



GAUGING THE IMPACT OF CHINA'S ONE BELT ONE ROAD

HKUST IEMS – EY Emerging Market Insights Series (2016.10.18)

China's One Belt One Road development plan is not simply a trade development plan. It is much more than a series of trade agreements and infrastructure deals. Xi Jinping's landmark initiative spans more than 60 countries across Eurasia, accounting for two-thirds of the world's population and one third of its GDP. From inception to reality, this endeavor will take decades – and soak up USD 5 trillion in near-term investment. As economist and IEMS Faculty Associate **Alicia Garcia-Herrero** puts it, "This is [China's] 20-year endgame."

In the latest Emerging Market Insights Series presentation, Dr Garcia-Herrero asks how Xi Jinping's One Belt One Road initiative will impact EU trade. Among the many benefits of improved connectivity, trade is at the forefront.

Based on a simulation-analysis, Dr Garcia-Herrero argues that the European Union is better positioned to benefit from the Belt and Road than Central Asian countries. Her research looks at bilateral trade-flows, modelling reduced transportation costs from One Belt One Road. She finds that European countries, especially landlocked EU countries, benefit greatly from reduced rail shipment costs from Asia.

The extensive infrastructure deals have also paved the way for Chinese-led trade agreements. The Chinese government has already begun considering free trade agreements with Belt and Road countries. If the deals pan-out, the EU may find itself neighbors with a sizable Asian economic bloc. Free trade agreements would benefit Asian countries, with the harms to EU countries largely offsetting gains from improved infrastructure.

China has so far financed the Initiative alongside with Belt and Road countries. The EU clearly benefits without an attached financial cost – benefitting from Xi Jinping's focus on developing transport links. Given the substantial potential trade gains, it is in the EU's interest to do more to participate in and even help finance the Belt and Road Initiative.

IEMS Faculty Associate and political scientist **Barry Sautman** examined the effects of Chinese foreign direct investment on the African subcontinent.

The media has portrayed Chinese enterprises as exploitative, claiming that Chinese businesses bring in their own workers and strip local resources. Yet no one has systematically studied these claims.

Prof Sautman's study finds that the vast majority of Chinese enterprises in Africa are made up of 80%-95% local workers. The several companies who hire the least number of local workers are in the telecommunications industry. Yet these telecoms companies still hire 66% of their workers locally. This is attributable to the shortage of engineers in African states.

According to Sautman, African leaders see Chinese business ventures as a political necessity. And African managers and engineers see stints at Chinese companies as vital for their career development. Meanwhile, trade unionists and NGOs welcome the better treatment of employees and greater corporate social responsibility.

Almost every Chinese manager interviewed by the study agreed that the advantages of localization outweighed the drawbacks. Companies with localized workforces benefit from a lower wage bill, improved government relations and the acquisition of local knowledge. Many managers actively seek localization for these reasons. Several medium-sized companies have exceeded 99% localization, typically in mining, agriculture, textiles and steel.

Sautman's study also found no evidence to support claims that China is exporting excess labor. Chinese workers brought over by large companies only number in the tens of thousands – a tiny number compared to China's population of 1.4 billion.

Sautman warns against politicized falsehoods regarding Chinese investment in Africa, which he argues detracts from more important issues. Most important to Africa, he explains, is the development of local jobs and local industries.

The "One Belt One Road: Impact on Trade and Investment" talk was supported by EY Hong Kong and is part of the HKUST IEMS – EY Emerging Market Insights Series.



Visit iems.ust.hk/insights to watch the talk and for more on the Thought Leadership Brief series.



DIRECTOR'S MESSAGE

Albert Park



In the second half of 2016, HKUST IEMS organized a full schedule of conferences, academic seminars, and policy talks, and published two new Thought Leadership Briefs on optimal industrial policy in developing countries and trade impacts of

China's One Belt One Road initiative. The highlight of the fall semester was a major international conference on Jobs and Development held at the World Bank in Washington, DC, which HKUST IEMS co-organized with partner institutions in India, Poland, South Africa, and Latin America. The event, which drew together leading researchers from all regions of the globe, was a culmination of three years of research and activities as an institutional partner of the Network on Jobs and Development organized by the World Bank Jobs Group. Other IEMS events also addressed how jobs are being transformed in emerging markets. Two academic seminars by Piotr Lewandowski and myself examined how the nature of skill demand is changing in Central and Eastern Europe and in China. Jay Nibbe's talk in the HKUST 25th Anniversary Distinguished Speaker Series addressed how disruptive changes are dramatically transforming the nature of business and careers, especially in emerging markets. As usual, the Institute's activities also addressed many other topics relevant to the business and policy challenges facing emerging markets.



A LOOK AT THE JOBS LANDSCAPE OF THE FUTURE

Highlights from the Jobs & Development Conference, November 2-3 2016, Washington DC

HKUST IEMS co-organized a major international conference on Jobs and Development at the World Bank along with a partner institutions of the Network on Jobs and Development. The conference presented the latest policy-relevant research to foster the creation of multi-sector, multi-disciplinary solutions to jobs challenges around the world. Main topics included job creation, the impact of technology on jobs and inequality, structural change, demographic change, gender wage gaps, labor regulation and enforcement, and jobs in the context of fragility.

Creating Jobs in Emerging Economies

One of the main goals of the event is to connect research with policy. This year's event featured a high-level panel discussion on labor policy by three high-ranking ex-government officials from different emerging market countries.

Former Finance Minister of Chile Felipe Larrain Bascuñán discussed the policy challenges facing job creation in developing countries. He drew on the experiences of Pacific Alliance countries (Colombia, Chile, Peru and Mexico) to discuss the slowing of job creation in wake of recessions in Latin America. Larrain emphasized the effect of digitisation on Latin American labor markets. Digitization has unique effects on transitional economies, which are moving towards a more services-oriented economy. He identified education, social security and job formality to be of prime importance for these emerging markets.

Former Deputy Chairman of India's Planning Commission Montek Singh Ahluwalia revisited topics of poverty reduction, this time framed by issues of skill development. Mr. Ahluwalia warned against jobless growth, a problem made worse by the stigma carried by certain jobs.

Former Governor of the Central Bank of Kenya Njuguna Ndung'u closed the session with lessons from Kenya's recent economic strife – a stern reminder of the importance of sound economic policy.

Urbanization and Poverty Reduction in India

In his keynote talk, **Martin Ravallion (Georgetown University)** discussed the pitfalls in policy implementation for Indian poverty reduction programs. India's early structural transformation left a large rural population behind, unable to benefit from the development of urban areas. This all changed in the early 1990s. Even though broad reform policies did not target agriculture directly, they promoted faster economic growth which had a huge knock-on effect for rural workers. Rural-urban migration became the largest driver of poverty reduction – in both rural and urban areas. Despite increased inequality, economic development still lifted many out of poverty.

Europe's Refugee Crisis and Labor Integration

Klaus Zimmermann (Princeton University; UNU-MERIT) made a timely address on how European labor markets have been affected by the recent refugee crisis. Contrary to public opinion, Zimmerman showed how refugee migration has had little effect on native employment, and virtually no effect on wage levels. He criticised the lack of asylum and refugee policies and recommended understanding and awareness to achieve better refugee integration.

Enforcement and Compliance with Labor Regulations

Unlike in advanced countries, lack of enforcement of labor regulations often is an important issue in emerging and developing countries. **Yang Du (CASS)** assessed the impacts of a 2008 Chinese reform which strengthened labor regulations. Enforcement improved, especially in cities with initially poor enforcement, but was accompanied by slower employment growth. Exporting firms, still reeling from a drop in global demand following the global financial crisis, were less affected by enforcement.

Piotr Lewandowski (Institute for Structural Reform) presented evidence on non-compliance with minimum wage laws in Central and Eastern European countries, finding that non-compliance is prevalent among vulnerable groups such as women and part-time workers. Compliance in the region is tightly linked to the level of the minimum wage.

Giulia Lotti (CAGE Warwick) also found that higher minimum wages are associated with higher non-compliance. The study drew from a sample of 59 low and middle income countries. She also showed that a higher minimum wage is associated with a larger self-employment share.

Jorge Eduardo Pérez Pérez (Brown University) analysed an unexpected increase in the real minimum wage during the 1999 Colombian economic crisis. Research finds that employment was reduced in the informal sector, but not in the formal sector. The formal sector experienced noticeable wage increases.

Cecilia Poggi (University of Sussex) analysed Thai minimum wage policy implemented during an economic boom. She found that employment is weakly affected. Wages rose, suggesting that minimum wages are used as a reference point for wage-setting across the economy.

Job Training Programs for Workforce Development

Training programs are a frequent policy tool to increase the productivity and income of workers in developing countries.

Bruno Crépon (CREST) investigated the impact and trailing effects of public works and youth training in the Ivory Coast. The programs significantly affected the well-being of youth targeted during and after the program. Youth workers saw an average increase of 11% in earnings. Unfortunately, the program costs were far larger than the impact on earnings.

Jose Romero's (World Bank) meta-study explored whether youth employment programs improve labor market outcomes. Programs addressed to vulnerable workers had above-average outcomes. However, no type of program showed consistently significant effects, whether positive or negative. Soft skills training similarly had no significant effects. Romero's presentation covered skills and training, entrepreneurship and promotion, employment services and subsidised employment.

Pablo Egana del Sol (Columbia University) looked at late stage investment on at-risk youth and found that social programs don't seem to affect socio-emotional skills, although they do affect emotional state which could lead to biases in self-reporting of noncognitive skills.

Guillermo Cruces (CEDLAS-UNLP) analyzed long-term evidence on the impact of youth training on soft skills, hard skills and labor market outcomes in the Dominican Republic. He found no long-run effects on labor market outcomes, but strong lasting effects on personal skills acquisition and expectations. These effects were stronger for women.

Tomás Rau's (Pontificia Universidad Católica de Chile) study of employment subsidies for vulnerable youth in Chile showed the importance of peer effects among co-workers. Rau's study found that co-workers influenced people's up-take of employment subsidy programs while high-school classmates did not.

Stephen O'Connell (MIT) evaluated a vocational training program tailored to actual skill demands (Pronatec-MDIC). He found that demand-based vocational training increased the probability of employment within six months of course completion. The study found no evidence that the program led to higher wages.

María Prada (IDB) studied the employability of various skillsets. The study found positive wage effects from skills of high mechanical ability, particularly for individuals who didn't attend college. The results suggesting that an advanced degree is not the only path to better earnings power.

The Jobs and Development Network is a research network involving the Development Policy Research Unit at University of Cape Town (DPRU, South Africa), the Indian Council for Research on International Economic Relations (ICRIER, India), the Institute for Structural Research (IBS, Poland), the Latin American and Caribbean Economic Association (LACEA), and the Hong Kong University of Science and Technology Institute of Emerging Market Studies (HKUST IEMS).

Select papers and interviews can be found at iems.ust.hk/jobs4dev



AUTOMATION AND UPSKILLING: THE CHANGING TASK CONTENT OF JOBS

Highlights from IEMS Academic Seminars (2016.09.14 and 2016.12.01)



In advanced economies, cheaper robotics and IT solutions are killing off jobs featuring repetitive, routine tasks which are the easiest to codify and replace with machines or computers. Labor markets are thus being polarized, with technology hollowing out many middle-skill jobs. Yet emerging markets show a surprisingly different trend according to studies conducted by Piotr Lewandowski and Albert Park. The two studies – one in post-bloc Europe and the other in the Pearl River Delta (PRD) – studied the evolving task-content of jobs. Examining which tasks are actually in demand gives us a clearer picture of labor markets.

IEMS Faculty Associate and IBS Director **Piotr Lewandowski** showed how demand for routine, cognitive tasks are actually rising in Central and Eastern Europe (CEE). These tasks are associated with middle-skilled jobs, including entry-level services jobs with repetitive tasks. The CEE region is now seeing significant growth in these middle-skilled jobs. Data also demonstrated that demand for manual tasks was falling while the demand for non-routine cognitive tasks usually performed by the most educated workers was increasing. Lewandowski attributed part of this to workforce upskilling – the development of worker skills through continued education – but added that technological changes have also contributed.

Institute Director **Albert Park** analyzed Chinese census data to show that in China, too, there has been a substantial increase in middle-skilled jobs. He then used data from the China Employer-Employee Survey (CEES) data for PRD manufacturing firms to show that manufacturing firms have responded to rapidly rising wages by cutting workers, especially less-skilled production workers. There has only been a slight increase in high skilled jobs. Rising wage and other costs have hurt the profit margins of many Chinese manufacturers. Like most developing nations, China is in the middle of a pervasive structural change.

Scholars aren't sure what is the main driver of China's boom in middle-skill jobs. Two possible candidates are globalization and structural change.

Developed nations have outsourced many routine, codifiable tasks to countries like China, whether directly for service jobs or indirectly for manufacturing jobs (by shifting production abroad or importing goods). The result is that foreign FDI firms and Chinese exporting firms may have increasingly specialized in routine tasks, a pattern confirmed by analysis of the CEES data. This is consistent with the large increase in FDI to and exports from China during the 2000's following FDI deregulation in 1998 and WTO entry in 2000. Data reveals that much of the new middle-skilled jobs were created during the 2000s.

The process of structural change shifts economic activity from agriculture into manufacturing and services. The changing demand for goods and services alters the demand for different tasks. Specifically, the growth in service sector jobs may be more concentrated in middle-skill, routine jobs. A final consideration is that in countries where the costs of skilled labor is sufficiently low, it may be efficient for employers to assign skilled workers to routine cognitive tasks, even if expensive technologies requiring fewer workers are available. Both the CEE region and China have seen much greater availability of college-educated workers over time.

What does this all mean for emerging economies? While emerging regions like CEE and the PRD are still playing structural catch-up, Lewandowski and Park agree that they will eventually feel the effects of technological advancement. Middle-skill jobs will eventually be replaced by technology as in advanced countries.



Video recording and presentation slides of the seminar by Lewandowski can be found at iems.ust.hk/piotr



Watch Prof Park's seminar at iems.ust.hk/plight



DIETS IN TRANSITION: MALNUTRITION CRISIS IN EMERGING ASIA

IEMS Academic Seminar (2016.11.16)

Emerging market countries are improving food security at the expense of their health. The 2016 Global Nutrition Report details growing malnutrition and obesity in developing Asia. Together they are known as the double burden of food-related disease, and have become the new norm. Diabetes and related illnesses are rising and sedentary, city lifestyles are making things worse. Now, vitamin and mineral deficiencies are emerging as a third burden.

Regina Moench-Pfanner, Chief Executive Officer of ibn360 Pte Ltd, points out that ill effects are not only health-related. Malnutrition harms productivity as well. Studies estimate that poor nutrition is costing Asia and Africa 11% of GDP every year.

Despite the looming nutrition crisis, a substantial population still suffer from undernutrition. Cheap, calorie-dense, but nutritionally bankrupt foods are becoming more prevalent in modern diets – especially in emerging Asia. People living in cities now outnumber those living in rural areas and studies suggests a convergence in urban and rural consumer demand for processed foods in developing Asian countries.

Although dietary habits are mainly to blame, the market also plays an important role. The most profitable food tends to be the worst for health.

Luckily, processed foods can be designed to be both economical and nutritious – through micro-nutrient fortification. We already fortify emergency rations – used by aid workers to treat starving children. Used properly, food fortification can help close the nutrient gap.

However, malnutrition is a multi-faceted problem. Real, lasting change needs to involve governments, academia and the food industry. They are the main drivers in the research, development and production of our food supply.

Dr Moench-Pfanner explains how most food-related illnesses faced by emerging markets are caused by improper nutrition, not inadequate nutrition. She points out that we already have the expertise to have both health and abundance. She advocates for both food security and nutritional security. She argues change must involve gradual, research-driven improvements. Disruptive innovations can shift both food production and consumption towards improved nutritional outcomes, not just economical ones.



Video recordings and presentation slides at iems.ust.hk/malnutrition



RISK MANAGEMENT IN THE JOURNEY OF SOCIAL INNOVATION

IEMS Academic Seminar (2016.10.27)



In this IEMS seminar, **Timothy Ma** discussed risk management practices crucial for budding entrepreneurs, drawing upon his own experience as a social entrepreneur, and as Project Consultant (and previously Executive Director) at City University of Hong Kong's social innovation initiative Project Flame.

Starting new business ventures can oftentimes be an isolating endeavor. People working in such enterprises tend to lack job security. Timothy Ma talked about how, with proper risk management, entrepreneurs can find success and gratification in an otherwise arduous journey.

To limit risk, there are three key practices young entrepreneurs should pay attention to: determining their vision, mission and values; setting their focus and priorities; and ensuring the quality of their end-product. While there are many risks in business ventures, properly addressing these key issues can maximize the chances of entrepreneurial success.

Mr Ma led a lively discussion of key challenges facing social entrepreneurs today. Entrepreneurs must consider vision-mission, and budgeting and financing issues, while delivering on capacity and client support. They need to reflect seriously about the sustainability of their untested business. They also need to build a strong team, and protect their intellectual property as many young ventures' most valuable asset is their ideas. And on top of all this, they must invest in the future by investing in R&D.

Visit iems.ust.hk/Tim for video recordings and presentation slides



FETAL ORIGINS OF MENTAL HEALTH: EVIDENCE FROM NATURAL DISASTERS IN TAIWAN

IEMS Academic Seminar (2016.09.09)



Given the extremely high economic and social cost of mental illness, reducing the prevalence of mental illness can create huge benefits for society.

Elaine Liu, Associate Professor of Economics

at the University of Houston, presented her research on prenatal exposure to environmental stressors and mental illnesses in Taiwan. Her study finds that in utero exposure to typhoons increased the risk of an individual developing mental illness by 12%. Such individuals were more likely to be prescribed psychiatric drugs, such as antidepressants, by more than 40% -

a result that was more prominent for women. Previous studies have investigated the link between in-utero experiences and physical health outcomes, but not mental health outcomes.

Prof Liu suggested that pregnant women who endure natural disasters during pregnancy should be targeted for support to avoid more costly treatment later in life. Liu also pointed out that in-utero experiences can help identify high-risk groups and guide support programs, making screening procedures more cost effective compared to expensive blanket approaches.

Find out more about the event at iems.ust.hk/fetal



CHINA'S ECONOMIC DEVELOPMENT

Highlights from the 2016 China Economics Summer Institute (2016.11.2-3)

Every summer, the IEMS co-sponsors the Chinese Economics Summer Institute which connects top scholars from around the world who are conducting research on the Chinese economy. This year, IEMS hosted the 9th annual event in Hong Kong. The conference featured presentations on a range of topics, some of which are described below.

China's Revolutionary Boomers

In China, the "Lost Generation" is not a reference to WWI, but to the Cultural Revolution. During the Revolution, class warfare affected an entire generation. People were encouraged to turn on each other, subverting social order.

Gerard Roland (UC Berkeley) presented research finding that members of the Lost Generation cohort tend not to believe that effort pays off when compared with other generations.

Roland's paper, "China's Lost Generation: Changes in Beliefs and their Intergenerational Transmission," also found that the Generation have not passed on their beliefs to their children. The revolutionary cohort, who themselves were deprived of education, also invested more in their children's education than other cohorts. These two findings suggest that the Lost Generation have tried to safeguard their children against similar misfortunes.

In her paper, "The Invisible Wound: The Long-term Impact of China's Cultural Revolution on Trust", **Lingwei Wu (HKUST)** looked at the effect of the Cultural Revolution on public trust. During the Revolution, people were encouraged to snitch to demonstrate party loyalty. Employing a difference-in-difference approach, her study showed that people of school age during the Cultural Revolution and in counties with more Cultural Revolution violence were less trusting of society.

Economic Governance

In her study, "The Limits of Meritocracy: Screening Bureaucrats Under Imperfect Verifiability," **Shuang Zhang (U. Colorado Boulder)** studied the consequences of using success in implementing China's One Child Policy as a criteria for promoting city mayors to higher positions. Taking advantage of independent performance measures, her study finds that the policy led to wide-spread false reporting as mayoral candidates jockeyed for promotion, and promoted mayors were not more capable than their peers.

In his paper on "Meritocracy, Decentralization and Party-Government Relationships," **Weijia Li (UC Berkeley)** studies the relationship between party and government. He argues that authoritarian leaders have a tendency to consolidate power by promoting mediocre candidates who cannot threaten them

DIGITIZATION AND INNOVATION IN EMERGING MARKETS

Highlights from the 2016 EY-IEMS Network Workshop (2016.12.05)



Vladimir Korovkin (SKOLKOVO IEMS)

HKUST IEMS hosted EY managers and partner EY-supported emerging market institutes in Russia and India for a workshop to discuss collaborative research projects on firm innovation and the digital revolution.

Innovation is slated to become a main driver for productivity in the “new economy.” EY Global Vice-Chair of Tax Jay Nibbe describes a norm of disruption thanks to a quickening pace of technological change.

To study the process, the IEMS will work with the Moscow School of Management SKOLKOVO and Indian School of Business (ISB) on two joint projects: one studying the drivers of firm innovation, the other to calculate a Digital Life Index for cities in Russia, China, and India.

Anand Nandkumar (Indian School of Business) presented on firm innovation, focusing on the Indian and Chinese pharmaceuticals market. He points out that the number of Indian patents each year (3.27 million in 2006) pale in comparison to

the US (186 million) and China (459 million). Most Indian patents are also filed by foreign firms, though entry by domestic firms is increasing. An interesting question to be pursued by future joint research is: what explains the large difference in firm innovation in the two countries?

Naubahar Sharif (HKUST IEMS) explained how quadic patenting—where firms are choosing to register a fourth patent beyond the typical US-EU-Japan triad—is increasing and reflects the competitiveness of different emerging markets. He argued that there are three factors which promote quadic patenting in a specific country: the size and ease-of-access of the market, the risk of imitation by local firms, and the degree of local market competition.

Vladimir Korovkin (SKOLKOVO IEMS) presented research on the penetration of digitization in the lives of citizens within Russian cities of more than 1 million people.

The study divides digital life into 7 domains: retail, finance, public services, transport, education, health care, and media. It finds substantial differences across cities in digital life across the different domains.

HKUST IEMS and India Business School are working with SKOLKOVO IEMS to extend the study to Chinese and Indian cities, to see how digitization is changing the Chinese and Indian economies.

Videos and photos of the workshop can be found at iems.ust.hk/Ey



but who are less talented bureaucrats. The result is highly centralized policy-making.

During some periods of imperial China and currently, Chinese leaders have tried to avoid these tradeoffs by adopting a co-ruler structure, whereby political authority is entrusted to one person (e.g., party secretaries) while economic policy is handled by another (governors). Dividing power curtails threats to central authority and enables the appointment of more talented economic managers. Mr. Li presents data showing that during imperial China periods of meritocracy was strongly associated with such a division of power.

Lessons for Pollution Policies

Environmental sustainability was a key focus of China's most recent Five-year Plan. The government has targeted reduction of emissions of SO₂ and other pollutants.

However, in his paper “An Evaluation of Air Control Pollution Policy in China,” **Thomas Stoerk (U. Pompeu Fabra)** showed how policies aimed at reducing SO₂ levels were less effective than officially reported. Reported SO₂ emissions of producers declined, but there was little effect on air pollution levels as measured by monitoring stations. This could be attributable to a mismatch between where pollution sources and air-quality monitors are located.

Business Environment

Amidst rising wage costs and slowing output, Chinese businesses are facing growing challenges. Two papers examined different aspects of firm performance in China.

In his study “Internal Migration and Firm Growth: Evidence from China”, **Marlon Seror (Paris School of Economics)**

studies the effects of rural migration on wages and productivity in urban areas. Inflows of migrant workers drive urban wages down, hurting local workers but helping manufacturing firms reduce labor costs and grow faster. Policies which lower barriers to migration not only benefit rural migrants but also Chinese businesses. The study further finds that the benefits were greater for more productive firms.

Jing Cai (University of Michigan) in her study “Interfirm Relationships and Business Performance,” designed a randomized experiment to study the value of business networks for Chinese firms. She organized regular meetings among managers of young firms, and examined whether networking improved performance. The study finds that attending the meetings increased firm sales by 7.7%, and also increased profitability, employment, and productivity. Firms whose managers participated in meetings with managers of larger firms benefitted more from the intervention.

The CESI is sponsored by the HKUST IEMS, the UC Berkeley Center on Institutions and Governance, the Chicago Booth Initiative on Global Markets, the Tsinghua University School of Economics and Management and the Peking University Guanghua School of Management, and involves the academic networks BREAD, CEPR and NBER.

Video recordings of selected sessions are available at iems.ust.hk/cesi2016



WHEN CAN INDUSTRIAL POLICY WORK FOR DEVELOPING COUNTRIES?

IEMS Thought Leadership Brief Issue No. 13
"Industrial Policy and Comparative Advantage:
When and Where Government Involvement Can
Increase Social Welfare"



Many 'big push' industrial policies fail while some succeed. How can we tailor effective policy for successful industrial development?

In our September Thought Leadership Brief, IEMS Faculty Associate and HKUST Assistant Professor of Economics **Yong Wang** critically examines the role of government intervention in industrializing countries.

Markets are imperfect. If private investors fail to value spillover effects of investments, such as benefits for related industries, public interventions can be an important tool to correct market failures.

Why then do some 'big push' industrial policies fail while others succeed?

In contrast to most existing studies of industrial policy, Prof. Wang explicitly models the role of capital accumulation in optimal industrial policy.

For emerging markets, there is always the temptation to leapfrog into capital intensive industries, usually with disastrous consequences. Success stories like Japan, South Korea, Singapore and Taiwan demonstrate how intervention can succeed. These countries played to their comparative advantage as emerging markets, allowing capital to accumulate gradually.

The government cannot ignore the potential dynamic benefits of intervention when market failures lead to sub-optimal allocations of capital. Tax incentives can serve as a primary tool to compel firm investment decisions consistent with a country's dynamic comparative advantage. Prof Wang recommends that governments observe a "market-led and government-facilitated" approach to intervention. A balanced approach allows governments to take advantage of efficient market forces, while guiding industrial activity at the strategic level.

DISRUPTION IN BUSINESS: WHAT FORCES WILL SHAPE OUR CAREERS IN THE COMING YEARS?

HKUST Distinguished Speaker Series: Jay Nibbe, EY Global Vice-Chair of Tax (2016.09.22)

Consumer preferences are evolving. In his HKUST 25th Anniversary Distinguished Lecture, **Jay Nibbe** of EY, who is the Chair of the HKUST IEMS Advisory Committee, discussed some of the key global trends that are transforming international business and influencing future career trajectories. Specifically, he described the four "T"s of business disruption and led an active discussion on what these changes mean for career planning.

Transformation refers to major disruptions experienced by governments, companies and individuals due to fundamental changes associated with new technologies, changing consumer behavior, and the need for new risk management and business models following the global financial crisis. These disruptions are changing the fundamental nature of a business.

Technology is changing the game. The pace of technological progress is the biggest disruptor, and it is increasing. Business models have needed to adapt to the IT revolution. We are seeing the emergence of artificial intelligence and robotics, as well as drones and driverless cars. 3D printing will have a dramatic impact on supply-chains, disrupting fundamentally how we design, make, and deliver goods.

Transparency is changing our standards. Information is not only available to stakeholders but, more importantly, to their competitors as well. Transparency has lifted the world economy as a whole, but especially emerging markets who have benefitted from access to global technologies and markets. Globalization

has shifted buying power to emerging markets, forcing companies to respond quickly as the global standard of living rises.

Talent is emerging as a key difference between mature and emerging markets. Aging populations mean that mature economies are short of talent. Jobs are beginning to outnumber the available talent. There is imbalance in labor markets. Except for Africa, India and the US, most countries will need to find better ways to connect workers with jobs as their workforces continue to age. Additionally, as millennials move into managerial levels, employers face challenges recruiting and retaining talent.

In closing, Mr Nibbe reminds us that the world will become more connected. It will also become more regulated and diverse. Ideally, the world's capital markets will become more efficient, leading to higher standards of living and more local opportunities. Emerging markets have the biggest room for change. They are where the most growth will happen, and we need to be ready.

