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THE LAUDER GLOBAL BUSINESS
INSIGHT REPORT 2014

Rebalancing the Global Economy





Introduction

THE LAUDER GLOBAL BUSINESS INSIGHT REPORT 2014

Rebalancing the Global Economy

In this special report, students from the Joseph H. Lauder Institute of Management & International Studies examine current trends and recent developments shaping today's global marketplace.

The articles cover a wide variety of topics ranging from technology, innovation and brand building to infrastructure, entrepreneurship and social impact.

A section on consumer markets looks at the popularity of e-cigarettes in France and elsewhere, efforts by Japanese firms to expand their businesses into Asia, new trends in French gastronomy, changes in Japan's traditional food-consumption habits, and how a sector of the Chinese population is spreading, and spending, its newfound wealth.

The report offers an analysis linking market-driven strategies with social impact in Peru and Colombia, as well as an article describing South Carolina's embrace of innovative research. Other articles look at the Russian government's attempt to reboot the city of Skolkovo as an innovation hub, the mixed success of innovation efforts in China, and the growing threat of cybercrime to businesses across the world.

The challenges of infrastructure and planning are addressed in analyses of transportation in areas of Latin America, deficiencies in Brazil's infrastructure, and real estate's impact on Peru's emerging middle class.

Business and politics underpin a number of economic forces, as noted in articles on corruption and protest in India, social unrest in Brazil, the potential of the gemstone tanzanite to help develop Tanzania's economy, and growing frictions between China and Myanmar.

Cities on the move in the global economy are examined in separate articles on Casablanca's attempt to become an international financial center like Dubai, and Berlin's goal of becoming a world-class city. Another article showcases Medellín, Colombia, to explain how local government can help cities become more innovative and attract foreign investment.

And finally, entrepreneurship continues to flourish around the globe, as described in articles analyzing business creation in France, the unique role of entrepreneurs in China's economic resurgence, and the challenges that face those trying to start a company in Brazil.

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E-cigarettes: Lighting Up in France and Beyond

The popularity of electronic cigarettes (e-cigarettes) has exploded internationally, particularly in France, where smoking has long been part of the social fabric and culture. Both longtime and new smokers have gravitated toward this innovative device-drug combination, which costs significantly less than traditional cigarettes and benefits from a smokeless and odorless technology. Many claim that e-cigarettes' noncarcinogenic liquid-vapor-based formula demonstrates a health profile superior to that of conventional cigarettes.

However, product characteristics vary significantly, owing to the market's rapid and unregulated development, and medical experts express uncertainty about long-term health implications. The rapid rise of the global e-cigarette market — which registered global sales CAGR (compound annual growth rate) of 57% between 2010 and 2012 and is expected to be worth around US\$2 billion by the end of 2013 — has eaten into the broader tobacco market and prompted calls for government regulation. This research explores the sociocultural, economic, and political implications of e-cigarettes' growth in France and internationally.

E-cigarettes have been around longer than most people realize. The first was “a smokeless non-tobacco cigarette,” invented and patented by American Herbert A. Gilbert in 1965; however, his device was never commercialized. Hon Lik, a Chinese pharmacist, invented the present-day e-cigarette, introducing it to the Chinese market in 2004 and expanding sales internationally in 2006. Lik's legacy continues today; among the more than 400 e-cigarette device and component manufacturers worldwide, the majority are Chinese.

At the core of the device is its atomizer, a technology that heats a nicotine-infused propylene glycol liquid, converting it into a vapor (hence the verb “to vape” and the appellation *vapoteurs* given to product converts in France) that users inhale through a plastic cartridge

mouthpiece. The device is powered by a lithium-ion battery, which is rechargeable through a USB port, an AC wall outlet, a car adapter, or a portable charging case.

E-cigarette liquids (also known as e-liquids) are sold separately from the device in the form of disposable glass or plastic vials. E-liquid solutions lack the tar, arsenic, and carcinogens associated with tobacco and are available in varying nicotine concentration levels, ranging from 0 to 24 milligrams per milliliter of solution. France's *vapoteurs* can choose from hundreds of flavors. Selections available across Paris boutiques include e-liquids replicating the tastes of American tobacco, exotic fruits, mojito cocktails, and even bubble gum.

A Novel (and Healthier) Alternative?

While noncombustible e-cigarette technologies represent an innovative break from the past, manufacturers have mimicked the habitual smoking experience associated with conventional cigarettes. Even though e-cigarette devices are visibly different from paper-enveloped tobacco, their functionality is imitative. Although some emit a light, odorless mist, all atomizers are smokeless, thus preventing the risks of “secondhand” inhalation. Many devices are tipped with an LED light that glows like burning ash, and select products simulate the noise associated with the puff of a traditional cigarette. Most of all, e-cigarettes provide the routine hand-to-mouth gesture that smokers crave.

After vaping an e-cigarette for the first time at a Paris boutique, a woman who describes herself as “a social smoker” stated: “I have the sensation that I am smoking a real cigarette, but without the bad smell.” She is just one example of France’s many e-cigarette converts who suggest that the product is a game changer, successfully bridging the gap between traditional cigarettes and nicotine-based alternatives (such as gum, patches, and other smoking cessation tools).

Yet significant concerns remain regarding the safety of the devices’ evolving delivery technologies. There have been incidents reported of defective e-cigarettes exploding as the result of battery and electrical-charge defaults, causing second-degree burns to the users’ faces. Likewise, the discovery of toxic chemicals in the devices has raised questions about quality control at factories. Furthermore, given inconsistent technical specifications and lack of regulation for marketed devices and e-liquids, nicotine and chemical concentration levels in the inhaled mist vary across products.

Given the novelty of e-cigarette development, the variability of marketed products, and the limited, partial, and contradictory nature of clinical research findings to date, it is difficult to evaluate the health repercussions of vaping in the short term, much less the long term. The World Health Organization (WHO) has cautioned that, until national regulators have endorsed the safety and effectiveness of e-cigarettes, “Consumers should be strongly advised not to use any of these products.” A May 2013 study conducted by the German Cancer Research Center suggests that the devices’ substances may cause airway irritation and allergic reactions among users, although the breadth of potential health consequences are yet unknown. The fact remains that the nicotine content in e-cigarettes is addictive, and excessive intake of the substance may result in overdose or poisoning.

While e-cigarettes do not produce the tar, arsenic, or other cancer-causing toxins associated with conventional cigarettes, the jury is still out as to whether they are the lesser of two evils. Today, smoking remains the leading cause of preventable mortality in France, with an estimated 73,000 deaths each year. France’s National Institution for Prevention and Health Education

estimates that tobacco costs the government more than €47 billion (US\$63 billion) annually in terms of health expenditures, prevention campaigns, and loss of income and productivity.

Even though the harmful health consequences of conventional cigarettes are widely accepted, some current smokers express reluctance to transition to an electronic equivalent. As one French smoker of 32 years suggested, “I have not and do not plan to test e-cigarettes. I try to avoid putting chemicals in my body, and I still do not know which substances are in that liquid.” In its Tobacco-Related Health Fraud Policy, the U.S. Federal Drug Administration (FDA) states that, “to date, no tobacco products have been scientifically proven to reduce risk of tobacco-related disease, improve safety or cause less harm than other tobacco products.” France’s most authoritative report to date, published in May 2013 by the French Office for Tobacco Prevention (OFT), provides an alternative assessment: “If properly fabricated and used, the e-cigarette presents significantly less danger than the cigarette, but its dangers are not entirely absent.”

Despite its many novel properties, significant concerns remain regarding the safety of the devices’ evolving delivery technologies.

Beyond current questions regarding health implications, medical experts are now assessing whether the e-cigarette is simply a tobacco alternative or something that may be utilized as a smoking cessation tool. While some *vapoteur* converts consume e-cigarettes at levels consistent with their habitual nicotine-usage patterns and express no ambitions to quit, many others have transitioned methodologically to e-cigarettes in order to eventually quit altogether, developing tailored programs to gradually reduce nicotine intake levels (sometimes to nothing). “Many of our clients suggest e-cigarettes also reduce cravings and withdrawal symptoms, thus leading them to cut down on nicotine intake,” suggests Xavier Lebigot, the manager of Vapostore, an e-cigarette boutique in Paris’ 6th Arrondissement.

In a June 2013 report, the British Royal College of Physicians recommended that e-cigarettes “be made available as part of a harm reduction approach to tobacco.” Likewise, the OFT report suggested that, “among smokers addicted to tobacco, e-cigarette tobacco replacement should in theory help reduce risk and damage.” A 2011 survey-based study in *The American Journal of Preventive Medicine* indicated “that e-cigarettes may hold promise as a smoking cessation method and that they are worthy of further study using more-rigorous research designs.” In September 2013, *The Lancet* published results of a six-month randomized trial of current smokers to compare the efficacy of nicotine e-cigarettes, nicotine patches, and placebo e-cigarettes. Ultimately, the study concluded that e-cigarettes are modestly effective in supporting smoking cessation and are statistically comparable to nicotine patches. However, discord and uncertainty remain regarding the efficacy of e-cigarettes in reducing nicotine dependence.

While the vast majority of today’s *vapoteurs* have transitioned from traditional smoking, many e-cigarette critics express concerns that the devices may serve as a path to dependency for the next generation of smokers. French health officials fear that their *à la mode* status, colorful advertising, and exotic vapor flavors might induce young people, women, and the unemployed to start smoking. In a 2012 survey of more than 3,400 Parisian schoolchildren, ages 12-19, more than 8% indicated that they had tried e-cigarettes, two-thirds of whom were nonsmokers.

In France, where economic woes and high unemployment have taken a toll, many *vapoteurs* also cite financial reasons for their transition from traditional cigarettes to e-cigarettes. French federal tax reform has increased tobacco prices, and the average monthly cost of smoking one pack of cigarettes daily is more than €200 (US\$265). E-cigarettes, on the other hand, cost less than half this amount. Many e-cigarette users opt to purchase starter kits, which include a battery, a charger, and a range of atomizer-cartridge ensembles, at a cost of €90 (US\$120). Each e-liquid vial, the equivalent of 400-500 puffs (between one and three cigarette packs), costs €6 (US\$8). As an alternative to e-cigarette kits, some *vapoteurs* use disposable devices, which cost €10 (US\$13), also have a lifespan of 400-500 puffs, and are fully discarded upon depletion.

Growth of a Multibillion-dollar Global Industry

According to Linarch and Citigroup analyst estimates, worldwide e-cigarette sales grew from US\$461 million in 2010 to more than US\$1 billion in 2012, representing a CAGR of 57% over the period. By the end of 2013, the global market is projected to be worth approximately US\$2 billion. This robust growth trajectory is expected to continue in the near-to-medium term, with about US\$3.3 billion in sales by 2015. Wells Fargo industry analyst Bonnie Herzog suggests that worldwide sales could exceed US\$10 billion by 2017. Other analysts propose that e-cigarette sales could surpass traditional cigarette sales within the next decade.

In 2012, French e-cigarette sales reached €40 million (US\$54 million), a figure that is expected to more than double to €100 million (US\$134 million) by the end of 2013. A closer analysis of French e-cigarette usage habits, undertaken by the OFT and commissioned by the government, reveals similar growth. In France in mid-2013, more than one million individuals considered themselves to be “regular” users of e-cigarettes, compared with 500,000 at the end of 2012. However, e-cigarette smokers represent only a fraction of the 14 million traditional smokers in France, underscoring the significant potential for the devices.

In the early days, e-cigarettes were sold exclusively through e-commerce channels. Over time, online retailers turned toward a brick-and-mortar model to allow consumers to experience the product firsthand. Today, there are approximately 100 dedicated e-cigarette boutiques in Paris alone and more than 500 stores in all of France. According to OFT estimates, this number is expected to double by the end of 2013. Moreover, additional sales channels are now trying to benefit from the growing market. France’s tabacs (convenience stores) are now selling e-cigarettes to compensate for the decline in traditional cigarette sales and have even proposed plans for exclusive rights to device sales. Today, points of sale are as wide-ranging as pharmacies, tanning salons, and consumer-electronics stores.

According to the FDA, there are more than 400 manufacturers of e-cigarette devices and components worldwide. Joyetech, a Chinese manufacturer established in 2007, is the world’s leading device and e-liquid manufacturer. Until recently, e-cigarettes were

manufactured exclusively in China; however, some production has since shifted abroad, including to the U.S. and France.

Amid growing e-cigarette sales, tobacco and pharmaceutical firms are now trying to assess their competitive positions in the evolving nicotine-containing-product (NCP) landscape. Large tobacco players have entered the e-cigarette market by acquiring existing brands (e.g., Lorillard's April 2012 purchase of Blu, the largest American e-cigarette manufacturer) and by launching their own e-cigarette products (e.g., Altria's launch of MarkTen in the U.S. and British American Tobacco's launch of Vype in the UK). This surge of interest from Big Tobacco raises two pertinent questions: Do investments in e-cigarettes represent a strategy to stave off potential competition, or do tobacco companies believe that e-cigarettes are the market's future?

In an interview with the *Financial Times*, Nicandro Durante, the CFO of British American Tobacco, claimed that the size of the market for tobacco alternatives could account for as much as 40% of the company's revenues (US\$24 billion in 2012) in 20 years. Thus far, pharmaceutical companies, whose smoking cessation products have already been challenged by e-cigarettes, have lobbied for the regulation of the devices, rather than establishing links with the emerging industry.

A Regulatory Enigma

The current regulation of e-cigarettes remains blurred across geographies. In some countries, including the U.S., e-cigarettes are regulated neither as tobacco products nor as medical devices, although they share qualities with both categories. However, in the European Union, Brussels recently rejected a proposal to treat e-cigarettes as medicinal products. As a result, e-cigarettes are categorized by default as recreational products in most countries, including France. Because the products remain largely unregulated, they are not subject to health and safety standards or to the excise taxes usually applied to alcohol and tobacco products. Likewise, the marketing standards for e-cigarettes are inconsistent globally. E-cigarette retailers in France once advertised via the Internet, newspapers, and radio. However, in October 2013, the European Parliament

voted to apply the same marketing standards and advertising rules that apply to conventional cigarettes, given that e-cigarettes evoke the act of smoking.

In light of the current regulatory environment, the French government recently took steps to manage the unprecedented growth of e-cigarettes. In May 2013, Marisol Touraine, the French Minister of Health, suggested establishing "the same laws for electronic cigarettes as for regular cigarettes," owing to their nicotine content, potential as a gateway to smoking, and health repercussions. In June 2013, the French government prohibited the sale of e-cigarette products to minors. A new law banning public e-cigarette consumption is also under consideration; unlike traditional cigarettes, e-cigarettes are not currently banned in public places. One Parisian *vapoteur*, who previously smoked one pack of cigarettes a day, suggested that the dearth of French regulations render smokeless e-cigarettes the obvious choice: "Unlike cigarettes, I am not limited to smoking outdoors. I can vape inside shops and cafés, my office, and even the Metro."

Despite the tremendous growth in e-cigarette consumption, the market outlook remains vulnerable to several forces. Consumers continue to adopt the e-cigarette both as a smoking cessation tool and as a less expensive and healthier nicotine alternative. Given currently available clinical data, medical experts largely agree that e-cigarettes are less toxic than traditional cigarettes and eliminate the risks of secondhand inhalation, even though their long-term public health implications remain unclear. Likewise, governments are grappling with how to regulate a nascent industry's products, retail distribution, public usage, and promotion. Finally, competitors in the tobacco and pharmaceutical industries are confronting declining product sales while determining how to profit from the e-cigarette market's unprecedented growth. Despite the uncertainty surrounding the market's evolution, e-cigarettes continue to build on their successful growth as they gain global momentum.

This article was written by Akshay Jashnani and Allison Silverstein, members of the Lauder Class of 2015.



Asia or Bust: Why Japanese Firms Must Succeed in Asia to Survive

As Japan's economy grew significantly from the 1960s through the 1980s, Japanese firms across all industries relied heavily on increasing domestic consumer spending and exports to the U.S. and Europe. Following the collapse of the economic bubble in the early 1990s and the lost decade (some would argue two decades) that ensued, it has become clear that these firms must increase sales in Asia's developing markets if they are to survive, let alone thrive.

However, many Japanese firms today are not operating in ways that are conducive to success in developing markets and emerging economies. Since Japan became an economic power, top Japanese firms in industries such as consumer electronics and automobiles entered the American market, stressing an image of high-quality, safe products. Once the yen began to strengthen post-bubble, this image was accompanied by another of high prices when compared to competing products from other countries. For consumers such as those in the U.S. or Western Europe with a great deal of disposable income, this high cost has not been a deal-breaker. In the developing markets of Asia, however, this business model is often problematic because “consumers aren’t willing to pay extra for the features in Japanese products,” according to Masataka Oka, a professor at Waseda Business School.

Oka notes that Japanese firms face three major challenges in appealing to consumers in Asia’s developing markets. First, their knowledge of local markets is generally quite poor. Compared to foreign competitors, Japanese companies are often unaware of the features local consumers will pay for and those they do not need. As a result, these firms, particularly in the consumer electronics industry, bring to developing

countries’ markets the same expensive products with unwanted features, leading to disappointing sales.

Second, Japanese firms tend to share knowledge and conduct R&D outside of their home country far less than their competitors do. Some of this is due to the language barrier, but knowledge sharing can be improved immensely if even a few non-Japanese voices are added to a company’s top management, as will be seen below in the discussion of Nissan’s strong performance. As Oka states, “This lack of global knowledge sharing hurts Japanese firms’ ability to learn from past successes and failures outside the country.”

Finally, despite Japan’s substantial investment in R&D spending, a culture of true innovation is often lacking in Japanese firms. According to Oka, burdensome and systematic rules at major Japanese firms significantly reduce the range of opportunities for developing innovative products. Encumbered by an employee-management system that generally does not reward merit or individual performance, firms often devote their R&D efforts to making minute changes and improvements to products that are fundamentally obsolete. This so-called “Galapagos effect” results in Japanese cell phone manufacturers, for example, continuing to produce flip phones for the domestic

market. The R&D outlay used to develop these products would have been better spent on generating next-generation smartphones that could compete with those of Samsung and Apple.

These problems affect some Japanese industries much more than others, including the consumer electronics industry, which has faced significant headwinds, and the automotive industry, which embraced globalization earlier and to a much greater degree, resulting in tremendous success. An analysis of these industries identifies past mistakes Japanese firms should avoid as well as best practices that can be leveraged to ensure the firms' future success in competing globally.

Struggles and Opportunities in Consumer Electronics

The Japanese consumer electronics industry's fall from grace has been well-documented in recent years. In fiscal year 2012, Panasonic and Sharp experienced losses totaling more than ¥1 trillion (US\$10 billion), while Sony eked out its first profit in five years, thanks in large part to a weakening yen. As the Japanese domestic market remains flat, firms across the industry see global expansion as the key to regaining profitability. As a consequence, expansion into Asia is now receiving much more attention.

In 2007, 25% of Sony's global revenue came from the U.S. and 26% from Europe, while another 26% came from all other regions outside Japan. Since then, the distribution of the company's revenues has changed dramatically. Revenue from the U.S. and Europe has fallen to 16% and 20% of the total, respectively, while revenue from the Asia-Pacific region in particular is growing very quickly. In fiscal year 2012, a full 19% of Sony's revenues came from the Asia-Pacific region, and since 2007, the company has added China and India to its list of geographic regions of particular interest, in addition to the U.S. and Europe. These facts demonstrate that Sony has recognized the global economy's shifting polarities, with Asian markets deserving major attention.

Sony's annual report for 2011 included a special feature on emerging markets, emphasizing the importance of Brazil, Russia, India, and China. Among these emerging markets, Sony has built software-development facilities

only in China and India, showing the special importance the firm places on these countries. Yet, when compared to other consumer electronics firms operating in the region, Sony comes up short. It still faces major problems in competing with local Chinese companies to gain a customer base. Indeed, Sony is far behind the top five firms in smartphone sales in that country.

Japanese firms continue to spend a great deal of money on generating new technologies and earn a tremendous number of patents each year.

According to Keigo Sugimoto, a project leader in Sony's product planning and marketing division, with the exception of Apple, brand does not matter to Chinese consumers. This situation makes it very difficult for firms such as Sony to compete. In Japan and in the West, consumers value the Sony name and, to some degree, will pay a higher price for the company's products because they believe them to be of higher quality.

According to Sugimoto, there are two main types of customers in China: those who want and can afford high-end brands such as Apple, and those who want but cannot afford these brands. Sony is currently not attractive to either of these groups because it wants to charge brand-level prices but is not viewed as such by the market. It is still uncertain whether the company can gain a strong foothold in the Chinese market.

Sony's situation is somewhat better in India, where it enjoys a high brand value. In 2012 it had the number one market share for flat-panel TVs, digital cameras, and laptops. In the mobile phone market, however, it is still struggling. A 2013 survey by *Voice & Data*, an online magazine that compiles data on the Indian telecom industry, found that Sony has not cracked the top five in mobile phone sales. Even domestic Indian companies such as Micromax Informatics and Karbonn Mobiles have gained market share at Sony's expense. The firm's struggles to sell some of its high-tech products in China and India raise questions about its approach to developing its products.

Understanding What the Customer Wants

Sony CEO Kazuo Hirai once said that his company sometimes becomes the victim of its own success. In the past, the company developed products such as the Walkman and camcorder without thoroughly vetting consumers, yet the products were very successful. This has led Sony's current employees to believe they can repeat these successes, which has not been the case. While few doubt the ability of the company's engineers to develop products in their research labs, far from the actual consumers, companies such as Samsung have spent a great deal of time and effort to learn first about consumer's needs before developing products.

In 2004, Samsung launched its regional specialist program, in which young employees are sent to countries the company has not yet commercialized specifically to learn about and understand potential consumers' needs. This program has guided Samsung's engineers significantly in developing successful products.

Sony has completely neglected this approach. Employees are sent on short business trips for exactly the same purpose. The end result, however, is very different. As Sugimoto notes, "The findings of these short trips are not exactly customer insights. They are just a collection of customer requests." Sony's approach involves *interviewing* the locals, while Samsung believes in *observing* the locals, which produces a much better end result.

At Sony, most of the ideas related to products are developed in Tokyo. The sentiment among some of its engineers is that the company is not properly leveraging the strength of its R&D centers in China and India. According to Rajkumar Waghmare, an Indian engineer who has worked at Sony's headquarters in Tokyo, "Only after an idea matures enough to become ready for implementation is it off-shored to R&D centers in India and China." Products that are developed entirely at off-shore locations are few and far between. As a result, the company is unable to properly incorporate local needs and wants that can be identified by engineers in these regions. Unlike Apple, which makes each product for the entire world, Sony makes hundreds of different products for various markets and cannot afford to ignore the wants of customers in its fastest-growing ones. Samsung's approach of leveraging its employees'

ideas outside its home country has produced very strong results so far; it remains to be seen whether Sony will apply these techniques for its own product development.

Observers suggest that Sony realizes the importance of generating higher revenue from the Asian market. Japanese firms continue to spend a great deal of money on generating new technologies and earn a tremendous number of patents each year. If Japanese consumer electronics firms can combine their technological prowess with a stronger knowledge of customer desires and produce new products that their foreign customers want, there is tremendous potential for global growth.

Strong Performance from the Automotive Industry

In contrast to the consumer electronics sector, Japanese firms in the automotive sector have performed quite well in the Asian market. Toyota and Nissan stand out as having embraced globalization and Asia's potential most aggressively. The Asian market accounts for about 40% of global sales for Toyota and about 35% for Nissan.

Toyota, the world's largest automaker, was forced to reorganize its corporate structure and management after its traditional style proved to be outdated. This reorganization was based on the increasing importance of emerging markets for the company's sales. Business units now include one for developed markets and one for emerging markets such as China, Indonesia, and Latin America. In addition, Toyota has appointed three outside board members for the first time and chosen non-Japanese CEOs for its divisions in the U.S., Africa, Latin America, and Europe in order to benefit from the more global knowledge base that many of its competitors lack.

In 1999 Carlos Ghosn, COO of Renault, was appointed CEO of Nissan, following the French company's takeover of the Japanese firm. Ghosn played a key role in steering the company back to growth through his "Nissan Revival Plan" (NRP), which is recognized by many as one of the most spectacular corporate turnarounds in history. The feeling across Japan is that only a foreign CEO could facilitate such a sharp corporate transformation.

Nissan has made significant changes to its corporate culture and management. Ghosn disliked the company's inefficient corporate communication style and launched a cross functional team (CFT) to facilitate more direct

and reciprocal interactions between departments and senior management. Each department selects its own CFT representatives, who work together within this new, smaller, and more efficient group to network more effectively without any departmental barriers. Captains within the CFT also report directly to Ghosn, eliminating the bureaucratic chain of command that is all too common in Japanese firms. This unique management approach has opened up Nissan's traditional Japanese corporate culture, removed unnecessary politics, and led the firm's communications to become brighter and more transparent. It should be noted that these recent changes by Toyota and Nissan have not yet been applied by their Japanese competitors in countries such as South Korea or China.

The Importance of Global Operations in the Automotive Sector

For many years, Japanese automobile manufacturers have earned significant revenues across the globe and embraced the potential of Asia's developing markets long before Japanese consumer electronics firms did. Toyota, in particular, has worked diligently since the 1960s to grow its operations in Southeast Asia, developing not only a new market for sales but also its own local production sites. "Toyoda Precepts," established in 1935, states that Toyota is "to be contributive to the development and welfare of the country" in these developing markets. In line with this philosophy, Toyota has supported local industries and contributed to the development of local transportation infrastructure. The company has also become involved with local communities through foundation activities and environmental conservation. These efforts have earned it a positive image in the ASEAN region and helped to build a successful and sizeable market for its automobiles.

Nissan, however, sees its flexible global production capability and supply chain as its strengths for entering new markets as well as a means of reacting quickly to crises. By customizing its systems and logistics, the company believes it can optimize its total manufacturing costs by building different components in different locations across the globe. This system

helped Nissan recover quickly from recent crises, such as the 2011 Tohoku earthquake in Japan and the 2013 floods in Thailand. Such flexibility also enables the company to focus its production globally or domestically, depending on the strength of the yen at the time, an option most of its competitors do not have. Over time, Nissan's overseas manufacturing has increased from just 9% in 1984 to 75% in 2011. The company currently operates 26 manufacturing plants and 25 powertrain plants overseas, compared to just five and two plants, respectively, in Japan.

The tremendous success of the Japanese automotive industry's globalization, compared to the struggles of the Japanese consumer electronics industry's efforts toward the same goal, shows that the future success of Japanese firms is achievable but not guaranteed. As Sony and its Japanese compatriots have seen firsthand, consumers in Asia's developing markets evaluate products differently than Japanese or American consumers do. If Japanese firms do not identify their customers' wants better, they will continue to fall behind. Furthermore, as Nissan has learned with Carlos Ghosn as CEO, the introduction of foreign voices into senior management can have a very positive effect in ensuring a global sharing of knowledge within the firm, benefiting both Japanese and non-Japanese employees and customers. As Oka notes, "if Japanese businesses can couple their hard-working employees with global best practices for management, they can succeed anywhere."

As the Japanese population decreases and the developing economies of Asia grow more rapidly, the importance of Japan's Asian neighbors to its economy will continue to grow. The success of Japanese firms competing in Asia is uncertain. But if these firms heed Oka's advice to expand their global knowledge sharing, develop products more closely aligned with the desires of local consumers, and build a more merit-based employee-management system, their chances of global success will continue to grow.

This article was written by Andrew Dugan, Randy Kyung-rok Han, and Sagar Pagare, members of the Lauder Class of 2015.



The New Face of French Gastronomy

Which city boasts the most Michelin stars? No one would be surprised to learn that, for much of the famed guide's history, the answer was Paris. Yet, as Michelin's website notes, 2007 marked a major shift in the form of a first-ever restaurant guide to Tokyo. More notably, Michelin awarded the city more stars than it had awarded to Paris. Still, observers could argue that one set of subjective rankings does not signal a broader trend. In 2013, however, another restaurant guide, San Pellegrino's list of the World's 50 Best Restaurants, continued to undermine French legitimacy. The list contained only six French restaurants, with none placing in the top 10.

France's *crise culinaire* is a subject that generates heated debate. There are those who strongly defend a long history of culinary tradition, while detractors call for chefs to be dragged to their metaphorical guillotines. The French themselves lament the fall of their once-unassailable reputation, and cite its perceived decline as another symptom of a weak economy and a general erosion of French culture. They are forced to ask themselves: Is France even a relevant player in the global culinary arena?

For the first time in history, sales from fast-food restaurants represented more than half (54%) of sales in the restaurant industry.

This debate was addressed directly in July 2013, when the French newspaper *Le Monde* devoted its entire monthly magazine to a portrait of *La Table*. The articles examined all aspects of the current state of French gastronomy and included topics such as celebrity chefs, bistros, grand restaurants, ingredients, and culinary

techniques. The aim was to respond to some of the questions currently on the minds of French citizens and tourists alike about gastronomy. In recognizing gastronomy's particularly unique role in France today, *Le Monde* noted, "The passion of cuisine and the art of the table are, for a country marked by depression, signs of encouragement.... The gastronomic tradition and concept of the abundant table are as much about nourishing the body as they are a salve for the spirit" (translated from French).

Along with the popularity of *Le Monde's* magazine came a dubious development for the French food world. Despite continued fascination with *haute cuisine* and more traditional aspects of gastronomy, for the first time in history, sales from fast-food restaurants represented more than half (54%) of sales in the restaurant industry. In addition, France became the second-largest market worldwide for McDonald's, another indication that the French are trading multicourse meals and white tablecloths for more modern styles of dining that cater to a faster-paced lifestyle. The younger segment of the French population seems far more likely to grab a burger *chez McDo* than to sit down at an expensive restaurant for an elaborate three-course meal. The result? Many

members of older generations fear for the long-term survival of the more traditional meals that at one time made France so famous around the world.

To fully understand France's culinary culture, one must consider its history. Modern French gastronomy dates back as far as the 16th century, when weary travelers would stop at roadside shops to eat *rôtissage des viandes* (roast meat). These early restaurants established a type of service-oriented environment distinct from other Western European countries such as Italy, where meals would be consumed only in the home. During the Revolution of 1789 and its aftermath, restaurants continued to evolve and represent a type of democratization of French society. As with many industries, guilds no longer reigned supreme, and individual chefs could now offer food to bourgeois consumers. Over the course of the next two centuries, this ideology spurred the emergence and modernization of *haute cuisine* and the grand restaurants that many today associate with French gastronomy.

For the French, gastronomy has come to represent much more than food. In 2010, UNESCO added the "French gastronomic meal" to its Intangible and Cultural Heritage list and defined the term as "a customary social practice for celebrating important moments in the lives of individuals and groups.... [I]t is a festive meal bringing people together for an occasion to enjoy the art of good eating and drinking." Moreover, it is not only the food itself that plays a critical role, but also the ambience, the quality of the products used, and the overall structure of the meal. In that sense, it is important to explore numerous facets of the current culinary scene in France in order to assess its long-term prospects.

It should be no surprise, then, that *Le Monde* dubbed the practice of proclaiming the death of French gastronomy as the *nouveau sportif* of the press. Successive headlines lose their potency as readers gradually become numbed to the sensationalist cries for attention to a problem that many would classify as endemic. A closer examination of the melting pot of France's culinary culture, however, reveals an entirely different outlook. A new set of trends on both the micro and macro levels is helping to shape the new face of French gastronomy. It is far from dead; it is simply adopting a new guise.

A Necessary Skill Set

French gastronomy is far more prevalent in the world than we realize. Sandra Messier, director of communications at Le Cordon Bleu Paris (LCB), noted that the long-standing tradition of young chefs from around the world eager to study in France is stronger than ever. They arrive with the aim of learning classic French techniques to further their abilities and hone their skill sets. After their studies, some remain in France to open their own restaurants and take advantage of the fertile gastronomic environment there. Whether they serve French or international cuisine, they develop their own innovative styles that cross-fertilize and strengthen the gastronomic community in France. Notable examples include Daniel Rose, an American who opened the French restaurant Spring in Paris. It is one of the hardest restaurants to book in the city. Another example is Hiroyuki Hiramatsu, a Japanese chef who left behind an empire of restaurants in Asia to open Hiramatsu Paris, one of the pillars of the Franco-Japanese fusion trend on the Parisian restaurant scene.

Beyond the realm of individual chefs, there is still a high demand for French cuisine among the clientele of elite restaurants around the world.

In contrast, Messier spoke of other foreign students who studied in France and returned to their countries of origin. She described a vast community of accomplished alumni who leverage French gastronomic techniques to change and sometimes "heighten" their own gastronomic cultures. A noteworthy example of this trend is Peruvian cuisine, which has been particularly prevalent in Latin America and smaller European countries that are developing their own *haute* gastronomy. The international importance of French culinary education-focused institutions is evidenced by the fact that LCB has schools in nearly 20 countries, ranging from Peru to Thailand. LCB's global director traveled to China in mid-2013 to herald the opening of a new school there.

Beyond the realm of individual chefs, there is still a high demand for French cuisine among the clientele of elite restaurants around the world. Many of the leading restaurants outside France are French and seek to employ chefs trained in this classical cuisine. Thomas Keller's Per Se and the French Laundry are great examples of this trend. In the domain of pastries, French-trained chefs remain highly sought-after everywhere as masters of desserts. Thousands of schools around the world that teach French gastronomy and pastries exclusively (including branches of LCB) operate to satisfy demand from young chefs who seek to gain French culinary training but cannot afford to travel to France. Overall, it is clear that international chefs continue to regard France as a reference for techniques and *savoir faire* and seek to study French gastronomy to gain the skills needed to master all cuisines.

Bistronomy will grow and thrive, especially as Europe's economic stalemate continues and restaurants must cater to the demands of a public seeking to spend less time and money on fine dining.

Bistronomy

When he pondered the rise, fall, and future of French gastronomy in his book *Au Revoir to All That*, wine critic Michael Steinberger described French gastronomy as tired and strongly criticized the decline of the once-grand French restaurant scene. Based on his experiences, he felt that many of the best restaurants in France lack the energy and exuberance that are evident in the gastronomic cultures of New York, London, and especially Spain — clearly threatening France's once-hegemonic position. He also pointed to the common French problem of relying on tradition and past success, noting that for many French chefs, "an inclination to rest on former glory [is] understandable."

In addition, Steinberger describes how French gastronomic traditions are evolving in ways that

demonstrate innovation and change incarnated in the bistronomy movement. The young chefs at the head of this culinary movement represent the positive future of French gastronomy and are breathing new life into France's culinary culture. Chef Christian Constant is one of the leading figures in this movement, and his story demonstrates the importance of ensuring that French gastronomy remains a player on the world stage.

Constant built his reputation as a chef at Michelin-starred restaurants in Paris. He left Les Ambassadeurs at the Hotel de Crillon to open his own restaurant, Violon d'Ingres, where he received two stars at the height of his fame. In 2004, he reached a turning point and decided to reinvent Violon. The economic climate was difficult, and the public was spending less money on food. Constant decided to cut the extravagances required by starred restaurants — such as a sommelier, expansive wait staff, and expensive décor — and focused all his energy on the food itself. He succeeded in developing a mid-priced €45 (US\$61) menu that maintained high-level quality and utilized classic French ingredients such as foie gras and morels. Food experts and critics celebrated his simple idea, which continues to change the face of French gastronomy as we know it with principles of good taste and high quality at reasonable prices. A number of chefs who have worked with Constant have moved on to open their own establishments, and renowned restaurants such as Frenchie, Septime, and Chateaubriand continue to disseminate his innovative philosophy.

According to chef Bertrand Grébaut, one of the leaders of the bistronomy movement, "the strength of the French cuisine of my generation is restaurants where there is the same quality, the same demands, the same work as in a three-starred restaurant, but accessible to everyone." Observers suggest that bistronomy will grow and thrive, especially as Europe's economic stalemate continues and restaurants must cater to the demands of a public seeking to spend less time and money on fine dining. This movement represents the evolution of French gastronomy in the modern context.

Food Trucks: Fast Food Frenchified?

By taking bistronomy's principle of quality food at low prices to a higher level, food trucks also represent a

dramatic innovation in the French culinary culture. Food trucks first appeared in France around 2010 as part of a wave led by expatriate American chefs. These trucks usually serve one dish that is easy to prepare and eat while standing, demonstrating to consumers that French cuisine can be simple, inexpensive, and quick. This trend exists largely in Paris, reflecting the city's ongoing role as the center of French gastronomy over many centuries. Critics have attacked this American-style fast-food invasion, but there has been a long history of street food in France, dating back to the Middle Ages. According to French historians cited by *Le Monde's La Table* magazine, during that period it was more common for people to purchase and eat food on the street than to cook at home.

Today, street food is gaining increasing renown and acceptance — even celebration — by the public and by the gastronomic community. The November 16, 2012, issue of the journal *Les Echos* cites Kristin Frederick, the American chef who opened the first Parisian food truck in 2011 and who has quickly become an icon in the gastronomic community. Frederick herself received the Prize of Honor from the French Fooding Guide in 2013. The food-truck movement has also demonstrated its strong role in the gastronomic culture by attracting heavyweights such as French Michelin-starred chef Thierry Marx, who created the Street Food Association in 2012 to attract a young public

that dedicates less time to eating and seeks quick, good meals. This recognition by a growing populace of both consumers and industry veterans shows that food trucks play an important role in ensuring French gastronomy continues to evolve and progress.

That eating habits are a theme worthy of debate highlights gastronomy's importance in the lives of French citizens. While it is difficult to deny that France now holds a tenuous grasp on its position as the world's culinary emporium, there is still a special link between the French and their food that even globalization and difficult economic times may be unable to erode. Even today, when the top-ranked restaurants in the world may be found in Japan, Scandinavia, or Spain, tourists flock to France to sample a meal at a bistro as much as they do to see the Eiffel Tower and to savor a plate of cheese as much as the picturesque countryside. If one can make a general statement about French gastronomy in 2013, it can be said that it has become faster-paced, more open to fusions with the cuisines of other countries, and, most importantly, more accessible to both foreign and local consumers. This development might be exactly what French cuisine needs to remain on top in the twenty-first century.

This article was written by Trex Desai, Frank DeSimone, and Sarit Henig, members of the Lauder Class of 2015.



Surf vs. Turf: New Trends Are Changing Japan's Traditional Food-consumption Habits

The smell of raw fish hangs in the hot summer air in Japan's Tsukiji Fish Market as Yutaka Hasegawa makes his way through the crab-and-bluefin-tuna-crammed aisles that compose this sprawling and bustling venue in Tokyo's Sumidagawa district. As he looks down an aisle, he recounts the golden days and laments how the net tonnage of fish sold through the country's largest wholesale market has actually declined over the last 10 years. Japan, long known for its love affair with fish, is undergoing an unexpected transformation. For the first time in the modern era, its populace has begun to rely more on red meat for the protein portion of its diet.

Indeed, reliance on fast food and convenience stores is quickly redefining how the Japanese choose to consume their meals. While the country has long been regarded for its influence on world cuisine — including dishes such as sushi and sashimi — new trends in domestic consumption are certain to affect not only Japanese eating habits, but also the future of Japanese cuisine.

Japanese Cuisine's Star — Sushi

From teriyaki — meat broiled and grilled basted in soy sauce — to ramen, Japanese cuisine has been a mainstay on the global gastronomic stage for more than 50 years. Even more adventurous dishes such as tempura — select vegetables and seafood battered and then deep-fried — have a considerable number of fans. However, nothing is more demonstrative of Japan's influence on global cuisine than sushi. In the U.S. in particular, the pairing of sliced raw fish on a two-fingered portion of rice is common fare for even the average consumer. As Sidney Mintz, a visiting lecturer and anthropologist at the Massachusetts Institute of Technology, writes in the *Asia-Pacific Journal*, "Sushi has, to all intents and purposes, become as American as bagels, pizza, pasta, and pita."

In contrast to the bamboo glamor and glass-box display cases that typify the current experience, sushi began rather humbly. Its predecessor in the mid-fourteenth through early seventeenth centuries was funazushi, a specialty dish in which fish and rice were fermented together for days or even weeks. Once deemed ready, the rice was discarded and the fish consumed. To accommodate growing demand in the nineteenth century, street vendors in Edo (then Japan's capital) eliminated the fermentation process and began serving sliced fish on rice as a popular fast-food option.

From these lowly beginnings, the sushi we see today, a century and a half later, has been molded and adapted to reflect global taste preferences. One representative proxy of this change appears in the ingredient list itself. Tuna did not always reign supreme. In fact, leaner fish such as mackerel and red snapper were deemed the pinnacles of flavor and status in nineteenth-century Japan. In his book, *The Sushi Economy*, American journalist Sasha Issenberg comments that "[tuna's] fattiness did not appeal to the austere appetite of a country that preferred lean fish, and the oily belly cuts were reserved for cats." It was not until after World War II, when Japan met the fattier tastes of the West during the mid-twentieth century, that these belly cuts surged in popularity.

Flavor alone, however, did not fuel sushi's meteoric rise into must-eats abroad. The cuisine required a complicated latticework of infrastructure, technology, and personnel to ship fresh, perishable fish quickly across the globe in sufficient quantities to satisfy rapidly growing demand. A seismic shift in airline transportation routes — particularly those from North America to Japan — and improved ice-packing techniques developed in the early 1970s by Japan Airlines greatly increased the amount of tuna the world consumed. Tuna raised on the Spanish coast or caught off the New England shoreline could be shipped to Japan, where it was sold, processed, priced, and exported within a matter of days. Coupled with the advent of purse seine net fishing in the 1960s and technologically advanced equipment such as sonar and GPS tracking, the industry enjoyed a profitable niche for nearly 50 years.

Today, sushi and other raw-fish dishes are consumed around the world. A quick search on TripAdvisor, a global travel website that specializes in aggregating region-specific information on restaurants and attractions, reveals a vast collection of sushi restaurants, from Argentina to China to Spain and beyond. This prolific quantity is matched only by the cuisine's quality: Over the past three years, Japanese cuisine has bucked the trend of French culinary dominance. Tokyo is now home to the largest number of Michelin-rated restaurants and the largest population of three-star properties.

This success comes at a heavy price, and nowhere is it felt more than at the Tsukiji Fish Market. This market is responsible for auctioning, processing, and distributing more than half of all the fish consumed in Japan and is the single largest market of its kind in the world. According to Hasegawa, a managing director of personnel there, "A few decades ago we saw more than 3,800 tons of fish come through here daily. Now it's less than half of that."

The scientific community agrees. In January 2013, the International Scientific Committee for Tuna and Tuna-Like species in the North Pacific Ocean estimated that more than 96% of bluefin tuna, the type found exclusively at the top of all sushi menus, had been decimated. This figure underscores the seriousness of overharvesting the world's oceans.

Changing Patterns in Japanese Protein Consumption

Historically, the Japanese people have relied on fish as the basis of their diet. Between 1980 and 2005, the bluefin tuna haul steadily increased year over year in conjunction with population growth. In addition, Japan's small area, emphasis on rice-crop production, and high population density meant the country had scant space for cattle farming. Nevertheless, an appetite for meat soon began to take hold of the island nation when McDonald's and other fast-food brands from America were tailored for, and introduced into, the Japanese market in 1971.

From teriyaki to ramen, Japanese cuisine has been a mainstay on the global gastronomic stage for more than 50 years.

Western food took the country by storm. Hamburger restaurants and convenience stores soon peppered the land of the rising sun and began to shift Japanese eating habits. The 3,800 McDonald's stores located in Japan control 60% of the hamburger market there and produce US\$4 billion in annual revenue for the parent company. Koji Izumi, who has analyzed the Japanese food industry, found a similar trend in the offerings of convenience stores. "The Japanese are changing their attitude towards the fish culture," he says, pointing to a graph detailing the convergence of beef consumption and fish consumption in the Japanese domestic market. "Beef consumption has been steadily gaining on fish since 1980 and finally superseded fish consumption in 2005," he notes.

Izumi's consumption observations perfectly match current domestic production trends in both the cattle industry and fisheries in Japan. Since 2005, the Japanese domestic market has witnessed an overall decline in fish production concurrent with exports. However, during the same time frame, the Japanese cattle industry and Japanese beef imports experienced sustained growth.

According to a study by Wilfram Ken Swartz, a Canadian researcher, overfishing, pollution, and lack of

conservation in the Japanese domestic fishing industries have led to domestic fishery yields declining by about 500,000 tons annually since 1980. Data compiled from Bloomberg confirm that this trend continues today. With the increasing influence of Western meals, the decrease in gross fish production, and an increase in the real price of fish, the Japanese have had to find a way to substitute a portion of their fish consumption with a different protein.

Beef has neatly filled this niche. As the world's third largest economy, Japan can afford to import beef and beef products to satisfy its growing meat cravings. Although Japan placed a trade embargo on the U.S. due to the 2003 outbreak of mad cow disease, increasing domestic demand for beef in Japan led to the removal of the embargo, giving the U.S. access to the Japanese beef market in 2005. The dependence on the U.S. for beef products and the shortfall during the embargo years led Japan to focus on improving domestic beef production. According to the USDA, Japan is now not only the second-largest beef importer in the world for U.S. beef — despite its declining population growth — but also one of the world's largest producers. In fact, the USDA estimates that if the current cost of beef imports from the U.S. declined by 2%, Japanese consumption would increase from 1.15 million metric tons in 2005 to a projected 1.5 million metric tons in 2019. Izumi attributes these trends to an expanding fast-food market and an increase in the number of convenience stores across the country.

Changing Tastes and Generational Differences

Many of the changes in consumption patterns are both generational and indicative of changing tastes and attitudes toward fish. Izumi, now in his 60s, is quick to point out that, for his generation, many key nutrients now obtained through other food groups or supplements were traditionally obtained through fish. "I have eaten fish daily for all of my life. My generation did not grow up with fortified foods or dairy products, and we relied primarily on fish for our calcium requirement," he says.

Many young people, by contrast, eat out frequently at fast-food restaurants where beef dominates the menu. They cite several reasons for eating less fish. Fusae Nanba, a resident of Tokyo and a mother of two, argues that "preparing fish at home is difficult. You have to take

out the organs and clean up the fish considerably before cooking it. Preparation of beef is comparably much easier and quicker, making it more convenient to cook for busy young people."

In addition to the convenience, there are qualitative differences between beef and fish. Nanba is quick to add that the odor of fish could be "off-putting" to some, that the many bones in fish could make it difficult for children to eat, and that many of the traditional preparations of fish — namely "nizakana," or fish simmered in soy sauce and mirin — are considered by younger Japanese to be "old fashioned." The other reason she cites for younger people favoring beef over fish is that it pairs better with bread and pasta, an interesting statement considering that consumption of wheat, like beef, has been increasing steadily in Japan.

The exception to this preference for beef over fish seems to be sushi. Indeed, Hasegawa is quick to point out that, despite the dramatic overall decrease in fish coming through the Tsukiji Fish Market, live fish are the exception. "It is sushi restaurants that are demanding the live fish," he says. It seems that while the popularity of purchasing fish at markets and cooking and preparing it at home have fallen out of fashion, consuming it as prepared sushi is as popular as ever. "My children enjoy sushi more than they enjoy cooked fish," Nanba adds. "It is widely available for purchase, requires no preparation, doesn't smell, and feels contemporary" — reasons that sound similar to those behind the rise in beef consumption.

It is easy to see the Japanese influence on dishes in restaurants around the world when chefs add delicate pieces of raw fish or splash a stripe of miso-based sauce across a dish. What has been less apparent to observers is the silent shift that has taken place in Japanese food consumption. At a time when fish is the face of Japanese cuisine abroad, it has been replaced domestically by beef. As fisheries around the world struggle to adjust to dwindling fish populations, it will be interesting to see how patterns of Japanese food consumption evolve and to observe the changing face of Japanese cuisine.

This article was written by Paul Baek, Colton Neves, and Carlos Vadillo, members of the Lauder Class of 2015.



Burgeoning Wealth, Consumer Behavior, and Golf in China

At first glance, the greens of Guan Lan Hu (Mission Hills Golf Club) in Shenzhen seem no different than those in the U.S. — carefully manicured grass, well-dressed members, and an excess of golf carts. Upon closer inspection, however, the differences become clear. In addition to caddies, golfers are served by a host of drivers, umbrella holders, and personal waitresses. In place of water bottles, members refresh themselves with glasses of beer and spirits; and when a ball goes astray, another is simply placed on the ground for a second attempt.

Welcome to the curious world of golf in China. These additional services at golf courses are a natural extension for a culture in which self-indulgence and maintaining impressions are important, and a country in which disposable income among the upper class has risen at an astronomical rate. The golf-services industry offers a unique window into the growing luxury leisure-services market in China and its impact on the tourism industry.

A Macro Look at the Chinese Consumer

China's new upper-class consumers can be typified by a number of traits. First, many are seeking experiences that differ from those available in the mass market. Xiaolin Zheng, a native Chinese professional in her twenties currently living in Hong Kong, would much rather travel on her own. "Why suffer the discomfort of sharing a bus with 40 other people and following a strict daily schedule, when I could organize my own trip?"

Second, it is common in China to treat product and service purchases as a means of burnishing one's social reputation. In a paper published in 2002 in the *Journal of Consumer Marketing*, Jai-Ok Kim, Sandra Forsythe, Qingliang Gu, and Sook Jae Moon concluded that "among those female consumers in China, clothing is regarded as a symbolic medium to demonstrate one's social status or express one's social image."

Third, the typical Chinese consumer is increasingly self-indulgent, seeking products and offerings that cater to his or her personal gratification. According to a 2009 study by Ge Xiao and Jai-Ok Kim that appeared in *Psychology & Marketing*, individual goals of self-direction, achievement, stimulation, power, and hedonism received higher value ratings from middle-class, urban Chinese consumers than did collectivist objectives of conformity, benevolence, and tradition. The authors also noted that, "as a result of economic growth and modernization processes, it is expected that more people will acquire an individualistic and material orientation."

China's new upper class is also growing quickly: According to Credit Suisse's *Global Wealth Report*, the country had 964,000 millionaires (in US\$ terms) at the end of 2012, a 19.8% increase from 805,000 in 2010, and nearly 35.0 million individuals within the top 10% of global wealth holders, an increase of 35.6% from 25.8 million in 2010 (third only to the U.S. and Japan). Mainland China today also has the second-largest number of billionaires, according to *Forbes'* 2013 Billionaires List, with 122 citizens (or 161 if Hong Kong is included), compared to the U.S. with 442.

A Micro Look at Golfers in China

There are two distinct groups of golfers in China — aging baby boomers who have saved just enough to

be able to try this new luxury leisure activity, and a growing, younger crowd of self-indulgent golfers in their twenties to late thirties who are increasingly dictating the rise of more extravagant golf courses.

Tang Li is a successful executive and a graduate of one of China's top universities. On his 47th birthday in 2010, he decided it was time to find another form of exercise because it became increasingly difficult for him to continue playing soccer. Previously, he would have never even considered golf, thinking he would not be able to afford the hefty RMB600,000 (US\$98,039) annual club membership fees, even with a good-paying job at a state-owned organization. However, he soon learned from his friends that there were alternatives. Many medium-sized golf courses in Beijing offer cheaper options that do not require membership dues but do require fees based on actual playing time (RMB400-800 or US\$65-130 per round of 18 holes). With help from his friends, Li has become a regular golfer. On average, he plays five to six times a month and spends about RMB20,000 (US\$3,268) annually. He golfs mostly with friends and increasingly more with his business partners. Sometimes he has lunch with his friends at the golf courses, but he never drinks or lingers in the area afterwards.

Tony Wang, on the other hand, is a 32-year-old finance executive and an avid golfer. The son of a wealthy steel magnate, he belongs to China's *fu'er dai* (wealthy second generation), a term used colloquially to describe the children of wealthy families in China. He was first introduced to the game of golf during his university days in Australia, and he played regularly with his small circle of wealthy Chinese classmates. He and his friends played the game mainly because it was considered a luxury sport that differentiated them from their peers. Moreover, the luxury services available after the actual game — spa, hot springs, food, and beverage facilities — sometimes influenced their repeated patronage. More often than not, they preferred golf courses near a bustling city with an active nightlife. A typical trip would involve traveling to a golf course in a nearby city during the day, enjoying the city's nightlife, and staying overnight. After obtaining his university degree, Wang returned to China and joined Guan Lan Hu, one of the most expensive clubs in China. He played there at least once every fortnight, enjoying a full day at the golf

course and then making the short drive to Shenzhen city, where he spent the night in the company of his friends.

These younger groups of golfers have transformed the luxury leisure golf market in China. They have replaced golf's most sacred tenets — love of the game, fair play, and sportsmanship — with a focus on luxury, entertainment, and general excess. Courses originally designed as places to practice and compete with friends now offer a host of other amenities. For instance, amenities at Guan Lan Hu now include a Japanese spa, mineral hot springs, a luxury hotel, meeting- and conference-room facilities, shopping centers, and a karaoke club.

The Quest for Status

To date, golf is still played by very few Chinese. Participation is concentrated among the country's wealthy elite. While a regular golfer, Li usually plays at medium-sized courses. Wang, on the other hand, is able to afford the more extravagant courses.

According to Wang, because of the sport's domestic lack of attention and coverage, the entry barriers are extremely high. On the development side, the expansive space a golf course requires can become an expensive venture, especially considering today's burgeoning Chinese real-estate market. Furthermore, the same reasoning applies to in-city driving ranges, which are scarce and expensive. For the consumer, just learning to play can be an extremely costly venture, given that instructors are rare commodities. Moreover, because the game has a steep learning curve — which requires constant practice, expensive greens fees, and high costs — practice sessions attract only the elite with sufficient disposable income.

While there are membership-free golf courses that cater to the general population, most courses in China serve the wealthy elite, requiring fees ranging from RMB100,000 (US\$16,339) annually all the way up to lifetime memberships of RMB3 million (US\$490,196). Many of these high-end courses, while originally built for foreign golf tourists, have evolved into Chinese-style, full-service facilities. According to Wang, the Chinese elite has made golf an even more personalized game and experience — with players being treated as emperors. In addition to choosing his/her own handicap and score,

each player can also choose the pace and experience of the game. For example, one could choose to enjoy a slow game with friends/business partners, accompanied by caddies and waitresses who serve food and champagne, all while enjoying the view and the scenery.

In addition, an increasing number of golf courses are being built in China and marketed toward foreign tourists, particularly Koreans and Japanese looking for discount golf vacations. Modern golf first arrived in China with the opening of the Chung Shan Hot Springs, located an hour and half's drive from the former Portuguese colony of Macau. The intention of owner Henry Fok was to give the resort "international status, and golf fit ... the bill." This same mentality in golf-course development has been carried through the early 2000s. Chinese golfers gradually adopted these foreign traditions and etiquettes and have learned to expect the same services and amenities afforded to foreign players.

The combination of all these factors means that the Chinese golfing sector is well-poised for growth. According to the legendary Jack "The Golden Bear" Nicklaus, who helped design the Shenzhen Mission Hills Golf Club, "golf is just exploding in China." With only 750 golf courses today and a growing upper class, China is seen as a key market for sporting-goods companies and course operators.

Global Implications

In addition to its impact on players and developers at home, golf's increasing popularity in China, combined with a surge in the number of Chinese traveling overseas, could also have substantial ramifications for the industry beyond the country's borders. According to the United Nations World Tourism Organization, the number of Chinese traveling abroad grew from 10 million in 2000 to 83 million in 2012. Moreover, China's expenditures on international tourism reached RMB 624 billion (US\$102 billion) in 2012, a 40% increase over 2011. With this surge in travel spending, China has surpassed Germany and the U.S. — formerly the two top-ranked spenders — in total outbound travel spending. As highlighted by Yong Chen, a specialist in Chinese outbound tourism at Hong Kong Polytechnic University, until now Chinese tourists have focused mainly on shopping, more so than any other global travelers — spending, on average, an estimated \$1,230 per trip.

While Chinese golfers have yet to begin traveling in large numbers for the exclusive purpose of playing golf, it is easy to see the potential for China's sports tourism to have a strong impact on golf courses overseas. Firstly, as weather conditions in much of China allow golfers to play only from March to October, more committed or curious golfers such as Li will often travel to nearby Southeast Asian countries — including Malaysia, the Philippines, and the Maldives. Secondly, the exclusive and famed golf courses of the U.S. and Europe appeal greatly to Chinese consumers, given their propensity to spend on products and services that burnish their social status and golf's reputation in China as a "luxury sport" played by intellectuals and successful executives. Finally, as the Chinese middle class grows wealthier and domestic golf courses fall within their spending power, the upper class will have a greater desire to visit courses overseas that enable them to differentiate themselves from the mass market. These travelling golfers have the potential to bring business not only to the golf courses, but also to the cities that host them and to the tourism industry in general.

China's new upper-class consumers ... are seeking experiences that differ from those available in the mass market.

As China's economy continues to grow and individual wealth among the country's elite continues to rise at a phenomenal pace, the country is slowly beginning to see the emergence of a new upper class. These new consumers, typified by a desire for experiences outside the ordinary and for products and services that both burnish social status and cater to personal gratification, have increasingly taken up golf as a preferred hobby and pastime. This has already resulted in the growth of a distinct golf culture in China, and ultimately has the potential to significantly impact the global golf culture.

This article was written by Ting Cui, Josh Lim, Andrew Maloy, Wesley Tillu, and Jason Wang, members of the Lauder Class of 2015.

**Names were changed to protect the identity of the interviewers.
Conversion rate: 1 USD = 6.12 RMB*



Market-driven Strategies: The Key to Social Impact in Peru and Colombia

Over the past decade, Peru and Colombia, like many other emerging economies in Latin America, have experienced a rapid decline in poverty. Data from the World Bank show that between 2004 and 2011 the poverty rate decreased from 54% to 28% in the former and from 47% to 34% in the latter. Much of this can be attributed to the market-expanding effects of globalization and subsequent export-driven growth.

Nevertheless, poverty rates are still high in both countries and, more importantly, the level of inequality has increased. According to the *CIA World Factbook's* 2011 inequality ranking, based on the Gini index, Peru ranked 103rd and Colombia was seven spots from the bottom at 129th. Thus, despite significant socioeconomic progress, pressing problems remain for Peruvian and Colombian populations at the bottom of the pyramid. Ollanta Moises Humala Tasso, the president of Peru, drove this point home at the World Economic Forum on Latin America in April 2013 when he said, “We need to grow economically and be able to distribute that growth — what we call social inclusion: growing to include and including to grow.”

In both countries, the social impact sector has grown in recent years with a goal of narrowing the income gap and bringing more prosperity to poor populations. While there have been some success stories, many organizations face tremendous challenges, such as limited access to knowledge and information, inadequate funding, and difficulty in achieving scale. To overcome these challenges, the social impact sectors in Peru and Colombia are turning increasingly to market-driven strategies. In this context, “market-driven” implies an approach or mindset that is typically characteristic of the private sector.

The Knowledge Gap

The challenge of knowledge access for the social innovation sectors in Peru and Colombia is experienced in all areas of running an organization — from contracting new employees to communicating with clients and constituents. To overcome this challenge, an organization could turn to the government or the public sector for assistance. However, many social innovators in Peru and Colombia have been implementing market-driven strategies, such as those that provide transparency, promote and prioritize local consumer insights, and embrace new technologies.

The case of Caja Los Andes, located in Puno, Peru, illustrates how providing transparency and prioritizing local consumer insights can be effective market-based strategies. Caja Los Andes is a profitable microfinance organization that has helped thousands of clients overcome poverty by providing savings, insurance, and working-capital loans. A fundamental challenge it has encountered is that many clients distrust banks and rely on myths and misinformation. Hence, the organization strongly emphasizes transparency and publicizes its interest rates as well as those of its competitors. “Caja Los Andes firmly believes and practices full transparency towards its customers,” says Rosanna Ramos-Velita, chairman of the board of Caja Los Andes. In addition,

the company stresses that employees educate clients and prospective clients on the basics of loans before offering services. According to Ramos-Velita, “We bring financial education training to our rural micro savings and credit clients because we believe in empowering them and in helping them understand the benefits and responsibilities of working with a fully regulated financial institution.”

Another challenge for Caja Los Andes is that more than a quarter of its clients are illiterate and speak different languages, and most of them live in remote areas that are sometimes inaccessible to automobiles. The organization has implemented strategies that are characteristically market-based. First, it strives to hire locally, and advertises that, in more than 80% of its branches, clients are welcomed in their native languages, including Aymara and Quechua. A branch manager in the town of Azangaro noted that she requires her employees to be able to ride motorbikes so they can see clients at their homes, many of which are located far from paved roads. Knowledge of the clients is so fundamental for Caja Los Andes that its motto is to be the “financial entity that best understands our clients, rural Andean entrepreneurs.”

Social impact organizations have also embraced new technologies and media platforms. In the case of Compartamos con Colombia, a Colombian organization that creates initiatives to overcome extreme poverty (living on less than US\$1 a day), a large part of its success has been derived from using technical knowledge and private sector resources. The organization works closely with leading consultancies such as McKinsey and PricewaterhouseCoopers as well as banks and law firms. For a new project that aims to promote initiatives to reduce poverty, Compartamos turned to online crowdsourcing to solicit the best ideas, thus demonstrating how embracing new technologies is key for the social innovation sector to overcome knowledge-based challenges.

Measuring the Impact

Attracting funding is another fundamental obstacle for many social enterprises in Peru and Colombia. In a 2013 interview with the *Christian Science Monitor*, César Rodríguez, director of the Global Justice and

Human Rights program at Universidad de los Andes in Bogotá, noted that, “Organizations are finding themselves without a source of financing and there is no replacement for those sources.” In an environment in which funders operate like market-driven investors, social impact organizations are, in turn, implementing market-driven strategies to secure funding.

Many organizations face tremendous challenges, such as limited access to knowledge and information, inadequate funding, and difficulty in achieving scale.

The case of the Corporación Universitaria Minuto de Dios (UNIMINUTO) in Colombia illustrates how a company that seeks social impact can be effective with a market-based funding model. UNIMINUTO began in 1992 as a for-profit corporation to provide a university-level education to members of the lowest socioeconomic classes. It has grown to 42 locations with 60,000 students and won the award for the G20 Challenge on Inclusive Business Innovation in 2012. Not only is UNIMINUTO having a social impact; the company is financially sustainable through profits generated by the small tuition payments all students make, as well as interest earned on loans provided to students.

In addition, it exemplifies how market-driven social impact organizations can be effective. Specifically, they are more stable, have to be held accountable for performance, and are typically extremely focused in a particular area of expertise. The vibrant Peruvian microfinance business environment, ranked the best in the world by the Inter-American Development Bank (IADB) for five years running, offers many examples of businesses that are profitable and contribute to the social good. What these organizations have in common is that they perceive the population at the bottom of the pyramid as consumers, not as the hopeless poor looking for handouts.

One of the key issues faced by funders of social innovation projects is quantifying the social impact

achieved. Funders want to know how much their investment is paying off, even if not monetarily. For example, if an organization assures a municipality that it can cut teen pregnancy rates by 10% over the course of a few years, the municipality will want to quantify how much health care savings and economic growth benefits will be generated. Avnish Gungadurdoss, managing partner of Instiglio — a fledgling social impact organization based in Medellín, Colombia — said that before making an investment, funders typically ask, “What is the service, what are the social outcomes and targets you are pursuing, how will you measure that impact and most importantly, what evidence is there that the service will achieve those targets?”

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To make social impact initiatives quantifiable and, thus, financially feasible, Instiglio created a new mechanism for raising capital in financial markets. The so-called social impact bond is a form of results-based financing that can theoretically expand financial resources, increase accountability by paying for success, and offer an upside to financial institutions or foundations seeking a new kind of risk or seeking to expand their portfolio of social impact investments. According to Gungadurdoss, small but effective social impact organizations “often have a hard time accessing scale funding, because in a paradigm where looks matter more than impact, they appear more risky than larger and well-established providers, even when the latter are less effective. Grassroots organizations with the necessary local knowledge, community ties and impact model thus often find it hard to scale.” With the social impact bond, Instiglio introduced market-based funding methods to the social-innovation space.

Achieving Scale

Even after bridging the knowledge gap and successfully launching their ideas, social innovators often hit a plateau. The idea — whether an after-school dance academy for urban youth (Escuela D1 in Lima, Peru) or low-cost devices to aid people with disabilities (Todos Podemos Ayudar in Medellín, Colombia) — may have a tremendous impact on the local community yet never spread beyond the immediate surroundings. According to Jenny Melo, Spanish editor of NextBillion.net and cofounder of eSe Conectivo, a social enterprise in Medellín, the challenge is that “there are many new organizations, but few that have achieved the scale to be all over the country. In Colombia, we are at a moment in which many are at that point of asking, ‘How do we achieve scale?’”

Small social enterprises seeking to grow can now benefit from more resources aimed at helping them develop sustainable and scalable business models. Although these methods are sometimes government-led, the strategies themselves are market-driven. For example, government initiatives such as Colombia’s Social Innovation Center (CIS) have worked to consolidate the network of resources required by social innovators by bringing together leading academic and research institutions, international development organizations, philanthropic foundations, and private entities into partnerships such as the Alianza Pioneros de Innovación Social (Alliance of Social Innovation Pioneers). Such ready-made networks make it easier for social entrepreneurs to engage with knowledgeable stakeholders who can offer support and advice on how to design and implement a scalable program.

In addition, CIS-sponsored innovation competitions focus on providing not just seed funding for aspiring social entrepreneurs, but also plentiful consulting and technical resources to ensure that the winning business models are viable in the long run and reach the broader population. According to Ana María Rojas, director of the CIS, such competitions have spawned more than 25 ongoing projects to date, including 10 in the evaluation stage and one in the replication stage. Several promising

ideas include new water-filtration systems, affordable-housing designs, and behavioral interventions for children. Another CIS program, Hilando, is a curated catalog of exemplary social innovations that target populations in extreme poverty. It aids in the diffusion of successful ideas that can be replicated across other parts of Colombia. A key tenet to the initiative, in line with the market-driven approach, is that community needs and demand should drive the design and implementation of social innovations.

The path to scalability is neither easy nor straightforward for social innovators in Peru and Colombia, but stakeholders from all sides seem to agree that the social innovation sector cannot rely wholly on the government to grow and that the best solutions draw from market-based models and leverage private sector resources. Indeed, at the Social Innovation Summit in Lima, Carolina Trivelli, Peru's first Minister of Development and Social Inclusion, acknowledged that "the government is a poor innovator. There are no better innovations than those that come from the private sector."

Approximately eight million and 16 million people in Peru and Colombia, respectively, live below the poverty line. Helping these large populations improve their status may seem like an overwhelming challenge. Yet both countries have reaped the benefits of strong and growing economies in recent years and maintain positive future outlooks. However, in order to preserve social stability in the long run, they cannot allow their most economically disadvantaged segments to be left behind by growing inequality.

While market-based initiatives can make a big difference, it is important to note that the governments in Peru and Colombia still play a critical role for social impact organizations. For precisely this

purpose, in October 2011 Peru created the Ministry of Development and Social Inclusion (MIDIS), around the same time that Colombia established the National Agency for Overcoming Extreme Poverty (ANSPE), which oversees the activities of the CIS. In addition, Peru is in the early stages of launching a social innovation fund, which it announced in April 2013 after hosting the first Social Innovation Summit of the World Economic Forum on Latin America. Both government organizations are focused on providing resources, financial and human, to innovative social enterprises directed at the base of the pyramid. However, even with government help, the challenges discussed above remain for many organizations.

Several promising ideas include new water-filtration systems, affordable-housing designs, and behavioral interventions for children.

The experiences of the social impact sector in Peru and Colombia suggest that market-oriented strategies are effective in overcoming certain challenges. As Peru's Trivelli noted, an institutional setting is emerging across Latin America that is causing a shift in the role of government "towards catalyzing the relevant actors and markets and incentivizing collaborative efforts, especially with the private sector." Social innovators and agencies seeking to bridge the gap between rich and poor in other Latin American countries and beyond could learn much from these methods.

This article was written by Patrick Burns, Carrie Nguyen, and Eduardo Nihill, members of the Lauder Class of 2015.



Private Sector Innovation? Think South Carolina, Not Silicon Valley

In the U.S. innovation is synonymous with Silicon Valley, not South Carolina, and is driven by the private sector, not the government. The South Carolina Research Authority (SCRA) confounds both perceptions. It is an independent, not-for-profit public entity that is run as a private organization. It focuses on providing R&D services to public and private clients in sectors ranging from national security and automotive to biotechnology and healthcare. It also provides venture funding for startups in these areas. In just 30 years, an initial infusion of US\$0.5 million and 1,400 acres of land has yielded US\$15.3 billion of impact on South Carolina's economy, attracting investment from all over the world.

South Carolina was one of two states founded to supply Barbados plantations with Native American slaves. Its first settlers were the second and third sons of British aristocratic families who saw opportunities for reinvention. In Britain, their first-born brothers were sole heirs; in South Carolina, they could become rich in their own right — a reinvention endeavor that continues to this day.

From its early seventeenth-century founding until the dawn of the twenty-first century, South Carolina has gone through many distinct periods. For more than 100 years, it was a rice-, indigo-, and subsequently cotton-based cash-crop economy. Between the Civil War and the 1940s, it remade itself into a textile economy. By the 1950s, driven by Japan's ascendance in textile manufacturing, the state repositioned itself as a non-textile manufacturing base. The strategy banked on its relatively well-educated and cheap labor force and the state's "right-to-work" laws.

Beginning in the 1970s, driven by cheap labor competition from China, Mexico, and India, South Carolina began to diversify its economy. Manufacturing continued to play an important role, with the state

attracting international companies such as Michelin, Bridgestone, BMW, and Bosch. At the same time, the service and trade industries also began to play important roles. The impact of the state's economic diversification is borne out by its employment data. According to figures from the U.S. Bureau of Labor Statistics, manufacturing in 1970 accounted for 28.9% of all jobs in South Carolina. By 1997, this number had declined to 17.3%. Conversely, employment in the services and trade sectors rose from 31.0% of total employment in 1970 (16.2% from services and 14.8% from trade) to 47.1% (24.7% from services and 22.4% from trade) in 1997.

SCRA is at the center of this transformation. In 1983, South Carolina's Legislature chartered SCRA with the goal of advancing the state's knowledge economy by using an initial cash infusion of US\$0.5 million and 1,400 undeveloped acres. SCRA's first project was a U.S. Navy-funded, on-demand, parts-manufacturing system. To complement SCRA's efforts, former Governor David M. Beasley established the South Carolina Technology Advisory Council in 1997. This council, which comprised mostly businesses, aimed, among other things, to induce multinationals — which had already found a suitable home in South Carolina for assembly

and manufacture — to see the state as a great place to establish their R&D facilities.

Structure, Impact and Opportunities

Today, SCRA continues to lead the way. The organization has won two of the most prestigious Stevie American Business Awards. In 2012, its CEO Bill Mahoney was named Executive of the Year, and in 2013, SCRA was named the Non-Profit Company of the Year. SCRA currently manages more than 100 domestic and international programs worth more than US\$2 billion in contract value and has a US\$15.3 billion cumulative economic impact in South Carolina — US\$1.45 billion of this in 2012 alone. To pull off this impressive feat, SCRA has accomplished at least three things successfully: It operates independently of South Carolina's government, focuses on three technology-related core activities that have strong economic development potential for South Carolina, and has expanded its global reach in recent years.

The first key element of SCRA's success lies in the fact that it was set up to be an independent not-for-profit entity managed under private sector principles. Its various boards draw from a stakeholder pool comprising business leaders, researchers, and public officials. South Carolina's legislators had the foresight in SCRA's founding statute to strictly limit their role. As Mahoney notes, "[What] it [gives] is not direction. It is advice." This governance structure effectively walls off SCRA's day-to-day economic development activities from the political interventionism that often impedes the functioning of state-led economic development agencies. Self-funding further strengthens this firewall; SCRA has received no additional tax appropriations beyond its initial US\$0.5 million funding since its founding. Its independence also positions it to pursue growth opportunities swiftly, as there is no mass of bureaucratic red tape to slow action.

The second key element of SCRA's success is its focus around three core technology-related activities that recognize important market shifts: the federal government's growing fiscal need for low-cost, high-yield innovative technologies; the growing trend for corporations to outsource their R&D functions; and the huge contribution of technology to growth. Several

decades of studies identify technology as the single largest contributor to long-term economic growth. Technology grows productivity while providing high-paying jobs and driving product and service innovation. The Bay Area Economic Institute (BAEI) estimates that 4.3 jobs are created in the local economy for every one technology job created. The comparable number for manufacturing is 1.4. SCRA's three core business activities — Technology Ventures, Applied R&D, and R&D Facilities — center on technology and capitalize on these facts.

Beginning in the 1970s, driven by cheap labor competition from China, Mexico, and India, South Carolina began to diversify its economy.

Via its flagship South Carolina Launch, SCRA's Technology Venture business provides seed capital, infrastructure support for early-stage startups, support for the commercialization of technology, and investments in mature tech companies. It also helps to attract high-tech startups to South Carolina. The Applied R&D business makes effective use of South Carolina's top universities — including the University of South Carolina (USC), the Medical University of South Carolina (MUSC), and Clemson University — to provide competitive, technology-oriented services to more than 300 government and corporate organizations around the globe. The R&D Facilities business complements the other two segments by providing government and corporate organizations with access to SCRA-built advanced R&D facilities, including cutting-edge wet labs, offices, and advanced manufacturing facilities. These form the backbone for the commercialization of IP, which is critical to a knowledge-centric economy.

Proven Track Record

Success stories abound. SCRA has helped several companies relocate to South Carolina. One such company is Pandoodle, whose product, Voolio, enables interactive ads to be placed in videos. Another is Proterra, an electric-bus manufacturing company.

Since its inception in 2006, South Carolina Launch has invested in 58 mature companies. More than 280 early-stage companies have enjoyed about US\$15 million in direct SCRA funding, subsequently securing more than US\$2.2 billion in additional follow-on capital from private sources. 52apps is one such early-stage startup. It develops one application per week based on need-ideas that the public submits online and has enjoyed more than half a million downloads to date. Another is early-stage biotech firm Immunologix. It focused on producing antibodies with the potential to tackle diseases as varied as cancer, diabetes, and multiple sclerosis; it was subsequently purchased by synthetic biology field leader Intrexon. A final example is ISI Technology. Its shoebox-size, water-heating technology can be used to heat water while generating electric savings of from 8% to 50% and water savings of up to 10%.

SCRA's Applied R&D core business is able to translate 70%-80% of its research into marketable technology (also known as the transition rate). This rate is typically 30% for federally funded research, which is about a third of research funding in the U.S. Applied R&D clients include aviation-industry players such as Boeing and defense-industry players such as the U.S. Department of Defense (DoD). The draw is SCRA's track record. SCRA's R&D effort yielded US\$120 million in savings for a US\$4 million research investment by the Office of Naval Research for the Navy's Joint Strike Fighter. The private sector has certainly noticed. SCRA's unique expertise in the defense and aviation industries, combined with South Carolina's economic strengths (and possibly its "right-to-work" laws), encouraged Boeing to relocate the 787 Dreamliner manufacturing plant to the state in 2013. This move is expected to create 2,000 new jobs by 2020. SCRA also helped BMW to develop hydrogen fuel-cell-driven material-handling equipment, which now runs at the BMW manufacturing plant located in South Carolina. Other products include a 3D virtual-training kit, used in ship design and production courses, and the STEP product-development standard, used by companies as varied as Boeing, GE, Rolls Royce, GM, and Daimler Benz.

The final key element of SCRA's success is its increasingly global reach. In the innovation market, this reach is a

crucial factor that affects competition. Indeed, several examples demonstrate SCRA's success in developing strategic partnerships with organizations in multiple geographies. Its partnership with BMW is one instance. In 2012, SCRA launched the first BMW-accredited components testing lab in the U.S. Prior to this, all products engineered in the U.S. still needed to be shipped to, and tested in, labs in Germany. Establishing this local lab unit turned BMW's product development into a faster and more efficient process and created technology-oriented jobs in South Carolina. Today, all of BMW's X3, X5 and X6 SUVs are manufactured only in South Carolina. Another example is SCRA's recent investment in an Israeli defense technology startup that will bring a segment of that company's R&D activities to South Carolina. "Over time," Mahoney notes, "SCRA hopes to generate 15% to 20% of its revenues from these kinds of partnerships."

Accordingly, SCRA has played an important role in South Carolina's economic transformation. Since 2006, approximately 15,000 new high-tech jobs — with average salaries ranging from US\$55,000 to US\$77,000 — have been created in the state. Columbia and the Charleston-Summerville-North Charleston corridor, as a result, moved ahead of the San Francisco-San Mateo-Redwood City metro area in high-tech job-growth rates from 2006 to 2011, according to BAEI calculations based on U.S. Bureau of Labor Statistics data. The former grew at an average annual rate of about 40%, whereas the latter grew at a rate of about 27%. While South Carolina is starting out from a smaller base and has much more catching-up to do, this growth is no less impressive. Indeed, in June 2013 *Inc.* named the USC/Columbia Technology Incubator as one of the top three college-town incubators to watch in the U.S.

A main weakness — or strength as some may see it — is that SCRA's revenues remain heavily tilted toward the defense sector. Approximately 70% of these revenues come through DoD and other publicly funded grants. Private companies account for the rest. SCRA acknowledges this challenge, and hopes to reduce this figure by growing its foreign partnerships and domestic corporate client base. Another weakness is SCRA's low visibility, even in its home state. It is one of those

great economic development not-for-profits people have never heard of. SCRA has been trying to address this. According to Micki MacNaughton, director of communication and legislative affairs, SCRA has recently “completed a brand consolidation and [has] changed [its] marketing strategy” by jumping on the social-media bandwagon. It has seen a significant jump in its social media followers, one of whom, prominent South Carolina Congressman Trey Gowdy, recommended a South Carolina Launch company to testify before the U.S. House of Representatives’ Small Business Committee. SCRA is also diversifying its client base, thus shedding what might be the stigma associated with doing work for the federal government in a state that is acclaimed for its dislike of that government.

SCRA: A Global Model

South Carolina is at an interesting point in its history and provides a viable alternative to the ever-publicized Chinese and Singaporean models for developing countries. There is at least one reason why the countries of the developing world may want to look at this state for their own growth and development strategies — its development model. What began as a predominantly agrarian state became a textile and light-manufacturing base. A transition to heavy manufacturing continues, with an emphasis on attracting high-tech investment. As such, South Carolina provides a unique model of legislative intervention — an autonomous impetus (SCRA) to attract investments from a diverse array of companies.

A number of elements distinguish SCRA from similar initiatives in China and Singapore, particularly in the context of the different geopolitical frameworks. The U.S. is a democratic country based on the principle of free enterprise that culturally encourages entrepreneurship. China and Singapore, on the other hand, have strictly controlled politics and markets. In China, entrepreneurship historically has been carried out in the shadow of the central government to avoid detection and possible takeover. Today, the country is compelling both domestic and foreign enterprises to invest in innovation and high-tech R&D. While Singapore has been able to attract foreign investments, so far it has

been unsuccessful in fostering domestic innovation or entrepreneurship. Its government is attempting to change this. As seen in China, however, this has resulted in an almost contrived and perhaps coerced attempt at innovation — a paradox.

Unlike Chinese initiatives, SCRA has had the advantage of being established when the U.S.’s system of law, including intellectual-property protection, was long in place and where, culturally, it remains permissible to fail. Unfortunately, these elements are often not as prevalent in the developing world.

All is not perfect, however. SCRA still faces challenges, many of which are also endemic in the developing world. South Carolina as a state continues to lag behind the national average in education, human resources, and per-capita income. SCRA also has to battle popular perceptions of the South as lacking in technical skills, being culturally narrow, and being less than innovative — in other words, no place for a global company. It also has to leverage a relatively poorly educated and under-skilled labor force. Despite these pitfalls, SCRA has had a significant impact on the state’s growth. Other states are looking to South Carolina for their next big ideas. According to MacNaughton, “we have spoken to and hosted visitors from states across the country, including Florida, Idaho, Iowa, and Indiana.”

Even if not in its entirety, SCRA presents a template that may be easier to adopt and replicate in developing countries than other models currently being championed. South Carolina’s SCRA demonstrates what strong political impulse, combined with efficient management, can do for a state’s economy. It is unique in being a government-initiated entity that, save for the initial cash infusion, has been entirely financially independent since its inception. It has also served as a liaison between business and local research universities such as USC and Clemson University. As a successful consultancy, incubator, and service provider, it offers a dynamic path toward a more innovative and entrepreneurial future.

This article was written by Roberto Blum, Claudia Gutierrez, Toukam Ngoufanké, and Anirudh RR, members of the Lauder Class of 2015.



Skolkovo: A Case Study in Government-supported Innovation

Entrepreneurial activity and innovation are imperative for sustained development and growth in any economy. Despite its nascent status as a capitalist nation, Russia's economy by many measures is fairly advanced. In 2012, the country's GDP was eighth in the world, at just over US\$2.0 trillion. Its population of 143 million is well-educated, with a literacy rate of 99% and nearly 70% enrolled in post-secondary education. Russia also boasts the largest Internet market in Europe, with 59.7 million users, and an astounding 230.5 million mobile phones, or 1.6 mobile phone numbers per person.

Despite these figures, however, private investment in early-stage business projects in Russia is still about US\$300 million per year, roughly 1/70th that of similar investment in the U.S. According to the Global Entrepreneurship Monitor, only about 5% of the Russian adult population is engaged in early-stage entrepreneurship, the lowest level among countries with a comparable GDP per capita. The abundance of natural resources — such as oil, gas, coal, and timber — and the economy's resulting dependence on these commodities for export earnings have led to a natural resource curse, whereby most public and private capital is funneled to support those industries, at the expense of nearly all other sectors of the economy.

In Russia, this is exacerbated by the fact that state ownership is present in 81% of the top firms, which places the country third in the category behind only China and the UAE. To sustain short-term economic growth and satisfy the country's recent fast-growing consumer market, where GDP per capita has grown about 13% annually from 1999 through 2010, politicians continue to funnel outsized portions of capital to these natural-resource-related industries.

Moreover, with very little foreign or domestic competition, Russian manufacturers do not see a reason to innovate, further increasing inefficiency and putting a strain on long-term economic development. For example, in 2011, overall R&D expenditures by businesses in Russia represented just over 1% of GDP, compared to expenditures of about 3% in the U.S. Furthermore, the number of researchers in Russia has decreased nearly three-fold since the late Soviet period. In addition, due in large part to its geographic vastness, isolation and political and economic barriers with other nations, very few industrial products (outside those used for natural resources) enter Russia's borders. As a result, with no internal demand for innovation, much of the nation's industrial technology has become dangerously outdated and inefficient. In fact, many industries continue to use legacy Soviet-era equipment and machinery. Finally, political instability, the economic crash in the 1990s, and a general lack of opportunity caused a "brain drain." It is estimated that 1.25 million people emigrated from Russia in the first decade of the twenty-first century alone.

A Startup Incubator Is Born

In 2010, recognizing this overall void in innovation and development spending, former President and current Prime Minister Dmitry Medvedev established the Skolkovo Innovation Center just outside Moscow. Billed as Russia's version of Silicon Valley, Skolkovo calls for a 400-hectare (1,000-acre) site with 25,000 permanent residents, business and engineering schools, housing, a Technopark, and mass-transit connections, all to be completed by 2020. This complex is a hallmark of Medvedev's efforts as president to wean Russia off natural-resource commodities and nurture a knowledge-based economy. The Technopark, in particular, serves as a startup incubator that supports its residents in developing products with the end goal of establishing them in the Russian and global markets.

Today each startup at Skolkovo falls into one of five clusters that the state deems essential to innovation: information technologies, energy-efficient technologies, nuclear technologies, biomedical technologies, and space technologies and telecommunications. According to the Skolkovo Foundation, which oversees the Innovation Center and Technopark, during the first half of 2013 resident companies generated about 4.6 billion rubles (US\$145 million) in revenues and submitted 204 applications to register intellectual property.

Once admitted through an application process, residents enjoy benefits such as highly subsidized rent and reductions in payroll and value-added taxes. They also have the opportunity to apply for monetary grants from the Skolkovo Foundation, but many choose not to because of the significant additional reporting requirements. International participants in Skolkovo Technopark are also afforded easier access to work visas.

In reality, the residents' incentives go beyond mere finances. Vladimir Bernstein, CEO of Board Maps, in the IT cluster, came upon Sberbank, which he hopes will become an important client, through a Skolkovo contact. Pavel Smirnoff, CEO of Optogard, in the nuclear-technology sector, hopes to gain access to Russian railroads through another Skolkovo connection. Optogard, which uses a unique laser-plasma system to increase the strength and durability of metal surfaces, also utilizes Skolkovo's vast array of hardware

technology and the advanced testing center — both of which are freely available to all residents — to analyze various metal surfaces. Another founder, in the Energy cluster, who prefers to remain anonymous, wound up at Skolkovo by accident, but loves the culture of innovation, frequently attending meet-and-greet events to network and share best practices.

In 2011, overall R&D expenditures by businesses in Russia represented just over 1% of GDP compared to expenditures of about 3% in the U.S.

Residents of Skolkovo can retain their benefits for either 10 years or until they exceed an annual revenue of 1 billion rubles (US\$31 million) — whichever comes first. This allows time for proper R&D to build and test the product but may also serve as a moral hazard.

Another concern is how Skolkovo Technopark plans to reconcile the need for innovation with commercial viability. Skolkovo recently hosted Startup Village, an Entrepreneurship and Innovation Conference, whose goal was to connect startups with investors, tech companies, and experts in their respective fields. The first-place winner was the eTrike from Bravo Motors, a business in the energy-efficiency cluster that focuses on research to extend the life of rechargeable batteries in electric cars. It received a 900,000 rubles (US\$30,000) prize and was named best Russian startup by *Forbes*. Bravo Motors' main challenge now is to raise 42 million rubles (US\$1.4 million) for field testing and initiating production. As an anonymous source close to the matter says, the success of Skolkovo will not be measured by companies like Bravo Motors. Rather, "the success of Skolkovo should be assessed on the basis of whether it manages to create a huge and successful business like Yandex [Russia's largest search engine] and Mail.ru [Russian email]."

Operating within the current Russian investment climate presents another challenge. The current legal system is still developing and lacks important elements, such as fundamental protection for minority

shareholders. As a result, many companies choose to incorporate in Luxembourg or Cyprus and hold overseas bank accounts. Businesses also seek to partner with international firms to share expertise, which is often lacking within Russia; and many seek international clients. Consequently, the benefit to Russia and its economy is diluted, and these startups are effectively Russian only in name. Outside of adequate access to capital and legal uncertainty, the lack of concrete corporate governance and the dearth of qualified people echo over and over as the main problems these startups face.

Sergei Sedyh, who has been involved in three startups at Skolkovo, questions whether companies in Russia can truly innovate and create a disruptive breakthrough. He describes the investors' general sentiment as, "if they haven't already done it in America, it probably won't work," and adds that "Russia is an investment desert." He also worries that the government is using Skolkovo as a political puppet for its own ends.

Since 2012, Skolkovo's name has been mired in a number of widely publicized criminal cases involving its executives.

Misspending and Illegal Payment Allegations

Since 2012, Skolkovo's name has been mired in a number of widely publicized criminal cases involving its executives. In February 2012, the Investigative Committee, a top law-enforcement body, said it was investigating the misspending of 3.18 billion rubles (US\$106 million) the government had provided to Skolkovo. The committee also announced that it had opened one criminal case against two Skolkovo managers over the alleged theft of 21.6 million rubles (US\$720,000), and a second case, accusing Skolkovo vice president Alexei Beltyukov of allegedly making illegal payments of 22.5 million rubles (US\$750,000) to opposition lawmaker Ilya Ponomarev for preparing a series of lectures about Skolkovo. In total, three ministers in Medvedev's cabinet have been fired or forced out since October 2012, most recently Deputy

Prime Minister Vladislav Surkov, the government's chief of staff. Announcement of his resignation in May 2013 came after he publicly criticized the criminal investigations into the use of state funds at Skolkovo, which he had overseen.

Skolkovo is widely regarded as an endeavor of former president Medvedev. While current President Vladimir Putin's public comments about the project have been largely supportive, his enacted policies have been mixed, and his administration recently reversed certain preferential treatments for the center. Gleb Pavlovsky, an ex-Kremlin adviser who heads the Moscow-based Effective Policy Foundation, says that "the idea of the project itself is anathema to the leadership because of its special status and independence. Without Medvedev able to protect it, it can't survive."

Beyond the shameful publicity that highlights the country's political instability, these events have led to hesitation among multinational corporations looking to invest in Russia. Many prominent global corporations — including Alstom, Intel, Microsoft, Samsung Electronics, and Siemens — originally backed Skolkovo and pledged nearly 15 billion rubles (US\$500 million) in investments. Conor Lenihan, a former Irish science minister tasked with attracting foreign companies to Skolkovo, notes that the center offers "alignment with a flagship project and a safe harbor where [the corporations] can locate R&D and receive protection for their intellectual property." However, with the current instability, many investors can still withdraw their financial support, especially if the projected state funding does not materialize.

The environment of political uncertainty compounds Skolkovo's fragility. The Technopark and innovation center are almost exclusively government-funded and are administered through Federal Law No. 244-FZ. The Skolkovo Foundation, whose board of directors oversees the Technopark, claims to be independent of the government. However, this direct government involvement creates a number of questions about conflicts of interest regarding independence and financial control, as well as interpretation of the law. Article 10, for example, states that, as of January 2014, all business residents must be physically present in Skolkovo. However, construction of the facilities is not

complete. As a result, some of the startups are worried about their logistical ability to comply with the law.

Gleb Daviduk, managing partner of iTech capital, a private equity firm that invests primarily in technology companies in Russia, is optimistic about Skolkovo, noting, “the Russian startup scene seems largely to have been spared by corruption. In the digital sphere, greedy civil servants don’t know what to look for — or where. This helps the industry to stay below various radar screens.” He believes all attempts at innovation are good and that Russia needs Skolkovo, no matter how inefficiently it is run. Skolkovo does not need to work for results specifically, he adds, but for the sake of being there to promote innovation.

Viktor Vekselberg, the Russian oligarch who heads the innovation center, points out that government involvement is unavoidable. He notes, “When it comes to innovation, Silicon Valley appeared thanks to the government.... Let’s not have illusions about this. It appeared in the first instance thanks to serious contracts from the military-industrial complex. And to this day, Silicon Valley — don’t try to twist things around — still relies heavily on the state.... Wherever you look, if we take other examples, the state always plays a dominant role. Singapore: The state plays a dominant role in an analogous project. India: huge involvement of the state.”

For at least the near term, the Russian government has reaffirmed its commitment to Skolkovo. In August 2013, the Duma allocated 502 billion rubles (about US\$15.5 million) through 2020. According to Vekselberg, this action demonstrates the government’s “faith in the future of the Skolkovo project.” According to the foundation’s estimates, by 2020, the Skolkovo project will help establish 1,000 startups in Russia, which will contribute

213 billion rubles (US\$7.1 billion) to the Russian economy. Vekselberg notes that “In total, efficiency from investment in the project needs to be calculated by 2030, when it reaches full operating capacity. According to preliminary calculations, the project will contribute up to 1.5 trillion rubles to GDP.”

By virtue of a rotund bureaucracy and the large role

Direct government involvement creates a number of questions about conflicts of interest regarding independence and financial control, as well as interpretation of the law.

state-owned enterprises play, every Skolkovo resident relies on the foundation for access to one branch of government or another — be it Russian railways, state-owned Sberbank (Russia’s largest commercial bank), or a regional government office. It is the magic ingredient in Russian entrepreneurship and is ubiquitously termed the “administrative resource.” As Vekselberg notes, “It is true that in Russia it is difficult to get anything done without state support.” It remains to be seen how the state will follow through on its commitment to Skolkovo and innovation in general, but Russia needs its continued development in order to avoid the Dutch disease of overreliance on natural resources.

This article was written by Eugene Bord and Natalya Guseva, members of the Lauder Class of 2015.



How Government Policies and Processes Are Hurting Innovation in China

While China's development over the last 30 years has been widely characterized as catching up to other, more advanced economies, some observers suggest that continued growth going forward will depend on the country's capacity to innovate. According to Ernst & Young's 2012 report, China's Productivity Imperative, China's total factory productivity fell from 4.7% during 2001-2007 to 2.8% during 2008-2010. As the opportunities for increased employment of capital and labor decrease — according to China's National Bureau of Statistics, the size of the country's labor force shrank for the first time in 2012 — economic theory suggests that sustained growth rates can be achieved only through increased productivity or a higher value produced per unit of input.

Well aware of the changing environment and the new challenges the economy faces, Chinese leaders are heavily promoting innovation. In fact, in 2006, the government released the *Medium to Long-Term Plan for the Development of Science and Technology* (MLP), its first such plan since joining the World Trade Organization. This key document made indigenous innovation a national strategy for the first time. Over the last few years, these guidelines were supported by further landmark policies, such as the 12th five-year plan released in 2011. A study by Weiguo Pang and Jonathan Plucker of East China Normal University and the University of Connecticut, respectively, found that the frequency of the use of terminologies related to innovation and creativity more than tripled between the 10th and the 12th five-year plans, indicating the government's increased emphasis on innovation.

Over the last few years, signs of innovation have increased steadily, suggesting that government policies are working. For example, in 2011, China filed more patents than any other country, and in 2012 it became the second-largest publisher of scientific content. In

addition, data from the Research Centre for Global R&D and Research (GLORAD) at Tongji University in Shanghai suggest that 255 new R&D facilities opened in China between 2001 and 2010, more than in any other major economy.

While these numbers are clearly impressive, the policies promoting the advances do not support, and might even hurt, the development of innovation.

Patent Quantity over Quality, and Academic Fraud

In 2011, China claimed the number one spot globally for the number of patents filed. This was attained, in part, after China set targets for the number of patents and tied subsidies to local governments for generating them. However, this “brute-force” strategy has led to skepticism about the quality of these patents. Most of the analysis indicates that patent quality in the country lags behind quantity.

A 2013 report in *The Economist* analyzed the number of places where inventors filed for a technology patent. The theory is that, if the idea has high value, the inventor would want to file in many countries, whereas a low-

value patent to obtain a local subsidy would not be filed internationally. Not many Chinese inventors seek to patent abroad — fewer than 5% between 2005 and 2009 — versus 27% and 40% in the U.S. and Europe, respectively. Other analyses from the EU Chamber of Commerce show low scores of patent citations and demonstrate that foreign enterprises typically do not file breakthrough innovations in China. Among most major provincial and national level policies in China, there are more than 80 references to initiatives to improve patent quality. This need for improvement has been raised both internationally and domestically.

Moreover, in less than a decade, China became a major contributor to scientific research, second only to the U.S. in terms of the volume of academic papers published in journals tabulated by the *Science Citation Index* (SCI). The growth of China's publication numbers is the result of reformed research incentives. A key policy, for example, ties funding for universities directly to quantifiable indicators, such as the number of citations an institute's research receives in respectable journals. Hence, many universities have implemented “publish-or-perish” contracts for their academic employees, making publication citations a significant factor for Chinese scholars in their appointments, promotions, and remunerations. A decade ago, publishing was not a key focus area for many Chinese academics. One professor in China noted that he alone was responsible for more than 15% of all the papers published by his university in a certain year prior to the implementation of above-mentioned policies. At that time, many contracts specified a target of one international publication per year; contracts today might stipulate three such publications.

While the policies obtained the targeted effect of increasing the number of publications, their true contribution to science has been less impressive. China ranks only 14th in average citations per SCI paper — perhaps a better indicator of the true scientific value. More importantly, however, the publication pressure generated by the new legislation led to widespread academic misconduct. A recent study by the China Association for Science and Technology found that more than 50% of employees were aware of academic misconduct in their professional proximity. At best,

misconduct is the publication of a paper in multiple journals; at worst, it includes plagiarism and falsification of data. During 2012 alone, a leading international science journal had to retract 70 papers from 2007 by two academics from China because all their findings were falsified.

Most of the analysis indicates that patent quality in the country lags behind quantity.

The increasing problem of academic fraud was recognized by the Chinese government as early as 2002, leading the Ministry of Education to publish a series of national policies aimed at eradicating academic misconduct and promoting scientific achievement. In addition, the publishing industry itself is trying to clamp down on misconduct. In 2012, the China Association for Science and Technology issued a new policy under which the editors and presidents of its 1,050 journals must adhere to strict academic guidelines.

Skeptics point out, however, that these policy interventions are not achieving satisfactory results in China, in part because a huge market for fake academic research and commercial papers, generated by an army of ghost writers, places profit far above academic integrity. According to the report in *The Economist*, this market in China was worth US\$150 million in 2009, up 500% from 2007.

Observers contend that unless China reforms its academic-research incentives, which are currently aligned primarily with objective measurements and reward quantity over quality, the country will face major challenges in trying to increase the value of its academic output and attaining the desired level of true contributions to innovation and progress.

These examples clearly show that many policies related to innovation might have unwelcome consequences that will ultimately hurt the development of China's innovation capabilities and intellectual capital. With that in mind, the government needs to carefully craft

and evaluate any new policies it intends to put in place. This is particularly true for a new policy on inventor-employee remuneration, for which the government released guidelines in 2012. An analysis of the draft rules by international law firm Foley & Lardner titled, “A Proposed Inventor-Remuneration Policy for Innovation Places a Greater Burden on Employers,” suggests that the new rules might have a negative effect on innovation.

In November 2012, the State Intellectual Property Office (SIPO) released new rules on inventor-employee remuneration that increased financial incentives for employees who develop new innovations. While this policy might have a positive effect on strengthening the inventor-employee’s position vis-à-vis the employer, if implemented as proposed it might actually hurt innovation. Foley & Lardner’s analysis identified three key reasons for this:

One of the most effective ways that Chinese firms have been able to move up the value chain is by leveraging foreign talent and technology.

Increase in the scope of what constitutes an innovation: While previous rules cover innovation in the form of patents, the new rules include, for example, new plant varieties, integrated circuit layout design and technical secrets.

Increase in the financial reward and remuneration: Both reward and remuneration for the inventor-employee are increased significantly under the new draft rules. For example, the financial reward for a patent under the new legislation must be at least RMB8,000 (US\$1,300), up from the previous minimum of RMB3,000 (US\$480). Remuneration is increased in a similar fashion.

Less room for contractual exceptions: The new rules limit the possibilities for entities to reduce the right to remuneration if certain conditions are not met. As an example, an employer previously could require the inventor-employee to work for the entity for a certain period of time before earning the right to remunerations

and rewards. Under the new rules, such a contractual agreement might be invalid, increasing the financial burden of invention for the entity.

The triple effect of broadening scope, increasing financial reward, and limiting exceptions will increase the burden of innovation for employers. The end result will ultimately not increase but, rather, decrease innovation efforts.

Foreign Talent and Technology

While certain policies might have actually hurt innovation in China, many success stories abound about innovation in the country. This is not a contradiction: Innovation in China is possible despite these policies.

One of the most effective ways that Chinese firms have been able to move up the value chain is by leveraging foreign talent and technology. According to the Brookings Institute, there have been more than 500,000 “returnees” to China — that is, Chinese nationals who studied overseas but have since returned to work in China in academic, science, or business settings. According to a study by the Administrative Committee of Zhongguancun, which oversees the startup scene in Beijing, 25% of startups in the area have been founded by returnees.

The Chinese government has instituted programs to tackle the “brain drain” aggressively. In 2008, it launched the Thousand Talents program to attract primarily Chinese-born experts, academics, and entrepreneurs to China. The program provides generous research funding along with substantial housing and tax-free education allowances. In 2011, China expanded the program to non-Chinese-born through the Thousand Foreign Experts program, which is designed to attract up to 1,000 foreign academics and entrepreneurs.

Chinese acquisition of foreign companies as a way to import technology and know-how has increased considerably over the past five years across a number of industries — from Lenovo’s US\$1.75 billion acquisition of IBM’s PC business to Shuanghui’s US\$4.7 billion acquisition of U.S.-based Smithfield Foods. In 2012, for example, Sany, a Chinese construction-equipment company, acquired the German company Putzmeister,

which makes high-tech concrete pumps. Putzmeister was widely regarded for its superior technological capabilities, and, following the acquisition, Sany took deliberate steps to bring the German company's technological know-how and innovative talent to China.

This acquisition was only part of Sany's strategic push to focus on innovation by looking abroad. The year before, it opened a greenfield US\$100 million R&D plant near Cologne so it could "reach the best global manufacturing and engineering talent to become a world-class company," according to a January 30, 2012, article in the *Financial Times*. Although it is hard to judge the long-term success of this strategy after such a short time, Sany has been able to achieve some early gains. For example, joint Sany and Putzmeister engineering teams have already introduced two new innovative products. In addition, the Putzmeister brand continues to perform well financially, with a 30% increase in year-on-year sales in fiscal year 2012.

Another exceptional case of a company that was able to move up the value chain successfully is GE China. Unlike many other multinationals that have relied on "glocalization" — the process of taking products developed in wealthy markets such as the U.S. and making only minor changes to fit the local Chinese market — GE has invested heavily in local R&D in China. Between 2010 and 2012, it spent more than US\$2 billion on innovation there, including US\$500 million on innovation centers and US\$1.5 billion to fund joint ventures with Chinese state-owned companies in the high-tech sector. GE also holds an annual US\$100 million green-energy innovation competition in China.

These efforts are part of GE CEO Jeff Immelt's strategy to rely on organic growth in developing markets such as China. To do this, GE has had to create products that fit the smaller budgets of its Chinese customers and are price-competitive with its local Chinese competition. "The key drivers of GE's success in innovation in China [include] getting closer to the customer and speaking the same language as the customer," says Hans Chia, director of market development for GE China. "We find that if we can really understand the needs of customers in China, then we can build the functionality that the Chinese

customer really wants and reduce cost over time. Since we do this process in China, the cost of innovation in China is lower than if we had done this in the U.S. or elsewhere. It will take some time, but the early results have been quite encouraging."

These efforts are part of GE CEO Jeff Immelt's strategy to rely on organic growth in developing markets such as China.

Because local innovation is embedded in its global strategy, GE China has been successful in moving up the value chain in China and has also reaped financial benefits. In 2002, it developed a portable ultrasound device that sold for 15% of the price of GE's highest-end model. The product not only took off in China, but also entered the U.S. market, where it is used at accident sites and in emergency rooms. According to a *Harvard Business Review* case study from October 2009 titled, "How GE Is Disrupting Itself," the company increased its portable ultrasound revenue from US\$3 million in 2002 to US\$278 million in 2007. GE also has spent hundreds of millions of dollars hosting innovation competitions in China. This began with the launch of GE's Ecomagination Challenge in 2011, which awards US\$100 million annually to innovations in gas power, and has since expanded to a similar challenge in breast cancer detection. These initiatives have reaped significant financial benefits for GE, and they highlight the importance of market mechanisms, rather than government policies, in driving successful innovation.

Where innovation policies and success stories are concerned, one could conclude that the misguided policies are primarily the result of state-led innovation, while the successes are the result of market-based entrepreneurship. It suggests that the current model of centrally identified prioritization, funding, and research should be amended to include stronger market mechanisms. For example, it is often noted that the system for allocating funds should be geared toward deserving companies that are small- to medium-size

enterprises rather than state-owned enterprises. Along these lines, the Chinese government recently announced construction of the Shanghai Free Trade Zone, a testing ground where the government is expected to allow for the liberalization of investment, foreign exchange, trade, and manufacturing. Although details have yet to emerge, the Xi-Li administration has stressed its desire to have the government limit its scope. The new experiment in Shanghai could herald the beginning of a new round of market-led innovation in China.

Yet the state should still have processes for measuring the growth of innovation in China. These processes, however, should be based less on quantitative targets for the number of patents and more on other aspects that gauge innovation, such as the European Union's Regional Innovation Scoreboard, which measures a wide range of metrics that include the percentage of small-to medium-size enterprises introducing a product, and patent revenue derived from abroad, as noted by the European Chamber of Commerce. Additionally, financial incentives for patents should be based on criteria reflective of quality. "Financial incentives for

innovation should not be tied to the front-end for having a patent approved. Incentives should be rewarded on the back-end," says Tony Chen, a partner in patent litigation at Jones Day based in Shanghai. These alternative measures could encourage a long-term perspective on risk taking that is necessary to drive break-through innovations in China.

In addition, scientists also argue that the state must do more to protect intellectual property rather than merely promote the increased creation of knowledge. According to *The Global Competitiveness Report 2005-2006*, countries with strong intellectual property protections are more innovative than those with weak protections. Intellectual-property protection reduces the risks associated with innovation. Without these protections, those who invest in innovation — be it inventors, companies, or investment funds — are less likely to take the gamble.

This article was written by Lori Hu, Lorenz Kazda, and Cathy Li, members of the Lauder Class of 2015.



Cyber Crime: The Achilles Heel of the Business World

Businesses are increasingly the victims of cyber attacks. These crimes are not only costly for the companies, but can also put their very existence at risk and may provoke significant externalities for third parties. The World Federation of Exchanges reported in July 2013 that half of the 46 exchanges it surveyed had been victims of cyber attacks in the previous year. In a 2013 Financial Times article, the Depository Trust and Clearing Corporation, which processes large securities transactions for U.S. capital markets, described cyber crime “as arguably the top systemic threat facing global financial markets and associated infrastructure.”

Cyber attacks are not limited to the financial sector. A multitude of companies of different sizes and across sectors incur losses as a result of this crime. According to the Identity Theft Resource Center, a nonprofit research and education group that aids cyber-crime victims, at least 441 U.S. companies, government agencies, and other institutions reported material breaches to their computer networks during the first three quarters of 2013. This figure likely underestimates the real magnitude of the crime. As Michael Levy, chief of computer crimes at the U.S. Attorney’s Office for the Eastern District of Pennsylvania, notes, “Companies often don’t know that they have been victims of cyber attacks, and if they do know it, they are reluctant to disclose such intrusions” because they fear this might damage their reputations or cause them to lose their shareholders’ confidence.

The fact that businesses are becoming more and more tech-dependent and interconnected adds to an increased cyber crime presence. Based on the 2012 “Cost of Cyber Crime Study” published by the Ponemon Institute — a research center dedicated to privacy, data protection, and information security policy — U.S. organizations experience an average of 102 successful cyber attacks per week, more than double the total for 2010. Costs linked to cyber crime rose by nearly 40% compared

to 2010 and reached an average annual cost of US\$8.9 million for the U.S. organizations that are part of the sample benchmark. The same report points out that 78% of these costs are caused by malicious code, denial of service, stolen or hijacked devices, and malevolent insiders. PA Consulting, a consultancy specializing in management, technology and innovation, estimated in a March 2012 blog post, published in the *Future of Business*, that “roughly 80% of the value of a typical company is exposed in cyberspace” and that “a typical advanced attack costs the victim in excess of US\$150 million, with an average of 12% wiped off the market cap of a company in the immediate public aftermath.”

In addition, cyber criminals are more sophisticated than ever as the cost of equipment has fallen significantly in recent years, hence allowing a new generation of cyber criminals — often based in emerging countries — to develop elaborate attacks that circumvent cutting-edge cyber-security systems. Matt Hartley, senior director at the cyber-security consultancy firm iSIGHT Partners, notes that “cyber attackers are increasingly sophisticated. The pace of innovation is escalating rapidly among threat sources, helped by an acceleration in the global proliferation of cyber expertise.” As examples of the transfer of more sophisticated approaches, he cites not only the Stuxnet worm, but also recent attacks that

targeted the oil and gas industry, such as the data-destruction attack against Saudi Arabian oil company Saudi Aramco in 2012. In this attack, considered to be one of the most destructive against a single company, a group of hackers calling themselves the “Cutting Sword of Justice” managed to shut down 30,000 Aramco computer workstations and to delete all of their data.

Cyber warfare damages for a company can go beyond business interruptions and the destruction of strategic data. They include cyber espionage, intellectual property loss, identity, and sensitive data theft, as well as the losses that affect third parties such as customers. What will be the real consequences of the security breach e-commerce startup LivingSocial experienced in April 2013, which involved the data of more than 50 million customers? Businesses can suffer not only from direct losses, but also from indirect losses such as brand and reputation damage. Depending on their jurisdiction, “companies may also be responsible for negative externalities they may have not directly caused and for the lack of compliance to an increasingly stringent regulation in the event of cyber incidents involving third parties,” notes Bradley Gow, a cyber insurance pioneer from specialty insurance provider Endurance.

Cyber warfare damages for a company can go beyond business interruptions and the destruction of strategic data.

Companies that are more aware of the increasing threat of cyber warfare, especially global brands and players in the banking and energy sectors, are increasing their annual budgets for cyber security and defense. The trend is to move from a reactive to a proactive approach and to adopt “intelligent security” strategies. Cyber security is about understanding the cyber threats to a company and acting upon them. However, even in these best-in-class companies, cyber security often remains isolated and is rarely integrated into the company’s other strategic areas. According to Hartley, “Companies must move from a mostly-isolated and technology-centered security operation to a unified security organization, tying technology, security and intelligence on threats together. Those [people] leading security and technology teams

should be connected and in constant communication with those [who are] heading operations, marketing, finance, and strategy, all the way up to and including the CEO and board.”

A higher degree of cyber security discourages opportunist attacks, but does not offset the risk of being the victim of a targeted attack. Different strategies are being adopted to minimize the risk of such attacks in terms of frequency and impact. Large banks have created the Financial Services-Information Sharing and Analysis Center (FS-ISAC) to share information about attacks and how they managed to repair the breaches in their systems in order to prevent similar attacks from happening to other members of the organization. Despite being initially reluctant to share sensitive information, large financial institutions understand that such practices will benefit all of them in the medium to long term by reducing the frequency of their losses. Institutionalizing ways to reduce damages from cyber attacks implicitly recognizes that all companies’ IT platforms are vulnerable, no matter what their cyber security policy’s level of sophistication is.

Hartley points out another way in which companies are currently preventing damage, especially in the tech industry. Facebook has a white-hat system that encourages cyber experts — so-called “cyber researchers” — to disclose security gaps discovered in its technology. They are paid a minimum of US\$500 for each critical gap reported, and there is no cap to such compensation. In this way, Facebook gathers data on its platform’s shortfalls before they can be exploited by malicious intent. However, paying the researchers is effective only if their impetus is money, which is not always the case. Money would unlikely have stopped Julian Assange from creating Wikileaks and Edward Snowden from leaking top-secret government information. Also, as the provenance of cyber attacks suggests — a considerable number of attacks originate in China, the Middle East, and the Commonwealth of Independent States — political motives are becoming increasingly common.

Because even those companies that invest the most in cyber security are vulnerable, it would be reasonable to expect an approach to cyber risk similar to what companies apply with respect to other risks they

face: insurance. This is not the case. While virtually all American businesses are insured against natural disasters and terroristic attacks — the latter being covered by the Terrorism Insurance Act of 2002 — only a few businesses cover their risk within their insurance package. As Levy notes, “If a company does not appreciate that there is a risk, it does not address it.” Nevertheless, the economic damage resulting from cyber attacks can be as great as that of a natural disaster, and the impotence of businesses in the face of cyber criminals is similar to what they experience in the face of terrorists.

According to Gow, “Cyber insurance products were commercialized at first in the 1990s when dotcom companies started going public and had to justify in their IPO prospectus how they were mitigating their exposure to hacker threats and viruses.” New regulations on privacy supported an initial expansion phase of cyber insurance, which companies used as protection against the potential lack of compliance with legal requirements in the event of personal data loss. Nonetheless, as pointed out at a November 2012 U.S. Department of Homeland Security workshop focused on cyber insurance by Tyler Moore, professor of computer science and engineering at Southern Methodist University, “the cyber security insurance market today is small and has underperformed expectations.” Because businesses are often unaware of the cyber risks they are exposed to, they are reluctant to pay a premium to cover such risks. However, justifying the underdevelopment of the cyber insurance market with a lack of demand is simplistic. Had the insurance industry found the business opportunity linked to cyber insurance attractive, it would have pushed cyber insurance products by educating its client base more convincingly and creating a need for cyber risk coverage.

Jean Lemaire, a professor of insurance and actuarial science at Wharton, explains from an outsider’s perspective why cyber insurance may not be seen as a lucrative segment for traditional insurers: “Unlike natural disaster risks, cyber risks are not independent, and [they] evolve rapidly. These two peculiarities, coupled with the lack of data, make it difficult for insurance companies to quantify the risk and the size of damages, which are necessary to calculate premiums.” In addition, potential

losses following a cyber attack vary from company to company depending on the industry and the company’s business model, its positioning and reputation, and its association with certain causes and values.

The fact that businesses are becoming more and more tech-dependent and interconnected adds to an increased cyber crime presence.

Moore notes that, after a first development phase along with the Internet bubble, cyber insurance growth slowed down following the Y2K fears and the 9/11 attacks, the magnitude of which insurance companies had not anticipated. Hence, premiums increased, and insurers began to remove cyber risk coverage from their general policies. In addition, “policies are typically capped at \$1 million to \$50 million and contain unpopular exclusions.”

Gow adds that insurance providers typically limit their exposure to any single cyber account to US\$10-US\$20 million. Although companies often purchase policies from different providers, such a strategy reduces their cyber-risk exposure only marginally. Moreover, companies were unsuccessful in their attempts to file claims under their commercial general-liability insurance policies, which often exclude explicitly cyber-related incidents. Gow recalls the legal dispute between Zurich Insurance and Sony, which was decided in favor of the insurer in 2011.

“Cyber insurance is today a specialist market, underwritten separately, which accounts for approximately \$1.3 billion in premiums,” notes Gow. “Despite being relatively small compared to its potential, the market is among the fastest growing segments of the insurance industry and is highly correlated to regulation, for example on privacy.”

Government can, in fact, play a major role both in the fight against cyber crime and in the spread of cyber insurance. The U.K. government took the lead on cyber security in 2011 by setting aside nearly US\$1 billion to boost the country’s cyber defenses. This has already resulted in the creation of a cyber crime investigation

unit and a hub to promote information-sharing across organizations. Currently, tax incentives and new regulations promoting cyber insurance are being debated in the U.K.'s public arena. In fact, the development of cyber insurance would not only diminish the exposure of companies to cyber risk, but also increase the protection of virtually all citizens from cyber crime. This insurance could result in virtuous circles leading to companies that are better protected against opportunistic attacks. As Gow points out, "minimum security policies are required by an insurer before the latter is willing to take on the risk," and insurance companies are likely to discount their premiums for companies exceeding these minimum requirements.

Insurance providers typically limit their exposure to any single cyber account to US\$10 million-US\$20 million.

The U.S. government is also increasingly seeing cyber security as a major threat that requires its intervention. While closely monitoring the level of cyber protection for critical infrastructure, President Barack Obama in February 2013 signed an executive order expanding private sector access to government cyber threat information and instructing agencies to create a set

of standards. Levy believes that the U.S. government may also consider "the creation of an agency gathering cybercrime information, and self-sustained via a minimum registration fee" — in other words, the extension of the FS-ISAC system beyond the financial services industry. "This agency would analyze malware and share the analysis and proposed mitigation strategy with subscribers, while at the same time keeping anonymous the company that provided the information," adds Levy. The actuarial data collected in this way would also be a key resource for insurance companies in their attempt to quantify cyber risk and could ultimately result in a more dynamic offering of cyber-insurance products.

As a complement to such a data-gathering effort, establishing a federal re-insurance entity would further fuel the cyber insurance market by protecting insurance companies from large-impact, low-frequency risks — or the so called "cyber hurricanes." The U.S. government did assume the role of insurer of last resort for terrorist events in the aftermath of 9/11, but public opinion is already considering whether this role should be extended beyond its planned December 31, 2014, expiration date. Thus, the battle for a new government-funded cyber re-insurance vehicle may not arise in the near future.

This article was written by Emilie Esposito, member of the Lauder Class of 2015.

INFRASTRUCTURE AND PLANNING



Colombia and Peru: Boosting Global Competitiveness by Investing in Infrastructure

The political stability achieved by Colombia and Peru over the past 15 years, along with accelerated economic growth, have led to a significant increase in total trade (the sum of exports and imports) from US\$125 billion in 2008 to US\$188 billion in 2012. In addition to stability and economic growth, another key factor is both countries' success in establishing free trade agreements (FTAs) with major economies such as the U.S., China, and the EU. Nevertheless, for Colombia and Peru to compete with these countries and truly benefit from free trade, they must narrow their infrastructure gap to increase their competitiveness.

One of the primary limitations in both countries' competitiveness rankings is their infrastructure, particularly in the transportation sector. According to the *Global Competitiveness Report*, prepared by the World Economic Forum in 2012, Colombia and Peru were ranked 114 and 97, respectively, among 144 countries and territories in terms of transportation infrastructure — below Puerto Rico (45) and Rwanda (67).

The Colombian Infrastructure Chamber published a study in 2012 showing a deficit of more than 30,000 kilometers of paved roads in the country and a lack of roughly 1,000,000 containers in port capacity. This study also highlighted the poor conditions of existing roads, where only 10% to 15% of secondary and tertiary roads are considered to be in “good” condition. One of Peru's primary newspapers, *La República*, estimated that, in order to maintain its current level of competitiveness, Peru would need US\$88 billion in infrastructure investment between 2012 and 2021. Transportation accounts for almost 25% of the deficit, with the primary transportation areas being roads (roughly US\$13 billion) and railways (US\$7 billion).

As a consequence of poor infrastructure, Colombia and Peru face extremely high transportation costs.

Xavier Duran, a professor at Universidad Los Andes in Colombia, noted that logistics costs in Colombia and Peru represent 23% and 32% of their GDP, respectively, compared to 9% on average in OECD countries. Other evidence from the World Bank's 2012 *Doing Business* report shows that the cost of exporting a commodity is approximately US\$2,270 per container in Colombia and US\$850 in Peru, much higher than the cost in countries such as Malaysia (US\$435) and South Korea (US\$695).

Both the Colombian and Peruvian governments are aware of the current situation and the need to invest in order to improve their global competitiveness. Colombian President Juan Manuel Santos stated in 2012 that, “Only with major investments and ambitious projects will we be able to recover and provide the productive sector with an infrastructure that allows us to be truly competitive.” What are the root causes of poor infrastructure in these countries? What is the role of government in addressing the challenges? What progress has been achieved, and what lies ahead to ensure that increased investment will close the infrastructure gap? What are these governments doing, and what do they still need to do to close the gap?

Origins of the Deficit

Indirectly emphasized by President Santos, one of the primary factors that explains the gap in transportation infrastructure is the historical lack of ambitious projects and investment. During the 9th National Congress of Infrastructure in 2012, Leonardo Villar, president of the Foundation for Education and Development in Colombia (Fedesarrollo), argued that over the past decades, Colombia and Peru had each invested about half a percent of their GDP on infrastructure, whereas developed countries invested more than 2% and emerging countries invested roughly 9%.

In Villar's view, part of the problem is that the constitutions of both countries create strong distinctions between productive and social investments, with an emphasis on the latter. He argues that some social investments are misclassified. For example, large pensions paid to former government officials are often categorized as social investments, while new road construction connecting an impoverished village to a commercial center might be classified as a productive investment and, thus, deprioritized.

"Only with major investments and ambitious projects will we be able to ... provide the productive sector with an infrastructure that allows us to be truly competitive."

—Colombian President Juan Manuel Santos

This view is also shared by other experts, such as former Colombian Minister of Finance Juan Carlos Echeverry. In a 2012 interview with *The Wall Street Journal*, he stated that, "for years, Colombia has not paid attention to the infrastructure. We paid attention to education, health care and pensions — and the war. Now we are getting back to building the infrastructure."

According to Carlos Casa, a professor at Universidad de Los Andes in Peru, the limited access to capital has also played an important role in constraining investments in infrastructure. The government has not had sufficient

funds to make the necessary investments, nor has the private sector been properly incentivized to support projects of public interest. For example, a 2012 study by Apoyo Consultoría showed that of all private investment projects in Peru slated for 2013 and 2014, only 5% will be allocated to infrastructure; of these projects, the vast majority (62%) will be directed toward mining and hydrocarbon. In the public sector, there is also a misalignment of government incentives, creating an unwillingness to make investments that benefit future governments, as seen in the lack of investments for road maintenance and rehabilitation.

In addition, Carlos Parodi, a professor at Universidad de Los Andes, highlights two important aspects in Colombia and Peru that contribute to low-quality infrastructure: corruption and a lack of human capital. In the World Economic Forum's *Global Competitiveness Report* for 2012-2013, Colombia and Peru are ranked among the countries with the highest rate of diversion of public funds (130 and 103, respectively, out of a total of 144 countries). In Parodi's opinion, corruption not only discourages private investment, but also leads to low technical standards and poor prioritization of infrastructure projects. With regard to human capital, there is a shortage of qualified professionals at all levels within these governments, which makes infrastructure projects unmanageable.

Other factors that explain the high cost and low competitiveness of the transportation sector in these countries are their challenging topographies and geographies. According to Villar, Peru and Colombia are marked by a mountainous topography that increases distances between cities. By land, it takes more than 15 hours to go from Lima to Cuzco, another major inland city in Peru. The situation is even worse in Colombia, where there are three distinct mountain ranges and the largest cities are far from the coast. For example, it takes roughly 10 hours to go from Bogota to Medellín by land, a stretch of only 270 miles. Dario Londoño, a professor at Universidad Javeriana in Colombia, writes that the average distance from a primary city to the nearest port within Colombia is three to eight times greater than the distance in comparable countries such as Chile (3.2 times), Brazil (3.6 times), and Argentina (8.0 times).

According to the *Competitiveness Report*, published by the Consejo Privado de Competitividad in Colombia, some minor factors also impact the infrastructure in these countries, including serious competition among industries for transportation resources, poor fleet quality, and a high level of informality. The recent boom in the mining and oil and gas industries in Colombia and Peru has increased the demand for logistics resources and, thus, transportation costs. With regard to fleet quality, the average vehicle age is 22 years old in Colombia and 18 years old in Peru; it is closer to seven years old in the U.S. An old fleet increases transportation costs (e.g., higher maintenance and poorer fuel efficiency) and negatively impacts society (e.g., pollution). Along with the absence of formal contracts in the transportation industry (informality), these factors lead to low standards in service delivery, adversely affecting the sector's competitiveness.

The Role of Government

Due to each government's control of construction licensing for infrastructure projects, observers cite the need for public funds to make many transportation infrastructure projects financially viable along with the need for a long-term strategic plan that extends beyond most private investors' time horizons. Responsibility for successful long-term infrastructure development falls wholly on governments. As noted above, government officials in both Colombia and Peru are aware of their responsibility and the importance of increasing the pace of infrastructure investments to maintain and bolster their countries' level of competitiveness. Both governments have already undertaken a number of initiatives to improve transportation infrastructure, ports, and roads.

While Colombia is focused on all aspects of its road system — from primary to tertiary — it has not formally created a comparable decentralized program and is still managing similar projects under its umbrella roadway institution, the National Roads Institute (INVÍAS). The benefit of this type of program is its ability to provide focused coordination, promotion, and technical assistance to local authorities and municipalities for prioritizing, developing, and structuring transportation infrastructure investments. On the regional and

municipal levels, Peru implemented a decentralized program, called PROVÍAS, focused on paving and maintaining secondary and tertiary roadways. Richard Webb, a former president of Peru's Central Bank, argues in his new book, *Conexión y Despegue Rural*, that since 2006 this program has developed institutional capacity in road infrastructure management and has already rehabilitated 15,000 kilometers of roadways. This work successfully decreased land travel times between impoverished areas and primary cities from 13.2 hours in 2001 to just 5.0 hours in 2011.

In addition, to increase the pace of new projects, both countries have passed legal reforms that simplify and promote infrastructure investments. One example is Peru's recently enacted eminent-domain law that streamlines the use of land for priority infrastructure projects, such as roads and the construction or expansion of ports and airports. Colombia has also instituted similar legislation.

The scale of infrastructure projects relevant on the national level can easily exceed hundreds of millions or even several billion dollars.

While these efforts have spurred progress, there are still large hurdles to overcome. The scale of infrastructure projects relevant on the national level can easily exceed hundreds of millions or even several billion dollars. This magnitude of investment and the required personnel with the necessary training and expertise simply cannot be provided by public institutions alone. Thus, both Colombia and Peru have turned their attention to resolving these issues by creating an environment that attracts and promotes private investment through public-private partnerships (PPPs). Inviting private domestic and multinational firms to participate and lead large-scale infrastructure projects provides access to economic and human resources not otherwise available to these governments. As discussed below, the shift to focus on PPPs is a first step, but is not an easily attainable solution.

The Role of Public-private Partnerships

The unique structure of PPPs makes them appropriate to finance public projects with high initial costs and long asset lives. As Javier Serrano Rodriguez writes in his 2010 paper, “Financing Transportation Projects,” the main objectives of the PPP structure are to transfer construction risk from the government to the construction contractor, who is arguably in a better position to manage such risk, and to postpone government payments, stretching them over a 20-30-year term, commensurate with the useful life of the project, thus allowing the government to better manage its fiscal position.

Colombia was the first country in South America to utilize PPPs, beginning in 1993. Now in their fourth generation, these partnerships in Colombia have seen a significant number of contract renegotiations due to unforeseen economic challenges, necessitating a complete overhaul of the structures on a go-forward basis. Under the current PPP structure, projects are bid out to private companies — both domestic and international — that are responsible for the financing, construction, and operation, while the government, in return, makes payments based on road availability and quality. If the maintenance and operation of a project are not deemed to meet the standards of the contract, payments by the government can be reduced by up to 10%. Payments by the government will be covered by tax revenues, as established by Law 1508, thus providing a dedicated source of payment that reduces uncertainty for investors while still holding operators accountable for nonperformance. Certainty of government payments and nonperformance disagreements were issues seen in previous iterations of the PPP structure. Under this new structure, Colombia successfully undertook the financing of Ruta del Sol, a 1,000-kilometer highway connecting the country’s capital to other major cities.

In contrast, transportation projects in Peru have been financed under a PPP scheme that separates construction and operational risks. The current

structure, in place since 2006, ascribes construction risk to private companies and commercial banks. However, once the project is finished, the government inspects the road and issues a certificate of completion, which then effectively allows the bank debt to be replaced with a 20-30-year bond guaranteed by the government. Investors in the completed project then take sovereign risk rather than company risk, which results in greater access to international financial markets.

With the recognized need to attract private investment, Colombia and Peru have passed laws and enacted policies to create a friendlier environment for accomplishing this. Both countries have sought to (1) provide transparency for all the parties in the bidding and construction processes; (2) create legal, political, and tax stability; and (3) treat foreign and domestic investors equally — all critical factors for building investor confidence.

Colombia has also formed new institutions, such as the National Infrastructure Agency (ANI) and the National System of Competitiveness and Innovation, and strengthened other institutions, such as INVÍAS, to execute the country’s infrastructure plan more effectively. ANI, in particular, was created to build relationships with private investors, manage all aspects of project evaluation and prioritization, and ultimately improve the country’s PPP programs. Other initiatives by Colombia include the introduction of the Royalties Act, which will provide 10% of the General System of Royalties for infrastructure construction.

While all of these efforts to increase the flow of private capital into Colombia and Peru are important and relevant steps on the path to improving global competitiveness, there are still significant challenges ahead. The changes implemented to date under these programs will require time to be proven and accepted by the capital markets.

This article was written by Cristina Camiz, Troy Ford, Matheus Schmidt, and Daniela Toleva, members of the Lauder Class of 2015.



Big Bottleneck: A Weak Transportation Network Is Hurting Brazil's Once-hot Economy

On the highway that leads to Brazil's Port of Santos, Latin America's largest port, a line of trucks sits on the shoulder. The motorists set up lawn chairs at the side of the road, re-entering their trucks every few hours to inch forward in the line. They may spend a week or more waiting to unload their cargo in the port. In April 2013, Bloomberg reported that this line of trucks, most of which were carrying Brazil's record soybean crop, quadrupled from its normal length of around five miles to more than 20 miles.

Meanwhile, just off the coast, more than 200 vessels waited to dock and load the cargoes. The ships would wait an average of 39 days to dock, at an estimated cost of US\$30,000 per day. The soybean harvest begins in January and export shipments are usually completed by May, but 2013's shipments were extended to July. With the containers now full and a lack of sufficient grain silos for the overflow, Brazilian farmers have been forced to leave soybeans to rot in the fields.

Over the past decade, Brazil has established itself as an economic powerhouse, though not without problems and limitations. The country emerged relatively unscathed from the financial crisis of 2008 and has experienced significant growth in recent years, including GDP growth of 7.2% in 2010. Some observers believed that sustained growth would naturally result from Brazil's banking and energy sectors and from increased buying power among the country's emerging middle class. Others believed that Internet access and the increased adoption of modern technology would create the conditions for continued economic growth.

The single most important factor behind Brazil's growth pattern, however, has been the price of commodities. Since 2008, GDP growth has shown a high correlation with the Goldman Sachs Commodities Index. Exports

of Brazil's six most important commodities — iron, oil, soy, beef, sugar, and coffee — have increased by 180% since 2007, from 28% to 44% of exports on a value basis. More than 47% of Brazil's exports are raw materials, as opposed to manufactured goods. Much of this growth has been related to the increased demand for commodities in China.

The current lack of capacity in Brazil's port system begins even before the freight enters the port.

As global growth slowed in 2012, so did the once-hot Brazilian economy, demonstrating the importance of commodity exports to the country's health. The commodities boom also exposed a key bottleneck in Brazil's economy, namely, the deficiencies of the current logistics infrastructure. Increased production has stressed the insufficient transportation network, particularly in Brazil's critical port system, which handles 95% of foreign commerce. Southeastern ports are running at near 100% capacity, while ports in the rest of the country are expected to be saturated by 2016.

Brazil remains in a strong position to benefit from the continued growth in worldwide demand for commodities. Rail-infrastructure projects in the rural center of the country have the potential to open millions of hectares of new farmland and significantly increase the production of soybean, corn, and sugar. The challenge is no longer how to increase production, but how to export what is being produced. To take full advantage of this enormous opportunity and to remain a world leader in commodity exports, Brazil must resolve the bottlenecks that are hampering exports, which seems to be an impossible task without expanding port capacity.

The challenge is no longer how to increase production, but how to export what is being produced.

Brazil's historically essential coffee and sugar trade, as well as investment in the port system at the turn of the twentieth century, allowed the Port of Santos to become the busiest in South America. Investment continued through the 1970s and early 1980s and modernized the port for the containerization movement. Brazil had enjoyed a public infrastructure investment rate of nearly 2% of GDP through the late 1970s. But a string of economic crises — namely, hyperinflation, the Asian financial crisis of 1997, and the Russian and Argentinian defaults in 1998 and 2000 — all negatively impacted dollar flows into Brazil and led to underinvestment in public-infrastructure projects. Through the 1990s, public-infrastructure investment rarely exceeded 0.2% of GDP. Currently, Brazil sits in the bottom third in the global rankings for competitiveness in road, rail, and port infrastructure.

Private investment has lagged as well. In 1993, Brazil ended the state-controlled Portobras system and turned port operations over to private corporations. The concessions system that was implemented instead allowed companies to bid on projects to construct and operate port terminals. Ports that operated on this system were subject to heavy regulation and labor restrictions. Private ports, owned mostly by

large-commodity producers, were legally barred from handling third-party cargo, which led to years of private underinvestment. While the concessions system improved the situation after the Portobras era, distorted incentives led to underinvestment, high labor costs, political entrenchment, and corruption.

Current Port Infrastructure Problems

According to Antonio Carlos Duarte Sepulveda, CEO of the major logistics firm Santos Brasil, “lack of access is the principle bottleneck to the [Santos] port. The majority of cargo arrives via truck, which is a strategic error. Brazilian logistics are turned upside down.” A poll by the National Transport Confederation (CNT) reported that 61.3% of respondents found road access to the ports inadequate. Poor road infrastructure and single entry points force trucks to wait for days to enter the area, creating a huge bottleneck even before the cargo reaches the port. Railroad access suffers from a different issue: reach. Brazil's rail infrastructure does not extend to much of the country's rural interior. Where it does exist — mainly from São Paulo to Santos — freight trains compete with passenger trains, creating congestion between the two busy cities.

The delays continue when the goods arrive at the ports. Between 1997 and 2007, export cargo tripled while the Brazilian government spent less than R\$3 billion (US\$1.29 billion) on port infrastructure investment. The World Economic Forum now ranks Brazil's port infrastructure 135th among 144 worldwide. According to the American Association of Port Authorities, of the 40 operational ports in Brazil, the top five shipped more than 45% of all tonnage in 2012. Containerized exports are even more concentrated, according to the Brazilian Ministry of External Relations, with almost 36% of all containers leaving Brazil through a single port (Port of Santos) in 2012. The current wait time for a ship to dock and be loaded with cargo at the Port of Santos is 35 days, and wait times at the Port of Paranaguá average 55 days.

These delays have already proven costly. For example, a Chinese soy operator recently cancelled a two-million-ton order due to the shipping delays. While many delays are due to expanded production and lack of capacity,

much of the bottleneck is due to the red tape created by the port bureaucracy. To move cargo, one must deal with 16 different government agencies. The result is an exorbitant cost of doing business. Brazil's port costs for containers ran 81% and 166% above those of Northern European and Asian ports, respectively, according to Morgan Stanley.

The Future of Brazil's Port System

Brazil has recognized the need to increase investment in the national port infrastructure. Legislation earlier in 2013 has changed the regulatory framework and has expanded the possibility of private investment in the ports. Three aspects of this new legislation, in particular, open the possibility for quickly expanding port capacity and relieving the pressure Brazil's ports currently face — third-party cargo, the National Dredging Program (PND), and improved concessions legislation.

One of the most important aspects of the new legislation is the change in how private ports deal with third-party cargo. Previous legislation heavily restricted the amount and type of additional cargo a private port owner could handle in addition to its own. Under the new law, private ports can now ship cargo from other companies and can ship types of goods other than their own. An analysis by Credit Suisse determined that this aspect was the most significant piece of the new legislation.

In addition, private ports are no longer subject to the same onerous labor regulations as public ports. According to Sepulveda, due to the difficult regulations involved in hiring public port workers, the ports experience “an exceptional loss of productivity when the best employees are not actually able to be selected to work on a project.” The possible gains in productivity realized by expanding the private port system represent possible cost savings of up to 25%-30%, according to Credit Suisse.

Brazil has also made a significant investment in dredging its ports. Because of their geography, their age, and a worldwide trend toward larger ships, the ports are shallow and restrict the containerized capacity of vessels that can dock at many of them to 3,000-4,000 twenty-foot equivalent units (TEUs). Brazil has invested R\$3.8

billion (US\$1.63 billion) to increase the depth of the ports. Even though dredging is a major undertaking, increasing the depth to at least 14.5 meters will allow more modern ships with capacity as great as 8,000 TEUs to enter many more ports.

Finally, the new port legislation addresses the concessions system. The government plans to send to auction again many of the previously held concessions. Winners will be chosen based on a combination of the highest bid, the lowest tariff, and the greatest expected productivity. This will allow new players to enter the market and force the old guard to improve processes and become more competitive. The Port of Santos, for example, expects productivity to increase by 30% under the new system.

To move cargo, one must deal with 16 different government agencies. The result is an exorbitant cost of doing business.

Brazil also has the opportunity to reduce dependence on the ports in the southeastern region of the country, especially as agricultural production continues to migrate northward. The Brazilian Soybean Producers Association estimates that transport costs would fall by at least 18% for soybeans trucked via BR-163, a new highway being constructed from Mato Grosso to Santarem, even as the project has run into significant construction delays. This route would allow transporters to leverage the Amazon River port system, as shipping distance from Mato Grosso to Santarem is similar to current routes. According to one shipping expert, changes in the Panama Canal's pricing system for bulk cargo will allow Brazil to leverage the northeastern ports to ship through the canal and cut shipping times to China.

These recent legislative steps show that Brazilian authorities understand and are attempting to address the insufficiency of Brazil's port infrastructure. As a result of recent public protests, however, the federal government

is feeling pressure to increase spending in education, healthcare, and welfare programs. As the government attempts to allocate resources, will it invest enough in infrastructure to meet future rising demand? Credit Suisse estimates that the recent spending packages that raise infrastructure spending to 1% of GDP will address only 20% of Brazil's infrastructure needs, the vast majority of which will be invested in road and rail expansion. This expansion will open enormous swaths of farmland in the central-west region of the country, further increasing production and putting even greater pressure on the port system.

Despite the recent downturn, the foundations of the economy leave Brazil in a position for excellent growth

over the short and long term. The country's potential to sustain significant GDP growth and remain a major supplier of commodities to the world depends on its logistics infrastructure to transport efficiently the recent increases in production. The significant investments required for these projects will require corporations, investors, and politicians to come together to find intelligent private and public investments to develop the robust and efficient logistics system necessary to carry Brazil through the next phase of growth.

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INFRASTRUCTURE AND PLANNING



Real Estate, Credit, and the Emerging Middle Class in Peru

Peru's real estate market has experienced explosive growth over the last decade, with new construction springing up throughout the country and prices rising quickly. Several factors have contributed to this phenomenon.

The first is obvious. Peru's unprecedented economic growth — approximately 7% annually over recent years — has facilitated the emergence of a robust middle class with increasing disposable income. According to the Inter-American Development Bank (IADB), the percentage of Peruvians considered “middle class” doubled to 70% of the population between 2005 and 2011. And according to Peru's socioeconomic level system — a widely accepted scheme for classifying the socioeconomic demographics of the nation's population, with segments ranging from A to E — the middle-class population is represented by strata C and D. In addition to experiencing strong growth, this new middle class has enjoyed increased purchasing power through newly attained disposable income. For example, average monthly earnings for the Lima metropolitan area climbed by 41.8% between 2003 and 2010, with much of this increase concentrated in segments C and D.

Second, while the demand for housing has expanded vigorously, the supply has fallen behind. Peru faces a significant housing deficit, particularly in its urban areas. Lima's population exploded from about half a million people in 1945 to about nine million today. Peru's population is concentrated in the typical age of a first-time home buyer — about 26.5 years. Given these factors, the country faces a projected shortage of 1.9 million housing units in the short term.

Third, the unprecedented macroeconomic and political stability has enabled families to adopt a more long-term view of the future and encouraged them to make longer-term investments in housing. According to Alberto Pascó-Font, general manager of Enfoca Inversiones, the investment division of the Peruvian private equity firm ENFOCA, Peruvians who enter the emerging middle class tend to focus their discretionary spending on three main areas: housing, health, and education. Of these, the lion's share of spending has been devoted to housing improvement and acquisition, suggesting that these consumers seek to significantly invest in their future in order to consolidate their status as part of the middle class over the long term.

The unprecedented macroeconomic and political stability has enabled families to adopt a more long-term view of the future.

The financial sector, however, is not living up to the higher expectations of the middle class. Access to credit among the emerging middle class in Peru remains very low as banks have focused traditionally on the small high-income segments of the population. In recent years, a number of innovative new financiers have entered the

Peruvian market and have begun to provide mortgages and other financial products to the new middle class, further driving real estate growth (and prices) in Lima. Peruvians have reacted to the various bottlenecks in creative ways, of which the self-construction and pre-fabricated housing markets are the most important.

To capitalize on increased construction spending, these stores have initiated new financing programs targeted at self-constructors.

Self-construction and the New Middle Class

Home ownership and urban development in Lima have taken place as a process of progressive formalization of the housing stock. According to Hernando de Soto, a prominent Peruvian economist, the informal settlements that burgeoned in Lima throughout the last seven decades were developed as inhabitants occupied a parcel of land, constructed a dwelling, and only then attempted to obtain a formal deed for the land or house. Over the years, much of the housing stock in the peri-urban areas of Lima was built on informal “invasions,” which were then formalized, and its inhabitants were eventually granted access to basic services. Areas that were once home to the city’s poorest now house the city’s emerging middle class, who live in “formalized” areas; the poorest, particularly rural migrants, build in more precarious spots, predominantly in the marginal areas on mountainsides.

Peruvians in the lower- and middle-income segments have traditionally constructed their own houses. This generally involved a multi-year piecemeal process, given the lack of access to credit, as families saved money to purchase construction materials. According to a May 2013 article in the newspaper *La República*, 60% of homes in Peru are constructed by owners, representing about 3.6% of GDP, or US\$2 billion annually. Even within metropolitan Lima, nearly 60% of the territory comprises “invasions” or informal settlements, which has created a state of permanent construction as these homes evolve. Despite rising incomes, the majority of Peruvians

in the lower-middle classes still build their own homes. This continued self-construction trend, paired with rising middle-class incomes, has created a robust market for construction materials.

A number of companies have begun to capitalize on this emerging opportunity set, with three large home-improvement retailers, in particular, expanding to address this demand in lower-middle-income areas in the peri-urban areas of Lima. For example, Maestro, a local chain of home-improvement stores that traditionally served higher-income segments, has expanded exponentially in the last six years to serve low- and middle-income neighborhoods. Competitors Sodimac and ProMart have experienced similar growth by offering a wide range of products for home self-construction or improvement, including appliances, cement, tile, and plumbing materials.

Not only have these businesses widened their focus to include the middle-class strata, but they have also adjusted their services, now offering credit to lower-income customers through store-branded credit cards, such as Sodimac’s CMR card and Maestro’s Presta card. The presence of these credit cards is notable in that it allows households to speed up the self-construction process — which historically took years — promoting greater spending on construction materials in the short term.

Similarly, select construction-material brands that are popular among lower-income segments of the population have extended financing schemes to their self-construction consumers. ProgreSol, for example, has traditionally been the retailer of choice for low-income households in the self-construction market through its network of small hardware stores in low-income neighborhoods. To capitalize on increased construction spending, these stores have initiated new financing programs targeted at self-constructors.

HatunSol, a lending program that provides credit to purchase materials through a group of cement providers, offers free delivery, design services, and technical support. According to Gena Pepoli, professor of marketing at the Universidad del Pacífico, this program positions itself explicitly in its advertising campaigns as a substitute for the *pollada bailable*, a traditional party

thrown by poor households to raise money to construct their houses. She suggests that it is not trying to replace traditional construction techniques but, rather, to facilitate the purchase of construction materials through financing.

The Peruvian government itself has recognized the importance of the self-construction phenomenon by providing subsidies and a government lending program for financing self-constructed homes. As part of the Fondo MiVivienda (My Home Fund), two subsidized lending programs — TechoPropio and MiConstrucción (My Own Roof and My Construction, respectively) — are helping lenders extend credit to lower-middle-income households to build or expand current housing stock themselves. In addition, a new program, MisMateriales (My Materials), specifically underwrites the purchase of new construction materials.

These credits are provided through either municipal *cajas* (banks) or other registered financial entities. As such, these programs are facilitating rapid access to construction materials for wide swaths of the population who previously had to save for many years to build or improve their housing, fueling consumer-credit growth and increased sales among home-improvement retailers.

Mortgages and Low-income Housing Developments

While self-construction continues to be an important phenomenon on the Peruvian landscape, a new real estate trend has emerged among segments C and D as a growing number of households move away from self-constructed housing into prefabricated homes with the aid of traditional mortgages.

The emerging middle class has generally been excluded from the credit system. Historically, 95% of mortgages have been disbursed to households in the upper-class segments A and B through large banks, such as Scotia and Interbank, due to stringent credit requirements that require formal employment. Mortgage products had been poorly suited to the unique needs of households in the emerging middle class, and the large percentage of the labor force in the informal sector had also faced a barrier in seeking formal financing.

With mortgage penetration in Peru at just 6%, a number of players have begun to recognize the potential value of the middle-class consumer within the credit arena. The government itself has acknowledged the critical constraints posed by a lack of access to credit and has established a number of government funds, most notably the Fondo MiVivienda, to underwrite mortgage risks, provide guarantees, and subsidize mortgages for lower-income Peruvians. These subsidies and guarantees are disbursed through qualifying financial institutions and have aided substantially in improving the supply of low-income housing developments and facilitating access to mortgages for new home buyers.

Will increased credit consumption help Peru remain [a] shining star ... or will it prove to be a systemic risk, as it was for so many advanced economies at the onset of the financial crisis?

One of the prime implementers of these government programs is miCasita Hipotecaria, a private company founded in 2004 by Roberto Baba Yamamoto with the goal of filling the credit-access gap for the middle class. MiCasita is one of the first financial institutions to specialize in mortgages in Peru, with the specific goal of meeting demand from lower-middle-class households. The company offers various financial products, including mortgages for housing acquisition and for housing improvement, targeted specifically toward customers in the emerging middle class. Its most popular product, Credito Hipotecario Nuevo MiVivienda, is guaranteed and subsidized by MiVivienda, demonstrating the extent to which Fondo MiVivienda is stimulating Peru's mortgage market.

In addition, miCasita works closely with small-scale real-estate developers to finance their projects in lower-middle-class areas. It also serves as the mortgage provider for the eventual home buyers in the real estate developments it finances. As Yamamoto notes, “these credits have fomented the growth of pre-fabricated housing for lower income segments and further facilitated access to credit for these first-time home buyers.”

Similarly, Los Portales is a large real-estate developer that has developed apartment complexes throughout Peru, targeted historically toward high-income consumers. In recent years, it has developed a series of products for lower-income consumers, drawing on the Fondo MiVivienda subsidies. Under these programs, Los Portales builds large neighborhoods of small and relatively simple units in the peri-urban areas of Lima and provides mortgages directly, underwritten by the governmental programs. These developments, among others, are revolutionizing the social and economic behaviors of the members of these segments who are moving from formalized settlements into planned neighborhoods in the same areas.

What's Next?

In many ways, Peru has become a poster child for strong economic growth, not only within Latin America, but also globally, given its significant reduction in total poverty and the undeniable expansion of its middle class.

When it comes to credit, a key question remains: Will increased credit consumption help Peru to remain the shining star it has become or will it prove to be a systemic risk, as it was for so many advanced economies at the onset of the financial crisis? Rosanna Ramos-Velita, co-founder and chairperson of the board of Caja Rural Los Andes, a Peruvian microfinance firm, points out that a major risk associated with the growth of credit in Peru is that the emerging middle class will assume too much debt and fail to pay it back. MiCasita is just one part of a trend in significant credit consumption in Peru, one that has represented a more than 800% growth in mortgages and consumer credit between 2002 and 2012.

With bank credit growing at an annual rate of about 20% in Peru and the price per square meter for apartments in posh Lima districts doubling since 2007 in constant Nuevo Soles, it is hard not to wonder whether Peru is on the brink of a credit and housing boom.

The jury is still undecided in this debate. On one hand, experts, such as economists at the International Monetary Fund, have noted that strong credit growth in Latin America has taken place primarily in countries with shallow penetration and low initial credit-to-GDP ratios, such as Peru. This mindset highlights a near-“normalization” process in which supply has been introduced in order to meet the demand for credit among the Peruvian population. According to a recent IMF Western Hemisphere Department report, Peru’s “central bank stands ready to react to risks associated with strong domestic demand, large capital inflows, and rapid credit growth.”

On the other hand, old habits seem to die hard, and some observers are sounding the alarm about a replay of 2007, when credit ruled the world — before sending the world into a downward spiral. Carlos Parodi, a professor at the Universidad del Pacífico, warns that Peru manifests all the components of a housing bubble: excess credit, overindebtedness, and a mismatch between credit growth and income growth.

Only time will tell if Peru will avoid the pain other economies have endured.

This article was written by Andriana Diez, Julia Hazen, Liliya Ivanova, and Joel Simpson, members of the Lauder Class of 2015.



From *Jugaad* to Justice: Endemic Corruption and the Possibility of an Indian Spring

Jugaad is a term that needs no introduction in common Indian parlance. It literally means an improvised arrangement or work-around used to overcome a lack of resources. “For decades, India has survived, and sometimes thrived, by turning muddle and adversity into success,” observed the columnist John Elliott in The Independent’s blogs section. Indian ingenuity has certainly led to economic dynamism, but there also is a less appealing side to jugaad which has to do with the innovations devised by the common citizen to work around the everyday obstacles the government puts in place.

“No less than 93% of Chinese businessmen say the main reason for their spectacular success is network connections (guangxi), especially with government officials,” wrote Swaminathan S. A. Aiyar in *The Economic Times*, India’s leading business daily. “Indian businessmen, however, have succeeded despite the government: 81% say the main reason for their success is *jugaad*, the ability to find [an] innovative way around prohibitive rules and institutions.” He was quoting results from a survey conducted by the Legatum Institute, an independent think tank.

Jugaad is not a work-around or even an alternative in today’s India. It is the only way for many to succeed in their businesses and personal lives, and has come to color the country’s vocabulary in much the same way that an informal economy supports India’s booming *de jure* economy. Montek Singh Ahluwalia, vice-chairman of India’s powerful Planning Commission, has gone so far as to condemn the positive connotation of the term, noting that “*jugaad* as we know it is not a necessary evil; it is purely an evil that needs to be stamped out.”

This need for *jugaad*, compounded by the state of near-paralysis in policymaking at both the central and state levels of India’s legislative branch of government,

is driving many into a frenzy of antigovernment and anticorruption protests, visible most notably during activist Anna Hazare’s anticorruption sit-in in 2011. While none of these protests has yet turned violent, and many India-watchers and local political pundits seem to believe that the volatile antigovernment sentiment appears to have abated slightly since then, frustration with the central government’s incompetence and corruption remains widespread. In addition, the undercurrent of violent action to overthrow local governments across the country — most notably among the Naxalites in Eastern India — combined with the simmering despair felt by most of the population across the geographic landscape, could prove to be a potent powder keg of emotion in the months leading up to the general election in 2014.

Many Indian leaders are concerned about the possibility of a full-blown Arab Spring-like uprising in a country that is the world’s largest democracy and one of the oldest continuous democracies in the East. A member of Parliament and Union Minister described the situation as “a catch 22. The system in India cannot change until and unless the politicians want it to change because the Indian public considers itself to be in a better position than that of the Middle Eastern countries.” Union

Minister of Corporate Affairs Sachin Pilot agreed with his colleague, saying that he “understand[s] the feeling of frustration that people have with the political process, and we as a political class have not done a good enough job in creating a more transparent government. However, people in India also realize that their access to information and their ability to change their leaders [are] relevant and [are] tool[s] they are able to use frequently and justly.”

The undercurrent of violent action to overthrow local governments across the country ... could prove to be a potent powder keg of emotion in the months leading up to the general election in 2014.

Attempts to Promote Transparency

India's oft-cited “noisy media” and high level of social activism have played an interesting role in quelling public discontent, while at the same time fomenting frustration aimed at the constant state of political quagmire. The Right to Information Act of 2005 (RTI), which mandates a timely response to citizens' requests for government information, was a milestone for Indian democracy. Stronger than its counterparts in the U.S. and the U.K., it has been hailed as one of the most progressive information acts in the world. According to the RTI, public authorities must regularly publish information without solicitation and respond to citizens' requests for information within 30 days. Public authorities must provide information not only promptly but also inexpensively, with compliance enforced through penalty provisions. This act has empowered millions of Indians to combat corrupt governmental practices and has helped to provide transparency on perceived injustices.

The RTI has allowed the Indian public to investigate flagrant acts of corruption by governmental officials, many of whom were previously considered untouchable. Through precedents such as this act, ordinary Indians are developing the ability to hold officials accountable

without the need for mass demonstrations, a course of action that was not available for many of the regimes that fell during the Arab Spring. “All the officials are scared of RTI now,” observed activist P.M.L. Kalayansundaram in a 2010 *New York Times* article. “If they don't answer within 30 days, they know they can be suspended.” To the extent that the RTI serves as a channel to hold officials accountable, the likelihood of an Arab Spring-like protest movement in India will be smaller. Writing in Britain's *The Guardian*, activist Aruna Roy argues that the law has “unearthed fraud, corruption, and poor governance, including, for instance, the Adarsh housing scam in Mumbai and the marking of university finals in Delhi.”

While the RTI has had its successes and has provided much-needed transparency in the operations of public authorities, it is still not a silver bullet in the fight against government corruption and injustice. Among the success stories, most of the information has been requested by RTI activists about nongovernmental agencies. Even though the information must be made available quickly and inexpensively, relatively few private citizens have the time or the resources to uncover governmental misconduct. In addition, the increased transparency does not translate into increased accountability. Without the backing of the media or other nongovernmental organizations, it is still difficult to alleviate the grievances of the masses. An additional problem is that political parties are not yet covered by the requirements in the law. This exclusion would allow the most powerful organizations in India's democracy to continue to operate surreptitiously.

As more corruption scandals surfaced, popular discontent grew again in 2011. The noted social activist Anna Hazare went on a hunger strike in Delhi in April. The government's poor handling of the situation led to a mass movement that gained tremendous momentum, with social-media platforms being used heavily to strengthen the protest and to mobilize the nation. Within days, the government ceded to public demand and passed a resolution agreeing to the three prime provisions of the Jan Lokpal Bill, namely, to deter corruption, compensate citizen grievances, and protect whistle-blowers. “Parliamentarians have been jolted by what they feared could have become violent protests if Mr. Hazare's hunger strike had continued,” stated the

Financial Times. “I am relieved that Mr. Hazare has agreed to break his fast. We were worried about his health,” said Pranab Mukherjee, the finance minister. “It would have caused a substantial agitation in Delhi and other parts of the country.”

As oftentimes happens in India, however, the bill did not clear the Upper House of Parliament in 2011, and the government has not reactivated the process of approval since then. When asked about his views on the anticorruption movement and its results, a prominent business professional said that, “We are sitting on a time bomb, and the naturally peaceful atmosphere now will transform. Luckily, it’s not a pressure cooker situation in India. You can vent. It’s truly democratic. India will evolve, and I am truly optimistic about that.” This point was also made by another business person in India: “We have to move from being an advanced civilization in the advanced state of decay to an advanced civilization in the advanced state of growth. We most certainly are, albeit slowly, making progress in the right direction.”

The relatively modest progress in combating corruption has led to the rise and consolidation of more radical protest movements. One of them, the Naxalites, began in West Bengal in 1967 to advocate and fight for the rights of tribal people and landless agricultural peasants. Initially, the movement was guided by the Maoist theory of violent agricultural revolutions focused on the removal of the national bourgeoisie from power. It has since evolved to include more randomized acts of violence against affluent citizens and low-level police and political figures. While the Naxalites have achieved some significance, recently being called India’s largest domestic security threat by Prime Minister Manmohan Singh, the movement has struggled to raise country-wide support to implement federal-level changes in legislation for social mandates and agricultural land reforms.

Pundits who consider the Naxalites to be the precursors to a national upheaval resembling the Arab Spring have been disappointed to see the general distrust and disdain with which Naxalite leaders are treated by the majority of the public. “Tools of protest and redress increasingly available in India’s imperfect but dogged democracy — Right to Information, protests by local communities and civil society, judicial and media activism, investor

watchdogs — are showing ways to negotiated solutions that do not require the gun,” argued Sudeep Chakravarti, who has written extensively about the movement in a 2013 article in the *Hindustan Times*. While there have been some recent examples and incidences of country-wide unrest, such as the response to the Delhi rape case that occurred in November 2012, political parties and officials tend to move quickly to calm down protests before they grow out of control, although they rarely act to eradicate the source of the popular discontent.

The RTI has allowed the Indian public to investigate flagrant acts of corruption by governmental officials, many of whom were previously considered untouchable.

Predicting the Future ... by Looking at the Past

It is important to put India’s political development in perspective when considering the possibility of an Indian Spring. Today’s India is a legacy of one of the most successful and well-orchestrated political revolutions in history. The Indian independence movement began, in many ways, as an elitist movement led by members of the Western-educated upper classes. It demanded freedom from Great Britain and the unification of the Indian subcontinent. Members of the Indian urban intelligentsia formed the Indian National Congress in 1885. However, it was not until the 1920s that the independence movement began to appeal to the masses, the majority of whom lived in the poor agricultural countryside. Just 15 years later, it became a foregone conclusion that India would be free from British rule. Indeed, as noted BBC personality and historian Chandrika Kaul stated, “The British Raj unraveled quickly in the 1940s.... As a result, India moved inexorably towards self-government.”

Historians, political pundits, and contemporary politicians have argued that factors similar to India’s independence uprising, which led to the effective coalescing of a mass revolutionary movement, may be in place today. “Instability is India’s destiny,” argues

Ramachandra Guha, a leading historian. One can no longer assume that India “will somehow muddle through,” notes the diplomat Pavan Varma. There is widespread dissatisfaction regarding the role of government in society, and there is a general perception that a major gap exists between the government’s responsibilities as outlined in the constitution and actual service delivery. In their book, *Global Turning Points*, Mauro Guillén and Emilio Ontiveros wrote that the “Arab Spring spread from Tunisia throughout the Middle

Historians, political pundits, and contemporary politicians have argued that factors similar to India’s independence uprising, which led to the effective coalescing of a mass revolutionary movement, may be in place today.

East and North Africa like wildfire. In most of these countries between 45% and 65% of the population is under the age of 25 and faces grim prospects in the labor market; rural-urban inequality and within-urban income inequality are on the rise, and corruption is rampant.” In fact, India shares some of the same circumstances.

Despite the dire predictions, however, the conditions for a perfect storm in India are most likely not in place nowadays, although they once were in the first half of the twentieth century. India’s boisterous democracy and rambunctious media provide ample opportunity to highlight issues, debate solutions, and examine implementation. Growing access to education, wealth, and social mobility will empower Indians to reform their own society, thereby putting in place the framework needed to build strong institutions and to hold the government accountable. UNESCO’s mission statement and founding belief provides the key insight: “Empowerment ... is ideally seen as a continuous holistic process with cognitive, psychological, economic, and political dimensions in order to achieve emancipation.” Similarly, change in India will be slow and, at times, painful, but it is unlikely to lead to widespread violence and political upheaval. The government seems to do just enough to avoid a meltdown, but not nearly enough to eradicate the sources of corruption. *Jugaad* is here to stay, and it “feeds into corruption,” concludes *The Independent’s* Elliott. “Why build a good road that would last years if you can bribe officials to accept quick-fix substandard work and then bribe them again to let you repair it!”

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The Perfect Storm: Brazil's Economic Climate in the Wake of Social Unrest

“The giant has awakened” was one of the most popular phrases heard during the summer of 2013, as the world learned of the massive street demonstrations in Brazil. Although many voices made themselves heard amid the protests, one common theme unified them all: the demand for better public investment and the improvement of public services.

Indeed, the world has set its sights on Brazil, with casual observers and experts alike offering a myriad of perspectives. What seemed to be a simple protest over a US\$.20 increase in bus fares became one of the greatest milestones in Brazilian history. Over the course of the country's history, Brazilians have rarely taken to the streets to demand change, and never with such resolution. Despite the scattered violence that occurred, Brazilian President Dilma Rousseff showed her support for the protests, and the government has already begun implementing key legislation that responds to the mounting pressure. More initiatives are coming.

With protesters numbering approximately 1.4 million people in 130 cities, the demonstrations quickly caught the government's attention. Weeks of constant protests, followed by a general strike and a substantial decline in President Rousseff's approval ratings, forced the president to acknowledge the legitimacy of the protests and to offer a set of initiatives in response to the demands. One of these, a measure that will allocate 75% of oil royalties to education and 25% to health care, is already being implemented. Another, titled “Mais Médicos” (More Doctors), will recruit foreign doctors to work in remote areas to help fill existing gaps in medical care.

Despite the initial replies to the protests, many Brazilians consider the government's responses to be superficial and insufficient. Energized by the impact of

the demonstrations and the wide-ranging support they received, demonstrators are likely to return to the streets as the presidential election, the World Cup, and the Olympics draw near. The result is a newly competitive political landscape and a mobilized citizenry interested in strengthening the social pact with the government. The subsequent political uncertainty has also spurred doubt about the country's economic future, including its capacity to control rising inflation and to stimulate lagging growth. Such uncertainty on both the political and economic fronts, paired with the threat of social unrest, has resulted in a perfect storm for Brazil, the results of which will have significant implications for the country's investment climate.

Social Unrest and Economic Implications

The demonstrations in Brazil occurred in the absence of both high unemployment and a decreasing quality of life. *Reforma Política Ja* (Political Reform Now), a Brazilian social movement, points instead to corruption and impunity in politics, precarious education and healthcare systems, and income inequality as being among the leading causes of the growing discontent. Many of the protesters belong to the country's rising middle class, whose expectations of government services have grown increasingly sophisticated. Young people also participated en masse, leveraging social media to

help organize the protests. According to Cristovam Buarque, a Brazilian senator, “the awareness of the discontent and the loss of hope coincided with the knowledge of the Internet’s ability to mobilize people.”

Over the last decade, Brazil has made substantial progress in bridging the poor-rich gap. More than 40 million citizens have risen above the extreme poverty threshold in a country of 200 million. However, income inequality remains an acute problem. Brazil’s Gini index, a measure of income disparity widely used by economists (where 0 represents perfect equality and 100 perfect inequality), stood at 54.7 in the late 2000s. Its level of concentration of income is the highest among the BRIC countries (40.1 for Russia, 33.9 for India, and 42.1 for China), and lags significantly relative to OECD countries (31.4).

According to Renato Janine Ribeiro, Brazilian political philosopher and a professor at the University of São Paulo, “Brazilians do not conform to being conformist.” He believes “what really matters is that from now on, the quality of public services, especially those aimed at the poor, is one of the most important items in our political agenda.” A galloping cost of living, record tax rates among emerging countries, and deficient public services contribute to rally social movements to request investment in areas that increase social benefits. One of these areas is infrastructure. A 2013 study from Bain & Company concludes that Brazil’s road infrastructure was “vastly underdeveloped and strongly focused on the economic center of Brazil, which [includes] the South-East and Southern Brazil.” The same study recommends a 10-year investment plan that could rejuvenate the national infrastructure. This type of farsighted initiative, however, might not appease the urgent social needs and might arrive too late for the upcoming World Cup and Olympic events, where Brazil hopes to woo the world.

Most critics target the perceived inaction and inefficiency of the current political system, as embodied by Rousseff’s government. Protesters urge the government to provide viable alternatives for increasing the efficiency of the political system and aligning the population’s objectives with those of the parties. Instead of low spending, the issue might

reside in the inefficiency of Brazil’s public spending programs, as Marcos Mendes, legislative consultant for Brazil’s Federal Senate, points out in his 2013 article on “Efficiency of Public Spending.” Nevertheless, the government is addressing the issue with measures such as the “Transparency Portal of the Federal Government,” that, according to McKinsey & Company, is a pioneering initiative that creates a positive culture of accountability.

The unfavorable global macroeconomic environment has ultimately affected Brazil’s economy as well. After a decade of remarkable economic expansion, the so-called BRIC giants (Brazil, Russia, India and China) are slowing down. The time has come for other emerging markets such as the “Next-11” — as Goldman Sachs dubbed a list of countries including Bangladesh, Indonesia, Mexico and Turkey — to lead global growth. Brazil has long profited from soaring demand in commodities and domestic consumption. However, the broad economic weakness and China’s deceleration have reduced the appetite for commodities, and domestic demand has slumped amid rising inflation. According to the International Monetary Fund, Brazil’s GDP growth dropped from 6.1% in 2007 to an estimated 2.5% in 2013.

According to Arminio Fraga, former president of Brazil’s Central Bank, “a global slowdown is always an issue, but far from the main one in Brazil’s case. Most of the recent growth here has been driven by credit and consumption. Now Brazil must invest more and better, and focus more on the overall productivity of the economy.” In this sense, manufacturing has never been a strength of the economy. Although Brazil has low commodity prices and labor costs, the *Custo Brazil* (Brazil Cost) — the increased cost of doing business in Brazil due to bureaucracy, underdeveloped infrastructure, and lack of qualified labor, for example — hinders the competitiveness of Brazilian products and services. In this regard, Fraga notes that “most aspects of Brazil’s infrastructure have not kept up with recent economic growth and have in fact become a barrier to further growth. This issue must be addressed. Education is also key.” These factors have repeatedly led Brazil to experience current account deficits, when imports exceeded exports.

In the past, the current account deficit was compensated by foreign investment, a change that was reinforced by several rounds of quantitative easing — a program for long-term bond buying that floods markets with money — from the U.S. Central Bank, a strategy that debilitated the U.S. dollar and sped funds into emerging markets. However, the U.S. recovery is reversing the trend and repatriating funds from Brazil. Since the Federal Reserve indicated that the U.S. Central Bank could scale back its bond buys in May 2013, US\$23 billion have flowed out of emerging market bonds, according to Barclays. This increased financing costs in Brazil, intensifying the economic slowdown and driving inflation, which ultimately depreciated the Brazilian currency.

For the time being, the Brazilian economy faces a dim outlook. According to a 2013 article in *The Economist*, “many [Brazilians] have now lost faith in the idea that their country was headed for orbit and diagnosed just another *voo de galinha* (chicken flight), as they dubbed previous short-lived economic spurts.” With all its current problems, analysts have little insight into what is going to happen next, creating an environment of volatility and unease. Until solid growth returns and inflation expectations decrease, investors will likely reduce their appetite for Brazilian assets.

Domestic and international effects intertwine, creating a critical socioeconomic situation. As in a perfect storm — where the combination of storm systems results in an event of colossal magnitude — inflationary pressures, social outcry, global slowdown, poor public services, and obsolete infrastructures jeopardize Brazil’s future at a time when the international outlook does not look bright for emerging economies. As Senator Buarque states, “[after] 20 years of social democratic governments and 10 years of the Workers’ Party, we expanded private consumption but we maintained the same tragedy in our public services, in the public hospitals and in the public schools.”

This perfect storm threatens to push Brazil to the edge. “I am concerned at the moment, but the solutions to our problems are in our own hands,” notes Fraga. “The government must keep the macroeconomic situation under control, while at the same time addressing the

myriad microeconomic challenges that range from the regulation of most utility and infrastructure sectors, to the complexity of the tax system, to the quality of public services,” including transportation, health and education. The long-term impact could be profound. The politicians’ capacity to react against the current environment and put in place a viable and effective plan to counter these effects will determine Brazil’s future prospects.

Despite the initial replies to the protests, many Brazilians consider the government’s responses to be superficial and insufficient.

Immediate Consequences

The climate of instability and social upheaval is serving as a catalyst. The Brazilian business confidence index plummeted to 49.9 in June 2013, nearing its record low. When analysts observe social movements of such relevance, their forecasts naturally predict a dimmer economic outlook, and markets tend to overreact. Data from Bovespa, the Brazilian stock exchange, support this behavior. In June, Bovespa decreased 11% against a 1% decline in the Dow Jones Industrial Average. However, in July it corrected its trend to stand in line with the Dow Jones, 2% versus 4%. During the first three weeks of August, it outperformed the Dow Jones, increasing 4% against a Dow Jones decrease of 3%. Thus, the data points reveal that the protests greatly increased volatility in the market and caused substantial losses in the Brazilian stock exchange. Exogenous factors, such as the global slowdown in the demand for oil and other commodities, further exacerbated Brazil’s perceived risk.

Slumping markets were not completely unrelated to losses in the real economy. The protests severely affected the stock prices of companies whose operations involve provisioning public services. For example, as a result of increased popular tension, Brazilian authorities mandated that toll-road authorities postpone planned increases in tolls. The Brazilian authorities’ desperate efforts to appease the

demonstrators led the mayor of São Paulo to suspend a lucrative public auction of bus lines.

Another proposed reform, the allocation of royalties from the recently discovered pré-sal petroleum to education (75%) and healthcare (25%) also caused controversy. Senator Buarque, a major proponent of educational reform, stated in an article published by *Agência Senado* that this money will help, but not solve, Brazil's education problem because "the solution to the educational problem resides in a bigger 'pré-sal,' that is the GDP." He estimates that Brazil's educational system requires US\$190 billion annually, far more than the approximately US\$7.6 billion that royalties from Brazil's oil reserves will provide.

Leaders at Palacio do Planalto, the Brazilian president's official workplace in Brasília, have also suffered the consequences of the popular demonstrations. Approval of Rousseff's government plummeted from 65% in May 2013 to 30% in June of that year, according to Datafolha, a think tank. In response to decreasing popularity, Rousseff called for a plebiscite aimed at reforming the political system. Her intentions, in line with the ideas of many of the protesters, included reforming the electoral system, modifying campaign financing, and changing the rules that oversee political alliances. This measure immediately raised controversy for what many see as a populist move. Against the President's aim to hold the referendum in 2013, the Senate resolved to create, instead, a working group that would debate the possibilities of reforming the electoral system.

Setting Priorities

As Brazilian voters consider the upcoming electoral landscape, they will no longer face the prospect of a shoo-in candidate. Since Lula's ascension to power in 2002, the Workers' Party (PT) has dominated at the ballot box. Lula easily won reelection in 2006, and President Rousseff, Lula's successor and former chief of staff, won in a run-off in 2010. Rousseff's fall in popularity following the recent protests has opened up an unexpected opportunity for her political rivals. Her reelection once all but assured, she now faces a reenergized opposition leading up to the October 2014

presidential election, including former minister Marina da Silva, who is launching a new political party and who was the primary beneficiary of the sinking confidence in Rousseff. Yet despite the increasingly unfavorable signs for the PT, no opposition candidate is currently positioned to beat the President. According to Ribeiro, "I think we now have a new agenda. [However], it still has no political party, no proposal, nothing but a widespread feeling of discontent."

One thing is resoundingly clear: The threat of inflation, combined with lagging growth, will continue to be a top priority for whichever administration takes power in 2015. As the election draws near, it is highly unlikely that the current administration will adopt drastic changes and risk alienating its political base. Thus far, the PT's strategy of keeping inflation at bay — by promoting internal consumer demand and raising interest rates — has been fairly predictable. In fact, it has been sufficiently aggressive thus far. At this writing, the interest rate stood at 6.25%, just below its target rate of 6.5%. The convergence of domestic and external factors that are currently limiting the growth and future prospects of the Brazilian economy will need to be addressed by the next administration.

An alternative vision for the country's economy, or an innovative change in policy, could produce newfound enthusiasm. The country's overreliance on internal consumer spending has proven unsustainable. Which approach the next administration will adopt — and the accompanying policies it will implement — will be determined by changes in the political climate. If Brazil hopes to continue to attract investment by leveraging its depreciation of the real, it will need to assure international investors that, despite the demonstrations, it will continue to protect and nurture investments. A dim outlook by observers has affected the country's economy in the short term, but Brazil can prove it is on track to reverse its recent fortunes and to regain its standing as an emerging market powerhouse.

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A Rare and Beautiful Stone Fails to Shine: Tanzania's Missed Opportunity

Tanzanite is one of the rarest gemstones on earth and one of the most undervalued relative to its rarity. Given its scarcity, it would be reasonable to assume that it would sell at a high premium. Yet, with the price per carat ranging between US\$300 and US\$600, it sells for far less than diamonds. Unlike diamonds, however, it has no industrial use. But that fact alone does not explain the stone's low value. This article analyzes the structural reasons that have kept tanzanite from achieving its true potential, beginning with an historical and contextual overview of this remarkable gemstone. It then explores the economics of the tanzanite market and discusses the stone's considerable potential to contribute to the development of Tanzania's economy.

'Gemstone of a Generation'

Tanzanite is a trichroic stone that reflects different colors, ranging from light blues or lilacs to deep indigos and violets. It was discovered in the 1960s and named after Tanzania by Tiffany & Co. The famous jewelry firm declared it to be the most beautiful stone discovered in the last 2,000 years. Tanzanite is so rare because it is found and mined in a small area only four kilometers wide and two kilometers long at the foot of Mount Kilimanjaro in the Manyara Region of Northern Tanzania. According to a Tanzanian geologist, the circumstances that led to its formation 585 million years ago were so exceptional that the likelihood of finding tanzanite anywhere else on earth is one in a million, making it a thousand times rarer than diamonds. At the current rate of mining, the geologist also estimates that the available supply will be depleted within the next 25 years. As a result, tanzanite is known as the "gemstone of a generation" because this generation will be the last one able to buy stones from the primary market before the supply is exhausted.

Tanzanite has enormous potential for Tanzania, but time is running out and the industry is in dire need of major changes and structural reforms. Currently, the worldwide wholesale market for rough tanzanite is estimated at US\$50 million. To put that in perspective, a 2010 industry report by Bain & Company estimated the worldwide wholesale market for rough diamonds to be about US\$12 billion. As Tanzania's GDP is about US\$28 billion, an increase in the market price or volume of tanzanite could have a significant impact on the local economy. But the window of opportunity is closing quickly as the likelihood of recouping near-term investments and benefiting from this rare resource is limited by the lifespan of the mines. While the Tanzanian government's active involvement is necessary for the successful implementation of industry-wide reforms, its track record is less than flattering.

The government first became involved in 1971 when it nationalized all the tanzanite mines. Three decades of nearly nonexistent mining activity followed. Although the government wielded legal control, it lacked the

knowledge and adequate human resources to operate the mines competently. Eventually, it returned ownership to private businesses. But in 2003, it intervened once again by imposing an export ban on rough stones larger than one carat. According to an industry veteran, the law served to foster a local cutting-and-polishing industry and to retain more added value within the country. However, it was poorly enforced, and the authorities failed to reduce smuggling. Thus, large quantities of gemstones in the rough continued to leave the country, to the detriment of larger and more established businesses. Furthermore, the country lacked the know-how and skills to develop the industry, at least until the emergence of TanzaniteOne.

Although the government wielded legal control, it lacked the knowledge and adequate human resources to operate the mines competently.

According to its official website, TanzaniteOne is the largest and most scientifically advanced miner and vendor of tanzanite. It is wholly owned by Richland Resources Ltd., which is listed on the AIM sub-market of the London Stock Exchange as RLD. Despite its positioning, the company is small, with yearly revenues seldom exceeding US\$24 million. It has been profitable only a handful of times since it was incorporated in 2004. While it is hard to understand why a large mining company of such a rare and beautiful stone has been unable to develop a lucrative market for itself, the answer can be found in a number of factors, including the Tanzanian government's involvement in the development and exploitation of tanzanite, as well as the overall market structure.

In 2010, Tanzania's parliament passed a new mining law requiring the government to hold an equity stake in all new mining projects. As a result, when its mining license came up for renewal in 2012, TanzaniteOne was forced to give up 50% of its equity. Executives at the firm believe there may be a silver lining to this, as the government now has an incentive to actively enforce the laws meant

to protect the industry. For example, the government could decide to curtail illegal smuggling, which is a huge issue that adversely affects the entire industry.

TanzaniteOne would be in a unique position to benefit from such a policy change because of its investment in a polishing facility. One of the expert gem cutters at the facility noted that, as the largest miner of tanzanite, TanzaniteOne has the scale needed to make such a venture profitable. The company has also been quite astute in its willingness to buy stones from other miners for cutting and polishing. TanzaniteOne is a pioneer in its decision to move up the production and distribution chain, where greater added value resides. While the cutting-and-polishing side of the business is not included in the stake ceded to the government, TanzaniteOne will, by virtue of its partnership with the state, have more leverage when asking for stricter enforcement of the export ban.

A Detriment to the Market

The mining area where tanzanite is found is divided into four sections, or blocks, labeled A, B, C, and D. TanzaniteOne has the concession for Block C, the largest of the four. The other blocks are occupied and exploited by an assortment of medium and small, independent, and artisanal miners. With little in the way of capital investments or even general overhead, these miners are able to flood the market with cheap gemstones and depress the overall price for tanzanite. Hayley Henning, executive director of the Tanzanite Foundation, agrees that the availability of stones of dubious provenance at huge discounts is detrimental to the entire market. Once its stones reach the market, TanzaniteOne has no way to differentiate its products from those of the other miners, putting it at a disadvantage in price negotiations.

Moreover, tanzanite's rarity has ironically worked against it as the stone is still relatively unknown. The Tanzanite Foundation, a nonprofit founded by TanzaniteOne, has worked tirelessly to increase awareness, issuing certificates of authenticity that guarantee a stone's origin and characteristics. Like diamonds, tanzanite stones are also rated for their clarity, color, carat, and cut. Unlike diamonds, they can be certified to be conflict-free. In addition, the TanzaniteOne mine adheres strictly

to labor laws and uses technology to minimize its environmental impact.

Through the Tanzanite Foundation, TanzaniteOne has also been involved in numerous social projects that benefit the surrounding community. Among the most noteworthy, the mine has provided fresh water to the neighboring areas. In addition, it has given financial support to local schools, a medical clinic, and a community center. Henning describes another project that empowers local Maasai women by helping them make artisanal jewelry that is then sold internationally. And yet these projects do not promote TanzaniteOne's stones directly. As with pricing, it is impossible to tell TanzaniteOne stones apart from those mined by others. Thus, many of the Foundation's efforts benefit the entire industry.

TanzaniteOne has attempted to emulate business models developed in the diamond industry by selling its stones through sightholders, the companies authorized as bulk purchasers of rough diamonds. According to a sales manager for TanzaniteOne, the company — as the largest miner of tanzanite — believed it could shape the market for the stone and influence its market price by partnering closely with a limited number of carefully selected international gemstone wholesalers. Its size notwithstanding, TanzaniteOne lacks the volume to set a price for tanzanite. In fact, the sightholders yield far more power in the relationship, as they can easily obtain stones from the other miners.

In 2012, TanzaniteOne's situation became dire. As detailed in its parent company's annual report, illegal miners from the other blocks infiltrated Block C and focused on the higher-quality areas of TanzaniteOne's mining operations. The invasions were aggressive and violent, and included the use of firearms and explosive devices. Several employees were injured, and a security guard was maimed. TanzaniteOne received little support from the authorities and found it difficult to enforce its property rights.

Without the full backing of the state, any enforcement action had the potential to blow up into a public relations disaster. TanzaniteOne was also aware of the high level of violence a response could trigger and was

concerned for the safety of its employees. It decided to retreat from those mining areas at great financial cost. When its mining license came up for renegotiation in 2012, the company made a bold but costly decision. Instead of entering a protracted and contentious dispute, it agreed to cede 50% of the license to the Tanzanian government, in accordance with the new mining act. Henning noted that, as a part owner, the government would now have a powerful incentive to step in and help enforce TanzaniteOne's property rights. But it still meant that Richland Resources took a significant write-off to reflect the new arrangement. As a result, trading of its stock was suspended temporarily.

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On July 18, 2013, the Tanzanian police began an operation to evict the illegal miners from the areas that belonged to TanzaniteOne. It seemed that the company's gamble was paying off. By the next day it was able to reclaim an area from which it had previously retreated. On July 21, however, a TanzaniteOne employee was fatally shot by illegal miners in the presence of the police — an example of how complex and difficult the situation is for the company.

TanzaniteOne is, first and foremost, a mine operator. But it has realized that there are far better rewards for those positioned higher up the value chain. Just as it saw an opportunity to move into gem polishing and cutting when the export ban was enacted, it also realized the advantages of becoming a retailer and launched stores under the brand Tanzanite Experience. This new channel of business has helped to counteract the negative effects facing the mining operations. Currently, about 80% of the company's revenues comes from selling rough stones, but retailing yields better profitability.

Retailing has also allowed TanzaniteOne to forge partnerships with designers of fine jewelry. This market is far more stable than mining and has better long-term prospects. As they look to the future, all parties involved acknowledge the need to leverage the current supply of tanzanite to build a sustainable and resilient industry. This can be achieved by moving into strategic sectors such as cutting, polishing, and retailing, where the profit margins are higher.

The sales channels for tanzanite are currently controlled mostly by the sightholders, who can leverage their buying power through their access to numerous miners. In a sense, the sightholder business model fuels the underground trade in rough stones. As TanzaniteOne continues to develop its footprint in retailing, it will achieve greater market power.

Finally, the tanzanite industry has the potential for enormous growth due to untapped international markets, particularly in China and India. According to a recent study by Bain & Company, both of those jewelry markets are growing at a rapid pace. In contrast to the U.S. and Europe, where diamonds are more popular, consumers in these regions prefer colored gemstones and buy them at a rate four times greater than diamonds. The trichroic property and rarity of tanzanite also gives the gem a competitive edge in these markets. In India it is a substitute for sapphires, which astrologers believe to have negative properties. Because the retail jewelry network in emerging markets is not as well-established as in developed markets, it makes more sense to utilize the strength of current relationships with sightholders to optimize interest in tanzanite.

An Opportunity to Turn the Industry Around

Tanzanite appears to have all the elements of a hit product — supply rarity, unique trichroic properties,

and a foundation dedicated to social impact. Yet, nearly 50 years after its discovery, a market breakthrough continues to elude the stone. The reason lies in the Tanzanian government's role, as illustrated by the history of the industry and the case of TanzaniteOne, the owner of the largest tanzanite deposit in the world. The company serves as a powerful example of the importance of good governance, and how the lack of enforcement can potentially destroy an industry by leading to erratic pricing, disruptive competition, and an unbalanced distribution of power among the players.

Although TanzaniteOne managed to maintain its leading position in the industry despite challenges of the past, it now faces an additional hurdle in the form of a new partnership that has cost the company half its equity. However, with the right development, this new collaboration can become the opportunity to turn the industry around. Now that the government has a 50% stake in the company's livelihood, TanzaniteOne has the leverage to demand enforcement against illegal trading. That alone is not enough, as the company also needs to increase its retail presence in existing U.S. and European markets to rebalance its relationship with sightholders. In contrast, in emerging markets such as China and India, collaboration with sightholders is key for growing the market and increasing demand.

The future of both tanzanite and the livelihoods of those who work within the industry or live in the areas surrounding the mine depends on TanzaniteOne's success and its ability to change the mindset of its partners while bringing forth the true value of the gemstone.

This article was written by Diego Rimoch and Stephenson Cherng, members of the Lauder Class of 2015.



Status Quo Revisited: The Evolving Ties Between China and Myanmar

In Burmese, pauk phaw means “fraternal” or “kinsfolk.” Historically, this is how China and Myanmar have referred to their relationship. However, they remain an unequal pair, with China’s overall GDP nearly 160 times that of Myanmar’s, a per capita GDP roughly five times as large, and a population nearly 26 times greater than that of its neighbor. On top of these imbalances, the recent political and economic reforms following Myanmar’s general elections in 2010 have further challenged bilateral relations, forcing the countries to re-evaluate the status quo of their relationship.

Since the beginning of the 21st century, the *pauk-phaw* relationship has centered on China’s economic development and, correspondingly, the country’s overwhelming need for energy and commodities. The State Grid estimates that the country’s total power consumption will double by 2020, from 4.69 trillion kWh in 2011, making hydroelectricity and coal core concerns.

China’s quest for energy security is a strategic opportunity for Myanmar. According to official data, Myanmar has total estimated gas reserves of 2.54 trillion cubic meters (the 10th largest in the world), 3.2 billion barrels of oil reserves (the largest in Southeast Asia), and an ample number of rivers. China, seeking to establish a diversified portfolio of energy suppliers, heavily weights its investments in Myanmar toward oil and gas, mining, and hydroelectric operations.

As Myanmar implements political and economic reforms, it will need to rely on foreign capital to bring its infrastructure and industry up to speed. The McKinsey Global Institute estimates the gap between required investment and domestic savings to be as much as US\$170 million. Foreign investment would serve not only as a source of financing, but also as an important

source of capacity building, knowledge-sharing, and connectivity to global supply chains.

From 1988 to July 2013, total contracted foreign investment in Myanmar hit US\$42.95 billion, according to a report by PwC. Greater China accounts for more than 48% of this total, making it the largest single investor in Myanmar during this period.

Given these figures, how will the changing dynamics of Myanmar’s political and economic environments affect China’s investment strategy there? And going forward, how will Myanmar manage — and indeed leverage — its powerful and resource-hungry neighbor to the north? To what extent will both sides of the relational equation experience significant rebalancing?

New Norms or Once-off Success?

In 2013, China achieved a potentially precedent-setting victory in the oil and gas sector in the form of two major Sino-Burma overland pipelines. The Shwe gas pipeline, which links gas reserves off Myanmar’s Arakan coast with Yunnan province in southern China (via Myanmar’s deep-water port of Kyaukphyu and the border crossing at Ruili), went live in late July;

there is also a corresponding oil pipeline. The two projects, begun in 2009 with an operational agreement between China's state-owned China National Petroleum Corporation (CNPC) and the previous government's junta-linked Myanmar Oil and Gas Enterprise (MOGE), come with a combined price tag of RMB17.7 billion (US\$2.9 billion). CNPC is set to hold a 50.9% stake and will manage the project; MOGE will own the remainder. In addition, China is entitled to take over 90% of the resources extracted (22 million tons of oil annually versus Myanmar's two million)

The pipelines will allow China to diversify its energy channels and avoid costly and inconvenient shipping routes through the Strait of Malacca. However, beyond ensuring energy security, China insists that broader objectives of the pipeline project include deepening regional economic integration, improving Myanmar's domestic infrastructure, promoting economic development, and strengthening bilateral relations.

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The flip side of this argument, however, is that such a project may, in fact, accomplish exactly the opposite. According to Paul Stevens, a senior research fellow in the Energy, Environment and Development Programme at Chatham House in London, cross-border pipelines such as these have the significant potential to engender conflict and local resentment (parties on both sides may have conflicting agendas and motivations, and benefits may not be shared equally).

Regardless of the motivations, China stands to benefit enormously. The Shwe pipelines will supply China annually with roughly 10 billion cubic meters of gas and an expected 22 million tons of crude oil, or approximately 10% of the country's total oil imports in 2010. Should implementation and operations continue

smoothly, this project may indeed be a bellwether for the complexity and scale of the Chinese government's future ambitions in Myanmar.

Myanmar's Hydropower Potential

China is also keen to tap into Myanmar's hydropower potential to alleviate its problem of acute water scarcity. China is home to 21% of the world's population, but only 6% of its fresh water. While it has designated RMB4 trillion (US\$653 billion) to water-related conservation and infrastructure projects over the next 10 years, the country will also need to seek out more water sources as it continues to urbanize and grow its economy. In contrast, Myanmar is estimated to have 24,164 cubic meters of water per capita per year, which is more than 10 times the per capita endowment of China and India, something the Chinese hope to take full advantage of.

Of the cumulative RMB86.5 billion (US\$14.2 billion) that China has invested in Myanmar since 1988, more than 50% has been allocated for hydropower dam projects. Myanmar's hydropower is especially attractive to the landlocked Chinese province of Yunnan.

According to the Harvard Ash Center for Democratic Governance and Innovation's David Dapice, a leading expert on economic development in Southeast Asia, it is a "cheap, green and accessible resource." However, in contrast to the Sino-Burma pipelines, hydropower projects have presented Chinese commercial investors with much steeper challenges.

The Chinese are financing roughly 30 dam projects across Myanmar, the most high-profile of which is the Myitsone Dam in northern Kachin state. The primary financier is China Power Investment Corporation (CPI), in partnership with Asia World Company, a privately owned Sino-Burmese company. Under the original terms of the contract, China was to receive 90% of the 3,600 to 6,000 megawatts of electricity generated, with most of it allocated to Yunnan province. At the other end of the deal, Myanmar was to receive 10% of the generated electricity, various tax proceeds, and RMB103 billion (US\$17 billion) for the 50-year lease. Initially scheduled to go online in 2017, the Myitsone Dam would flood 300 square miles of land along the Irrawaddy River.

While construction on the Shwe pipelines has continued unhampered, President Thein Sein suspended construction on the Myitsone Dam on September 30, 2011. He cited environmental concerns — as the Myitsone is situated close to an earthquake zone — as well as ethnic concerns: The project would have displaced more than 10,000 Kachins. Dapice also noted that the Burmese regard the dam location, at the head of the Irrawaddy, as a site of great environmental, cultural, historical, and even spiritual significance — in much the same way as Americans regard the Grand Canyon.

But, most importantly, much of the Burmese population objected to the construction of the dam because it symbolized the often unfair, corrupt, and exploitative nature of the *pauk-phaw* relationship. With many villages in Myanmar yet to be connected to the central grid, popular discontent with the project posed a serious risk for the newly formed government. According to Christian Lewis, Southeast Asia analyst at Eurasia Group, a global political-risk consulting firm, “the tide of populism is powerful” and civil society will continue to have a stronger voice in reshaping those contracts signed under the former junta government. Thus, Thein Sein aptly leveraged anti-Chinese sentiments to suspend the project, gaining popular favor in the process. Caught off guard, China initially called for an immediate restart and legal action.

Myanmar’s Strategy: Make New Friends But Keep the Old?

By suspending work on the Myitsone Dam and other projects such as the Letpadaung Copper Mine, the Burmese government is sidelining China, its most important diplomatic and economic ally. Data from China’s Ministry of Commerce show that investments in Myanmar dropped from RMB51.8 billion (US\$8.5 billion) in 2011 to RMB6.2 billion (US\$1.02 billion) in the first 11 months of 2012. Myanmar is essentially banking on newly reinstated relations with the West, primarily the U.S., to drive future investment and economic growth. While the Burmese see the government’s action as following the will of the people, investors and analysts also believe that the move signals a fundamental shift in the relationship.

What will this mean for Myanmar’s strategy? The civilian government recognizes that civil society — including ethnic minorities such as the Kachin, rural communities, NGOs, and the political opposition — will play a greater role in determining the foreign-investment process in the country. Unlike the junta government, President Thein Sein will need to continue political reforms and to balance the desires of the populace with the needs of entrenched power.

One might argue that China’s forceful pursuit of imbalanced hydropower and other resource-extraction projects is a prime example of its exploitative global strategy.

While some experts believe the Myitsone Dam project may eventually be cancelled, it is more likely that Myanmar will leverage its hydropower potential to force China to renegotiate more favorable terms for existing projects. CPI has already invested billions of dollars into Myitsone, and it is keen to see a return on its investments by agreeing to a new contract. However, despite alternative proposals on how to best manage the dams built in Kachin state, negotiations and construction on the dam remain at an impasse.

Will Myanmar continue to force China’s hand? Yun Sun, a fellow with the East Asia program at the Stimson Center, a nonpartisan global-security think tank, notes that Burmese officials “understand the risk of suspension or termination of such projects.” Suspension of the Myitsone Dam has already sent a strong message to commercial and government interests in China — further measures will serve only to belabor the point and lead to an irreparable rift in relations.

In the end, Myanmar will seek to diversify its trading and investment partners. Myanmar policymakers recognize that greenfield investments into energy and commodities will flush the economy with cash but will not be a magic bullet for economic development. For example, investments from the U.S. have centered

instead on light manufacturing and the production of consumer goods. That said, infrastructure in Myanmar is still lacking, and China remains one of the few international investors willing and able to extend large sums of cheap long-term loans for critical infrastructure development to such politically risky countries as Myanmar. Moreover, in order to attract diverse investments from the international community, Myanmar will have to continue economic, if not political, reforms. Thus, the ability and extent to which the Burmese government is able to attract and facilitate foreign investments remains to be seen.

China's Strategy: A Balancing Act

There is debate among the international community as to whether China's aggressive "going-out" strategy for foreign investment has generated odious debt/obligations for its partner nations. The Center for Global Development defines this as a situation in which "an illegitimate, unelected regime signs a contract with

From an investment point of view, prospects are bright for this resource-rich nation with a young population situated at the very crossroads of Asia.

a foreign agent, handing over part of the national patrimony in exchange for a short-run payment, which the regime ... uses in part to finance repression. In the case of natural resource contracts, citizens continue to suffer from sweetheart contracts that deprive the government of deserved revenues."

One might argue that China's forceful pursuit of imbalanced hydropower and other resource-extraction projects is a prime example of its exploitative global strategy for claiming resources, making friends, and exerting international influence. Does this type of behavior "bolster rogue states, fuel corruption, and increase the debt burdens of poor countries," as Ngaire Woods, dean of the Blavatnik School of Government at Oxford University, has argued?

Recognizing the possible reputational pitfall, China has taken steps to clarify its position on investment in Myanmar. For example, in an interview in August 2013 with *The Irrawaddy*, an independent publication covering Southeast Asia, Yang Houlun, the Chinese ambassador to Myanmar, reiterated his country's commitment to the people of Myanmar. He emphasized a bilateral mood of cooperation and positive momentum, and highlighted China's work with civil society organizations, opposition political and ethnic groups, border peace efforts, and prodemocracy forces within Myanmar.

Despite this outwardly cordial relationship, however, China significantly slashed its investment in Myanmar in 2013 in light of rising anti-Chinese sentiment in the country and the failures of key projects such as the Myitsone Dam and the Letpadaung Copper Mine. It issued harsh criticism of the escalating conflicts in Kachin state and expressed concern over border-security issues. Moreover, Chinese leaders did not visit Burma during the 18 months of frenetic reform between April 2011 and September 2012, in stark contrast to the three visits Chinese diplomats paid from March 2009 to June 2010 (pre-democratization).

One reason may be an ideological misalignment in terms of the relative importance of economic development versus political reform. China has placed industrialization, modernization, and consumerism at the forefront of its development agenda for the past 30 years, at times sacrificing human rights, environmental sustainability, and government and media transparency, among other things. Economic growth has been seen as a panacea for all the ills and upheavals of the previous century. Myanmar, on the other hand, welcomes economic growth, but there is also a strong desire to balance growth with democracy and human rights. Perhaps this more-nuanced approach stems from the country's deep-seated and relatively conservative Buddhist cultural foundations. Its implications are that Myanmar may *not* be willing to accept development assistance or foreign investment from China at any cost: If growth for growth's sake is not the sole goal, the Burmese can afford to be a bit pickier about where their foreign investments come from.

Nonetheless, China remains hopeful about its prospects in Myanmar. After all, it remains the country's largest and most powerful neighbor. China has good economic reasons (energy security, commodities trade, and a potential new consumer market) to forge strong ties with Myanmar, and this is likely fueling much of the positive dialogue. Moreover, Myanmar is hardly the riskiest place in which China operates: The latter is, at this point, accustomed to doing business across Africa and Central Asia, some of the most volatile, risky, and underdeveloped parts of the globe. Investing in nearby Myanmar may not seem like the dangerous black box some Westerners perceive it to be.

However, Myanmar's increasingly close relations with Japan, India, the U.S., and its Southeast Asian neighbors are a possible source of concern for China. Should it wish to protect its influence in the country, China has a distinct incentive to invest responsibly and to work to appeal to a broad section of the Burmese population. China's strategy in Myanmar will likely remain aggressive yet tightly managed.

Everything to Play for

Myanmar remains one of the last frontier economies in the world. From an investment point of view, prospects are bright for this resource-rich nation with a young

population situated at the very crossroads of Asia. The McKinsey Global Institute estimates that it has the potential to quadruple its current GDP to over US\$200 billion by 2030, create more than 10 million new jobs, triple its annual spending to US\$100 million, and add 19 million people to Asia's consumer class. However, at this pivotal moment, this severely underdeveloped and misgoverned nation faces serious uncertainty over its true ability to transform and to leapfrog into today's technologically advanced and fast-paced markets.

A neighbor with long-standing ties to Myanmar, China has the unique opportunity to play a crucial role in this metamorphosis. China has poured billions of dollars into Myanmar to tap into the country's plentiful natural resources and simultaneously to develop some infrastructure capability. However, given China's track record in Africa, Latin America, and parts of Central Asia, whether it will be capable of playing a purely constructive role remains to be seen. With so many eyes on Southeast Asia's newest darling economy, China will certainly begin to feel pressure to invest responsibly and to foster long-term sustainability from environmental, social, and economical perspectives.

This article was written by Chryssa Rask and Chanda Wong, members of the Lauder Class of 2015.

CITIES IN THE GLOBAL ECONOMY



Rise of the International Financial Center: Can Casablanca Emulate Dubai's Success?

The United Arab Emirates brings to mind opulent luxury: the seven-star Burj Al-Arab, swank hotels with an array of fine-dining options, caravans of exotic sports cars cruising along the JBR Walk, and the world's tallest building at 828 meters — all symbols of progress, wealth, and success.

Each of these icons has contributed to Dubai's identity and led to it becoming one of the world's preeminent tourist destinations (ranked #7 on MasterCard's Q2 2013 *Global Destination Cities Index*, ahead of major urban metropolises such as Barcelona, Rome, Vienna, and Los Angeles). Yet, there are other measures of economic success — albeit less visible to the unacquainted visitor.

The DIFC enjoys independent jurisdiction under the UAE's constitution, with a legal framework separate from that of the rest of the country.

Since its launch in 2004, the Dubai International Financial Centre (DIFC) has grown steadily and is now classified as a global contender, according to the March 2013 *Global Financial Centres Index*, alongside Beijing and Moscow. This success has not gone unnoticed in Casablanca, which seeks to emulate Dubai's example in hopes of attracting foreign investment and bulge-bracket financial institutions. Morocco's largest city will attempt to build the Casablanca Finance City (CFC), the first of its type and scale in North Africa.

What Is an International Financial Center?

An international financial center is defined as a global city that plays a significant role in capital markets and contains a large number of internationally significant financial institutions. Of particular note are those financial centers that are designated as special economic zones, or free zones, in order to incentivize business activity, especially as it relates to the financial sector.

The official mission of the DIFC is “to promote the growth and development of financial services and related sectors within the UAE economy and to provide state-of-the-art infrastructure and competitive services to stakeholders.” To that end, it was established as an “onshore” financial center in 2004 via UAE Federal Decree No. 35. DIFC members benefit from zero tax, 100% foreign ownership, and no restrictions on the repatriation of capital.

In the 2011 *Economic Activity Survey*, released in July 2012 by Nasser Saidi, the center's chief economist, the DIFC's growth is clearly evident. Nominal GDP of DIFC entities grew from US\$1.8 billion in 2007 to US\$3.1 billion in 2011, an increase of 72% despite the global financial crisis. Over the same period, the number of registered entities within the center increased 62%, from 505 to 817. The NASDAQ Dubai, opened in 2005, grew to a market capitalization of US\$31 billion as of August

31, 2013, according to Zawya, a subsidiary of Thomson Reuters. While the DIFC has clearly benefited from the UAE's world-class infrastructure and stable political regime in a region replete with turbulence, there are additional factors at work. Former DIFC Deputy CEO Marwan Lutfi told *Global Investor* magazine, "The DIFC, with its modern infrastructure, free zone status and self-governing laws and courts, is globally recognized as the preeminent and favored financial center in the region."

The DIFC enjoys independent jurisdiction under the UAE's constitution, with a legal framework separate from that of the rest of the country. Based primarily on English common law, as opposed to UAE civil law, the DIFC Courts administer civil and commercial disputes within the financial free zone. In statements made to the *International Financial Law Review*, Roberta Calarese, DIFC's chief legal officer, notes that the center has "a very sophisticated insolvency regime in contrast with the UAE whose regime isn't as well developed." In addition, the financial free zone has implemented "an efficient legislative process which means [the DIFC is] able to pass legislation that adapts to international standards fairly quickly ... in contrast with the more established countries that have a far more complicated legislative process that's much more lengthy...."

In order to administer its judicial system, the DIFC Courts have assembled an international panel of respected judges, including jurists from the U.K. and Singapore, two countries well-rooted in common law. To bolster its international appeal as a global dispute forum and a center of arbitration, in 2008 the DIFC passed a new law enabling anyone — not just member parties — to bring cases before it. It also opened an arbitration center in conjunction with the London Court of International Arbitration. An example of the independence and integrity of the DIFC Courts, reported by the *Khaleej Times* in August 2013, involved a member of the Kuwaiti royal family who had his lawsuit dismissed against the Swiss Bank UBS AG due to a lack of corroborative evidence.

In addition to its independent legal framework, the DIFC is governed by an independent regulatory framework under the Dubai Financial Services Authority (DFSA). In August 2013, the European

Commission formally declared the DFSA's audit controls to be of "equivalent status" to those of the eurozone. In a new agreement reached with the European Securities and Markets Authority, companies in the DIFC will be allowed to market alternative investment vehicles, such as private equity and hedge funds, to European investors.

In a statement to the UAE-based *The National* on August 26, 2013, Jahangir Aka, managing director at SEI Investments, observed that "there are already a number of European hedge fund organizations, who because of the regulatory environment and tax reasons will be looking to set up their operations in the DIFC and use Dubai as a hub. This will accelerate that." This bodes well for the growth prospects for the DIFC, which had previously shifted its focus to emerging market businesses after the financial crisis. According to Ian Johnston, DFSA CEO, "efforts to improve cross-border opportunities will further facilitate investment flows and will benefit investors and the funds industry."

Following political progress with economic gains remains the greatest challenge in Morocco, as in much of the Arab world.

Perhaps as an acknowledgment of Dubai's success with the financial free zone, Abu Dhabi, the capital of the UAE, announced it will establish a free zone to be called the Abu Dhabi Global Market (ADGM), which, it emphasizes, will differ from the DIFC. In an article published in *The National* on August 29, 2013, lawyers at Allen & Overy, sole legal adviser to the ADGM, noted that Abu Dhabi will fill a "black zone," when most Asian, European, and Asian markets are closed. In addition, it will specialize in handling physical commodities, tasks not currently handled by the DIFC.

Hopes of the CFC

Other Middle Eastern and North African countries hope to emulate Dubai's economic success. After 10 years of rule under King Mohammed VI, a 2009 Brookings Institution report called political progress

in the Kingdom of Morocco stagnant. The regime, it wrote, appeared to be merely “old wine in new bottles.” Since the Arab Spring, however, the king has held new elections and amended the constitution, largely avoiding much of the political turmoil that has plagued the region. A recent *Forbes* article credited Morocco’s strategic geographic position and political stability, especially when compared with the rest of North Africa and the Middle East, as key reasons that foreign manufacturers were flocking to Morocco to establish factories — among them Renault, Bombardier Aerospace, and Dell.

Employees of companies within the CFC will benefit from reduced personal income tax rates, designated as 20% for a maximum period of five years compared to rates of up to 38% in the rest of the country.

While Morocco is generally considered an economic success story, with U.S. Agency for International Development (USAID) representative Matthew Burton noting that USAID is close to graduating Morocco from the program due to its overwhelming success, some economic indicators — such as youth unemployment (about 30%, according to the World Bank) — remain problematic. Following political progress with economic gains remains the greatest challenge in Morocco, as in much of the Arab world. The biggest project aimed at improving the overall economy is the Casablanca Finance City (CFC).

In 2010, the Moroccan Parliament passed Law 44-10, which created the CFC. This new venture spans roughly 100 hectares and will shift the center to the western part of Casablanca. The CFC is managed by the Moroccan Financial Board (MFBoard), a public-private initiative led by Said Ibrahim, former General Treasurer of Morocco. According to Ibrahim, the CFC is set to become a business hub for Francophone Africa, an area he called “Greater North West Africa” (GNWA)

in a 2012 interview with the *Middle East Economic Digest*. Membership in the CFC is limited to financial institutions, professional services, and regional or international headquarters. The first phase of the project is expected to be completed in 2014.

The MFBoard has attempted to secure the requisite expertise to establish the strategic priorities and development of the CFC. It currently has partnerships with several international agencies responsible for promoting the financial sector within their respective countries, including TheCityUK, Luxembourg for Finance, and Singapore Cooperation Enterprise. Meanwhile, the CFC project comes on the heels of previous success with a free-trade zone. The Tangier Exportation Free Zone was voted best free-zone port in the world by *Foreign Direct Investment Magazine* in 2012. According to Julianne Furman, CEO of Polydesign Systems, lack of customs duties, proximity to Europe, and less burdensome government regulations are some of the main incentives that attracted Polydesign to this zone. These benefits, along with Morocco’s position as a stepping stone to the rest of North, West, and Central Africa, are expected to drive much of the interest in the CFC.

Clifford Chance, a “Magic Circle” law firm, already has offices in Casablanca and has applied for membership in the CFC. In a December 2011 briefing document pertaining to the free zone, the firm notes that Morocco’s ambitious growth plans are complemented by growth plans for neighboring countries, emphasizing the need for a strong financial hub in the region from which to coordinate financial transactions and activity. The benefits of the CFC for companies and employees within this special economic zone will focus significantly on preferential tax rates. Morocco has a corporate tax rate of 30%, a figure that will be reduced to 0% for the first five years under CFC designation, with a subsequent tax rate of 8.75% thereafter. For companies that have established regional or international headquarters in the CFC, the tax rate will be a flat 10%. Employees of companies within the CFC will benefit from reduced personal income tax rates, designated as 20% for a maximum period of five years. This compares to rates of up to 38% in the rest of the country.

Despite providing preferential tax rates similar to the DIFC and ADGM, the CFC will differ in an important regard. While the MFBoard has been tasked with creating the CFC, it will not regulate its members, and no new regulatory body or judicial system will be established. Rather, Morocco will use this opportunity to bring its existing regulatory and legal framework in line with best-practice international standards. Regulation will continue to be monitored by existing authorities, including the Central Bank (Bank Al Maghrib), the capital markets regulator (CDVM), the insurance-sector regulator (DAPS), and the Ministry of Finance. As Hicham Zegrari, head of legal affairs at the MFBoard, noted in a 2012 interview with the *International Financial Law Review*, one of the most-needed reforms is “to offer investors the opportunity to go to arbitration or mediation when they want,” referring to the judicial system.

From a purely developmental point of view, both the UAE and Morocco have reaped the benefits of stability

and appear poised to continue that expansion. While Dubai has already laid significant groundwork and established the leading financial center in the Middle East, the consensus is that Casablanca still has far to go. Only 10 institutions have been granted accreditation thus far, including Boston Consulting Group, Invest AD, and leading British law firms Norton Rose Fullbright and Clifford Chance. Of these companies, two were already situated in Morocco before the creation of the financial free zone, thereby not representing new investment. While the CFC and Morocco possess many strategic advantages that should lend support to the international financial center’s success, only the test of time and the implementation capabilities of the MFBoard will determine whether a new and sustainable global financial hub will be created.

This article was written by Jed Halfon and Mohammad Rustom, members of the Lauder Class of 2015.



Berlin: A Window into Germany's Future?

Sixty years ago, the great philosopher Martin Heidegger published his landmark “Bauen, Wohnen, Denken” (“Building, Inhabiting, Thinking”). In this pivotal essay he stressed the central role of housing for speakers of German, a language in which even the words for “being” and “freedom” are intrinsically intertwined with “dwelling” and “building.” For Germanophones, even the terms for the “poor” and “vagrants” are closely related to the lack of a roof under which to take shelter. Housing’s central role is even present in the original German constitutional rights and is, to this day, explicit in the city of Berlin’s constitution, which goes so far as to put the burden on the state to provide “living space.”

More than half a century later, the situation is much different. Today the German people’s desire to make Berlin a world-class city is pushing current residents out of their historical homes, while giving them jobs, services, and new neighbors about whom they harbor mixed feelings. Asked in a 2013 poll on BKULT.DE, a website devoted to the culture of building, whether gentrification was good or bad, respondents answered “yes” 60% of the time and no “40%.” The most common answer from politicians, architects, and journalists who submitted a comment was *jein*, a German word that means both yes and no simultaneously.

Berlin’s recent hype has had a significant impact on its inhabitants through gentrification and internal migration. Neighborhoods have been changed forever. For a society that struggles with immigration, a changing economy, an energy revolution, and an aging population, Berlin shows a window into a future Germany, or perhaps just a closed alleyway.

Berlin is the largest city in Germany in terms of population. The number of residents has been growing steadily since 2005, reaching 3.5 million as of January 1, 2012, according to Eurostat. While Germany’s population is nearly static, Berlin’s increases a little more than 1% a year.

A significant segment of Berlin’s population growth can be attributed to immigration. Approximately 470,000 non-Germans from close to 190 countries currently live in the city, according to the Representative of the Berlin Senate for Integration and Migration. Some 65,000 new inhabitants moved into the city on the Spree river between 2006 and 2011. Two-thirds of the migrants are young, between ages 18 and 33. In a continent undergoing a rapid aging of its population, Berlin stands out as an oddity, with a quarter of its populace under age 25.

One of the reasons for Berlin’s unique population patterns, compared to the rest of Europe, is that unemployment has declined from 18% to 10% over the last decade. The city’s economy has outperformed the rest of Germany. Berlin is the center of the country’s creative industries, with more than 24,000 companies and 170,000 employees working in this field. Activities such as the performing arts, music, software programming, and design generate 20% of the city’s GDP. People and companies come to the city to benefit from good education opportunities, cheaper housing and office space, and a creative and uninhibited atmosphere.

Berlin’s art scene is among the most vibrant in the country and in all of Europe. The capital is home to

more than 13% of Germany's artists and about 12% of design studios, according to Berlin Partner, the city's corporation for economic development and location marketing. The city boasts 170 museums and collections and more than 500 art galleries, and plays host to one of the most famous film festivals in the world, the *Berlinale*. As described on the festival's website, Berlin is "an exciting cosmopolitan cultural hub that never ceases to attract artists from around the world."

This creative and friendly environment actively fosters the development of new businesses. At least one start-up is founded every day in Berlin, which has come to be known as *Silicon Allee*, in reference to Silicon Valley in California. Indeed, companies such as Skype, SoundCloud, Game Genetics, and Rocket Internet were born and nurtured in Berlin. Now successful and world-famous, they come back to invest in up-and-coming entrepreneurs. As Skype co-founder Niklas Zennström observed in an interview with *Spiegel Online* in 2011, "there are a lot of people who worked for me at Skype who left to start their own companies. You end up with entrepreneurs who become investors, and people working for start-up companies who become entrepreneurs themselves."

Berlin's start-up scene could develop further if large mature tech companies such as Intel and Microsoft established R&D departments in the city. As Yair Re'em, CFO of Hasso Platner Ventures in Berlin, notes, "Then we will have the inbound/outbound circle of employees/entrepreneurs." Such a movement would foster development similar to that by the likes of Xerox and HP in Silicon Valley in the 1970s, adding to the above-mentioned contributions of Zennström and others. Berlin would become even more attractive for entrepreneurs, adding to the city's population. Could this added stimulus for people to move to Berlin have side effects?

In addition to the creative and innovative atmosphere, one current advantage of Berlin, Re'em notes, is the low cost of living, especially when one compares the German capital to other technology centers such as Munich and San Francisco. According to Numbeo, a database of user-contributed data about cities and countries, one would need about €4,312.08 (US\$5,762.50) a month in San Francisco to maintain the same standard of living one can have with €1,496.60 (US\$2,000) in Berlin (assuming

one rents in both cities). But can Berlin continue to attract artists, entrepreneurs, and investors? Will these new residents be able to afford living in the city? How long can the current hype last? And how long will Berlin's advantages last?

Berlin is the center of the country's creative industries, with more than 24,000 companies and 170,000 employees working in this field.

The Impact of Immigration

Young entrepreneurs and venture capitalists continue to pour into the city. They are young, highly educated, and career-centered. Laura Otero, a Spaniard who worked for a venture capital company in Berlin, highlights the city's ability to attract educated immigrants. "People who move to Berlin are more open and less snobbish than those who go to London or Hamburg/Frankfurt. In Berlin, there [are] only a couple of posh places to go out or eat; everything else is pretty laid back."

The arrival of these entrepreneurial immigrants, however, is not without controversy. Locals complain about rising prices and rents. The new word being tossed around, and the latest addition to Berlin's vocabulary, is *Gentrifizierung* (the German word for gentrification). Entire neighborhoods in the downtown area have been renovated and upgraded, and many of their former inhabitants are pushed out by the newcomers. Rocio Caces, who became part of a commune in the Kreuzberg neighborhood, has lived in Berlin for six years. She arrived with the first wave of alternative-culture immigrants, or pioneers, who are now being pushed away by the richer consultants who work for the government or by the start-up techies. "I feel this city has less to offer me. I don't see myself living in Berlin 10 years from now. I just can't afford it anymore."

Over the last decade, consumer prices and housing prices in Berlin have gone up by 10% and 20%, respectively. While the average rent in the city is still below the German average, neighborhoods such as Prenzlauer-Berg have lost 80% of their original populations and, while becoming shining examples of architectural and urban

recovery, have lost the entirety of their original social tissue. In general, the city seems to be chasing its tail. According to Caces, “Kreuzberg is the new Prenzlauer-Berg, and Neuköln is the new Kreuzberg.”

Still, it is hard not to appreciate the benefits. Low unemployment and an increase in the number of Germans moving to Berlin are unequivocal signs that things are relatively better here than in other areas of Germany. Berliners these days go around repeating the words of their mayor like a mantra, “Berlin is poor but sexy.” The problem is that sexy does not stay poor forever, and the numbers point that way.

As prices rise, those who had given Berlin its hype, brilliant art scene, and exciting nightlife are now starting to leave.

In her book *Mythos Kreuzberg*, Barbara Lang promotes the term “symbolic gentrification,” pointing out that gentrification in certain neighborhoods has been a superficial process associated with public works and that the original inhabitants have been taking on new rituals. Kreuzberg, for instance, still counts as neighbors a good number of the same people; they just make more money and pay more for their rent. This seems to be confirmed by data from the GfK, a German consumer advocacy office, which notes that the average rent in certain neighborhoods has gone up by less than one euro, and that only 3% of the people say they cannot afford living in their neighborhoods anymore. In contrast, a quarter of the renters fear they will be thrown out of their homes at some point in the future.

A Nation of Renters

More than half of Germans rent their homes or apartments, placing the country at the bottom of the European league in terms of home ownership, surpassing only Switzerland. In Berlin, nearly 85% of the population rents. Part of the reason is cultural, but the absence of tax breaks for homeowners and the policy of rent control also play very important roles. Moreover, banks require down payments of at least 40%, and loans must be paid back in 10 years, compared to 30 years in the U.S. As a result, construction of new dwellings

has been historically slow. According to the Deutscher Mieterbund (DMB), the German Tenants’ Association, only 6,000 apartments were built in Berlin in 2011, even though the population increased by about 41,000 people, most of whom are young.

In recent years, faster economic growth has propelled prices for both owning and renting to higher levels. The real estate market in Germany has attracted tremendous investor interest. A 2013 PricewaterhouseCoopers study ranked Berlin and Munich ahead of London and Paris in terms of investment prospects. With institutional investors moving into the market and pouring billions of euros into housing, inevitably there is going to be an increase in housing prices in a land-scarce country such as Germany.

While mortgage payments tend to be fixed over the life of the loan, rents are rarely stagnant for long. The large number of tenants in Germany means that people are seeing their budgets being squeezed. Moreover, newcomers suffer the most. According to the DMB, tenants who lease a new apartment in Frankfurt have to pay 31% more rent than the average in the area. The difference is 28% in Munich, 25% in Düsseldorf, 24% in Hamburg, and 19% in Berlin. This trend led the opposition Social Democratic Party (SPD) to propose a ceiling on the rent of a re-rental to 110% of the average rent in that area. Unfortunately, the proposal was outvoted in the German parliament by the ruling coalition of Christian Democrats (CDU/CSU) and Liberals (FDP). As a result, everyone expects rents to continue to soar.

As prices rise, those who had given Berlin its hype, brilliant art scene, and exciting nightlife are now starting to leave. Low prices, artists, and the brave old Berlin are slowly becoming things of the past, and what gave Berlin an edge over the rest of Europe may be slowly fading away, endangering the city’s momentum and creative vibrancy. In a city and country in which being and freedom are linguistically and economically linked to dwelling and building, much of the future hinges on the evolution of the real estate market.

This article was written by Carolina Benevides Lima, Kamran Mahmood and Juan Antonio Abraham, members of the Lauder Class of 2015.

CITIES IN THE GLOBAL ECONOMY



Local Government Handbook: How to Create an Innovative City

In 2012, Citibank and The Wall Street Journal awarded Medellín, Colombia, the prestigious title of “Innovative City of the Year.” In just a short period of time, Medellín has transformed itself from a violence-ridden, global drug capital to a model cosmopolitan metropolis with an award-winning public transportation system, a growing entrepreneurial ecosystem, and an increasingly attractive environment for foreign investment. How did Medellín, the second-largest city in Colombia, with more than 2.7 million residents, make this quantum leap forward? What factors are necessary to ensure the success of such a large-scale effort? What lessons from Medellín’s example can other emerging cities adopt to execute this type of sustainable change?

Three principal factors are necessary for innovative transformation: inclusive political policies, strong institutions focused on fostering innovation, and access to financial capital.

Action Item #1: Enact Inclusive Political Policies

To execute successful large-scale transformations, city governments need to focus on three critical actions that have been shown to produce inclusive political policies. First, the local government needs to engage the entire city’s community to create consensus and buy-in around the vision of a modern, innovative city.

To accomplish this, in 2004 Sergio Fajardo, the then-mayor of Medellín, established “civic-pact” agreements whereby city administrators and local neighborhoods collaborated to design government projects based on specific local needs. Community leaders and government officials jointly identified important initiatives and then signed agreements detailing the roles and responsibilities that each party would take on. To increase transparency, the mayor organized televised citywide spectacles where the agreements would be signed and shared publicly with the community. In

addition, Fajardo involved the general public in the budgeting process by allowing local communities to decide how to allocate and spend small portions of the city’s budget.

Through these initiatives, Medellín’s citizens for the first time had the opportunity to both design and invest money in local projects, empowering them with a sense of shared ownership and responsibility. Most importantly, the community’s active participation created buy-in and consensus, helping to support Medellín’s transformation into an innovative city.

Second, transforming any city requires the necessary physical infrastructure to unify disparate and diverse classes. In Medellín’s case, Jorge Melguizo, a former Fajardo cabinet member and a longtime insider in city politics, noted that “[Medellín] was a city that had been very fragmented, that was built on inequality and isolation ... a city that previously benefited just a few.” To ameliorate this situation, Fajardo began a campaign where he challenged Medellín’s government to take on the goal of “providing rich and poor with the same quality education, transportation and public architecture. In that way, you increase the sense of

ownership and equality across the community.” With this objective in mind, Medellín’s government built a state-of-the-art metro station and metro cable-car system to connect the popular classes living in the hillside neighborhoods with the rest of the city in the lower plains. According to “From Fear to Hope in Colombia,” a scholarly publication by Matthew Devlin and Sebastian Chaskel that examines Medellín from 2004 to 2007, these projects drastically reduced commute times, spurred private investment, and enhanced social equity.

In addition to the transportation system, the city established Parque Biblioteca España (Spain Library Park), located in the city’s slums, which offers low-income individuals access to education and after-school programs. According to one community member living next to the library, “The España library changed our perception of ourselves.” This initiative has encouraged innovation with underprivileged youth in the form of book clubs, theater groups, and many other extracurricular activities. Together, these two infrastructure investments have provided the physical platforms for the entire city to engage more actively in work, social, and innovation experiences.

Third, the local government cannot do it alone; the national government must allow the city government enough flexibility and autonomy to craft and execute its transformational plan. Unlike many other Latin American countries that employ centralized power structures wherein the capital city has tight control over each region’s activities, Colombia has adopted a decentralized system under which each region is given considerable latitude and flexibility for managing its own budget and raising additional capital investments. For example, many of Medellín’s local government bodies, such as the Biblioteca Pública Piloto (Public Library), which established the aforementioned library park in Medellín’s slums, have limited oversight from the central government; instead, these organizations are accountable to the mayor of Medellín.

Action Item #2: Build Institutions That Foster Innovation

In addition to inclusive political policies, a large-scale transformation requires important institutions to generate and sustain innovation. Recognizing the

emergence of successful technology capitals outside Latin America (e.g., Silicon Valley, Boston, Dresden, Taipei), Medellín set out to create its own innovation park to attract and develop tech talent. With a total investment of approximately COP58 billion (US\$30 million), in 2010 Medellín announced the creation of Ruta N, a nonprofit with the mission of strengthening the city’s innovation ecosystem. As an independent institution, Ruta N serves many important purposes. First, its office space is fully equipped to host foreign or domestic companies that want to be based in the city. Through activities such as “Innovation Week,” during which international technologists share their insights on technology trends, it has successfully attracted important outside agencies. This event has resulted in Ruta N developing an important strategic alliance with Hewlett Packard (HP), under which HP agreed to open a new global services center within the Ruta N complex and hire more than 1,000 employees, a huge win for Medellín.

Second, Ruta N offers various programs to strengthen and revitalize the capabilities of its business leaders. For example, it offers a skill development program, Inngenio, that is designed to support technologists creating prototypes for new products or services. Inngenio provides companies with expert mentors to help them create technical proposals, financial plans, or marketing strategies. Third, Ruta N also serves as an accelerator. The government of Medellín set aside a budget for Ruta N, when it was originally founded, to select and fund innovative companies. These enterprises were offered training and consulting sessions, and the opportunity to present to investors at Ruta N’s Demo Day. Finally, Ruta N serves the important role of creating and managing the official Science, Technology and Innovation Plan (STI) for Medellín, through which it is required to recommend specific initiatives to improve Medellín’s global competitiveness. The nonprofit and its important initiatives have helped transform the city into an internationally recognized hub of knowledge and innovation.

Along with entities that support enterprises, institutions that support early-stage entrepreneurs are critical for stimulating innovation. Recognizing the lack of entrepreneurs and the limited diversity of Medellín’s economy, then-mayor Alonso Salazar Jaramillo made it

a priority in his 2008-2011 development plan to build an organization that would help drive the demand for diverse products and services.

Cultura E was born through this initiative. Differing from Ruta N, which focuses on larger enterprises, Cultura E is focused on fostering the development of smaller, local businesses. Through partnerships with Banco de las Oportunidades, a government-funded bank, and 14 local micro-finance institutions, it offers small loans with flexible payment plans to high-potential entrepreneurs, many of whom live in some of Medellín's poorest neighborhoods. Entrepreneurs benefit from having different alternatives available at a single location and are thus able to make better choices regarding their needs for financial and mentoring services. In addition to funding opportunities, Cultura E also provides physical space for entrepreneurs to incubate new ideas and an annual Seed Capital Contest, which invites entrepreneurs to submit business plans and apply for government-funded seed capital. If an entrepreneur lacks the skills needed to complete a viable business plan, Cultura E employees and participating NGOs provide support.

To publicize their successes and engage Medellín's broader community, Cultura E brings the most outstanding businesses together to display their products during Colombia Moda (the country's version of Fashion Week). According to journalist Noguera Francisco, in an article entitled "Medellín's Promising Transformation," Cultura E has set the example of how local governments can successfully engage private sector institutions to spur entrepreneurship and alleviate poverty. Cultura E is another important government-backed institution that has helped Medellín become innovative.

Action Item #3: Attract Financial Capital to Fuel the Transformation

Beyond implementing inclusive political policies and creating institutions that promote innovation, transforming a city takes many years of significant investment, which requires access to capital. First, finding a long-term sustainable financing source to support the transformation is critical. One of the most unique and powerful financing tools that Medellín has employed throughout its transformation comes via a public utility. Empresas Públicas de Medellín (EPM) is

a state-owned company that provides electricity, gas, water, sanitation, and telecommunications services. It is run as a commercial enterprise but managed by the municipality of Medellín.

Medellín's citizens for the first time had the opportunity to both design and invest money in local projects, empowering them with a sense of shared ownership and responsibility.

While many municipalities, particularly in Latin America, privatized their public utilities, Medellín instead converted EPM into a multinational corporation. The company is wholly owned by the city and is closely linked to the mayor's office. In fact, the mayor serves as the president of the company and appoints all the board members. This unique structure has allowed EPM to play a strong role in the city's success and transformation, contributing roughly 30% of its net revenue to the city budget. Yet, the company's commercial position has not been compromised. In fact, EPM believes that community ownership has strengthened its operations because the city's inhabitants have become proud of "their" company's contributions to the city's economic development and culture and, as a result, are more inclined to buy into its projects.

EPM has funded huge projects throughout the city, including the Planetarium, the Botanical Gardens, the Museum of Water, a children's interactive museum, libraries, urban parks, and the 16,000-hectare Arví Park just outside the city limits. It also runs the Fondo EPM para la Educación Superior (EPM's University Education Fund), which benefits more than 3,000 students from Medellín and Antioquia annually. The company also values internal innovation. The CEO, Federico Restrepo Posada, was recently quoted as saying, "We are a company that promotes innovation, development and entrepreneurship — elements which, combined, contribute to the consolidation of an ecosystem of an innovative city." To illustrate this point, he stated that EPM allocates up to 0.6% of its annual income to be

reinvested in innovation and development strategies. As a reference point, this figure for 2012 amounted to more than COP29 billion (approximately US\$15 million). EPM has also committed to dedicate 7% of its profits to ensure that Ruta N has adequate resources until 2021.

In March 2012, the company launched a COP96 billion (US\$50 million) private equity fund to leverage business developments in innovation, science, and technology. In Colombia, this is the first fund with a focus on businesses in their growth stage — particularly important given that access to capital is one of the greatest challenges facing Latin American entrepreneurs. The fund's objective is to finance programs, projects, and activities with significant science and technology content aimed at strengthening the capacities for innovation in the city's strategic clusters and emerging sectors. This fund will serve as yet another mechanism to effectively and efficiently raise the municipality of Medellín's investment in science and technology to achieve the goals set out in the mayor's development plan.

Second, it is critical to create a local business environment that attracts foreign investors to support and diversify existing domestic funding sources. Medellín's GDP per capita has doubled over the last decade, from COP11.2 million (US\$5,826) in 2000 to COP19 million (US\$10,350) in 2012. This success is predicated largely on the municipality's ability to attract investment that funds growth and innovation.

In 2002, the Mayor's Office of Medellín established the first decentralized international cooperation agency (DIC) in Colombia, with the intention of creating direct ties between the city and the world that would improve the city's share in the global flow of capital, products, services, and knowledge. Agenda de Cooperación e Inversión (ACI) focuses specifically on internationalizing the Antioquia region and repositioning Medellín in order to increase the investment and international cooperation that support the city's development plans.

Since the agency was created, Medellín has been able to form direct ties with international allies such as cities, multilateral bodies, and NGOs. The mayor's office's main website contains an entire section dedicated to educating foreign investors about why they should invest in Medellín. In particular, the government has

focused on creating tax incentives that help attract investment to the city. With the aim of encouraging innovative activities, the City Council signed Agreement 67 of 2010, which grants abatements on industry, trade, and property taxes. These benefits are provided exclusively to companies that carry out innovative operations that fall within the predetermined strategic segments of focus set by the government.

Third, a large part of attracting investment includes making the city a more desirable place to start a business. According to the *Latin Business Chronicle*, Colombia ranks as having the fifth-lowest number of procedural requirements for starting a business in Latin America, with nine total. It also has the third-lowest cost to start a business in the region and the fourth-shortest time required. This makes the country a desirable place for an entrepreneur to start a business. In addition, Medellín's Chamber of Commerce is working to further simplify the process of creating a business. Through its website, entrepreneurs can perform different administrative procedures directly on the virtual platform. Legal changes in the country, that only the government can implement, have encouraged business development and helped to make Medellín one of the most innovative and entrepreneur-friendly cities in Latin America.

To recapitulate, enacting inclusive political policies, building institutions that foster innovation, and attracting the necessary financial capital to drive change are essential for urban transformation. Medellín stands tall as an example of how to overhaul perceptions and realities in record time. The Urban Land Institute, a Washington, D.C.-based nonprofit that researches land use and real-estate development around the world, summarizes Medellín's success well, stating that "Few cities have transformed the way that Medellín has in the past 20 years.... [The] change in the institutional fabric of the city may be as important as the tangible infrastructure projects.... Medellín's challenges are still many.... However, through innovation and leadership, Medellín has sowed the seeds of transformation, leading to its recognition as a city with potential for long-lasting success."

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Help Wanted: New Strategies Are Necessary to Increase Entrepreneurship in France

The past few years have been challenging for the global economy. Instability has been high, economic growth has stagnated, and employment opportunities for youth in particular have suffered. Global economic players such as the U.S., the U.K., China, and Germany have been mastering the challenges of the economic downturn resiliently. With an ongoing fragility in the economic markets and stagnating growth rates, however, even historically strong global players such as France are facing increasingly serious structural problems, raising questions about whether one of the continent's largest and most sophisticated economies may become the next sick man of Europe.

For many years now, France has lagged behind other European economies — such as Germany, Switzerland, and Norway — in terms of its per capita GDP (US\$35,500 in 2012). By many accounts, France is already moored in malaise. Unemployment is at its highest point since the current record-keeping system began in 1996 (11% at the end of July 2013), and job creation has been on a downward trajectory. Until the 1990s, France was among Europe's leading economies; by 2010 it had dropped to 11th among the EU-15, ranking higher than only the struggling Southern European countries, such as Spain and Greece. Low labor-force participation and sluggish productivity growth are the main drivers. France's participation rate has largely stagnated over recent decades, while the participation rate for the EU-15 as a whole has trended upward since 1996. By 2010, the participation gap between France and the EU average had reached two percentage points. Along with the European periphery, France's labor productivity has fallen by 30% in relation to Germany's.

Enter the Entrepreneurs

France is home to many successful companies. However, two alarming trends suggest that a revised

strategic orientation needs to be adopted to increase entrepreneurship: (1) an entrepreneurial environment with respect to infrastructure and administrative provisions that impedes the creation of small businesses dedicated to solving the problems of today and tomorrow, and (2) a cultural and political environment that does not sufficiently reward and encourage the entrepreneurial spirit.

“There are so many ways that our politicians could facilitate the foundations of young start-ups and they don't even need to be creative. Examples exist just across the border such as in Belgium,” journalist Mike Butcher argued in an October 2012 article, “How France's Government Screwed Its Entrepreneurs So Hard They Became Pigeons.”

State aid, in particular, enables the government to share some of the risks that are inherent with starting a business. For instance, a system of credits for research and development (Crédit d'Impôt Recherche) allows businesses to offset 30% of their research and development expenses. There are also multiple forms of state funding, including the Banque Publique d'Investissement (Public Investment Bank or BPI),

by which enterprises can access interest-free loans. In addition, the Fonds National pour la Société Numérique (FSN) is a government-backed fund that provides financing for profitable projects in the digital space. Furthermore, entrepreneurs can take advantage of a special *créateur d'entreprise* status, allowing founders to claim an unemployment benefit. For example, one can work full-time on his/her startup while minimizing salary costs for up to 15 months.

These initiatives have led to several success stories within the French start-up space, including that of Xavier Niel, the billionaire founder of broadband supplier Iliad and the country's best-known entrepreneur. Additional examples include Marc Simoncini, founder of the dating agency Meetic, and Daniel Marhely, founder of the music-streaming company Deezer, which aims to rival Spotify.

Two alarming trends suggest that a revised strategic orientation needs to be adopted to increase entrepreneurship.

Despite these measures, France lags behind other developed nations in terms of fostering entrepreneurship. In particular, according to the Global Entrepreneurship Monitor 2012, the entrepreneurial ecosystem in France ranks behind that of the U.S., Canada, Australia, the U.K., and Germany. In addition, newly created enterprises in France comprise less than 9% of existing businesses, which is lower than the 12% and 11% found in Germany and the U.K., respectively. Not only are fewer businesses being created in France, but it is also more difficult for companies there to grow. For instance, 93% of enterprises in France have fewer than nine employees, compared to 85% in Germany.

The numerous obstacles currently faced by French entrepreneurs are well-documented: high corporate taxes relative to other developed countries, administrative and judicial difficulties, limited sources of early-stage funding, and labor-market hurdles. François Bordes, the founder of MyCO2, cites the

rigidity of the labor market — including the high social charges incurred per employee and the costly measures that make it difficult to fire employees — as one of the greatest hindrances for many startups seeking to expand.

According to Croissance Plus, an organization that studies growing businesses, 75% of surveyed entrepreneurs would increase hiring if social charges were decreased, while 59% would increase their workforce if firing practices were less stringent for firms. Romain Niccoli, co-founder and CTO of Criteo, also believes that a cultural shift is needed. While becoming the next Steve Jobs or Mark Zuckerberg is seen as an attractive career ambition for graduates in San Francisco or London, the entrepreneurial route is often regarded in a negative light in France, where entrepreneurs are perceived as not having succeeded in the recruiting process.

The situation worsened following decisions enacted by the French government. The fall 2012 announcement that capital-gains taxes would increase from 32% to 60% for investors and entrepreneurs led to a furious and viral online campaign by French entrepreneurs, who called themselves *les Pigeons*. In May 2013, Arnaud Montebourg, the Minister of Industrial Renewal, vetoed Yahoo's acquisition of DailyMotion, sending yet another negative signal to entrepreneurs dreaming of cashing out to foreign acquirers. In addition, the proposed reduction in the auto-entrepreneur status, a low-tax and low-bureaucracy category created by former President Nicolas Sarkozy in 2012, gave rise to another movement of entrepreneurs called *les Poussins*, or “the baby birds.” This second uprising of entrepreneurs against the government has further reinforced the image that France is not a friendly environment for start-ups.

Over the past five years, many other countries around the globe have made substantial progress in launching and implementing programs to drive entrepreneurial activity, and their respective economies have benefited considerably from employment growth and productivity gains. Based on France's cultural, economic, and political starting positions and interviews with several of the country's foremost entrepreneurs, a roadmap of five key initiatives can be established that has the potential to launch the revival of entrepreneurs in France. These initiatives are focused around fostering educational

programs, reinforcing a favorable administrative and legal support network, improving funding sources, advancing cultural-change and mindset programs, and ensuring a beneficial tax system and incentives.

Fostering Educational Programs and Skill-building

Fostering entrepreneurship through educational programs is key to developing young and well-connected entrepreneurs. “One day, one entrepreneur, one student” is a recent French program that encourages students to spend time working with entrepreneurs. This is a favorable starting point to further reinforce the involvement of teachers, parents, and local businesses in developing and implementing these programs across the country. Moreover, HEC, one of the most prestigious business schools in France, has begun to create its own incubator programs to promote entrepreneurship at the college level.

At the same time, while progress has recently been made in France to introduce programs, such as those mentioned above, to foster entrepreneurial attitudes and build the skills of young people, there are still substantial opportunities to expand the curricula and involve the local business community in education. Numerous initiatives drawn from economies worldwide can serve as a basis for action. In the U.S. and Canada, for example, Junior Achievement targets middle- and high-school students; the organization is dedicated to educating these students about workforce readiness, entrepreneurship, and financial literacy through hands-on, experiential programs. Moreover, the Italian employers’ federation, *Confindustria*, interacts with schools and universities; it has established two-month courses on entrepreneurship skills for young people.

Outside France, numerous corporations play an active role in promoting entrepreneurship in schools, offering conferences and courses that help students develop the required skill-sets. In addition, entrepreneurship is appearing in more school curricula. The subject is discussed at tertiary institutions and is beginning to be included at the secondary level as well. Canada, for example, increased its number of entrepreneurial courses by 22% from 2004 to 2009, and high schools

in the U.S. began offering elective courses on entrepreneurship in 1999. “Autovision,” launched by Volkswagen in Germany, is just one outstanding example of close cooperation between a corporation and local municipalities to inspire and provide infrastructure for young entrepreneurs. Mentorships for entrepreneurs and young people seeking to set up their own businesses have been particularly lacking in France.

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In addition, Bordes highlights the current number of software programming positions that need to be filled as one example of the mismatches between employees’ skills and employers’ needs. Hence, educational programs that put more emphasis on programming skills and professional retraining programs may help close the skill gap and boost the employment rate.

Reinforcing a Legal Support Network

France needs to do more to create a favorable administrative and legal environment for entrepreneurs. Bordes details how valuable time and resources are spent filling out cumbersome paperwork to meet the government’s administrative requirements, at times requiring multiple iterations, which could be better spent on more productive activities. A new legal entity, created specifically for entrepreneurs, that reduces the administrative burden and reporting requirements, would lower the up-front and on-going costs for a start-up that is already constrained by limited resources. Facilitating the visa process for high-potential entrepreneurs would also increase the availability of qualified human capital and diversify the talent pool to help spur innovation.

At the moment, the government appears to be taking steps in the right direction, including the “simplification shock” announced in July 2013 by French President François Hollande. The purpose of the “shock” is to simplify the complicated bureaucratic process for French businesses, thus reducing the amount of expensive and complex paperwork for small companies. The French government has also adopted the open-data movement by giving the general populace access to large amounts of public data. Thomas Inglebert, a co-founder of VroomVroom.fr, was able to leverage these large datasets to help applicants by increasing the transparency of success rates for driving schools in France. VroomVroom.fr was ultimately named one of the winners of the Dataconnexions 2013 tournament, which enabled the founders to meet with Fleur Pellerin, the appointed Minister Delegate with responsibility for small and medium enterprises, innovation, and the digital economy.

At the moment, the government appears to be taking steps in the right direction, including the “simplification shock” announced in July 2013 by French President François Hollande.

While the BPI provides fiscal aid to small enterprises, France needs to improve and expand the funding sources available to entrepreneurs. According to Croissance Plus, 41% of surveyed French entrepreneurs do not believe the bank can fill the void created by the lack of private funds to finance growing enterprises. In addition, in 2012 the Association Française des Investisseurs pour la Croissance, the French private equity association, declared the lack of available capital to finance SMEs to be an emergency. The total amount of such capital available in France in 2012 was US\$6.5 billion, less than half the US\$17.6 billion available in the U.K., and a fraction of the US\$126.3 billion available in the U.S.

One solution would be to mobilize capital from stable capital sources — such as life-insurance funds, institutional investors, and banks — by creating a guaranteed fund that would limit the losses of one’s investment to appease risk-averse investors. This vehicle would limit losses to a guaranteed fixed amount (e.g., a loss of 20% of one’s investment). In an environment where strong returns are difficult to come by due to increasing regulations and challenging market conditions, allocating a portion of one’s portfolio to SMEs can represent an attractive risk reward.

Advancing Cultural-change and Mindset Programs

French culture does not place high value on being an entrepreneur. According to the French mindset, working as a civil servant or anonymously in a large company is much more prestigious. In other countries with stronger entrepreneurial spirits, creating an organization from scratch according to one’s own vision is highly respected. Delphine Bourges, a recent graduate of HEC Paris, contrasts her experience working for a start-up in France with what she observed in San Francisco during a school trip as being “markedly different; whereas entrepreneurs are often praised, and even admired, in the United States, entrepreneurship carries a negative stigma in France.”

Moreover, the general perception in France is that capitalism may not always serve society in the best way. Hence, cultural change and mindset programs centered on public campaigns and dedicated community and educational events are necessary to help facilitate the country’s general perceptions of entrepreneurship. The U.S. stands out for developing successful and relevant televised content and offering numerous awards to stimulate entrepreneurship. In addition, countries such as Canada, China, Turkey, and the U.K. broadcast reality shows focused on entrepreneurship.

Furthermore, nationwide efforts to promote entrepreneurship could focus on large-scale initiatives such as the creation of a “Year of the Entrepreneur,” with a calendar of activities that emphasize entrepreneurship and collaboration. To build a French economy that reflects the entrepreneurial spirit, substantial effort should be devoted to changing risk-averse behaviors.

The U.S. has successfully established an entrepreneurial culture, where risk-taking is viewed in a positive light. Germany has also launched initiatives to raise awareness — for example, developing tailored campaigns, such as “Entrepreneurship in Germany,” that highlight the benefits of being your own boss.

Ensuring a Beneficial Tax System and Incentives

In 2013, President Hollande trimmed tax breaks and other advantages for small entrepreneurs on the basis that these benefits, introduced under former President Sarkozy, had failed to help business start-ups and were open to abuse. Despite controversies related to the previous system, called *auto-entrepreneur*, the recent abolition of the tax benefits is a clear signal of the status and role of start-ups in France. The previous system provided startups with reduced taxes based on turnover, exemption from VAT, and no business taxes for the first three years.

While France offers the best research tax credit in Europe, the government provides little support and few tax exemptions for entrepreneurs during their first year of business. Many countries have adopted dedicated incentives — such as deferred tax payments in the first

year of operation or loss carry-forwards — so that future profits can compensate for initial losses as a result of capital-intensive investments in the first year.

France needs to increase its emphasis on promoting entrepreneurship, particularly due to its potential for increasing economic activity and employment within the country. As documented by various scholars in recent years, including Wharton management professor Mauro Guillén, director of the school’s Joseph H. Lauder Institute, new business-creation activities are a major driver of economic growth in the U.S. and Western Europe. This is especially important when considering the potential entrepreneurial brain drain that may result if the government does not address the key issues. Countries such as Canada, with the implementation of a visa program to attract 50,000 French entrepreneurs, and cities like London, with its earlier events to attract tech startups around the Olympics and its own hosting of the French competition, Le Web, clearly recognize the opportunity to pounce. Now is the time for France to act.

This article was written by Christian Dungal and Daniel Ng, members of the Lauder Class of 2015.



Not Exactly Silicon Valley: China's Distinct Brand of Entrepreneurship

Most observers believe that China's remarkable economic performance over the past three decades is due primarily to large, state-owned companies. While those organizations are, indeed, key players, the country's entrepreneurs have long been overlooked. According to the Global Entrepreneurship Monitor, nearly 25% of the adult population are entrepreneurs, twice as many as in the U.S. Working with limited resources and against intense competition, these individuals have played a major role in the country's unprecedented growth.

China's economic resurgence began with Deng Xiaoping's Reform and Opening policies in 1978, when Special Economic Zones — most notably Shenzhen in southern China — were established to test capitalism. Whether the central government knew it or not, there was a surplus of entrepreneurs ready to find ways to take advantage of these new opportunities. From the perspective of a copper refinery CEO in Zhejiang province, "the Chinese people really exceeded the government's expectations. After the Cultural Revolution, they were starting with literally zero resources at their disposal."

During the 1980s, China's central government supported entrepreneurship in a sustained way. In 1984, it implemented its first patent law. In 1986, it passed a law that allowed state-owned enterprises (SOEs) to go bankrupt. A year later, it repealed a law limiting private firms to seven employees. As a result, entrepreneurship, measured in terms of the number of companies officially registered, saw a jump of 93% in 1987 alone.

Two main types of entrepreneurial activity emerged in the 1980s and 1990s. The first was export-oriented, determining what other countries needed and making those goods cheaper. The second involved bringing

goods already popular in developed nations to the Chinese market. While many parts of the economy have yet to open fully and domestic consumption is still on the rise, this does not mean a lack of sophistication. Moving forward, entrepreneurs will play an important role in China's future growth.

The Entrepreneurial Ecosystem in China

Entrepreneurial ventures in emerging economies such as China operate in environmental and institutional contexts that differ markedly from those in high-income countries. According to a 2011 article by Nir Kshetri and Nikhilesh Dholakia in the *Journal of International Entrepreneurship*, a key determining factor in a country's entrepreneurial environment is participation by the government, which has been fractious for entrepreneurs. China's heavily state-biased, government-run legal system and regulatory practices put politically unconnected entrepreneurs at a distinct disadvantage compared to state-owned enterprises and government-backed private ventures. The court system, while vastly improved over the last two decades, is still inefficient and rife with corruption. In a survey of China's court proceedings, small businesses generally lose to large ones, and private

interests lose to state enterprises. To protect their business interests, entrepreneurs must divert significant effort from wealth creation to non-market factors, such as fostering relationships with local politicians.

The Chinese government recognizes the crucial role entrepreneurs play in the country's rapid growth and tries to encourage entrepreneurial activity, in particular through increased access to funding. However, funding continues to be the greatest bottleneck for entrepreneurial growth. Writing in *Time* magazine in 2009, Beijing correspondent Austin Ramzy noted that China does not have a well-established system to rate credit, and banks often set standards that are too high for small businesses to meet. Furthermore, private entities may not operate banks, so commercial loans can be issued only by state-owned banks, which maintain a strong bias toward state-owned enterprises and other large, low-risk businesses. In addition, laws bar inter-company lending, preventing small businesses from obtaining loans from other businesses.

Thus, many entrepreneurs find funding is limited to two sources: equity investment or illegal "off-the-books" loans from friends or loan sharks. Both options are expensive. The government recognizes the funding barriers entrepreneurs face: Both former premier Wen Jiabao and current Premier Xi Jinping have promised to increase lending opportunities for entrepreneurs by liberalizing bank interest rates, authorizing privately run banks, and regulating private lending markets. Unfortunately, despite Beijing's best intentions, China will see significant credit tightening as large numbers of those who received subprime government loans during the 2008 global recession begin to default. Inevitably, small businesses will feel the squeeze first.

Despite the unfavorable legal environment and significant credit constraints, China's growing middle class provides sufficiently fertile ground in which entrepreneurs can thrive. The question for many of them is not "Should I start a company?" Rather, more often it is "What is my exit strategy?" As Ben Ng, general partner at growth-stage private equity firm SAIF, notes, IPOs were traditionally the preferred route. Large companies were sufficiently dominant in their markets and did not seek

to buy smaller competitors. At the same time, Chinese entrepreneurs yearned for the prestige of an IPO and hesitated to relinquish ownership of their companies. In sectors such as technology, however, this trend is shifting toward acquisitions, increasing the feasibility of profitable exits for entrepreneurs on a shorter timeline. According to China-based VC firm ZhenFund, one-third of market exits in 2012 were M&As, which marks a significant increase from previous years.

Funding continues to be the greatest bottleneck for entrepreneurial growth.

The shift in exit behavior follows a rash of scandals of mismanagement and dishonest accounting practices within public Chinese companies on international stock markets, which all but obliterated investors' appetites for young Chinese companies. Fortunately for entrepreneurs, increasingly diverse consumer needs have forced large companies to rely on the acquisitions of start-ups that are more nimble and niche-focused to maintain their competitiveness. With more exit options, entrepreneurs can viably create more companies with greater frequency.

In addition to greater exit options, entrepreneurs currently enjoy a larger pool of resources for entrepreneurial development. One example is government-mandated zones for industry-specific development, such as Beijing's Zhongguancun, which is hailed as China's Silicon Valley. These concentrated zones, sponsored by local governments seeking to stimulate certain sectors of their economies, offer compelling financial incentives to fledgling enterprises operating in the zones and serve as a magnet for an increasing number of incubators and angel investors.

Another example is an increase in the quality of entrepreneurial talent, through both the sustained presence of multinational joint ventures, which train local talent in the creative process and effective management, and the emergence of the more experienced entrepreneur, who has already started a

company and is better-equipped to begin a successful second company or make smart investments in other start-ups. In a 2012 survey by ZhenFund, 70% of angel investors were founders themselves, and 50% reported returns of 30% or more. These well-trained industry veterans become catalysts for local innovation, accelerating the idea-generation process and reducing China's reliance on knowledge extraction from foreign creative centers such as Silicon Valley.

The profile of the contemporary Chinese entrepreneur reflects the distinctive socio-political environment in which he or she has emerged.

The Unique Chinese Entrepreneur

As with the entrepreneurial ecosystem, the profile of the contemporary Chinese entrepreneur reflects the distinctive socio-political environment in which he or she has emerged. Chinese entrepreneurs today are generally savvier, wealthier, and more experienced than their predecessors. In addition, what sets them apart from their peers in the Chinese business sphere is not necessarily the same contrasting set of characteristics found in the West. The personal traits, motivations, and cultural influences that define these entrepreneurs are unique to this specific era in China's development.

A few key traits separate Chinese entrepreneurs from their non-entrepreneurial counterparts. According to a 2005 study published in the *American Economic Review*, although their cognitive abilities are similar, entrepreneurs tend to be more mobile, wealthier, and more willing to accept risk. In addition, having entrepreneurial friends or family members tends to increase the likelihood of a Chinese person becoming an entrepreneur.

In China, where family and the government play central roles in peoples' lives, these two factors can have a great impact on career paths. According to a national household survey in 2000, cited by Linda Yueh in her 2011 article in the *Royal Society for the Arts Journal*, entrepreneurs are three times less likely

than their business peers to be members of the Chinese Communist Party (CCP): 6% compared to 18%. If a person's mother is highly educated or holds a non-manual job, the likelihood of entrepreneurship increases, whereas having a CCP member as a father decreases the likelihood. Finally, Chinese entrepreneurs focus largely on personal success, defined mainly by wealth and social status. They tend to pursue opportunistic, rather than passion-driven, industries and products.

China's career landscape is also influenced significantly by its rigid education system, which, as Ng notes, makes it difficult for recent college graduates to start their own companies. The system emphasizes rote memorization over critical thinking, as manifested in the *gaokao* (college entrance exam), which singularly determines students' major and career options. Due to the restrictive learning methods and time-consuming test preparation, industry experts say China is unlikely to foster its own Mark Zuckerberg, founder of Facebook, or other successful youthful entrepreneurs in the near term.

Instead, the current generation of successful entrepreneurs largely comprises those with significant work experience and extensive extant business knowledge. At Innovation Works, the tech incubator founded by tech industry veteran Kai-fu Lee, the choices are to back serial entrepreneurs first and high-level tech executives second. According to Mickey Du, the group's investment manager, "We look for founders with work experience — perhaps at a larger multinational or domestic tech company, where they were doing something meaningful so that they have unique insights about the specific problem that they are tackling ... and know how to structure a term sheet." Furthermore, many of these founders have overseas experience or have been exposed to international media about the industry. Chinese entrepreneurs know about cutting-edge technological developments emerging in Silicon Valley and can quickly emulate and adapt those concepts to the China market. According to Du, following Groupon's rapid success in the U.S., a handful of group-buying sites emerged almost overnight in China.

The perception of entrepreneurship in Chinese society is also changing. Although high-performing Chinese students (and their parents) are still likely to choose

careers in finance or government, the tech industry and entrepreneurship are gradually gaining prestige. Thanks to the increasing visibility of ultra-wealthy tech entrepreneurs, such as Jack Ma of Alibaba and Robin Li of Baidu, entrepreneurship is becoming an increasingly acceptable and desirable career path.

The Chinese Brand of Entrepreneurship

As a result of the dynamics of the Chinese entrepreneurial ecosystem and the unique profile of those who start businesses in China, entrepreneurship takes a different form there than in Western economies. The Chinese version has three key components. First, those who succeed have mastered “integrated innovation.” They reinvent an existing business idea to meet the demands of Chinese consumers. Du points out that Chinese entrepreneurs often start with Western-inspired products that fill local market needs but, after many iterative loops and localization, the end product differs significantly from the Western inspiration. Companies that only copy existing models are likely to fail.

Second, Chinese entrepreneurs have a deep knowledge of life in China and can identify unmet needs of the Chinese economy. With the Great Firewall and other government interventions, Chinese markets remain relatively closed to the rest of the world. Nevertheless, Chinese citizens continue to find ways to circumvent barriers and procure ideas from abroad, creating pent-up demand for goods and services ranging from vitamins to Facebook. Successful entrepreneurs flock to fill these gaps.

Finally, Chinese entrepreneurs carefully consider the role of government intervention. To avoid unpredictable policy changes, some entrepreneurs choose to enter regulation-light sectors. Others run toward key sectors identified in China’s Five-year Plans, which outline the government’s strategic directions for the country. These entrepreneurs hope to align with China’s industrial policy, which, when publicly announced, will be less susceptible to radical changes.

China: A Land of Entrepreneurial Opportunity

Like foreign multinational corporations, Chinese entrepreneurs see tremendous opportunity in

China. However, unlike foreign entrants who often cannot see beyond China’s massive 1.3 billion-strong population, these entrepreneurs experience firsthand the shortcomings within the current system and are driven to fill the gaps. Discussions with entrepreneurs and early-stage investors revealed three sectors that will likely see increased entrepreneurial activity in the near-term:

High Tech: In 2012, China had the largest number of Internet users in the world at 564 million, compared to 245 million in the U.S. China is currently the world’s largest online gaming market at US\$10 billion, and e-commerce volume is expected to surpass that of the U.S. in 2013. There is tremendous demand for high-tech services, but the current supply in China is deficient. According to Steve Blank, professor of entrepreneurship at UC Berkeley’s Haas School of Business, more than 30,000 websites are blocked in China, including Dropbox, Facebook, and YouTube. For this reason, many Chinese entrepreneurs and investors enter this sector. In 2012, the largest proportion of Chinese VC investment went to high tech: 45%, totaling US\$4.7 billion. Favorable demographics, combined with low up-front capital investment and relatively minimal government intervention, explain the explosive growth of this sector.

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Health Care: One of the key societal issues China faces is its aging population. Within the next few years, the country is expected to have more than 220 million adults over age 60, compared to 180 million today — all of whom will require medical care, facilities, and treatments. Currently, only 5% of China’s GDP is spent on health care compared to 16% in the U.S. The market capitalization of Chinese to U.S. health care companies is 1:20; the ratio of market capitalizations for health care services companies between the two countries is even greater, at 1:100. Realizing the need to improve the quality and increase the quantity of health care in China, the government deregulated the sector, thereby

inviting entrepreneurs to enter and close the gaps in basic infrastructure and services. According to Hong Lu, a principal at Piper Jaffray, “we’re still at the low-hanging fruit stage, with limited risk involved but extraordinary growth potential.”

Renewable Energy: Despite the recent tumble of the Chinese solar and wind-manufacturing sectors, renewable energy remains an opportunity for growth. It was first identified as a strategic industry in the 10th Five-year Plan of 2001 and has continued to be a focus of the government as a way to satisfy the growing demand for energy and simultaneously minimize environmental impact. From 2004 to 2011, the Chinese invested approximately US\$200 billion in this sector. This investment will continue as China’s 12th Five-year Plan of 2011 targets generating 11.4% of the country’s energy from non-fossil fuel sources by 2015 and 15% by 2020, up from 8% today. However, the boom and bust of China’s renewable energy sector over the past decade taught the government, investors, and entrepreneurs the negative results of too much government intervention. Entrepreneurs still see an opportunity to ride this policy trend, but have shifted focus to less-crowded verticals within the sector, such as water treatment, lighting, gas-fire generation, and environmental services.

As China enters what could be a significant economic slowdown in 2014, there are a number of indications that the role of its entrepreneurs will expand. The country’s 12th Five-year Plan, released in 2011, announced that the education, financial services, health care, and logistics sectors would be deregulated, creating competition with state-owned enterprises and space for new firms. Shanghai recently launched a new free-trade zone in Pudong, which has already been likened to the country’s economic experimentation of the 1980s. In addition, improvements in credit systems and financial transparency should increase access to funding. China has abundant resources to create new institutions that support entrepreneurship and perform the regulatory functions required for fostering new entrepreneurial activity. For the foreseeable future, there will be a growing need in China for entrepreneurs who will no doubt play a pivotal role in the country’s future economic growth.

This article was written by Annie Jonas, Stephanie Lai, Greg Root, and Russell Warriner, members of the Lauder Class of 2015.



Starting a Company in Brazil: Not for the Faint of Heart

In the winter of 2011, Davis Smith was cruising at 35,000 feet. His spirits should have been even higher. He had just obtained US\$23 million in funding to secure the first stage of growth for his promising new start-up in Brazil, baby.com.br. As with any start-up, there would be a multitude of challenges to overcome before his fledgling company could fulfill its sky-high potential. However, instead of celebrating his recent victories and focusing on building his company, Smith was on a flight back to the U.S. to resolve Brazilian work-visa issues that had arisen during the final stages of putting everything in order.

These visa issues, while serious, were merely the latest in a series of headaches Smith faced in getting his company off the ground. For example, he had just finished a six-month process to incorporate his business as a legal entity, wading through huge amounts of red tape and schmoozing the gatekeeper officials. After all his efforts, baby.com.br was finally up and running, but he had to return to the U.S. to obtain a specific type of visa so he could manage his company legally as a foreigner in Brazil.

Ultimately, obtaining this visa took Smith two pivotal months — during the embryonic stage of the company's launch. "The process is a black box," he states. "Sometimes you have no idea you are missing a document or some other deliverable until at the next milestone when government agents notify you there will be an unforeseen delay due to some undisclosed new stipulation, even if you have fulfilled all of the process requirements. There is definitely a lack of transparency, and it requires serious patience."

Starting a company in Brazil is a difficult process that is not exclusive to any one entrepreneur or industry. Widespread bureaucracy and administrative hurdles create major challenges that all entrepreneurs face there. According to the International Finance Corporation, the private-equity arm of the World Bank,

it takes on average 130 days, approximately R\$2,038 (US\$900) and 43 documents to open a new business in Brazil from scratch. Some of the required steps include registering with the commercial board of the state, registering with federal and state tax organizations (which takes a month on average) and applying to the local municipality for an operations permit (an additional 90 days). In its most direct form, there are more than 13 official steps in the process. Unfortunately for entrepreneurs, most of these steps build on each other sequentially, thus making it impossible to tackle them simultaneously to hasten the process.

Moreover, the actual experience faced by many entrepreneurs indicates that the total amount of time and total cost can far exceed the aforementioned figures. For example, the estimates fail to include the additional costs required for a few Brazilian *jeitinhos* (an expression used to describe the local way of doing things in Brazil, often circumventing rules and social conventions), which are essential in many instances to taking certain mandatory steps. "For an early stage start-up here in Brazil, you spend more than 50% of your time tackling administrative issues, such as visa, local residency, proof of address, [and] registration, and 50% of your time on your own company's operations and strategy. In the U.S., the ratio would be more like 20% (administrative) to 80% (strategy and implementation)," notes Ben Gleason,

CEO of Brazilian start-up Guiabolso, which provides services in Brazil similar to those of Mint.com, a free web-based personal financial management service in the U.S. Other entrepreneurs have stated that it is actually advisable to hire a full-time employee to focus solely on administrative issues to expedite the company's registration process. While this solution may seem costly, the long-term benefit could greatly exceed the short-term frustration of attempting to tackle the many steps involved.

One alternative to starting the entire six-month process of creating a company from scratch is to buy a "shell" company — typically purchased from a law firm. For several thousand dollars, a founder can take legal possession of an entity and start in the middle of Brazil's onerous incorporation process. This strategy shortens the procedure and speeds up an entrepreneur's access to his or her target market. Those who have employed this approach report varied experiences. Some have cut the process in half, to just over three months, while others have managed to save only a month or two. But in general, everyone has the same experience — disbelief and frustration with delays, bureaucracy and cost.

Enter the Fire Department

Entrepreneurs maneuvering through the process — in either form — often discover steps that are unnecessarily inefficient, complex or even redundant. For example, establishing a nationwide online portal to check the availability of a company name and logo would save a great deal of time and increase efficiency. Currently, registering the name of a new business involves personally visiting the local *Junta Comercial* and asking the staff to run a search for your proposed name. While the cost is low, results can take several days. Establishing a logo is even more difficult, as no formal process currently exists. This lack of structure often generates unnecessary delays and can lead to involuntary copyright infringements; frequently, entrepreneurs are unable to determine if a logo is already being used by an existing company in another state. By creating an online registry of this information, the government could simplify both steps.

Another example is the requirement that the fire department certify the safety of the business location.

The cost of this two-part step represents about 25% of the total company-creation process (US\$200). It begins with an extremely detailed in-person presentation of the chosen location's layout, which must meet very rigorous standards. The fire department must then visit the location to verify the information provided. While safety is an important matter, the process is unnecessarily long and expensive. In addition, it fails to differentiate companies that require specific inspections, such as industrial firms, from those that could undergo a much simpler and cheaper process. Such examples, which are different or altogether absent in other similarly situated countries, highlight but a few of the inefficiencies that could be improved or removed.

Implementing change and efficiencies, however, could be among the greatest obstacles to stimulating entrepreneurship in Brazil. Despite what the continued problems may suggest, the Brazilian government has not been completely silent about improving this process. For example, in 2009 it passed a new law that eliminated the need for all the required documents to be notarized. Unfortunately, this law has yet to be enforced. Without effective communication and enforcement of new laws, additional efforts to streamline the process may be futile, further stifling opportunities for entrepreneurship in Brazil.

Another key aspect for foreign entrepreneurs in Brazil is the importance of relationships. According to baby.com.br co-founder Thomas Kimball, "down here, relationships are currency." At many points in the formation of a business, who people know and how well they know them can be a deciding factor in their success. One solution that could be of significant benefit would be the ability for foreign entrepreneurs to contact and work with locals. A local business in Rio de Janeiro is trying to bridge these gaps. Co-founded by American entrepreneur Benjamin White and Brazilian Marcelo Sales, 21212 was created to connect foreigners with local Brazilian entrepreneurs as a way to facilitate the realization of the latter's ideas. While efforts such as this have helped, the number of obstacles continues to hinder entrepreneurship in Brazil.

On a global scale, these problems are reflected in Brazil's rankings relative to other countries. In 2013, the World Bank's "Doing Business" Index ranks the country at 130

(out of 185 countries) in the world in terms of ease to do business or start a new company. This compares poorly with regional peers such as Chile (37), Colombia (45) and Mexico (48), which have been drawing increasing capital away from Brazil over the last two years while providing attractive frameworks for entrepreneurs to open new businesses. For example, dealing with construction permits is significantly easier in Mexico (ranked 36 in this category) and Colombia (27) than it is in Brazil (131). Similarly, obtaining local credit, a key element for any start-up, is much easier in Mexico (40) compared to Brazil (104). While the government has made efforts to create institutions that encourage entrepreneurship and to fund new companies, such as the Brazilian Innovation Agency (FINEP), or to foster grants from local development banking giants, such as the Banco Nacional de Desenvolvimento Econômico e Social e Social (BNDES), the reality is that the process continues to be highly bureaucratic. A select few favorites and local champions obtain the majority of the funding while others are left in the dust. Finally, high direct and indirect taxes in Brazil (ranked 156) are another major hurdle for entrepreneurs, whose costs may well surpass their budgets.

Low-growth Economies

These rankings are particularly worrisome in light of a currently stagnant Brazilian economy (expected to grow about 2.0% in 2013 after growing just 0.3% in 2012) that is very much in need of entrepreneurs, new businesses, and capital inflows. According to The Kauffman Foundation, which helps to produce the *Global Entrepreneur Monitor* reports on entrepreneurship for 90 different countries, “small- and medium-size enterprises are responsible for 96% of all jobs in Brazil and 98% of all companies in the world,” further reflecting the importance of business creation in the country. The potential benefits, however, are not only economic. Scientists studying entrepreneurship have found that stimulating this sort of activity can have a positive social impact and can further promote economic activity both within and outside the sector. This means that, moving forward, Brazil will need to implement major improvements to facilitate business-creation processes and incentivize investors to take advantage of the

massive Brazilian consumer market of just over 200 million people.

As the country with the third-largest index of entrepreneurial activity, it is difficult to believe that Brazil’s government has failed to effectively incentivize this activity to date. Looking to the future, the country has reached a potentially watershed moment in its history of entrepreneurial activity. Whatever the statistics were before, playing host to the Olympic Games and the World Cup should spur a flurry of economic activity. Using these events as a kick-starter, the government should take full advantage of this ideal time to change regulations and processes and support its entrepreneurial population.

Widespread bureaucracy and administrative hurdles create major challenges that all entrepreneurs face there.

The race is on. Other countries have already recognized the value of this entrepreneurial activity to an economy and are introducing enormous changes to become more competitive and to attract foreign investment. Thus, far more government resources must be dedicated to promoting entrepreneurship in Brazil in the near term. The current state of its economy demands that the country find a way to stimulate growth. Given the size of its consumer market and wealth of resources, Brazil presents attractive opportunities for entrepreneurship for both local and foreign sources. However, with such complex and costly processes, when compared with neighboring countries, and no sign of improvement, it risks losing a potentially major source of innovation and economic stimulus. While entrepreneurship is not the only solution to Brazil’s financial situation, as it stands, the country is wasting this opportunity. As a result, the next baby.com.br might well be baby.com.mx.

This article was written by Mauricio Cordero, Pablo Ruiz, Preston Thomas and Tereza Widmar, members of the Lauder Class of 2015.

THE LAUDER GLOBAL BUSINESS
INSIGHT REPORT 2014

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