position? Will these senior leaders be able to counteract excessive innovation-unfriendly moves by the new *fixer* CEO?

To conclude, let's see what Bill George, the former CEO and board chairman of Medtronic and now a professor at Harvard Business School, wrote in his foreword to my book *Innovation Governance*, "To be successful, companies must be led by leaders—the CEO, top executives and board of directors—who are deeply and irrevocably committed to innovation as their path to success. Just making innovation one of many priorities or passive support for innovation are the best ways to ensure that their company will never become a great innovator."[4] I believe that the ten good practices listed above are undoubtedly a good way for boards to show their real, concrete commitment to innovation and its governance.

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This article belongs to a series of eight articles originally published on www.innovationmanagement.se. The article can be found on: http://www.innovationmanagement.se/2015/10/19/10-best-board-practices-on-innovation-governance-how-proactive-is-your-board/

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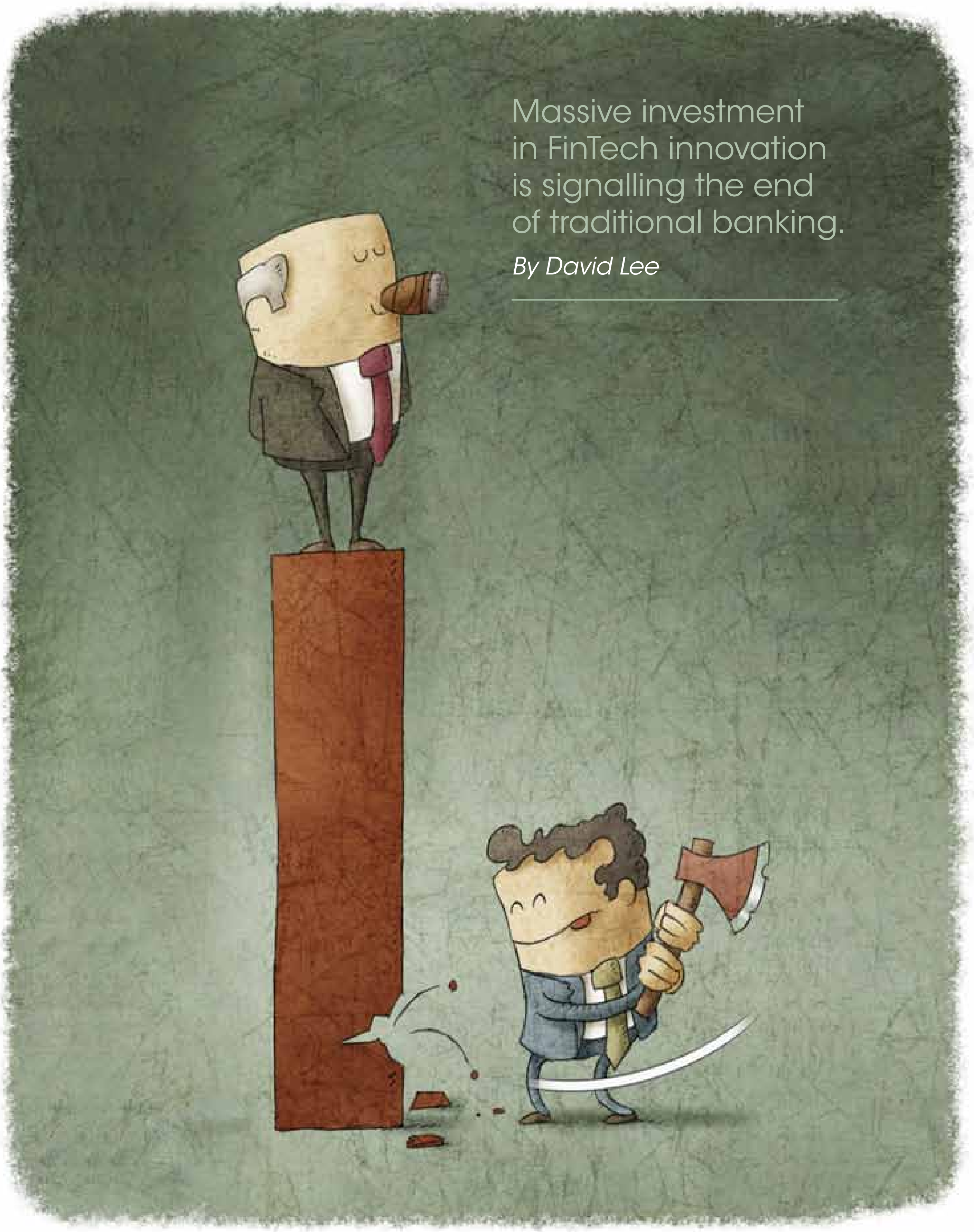
Massive investment in FinTech innovation is signalling the end of traditional banking.

By David Lee



On the edge of DISRUPTION

Innovative competitors operating on sleek business models and offering new alternative services are entering at the bottom of the market, where gross margins are low and latent demand is high.

Accelerating technological advancement in computerisation, communication and automation will increasingly displace jobs faster than labour markets can adapt. The result is persistent long-term unemployment. And given the inverse relationship between unemployment and inflation, there will be little rationale for policymakers to raise interest rates. In a low interest rate environment, fractional reserve banking loses its potency.

The financial system is on the verge of massive disruption. Innovative competitors operating on sleek business models and offering new alternative services are entering at the bottom of the market, where gross margins are low and latent demand is high. As these new entrants scale and progress through higher market segments, they will erode incumbent pricing power.

Financial services and banking still enjoy relatively robust margins, but this is more a function of regulatory protection than the actual value they create. Besides, they are tending to focus more on compliance and cost containment versus strategy execution. It's slow death.

Large, complex financial institutions—encumbered by tightening regulation, a silo mentality and burdensome physical infrastructure—are ripe for digital disruption. Google Ventures, Intel, Citi Ventures Asia and many others are investing heavily in FinTech start-ups: software and app-based companies primed to disrupt banks, fund managers and insurance companies through the offering of alternative financial services.

Growth in this area has been explosive. Investment in FinTech was US$34 million in 2003. In 2008 it was US$930 million. And by 2014, according to some measures, it was between US$4 billion and US$13 billion. The disruptive companies attracting this level of investment have certain characteristics in common.

Weapons of mass disruption

The world has become more volatile and uncertain. It used to be that companies with high margins were the most attractive destinations for capital, but the disruption is proving otherwise. These days, the most attractive companies are the innovative ones, with low margins but high potential for scalability, and a focus on customer stickiness rather than cash flow alone.

Mobile banking

There is already a lot of high-speed mobile broadband in the developed world, but in the developing countries penetration is still quite low. There is plenty of scope and opportunity here, and Google, Facebook and others are in a race to connect the last few billion people wirelessly to the Internet. The possibilities are profound when smartphones enter the equation.

According to The World Bank's 2014 Global Findex report, the worldwide percentage of adults with a financial deposit increased from 51 percent four years ago to over 62 percent today. But it is not the banks that are leading this change. Rather it is the telecom, Internet and e-commerce companies that are bringing banking services to the unbanked and the under-banked.

Traditional banks have left the financial needs of hundreds of millions of unbanked and under-banked people in low-income countries unmet because they were considered too risky and too poor. However, mobile communications technology has allowed massive networks to be built with extraordinary scale, which makes servicing these markets with low-margin models possible.

Telecom and Internet companies also face lower information asymmetry and risk versus banks when offering alternative financial services to the poor. For example, people may default on a loan, but they will always pay their phone bill. Access to a phone is essential. Safaricom and Vodacom, the two largest mobile network operators in Kenya and Tanzania, offer fee-based branchless banking services through M-Pesa: a mobile phone platform that can facilitate payments, money transfers, deposits and withdrawals communicated via text message. Cash withdrawals and deposits can simply be made through point-of-sale locations at vendors and kiosks. These kinds of added services further increase the stickiness of the customer.

Alternative finance in the payments, crowdfunding and peer-to-peer space is also largely unregulated—particularly when it comes to servicing the global poor. These are people who, in terms of consumer protection, were never really protected in the first place. They are considered consumers in a purely nominal sense. Also, alternative finance does not engage in fractional reserve banking, just banking-like services. All of this makes for very low compliance costs, which has helped these new services scale very quickly.

In Kenya, only five million of the country's 46 million people have a traditional bank account, but 19 million people have M-Pesa accounts—and this number is growing. Already M-Pesa has expanded into Afghanistan, India, South Africa and Eastern Europe. The competition is increasing too as more and more telecom and Internet companies are investing heavily in FinTech capabilities.

This rapid press for innovation on the part of FinTech companies and their investors is in stark contrast to the approach of the typical banking firm. FinTech firms innovate, explore, and recalibrate their offerings rapidly. On the other hand, the banking sector is plagued by a risk averse culture, dominated by amply staffed regulatory departments and a financial control ethos. None of these characteristics scream innovation or disruption.

Data is money

In April 2015, Singtel, a Singaporean telecom company, announced that it was accelerating its expansion into various digital lifestyle services offered throughout ASEAN (the Association of Southeast Asian Nations)—and since these services run on servers and software—they can be quickly scaled. When an app's functionality is dependent upon users being part of a group or community, where access to content requires user commitment, the switching cost for consumers becomes very high. The stickier the app, the richer the data it collects.

Digital services like iTunes, Skype and WhatsApp can create huge, captive user bases that generate enormous amounts of data. There is extraordinary value in this. In 2013, Facebook bought the start-up messaging service WhatsApp, with its 400 million active users, for US$22 billion, despite the acquired company earning a net loss of US$138.1 million that same year. These are 400 million users that could potentially be integrated into a FinTech platform. Logistics companies, which facilitate commerce and manage large swathes of valuable data, are being acquired for huge sums as well. In the new economy, data is money.

Beyond payments

Since 2012, the growth in mobile transactions has been impressive. What is happening now is that some of these e-commerce companies are moving beyond simple payment,

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delivery and settlement services. They are partnering with social media companies to provide lending, microcredit, investment products and more—they are even getting into insurance.

Alipay—a payment platform in China's Alibaba Group and the largest e-commerce company in the world—has over 300 million users; just under half of the total Chinese online payments market. The Tencent Group, owner of TenPay, another large competitor in the Chinese payments space, has subsidiaries in social media, digital entertainment, and mobile services. In February 2013, China's insurance regulator approved a joint venture between Alibaba and Tencent in a partnership with the country's top insurer, PingAn, to launch an online-only insurance company, ZhongAn. Less than two years later, on November 11, 2014, these giants would set an unprecedented record.

That record was set on China's biggest retail shopping day of the year, Singles Day. In that one day, Alibaba recorded sales of more than US$9 billion, over half of which was facilitated by Alipay. Bolstering these numbers were a total of RMB100 million (US$16 million) in online insurance premiums, from companies like ZhongAn, which sold 50-cent insurance policies covering package delivery. At such large scales, even the smallest margins become lucrative.

The new banking

Internet companies have an information advantage that provides them with an intimate understanding of the consumer. It paints for them a more accurate picture of a customer's potential financial risk versus what their more traditional peers can perceive. Because of this, these companies can disrupt the financial sector by lending and insuring at a lower cost. And given their inherent scalability with no need for brick and mortar branches, these reduced costs can be multiplied and passed on to millions of previously untapped consumers on a low margin fast-moving model.

Profit thus becomes secondary; FinTech companies grow by reaching out to the masses, diversifying service offerings and disrupting further up the value-chain. This attracts even more capital.

Alibaba has been offering low-cost loans to merchants for years. They have since branched out into micro-loans for consumers. Because transactions between buyers and sellers take place through an e-wallet like Alipay, Alibaba is able to quickly assess a company or individual's cash flow in real time. Low-interest rate loans of 30 days to a year are approved within 24-hours. A traditional bank would struggle to do that.

Consumer credibility can be analysed in very fine detail. Loan approvals can look through historical data where years of spending patterns can be observed. Not only that, but social networks in collaboration with FinTech companies can even evaluate the creditworthiness of applicants based on whom they associate with—and maybe, even what kind of content they search for and consume. This has mostly been used for small, short-term low-rate loans—but so far, default rates have been very low.

Democratisation—opportunity from the masses

Lending Club, an online peer-to-peer (P2P) lending service based in San Francisco, facilitates unsecured personal loans of up to US$35,000. Initially launched on Facebook as a social networking service, the company developed an algorithm to match potential lenders and borrowers based on social affinity factors like education, geography, professional background and social media connectedness. It has since incorporated more conventional risk assessment metrics such as credit history and debt-to-income ratios, and today has a default rate of 3.39%. The U.S. Federal Reserve reports an average consumer loan default rate of around two percent. Despite a slightly higher risk of default in P2P lending, Lending Club reports solid returns to lenders. Borrowers make monthly principal and interest payments for short-term loans, while investors have risk spread across multiple borrowers by lending in small US$25 tranches. The average net-annual returns to lenders yield six percent for 36-month B-grade notes.

Once again, compliance costs are low because Lending Club is not engaged in fractional reserve banking. Instead the lending process has been democratised. Borrowers get access to credit within hours and lenders earn returns in excess of most coupon rates. Lending Club profits through small origination fees of half a percent to one percent of the loan amount. As of 2015, it had issued 880,000 loans amounting to US$11 billion.

This has proved to be an attractive model for capital investment. In December 2014, Lending Club raised US$900 million in the largest tech IPO of 2014. In 2015 the company signed a partnership agreement with Google to expand lending services to small companies using Google's business services. It is also entering into partnerships with other companies to further expand into services such as car loans and mortgages.

A similar service, Capital Match, exists in Singapore and matches individual lenders to small and medium-sized enterprises. And companies like Estonian-developed, U.K.-based Transferwise are facilitating cross-border remittances for fees as low as half a percent whereas typical money transfer services charge fees of around five percent.

Transferwise can achieve much lower rates by crowdsourcing the funds flow, and in the process it bypasses traditional banking and payment networks. Instead of facilitating a direct transfer from a sender to a recipient, which involves a currency conversion, Transferwise reroutes payments from a sender to a recipient of another transfer, which is simultaneously taking place but going in the opposite direction. The disruption is happening from the bottom up.

Decentralising control

There is a powerful trend towards financial decentralisation—and eventually, towards a completely distributed financial system. Blockchain, for example, is a distributed database technology that makes a public ledger of transactions for cryptocurrencies like bitcoin possible. Each unit of cryptocurrency transacted is essentially a ledger file or block, which records an identifying address, a history of every transaction that the currency unit has experienced, and a digital signature unique to an individual's e-wallet.

This makes the entire cryptocurrency system transparent. But while every transaction is public, every wallet can be made anonymous. Within the system there are millions of nodes that confirm a transaction by verifying

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it against the blockchain database. Each node contains a complete or partial record of the blockchain. Confirming a transaction is computationally intensive as the record is enforced cryptographically. The system therefore relies on a swarm of computers distributed across a network of nodes to facilitate and record transactions on the blockchain. This keeps everything synced; a single transaction can be verified in seconds. It is analogous to collaborative real-time editing technology, which is how webpages like Wikipedia maintain their coherency while being edited and used simultaneously by multiple people.

The nodes in the system are the people and organisations, known as miners, which devote their computational resources to this activity. Anyone with a computer and Internet connection can become a miner, and miners are compensated for their computational resources by being issued new currency units from the system, of which there is an extremely large, albeit limited total possible number.

A currency unit can also be freely divided into smaller and smaller ratios. But as the number of transactions increase, the more demanding the computations to record and verify against the blockchain become. The value of the currency thus appreciates in accordance with its demand, which in turn attracts more miners. Inflation is kept in check by the limits of computational resources. In this regard, it is somewhat like commodity money.

Distributed systems such as this are more secure than centralised systems. Any attempt to hack the system would need to overcome the security protocols of every node. The cost to hack centralised systems is, in order of magnitude, less costly.

No single entity owns or controls a cryptocurrency system. It is self-regulating. New money is created collectively and transparently based on a publicly known set of parameters defined by the software. The function of a central bank has been democratised: with cryptocurrencies there is no need for clearing houses, or a custodial bank. The currency is held in an individual's unique e-wallet, from which transfers and payments can be made anonymously via a distributed cryptocurrency network.

Disruption from the bottom up

In Thomas Piketty's seminal work "Capital in the Twenty-First Century" (2013), he demonstrates that the rate of return on capital is greater than economic growth. People without assets are left behind. And as asset inflation continues, driven by quantitative easing targeted at keeping interest rates down, property prices get pushed up. This worsens the gap between rich and poor and reduces social mobility.

However, there is one type of asset inherent to all human beings—other than their labour—and that is the data they generate every day. Many companies profit off the data and content created by their users. So why should Mark Zuckerberg get all the money? There are alternatives to this. Gems, for instance, is a social networking and messaging app that rewards users with cryptocurrency based on their relative contribution to the network. Contribution is measured in terms of the number of active daily users that a user introduces to their network. Each user has a unique e-wallet from which currency can be transferred to and fro. While sharing user-generated content between friends in a network is free, advertisers must either buy or trade the Gems currency and pay that currency to individuals in order to advertise to them. Users thus take ownership and partake in the gains of the network in accordance with their own contribution.

A complete disruption of the financial system as it is known today is not that farfetched. The sharing economy is growing all the time—P2P platforms and cryptocurrency systems are ideal for facilitating this. In 20 or 30 years, there will be a decoupling of the new sharing economy from the current economic system. And that new economy may come to eclipse the current one, becoming the dominant economic system—a system in which control and ownership of the economy has been democratised.

So where will these new disruptors come from? And who will survive? Thus far, the companies that are attracting the biggest investments and the biggest IPOs today are those with inclusive business practices. Known by the acronym LASIC, these businesses are Low-margin, Asset light, Scalable, Innovative and Compliance easy.

Science fiction ramblings aside, keep in mind how fast things have changed in the last 20-30 years. There is clearly an acceleration of disruptive force. The world is now on the verge of the next big disruptive wave—and not just in banking and finance—other insulated sectors like education, government, medicine and law are beginning to experience this as well. There is no turning back in the brave new world of innovation.

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