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College of Business



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Call from the Heart

Issue Two 2019

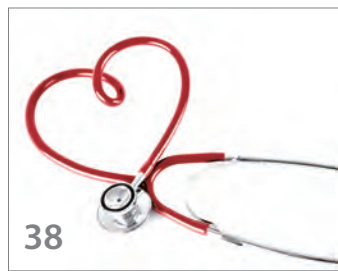
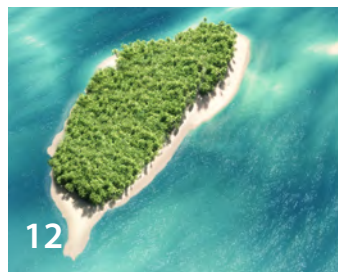
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From the Dean



Nature's gift comes hand-in-hand with the realisation that the most distant pacific island is submerged in millions of pieces of microplastics. As the Himalayan ice caps melt and the Amazon burns, the talk is of climate emergency. Our very ecosystem is under threat.

The Call from the Heart is to make all our ecosystems sustainable.

From the air that we breathe, to the power stations that supply our energy, the people who catch our fish, the infrastructure that ties us together, and the hospitals which are at the heart of our healthcare systems, we are in this together.

In Call from the Heart we examine sustainability from the perspectives of energy provision, migrant workers, infrastructure funding, and healthcare systems. We also carry a unique overview of sustainability as informed by ancient Chinese thinking. Professor Chao-shiuan Liu, President of the Foundation of Chinese Culture for Sustainable Development in Taiwan, shows how *The Wang Dao Sustainability Index*, grounded in Confucianist thinking can guide us towards sustainability in the modern world.

The most appropriate sustainable energy solutions will vary according to local circumstances. From a Hong Kong perspective, Dr William Chung argues that we can enjoy a sustainable, cleaner energy by relying on natural gas whilst at the same time contributing to the greening of the Belt and Road through carbon offsets and reforestation. By contrast, Professor Chi-yuan Liang of the National Central University in Taiwan examines the question as to whether Taiwan's nuclear-free vision is feasible, arguing for a diminished role for coal, a modestly increased future for renewables, alongside a continuing role for nuclear.

The Call from the Heart extends to the plight of migrant workers. We hear a lot about blockchain's role enabling crypto currencies but much less about how it might alleviate human suffering. *Modern slavery* by Mark Blick, Head of Government Solutions at Diginex, demonstrates how blockchain technology can enhance transparency in the labour recruitment process especially across borders, and help end the scourge of modern slavery.

In choosing to invest in green technologies, banks can play a crucial role in supporting progressive infrastructure projects. In *The green economy transition*, Alexander Plekhanov and Richard Jones of the European Bank for Reconstruction and Development show how green, inclusive and resilient infrastructure projects are being funded across Eastern Europe and Central Asia.

Finally, closer to home, Dr Eman Leung follows *The road less travelled* and brings heartening news of how CB's Theme-based Research Scheme project on healthcare is helping provide more efficient and humane systems to improve care of the elderly in Hong Kong.

A big thank you to all who entered our photo competition *For a Better World*, and congratulations to our winner Boss Cheng whose "Dancing turtle" can be found on our centre pages.

I do hope you enjoy this issue.

Hounmin Yan
Acting Dean

City Business Magazine takes a fresh look at breaking global business issues with an East Asia perspective. We showcase the achievements of our faculty, students, alumni and distinguished guests. Established in 2014, we publish twice a year in English and Chinese, and reach some 50,000 alumni, international partners, and corporate stakeholders in hard and soft copy.

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ON THE COVER

Heart of Voh, New Caledonia

Photo by Yann Arthus-Bertrand, Earth from Above

The mangrove swamp is a formation of amphibian trees, characteristic of tropical and subtropical coastlines, that develops in salty, muddy soils exposed to the movements of shifting tides. Rich in biodiversity, mangrove swamp is a fragile habitat subject to the pressure of various human activities, over exploitation of natural resources, drainage of surrounding areas, agricultural expansion, urbanisation of the coast, pollution...

A coal-free future for Hong Kong

By Dr William Chung

Dr William Chung, Associate Professor in the Department of Management Sciences, argues that access to cheaper Liquefied Natural Gas (LNG) world markets can allow Hong Kong to enjoy a coal-free, nuclear-free future. The key to net zero carbon emissions by 2050 is carbon offsetting and this creates an opportunity to green the Belt and Road.

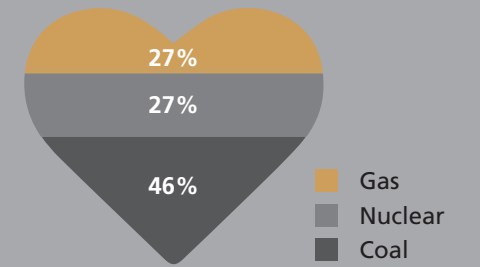
Climate change is the defining issue of our time and we are at a defining moment. The United Nations has declared that “rapid and far-reaching” changes are required in order to keep the global average temperature rise below 1.5°C relative to pre-industrial levels. A special report released by the UN Intergovernmental Panel on Climate Change in October 2018 set an urgent new goal: net zero carbon emissions by around 2050¹. This article shows how Hong Kong can achieve this emissions target by relying primarily on LNG, and using carbon offsets to create a win-win situation and green the Belt and Road.

The Hong Kong government is making its contribution. A public engagement document “Long-term Decarbonisation Strategy” was issued through the Council for

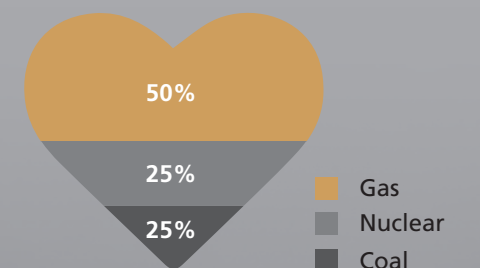
Sustainable Development of the Environment Bureau in June 2019. It seeks to “provide a platform to gauge the views of the community in formulating Hong Kong’s long-term decarbonisation strategy, charting practical pathways and developing feasible actions to achieve net zero carbon emission by 2050.”

Meeting this target is certainly a big challenge. Around 67% of Hong Kong’s carbon emissions come from the power sector and around 50% of electricity is generated by coal-fired power plants which incur the highest carbon intensity. So, the power sector is critical.

The Hong Kong energy mix in 2017



The Hong Kong energy mix target for 2020



Curbing air pollution and carbon emissions (2014-2020)

The Hong Kong government first targeted air pollution reduction by means of using relative “cleaner” natural gas in electricity generation. Then, carbon emissions reduction became the major target for combating climate change (Climate Action Plan 2030+).

The limits of coal-fired generation

Hong Kong’s electricity sector has always been privately-owned and operated, and is run by two vertically-integrated power companies, Hong Kong Electric (HKE) and China Light and Power (CLP). HKE provides about one-quarter of the territory’s power to Hong Kong Island and Lamma Island, whilst CLP provides around three-quarters of the total to the New Territories, Kowloon and most of the outlying islands. The two companies are regulated under a Scheme of Control (SoC) Agreement with the government

Hong Kong plans 80% nuclear and renewables by 2050

To achieve a carbon reduction target of well below 2°C in 2050 that is in compliance with the Paris Agreement, it is estimated that about 80% of our electricity would need to come from zero carbon energy sources (including renewable energy and imported nuclear energy).

As Hong Kong has very limited renewable energy potential, regional cooperation plays a crucial role in helping us achieve a higher carbon reduction target beyond 2030.

Public Engagement Document, June 2019

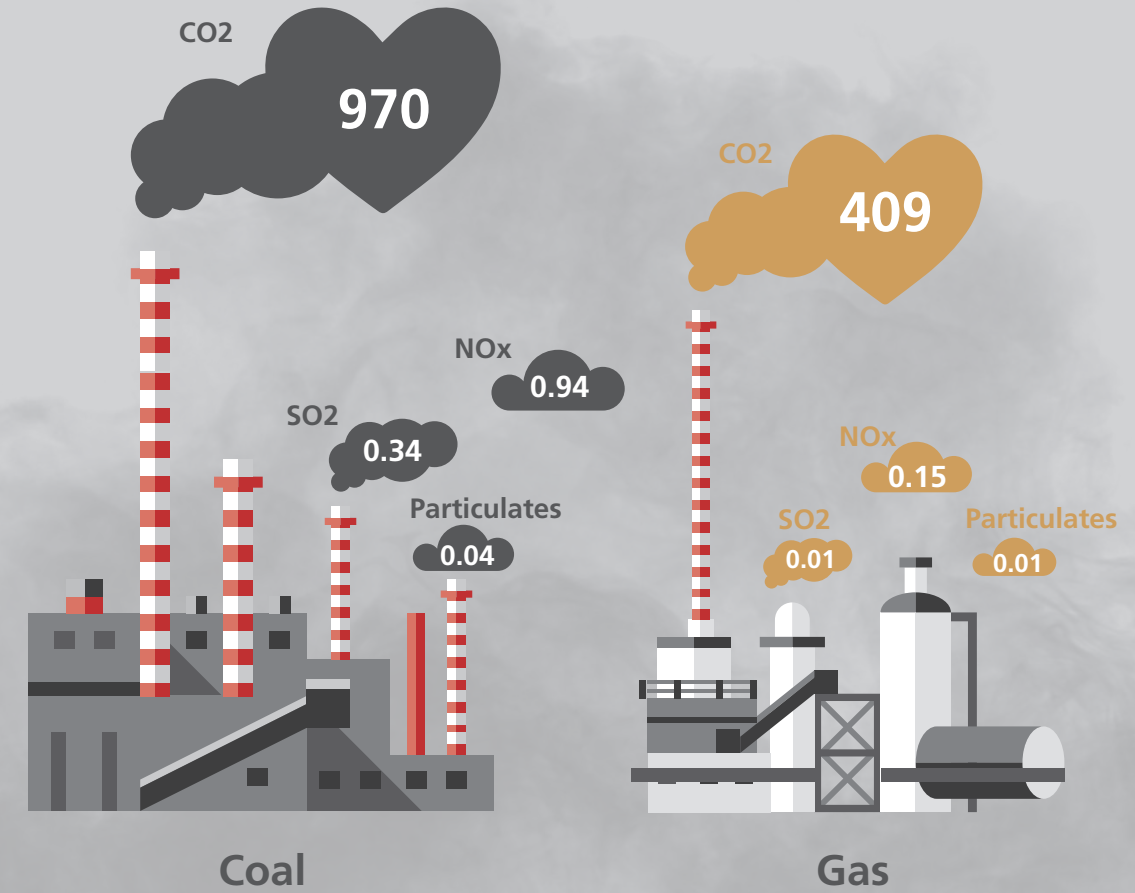
which is periodically renewed.

Back in 1997, the Hong Kong Government decided not to build any new coal-fired power plants. The idea was to reduce particulate matter, SO2 and NOx, and to resolve the air pollution problem. Any retired coal-fired power plants were to be replaced by natural gas-fired power plants. This strategy was based on natural gas being considered a kind of relatively “clean” energy, and has seen dramatically improved pollution performance at CLP.

In order to meet the targets set in 2014 and 2017, Hong Kong began to replace coal-fired power plants with gas-fired. The generation capacity of the two power companies in 2018 is summarised by fuel type in the table on the facing page.

There were ten gas-fired power plants satisfying 27% of electricity requirements in 2017. SO2 and NOx have been greatly reduced at CLP, which supplies around 77% of Hong Kong’s electricity requirements.

Emissions from CLP generation units in 2018 (g/kWh)



Progressive reduction of emission target (base year 2005)

	Air pollution reduction	Carbon intensity	Carbon emissions
2014 (Future Fuel Mix for Electricity Generation)	SO2 (35%-75%), NOx (20%-30%), RSP (15%-40%) by 2020	Reduce 50%-60% by 2020	Reduce 20% by 2020
2017 (Climate Action Plan 2030+)	N/A	Reduce 65%-75% by 2030	Reduce 26%-36% by 2030
2019 (Long-term Decarbonisation Strategy)	N/A	Net zero by 2050	Net zero by 2050

Generation capacities of Hong Kong power companies

	CLP	HKE	Fuel cost factor (HK\$/kWh)*
Renewable energy units (MW)	10	2	N/A
Gas-fired units (MW)	3125	1235	0.811
Coal-fired units (MW)	4108	2000	0.287
Nuclear units (nonlocal, MW)	1380	0	0.528
Diesel-fired units (backup, MW)	300	0	1.533
Pumped storage (MW)	600	0	N/A

* Source: <https://www.clp.com.hk/en/community-and-environment/green-tools/energy-costs> (May 2019)

In this replacement process, Hong Kong faces two major challenges.

First challenge – increased fuel costs

The fuel for electricity generation is imported and the fuel cost factor of a gas-fired unit is around **three times** that of a coal-fired unit. Consequently, using more natural gas means that the electricity tariff will increase sharply. Hong Kong is facing significantly higher costs to curb air pollution. Added to that, fuel prices are volatile as shown in the index below.

Second challenge – diversification of LNG fuel sources

CLP has two main gas supply sources, the Yacheng Gas Field near Hainan Island, China which has been used since 1996 and is nearly exhausted, and the Second West-East Gas Pipeline (WEPII) which came on stream in 2013. This is

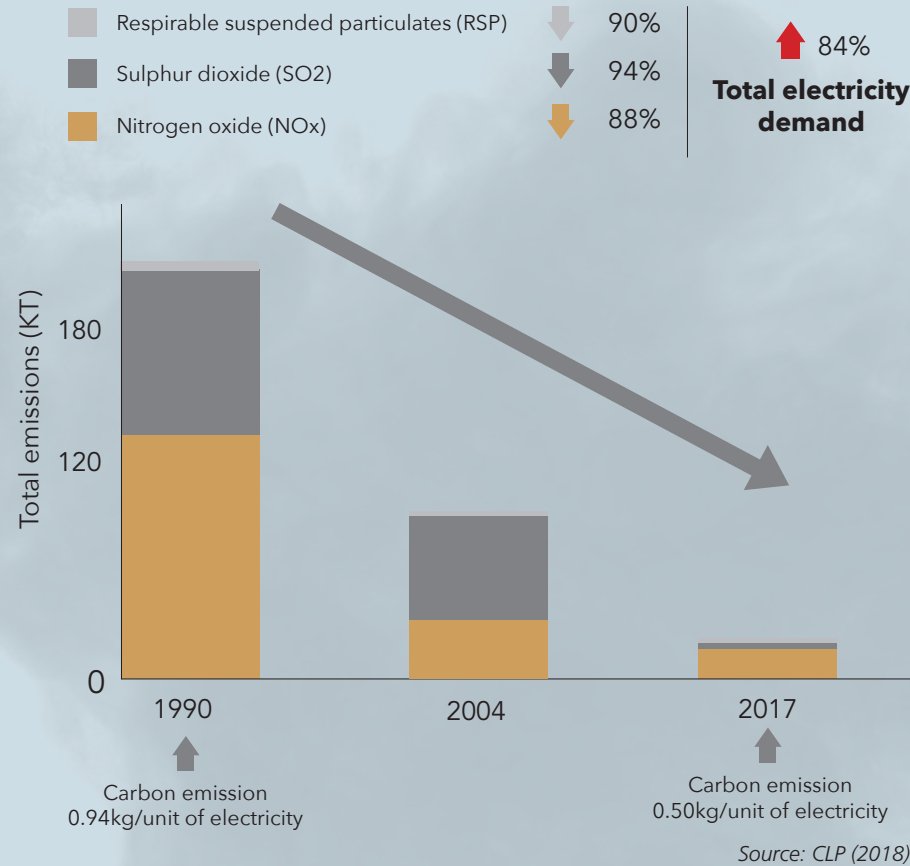
the world's longest gas pipeline crossing 14 provinces of China.

HKE, on the other hand, has a steady supply of LNG from Australia's North-West Shelf and

Qatar. The LNG is shipped to Shenzhen where LNG is gasified and delivered to HKE by pipeline².

When CLP's Yacheng Gas Field is exhausted, it will rely on a sole

CLP total emissions 1990-2017



LNG supplier. This is not good business practice, especially given the increasing role of gas-fired generation in the Hong Kong mix. This vulnerability of supply was highlighted when CLP encountered a two-month suspension of gas supplies from WEPII due to a landslide in Shenzhen in December 2015. As a result, CLP needed to use more coal-fired power plants and this affected its air pollution performance. So, the diversification of gas sources is an important issue.

A global LNG market

To resolve the challenges of gas price stability and supply security, the two power companies have proposed to build an offshore LNG terminal. This uses state-of-the-art Floating Storage Regasification Units (FSRU) to enable direct purchase of LNG from the international gas market.

An understandable concern for Hong Kong residents is if there

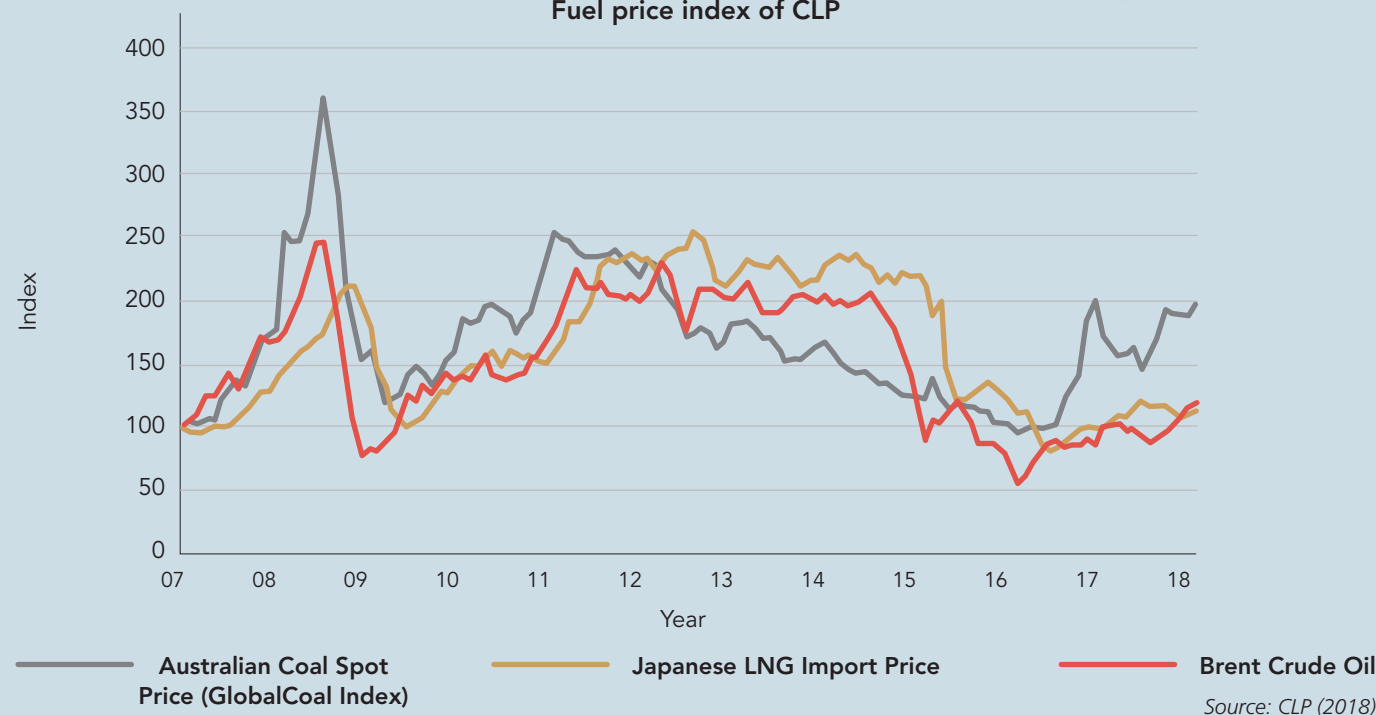
A global LNG market

The natural gas market is becoming more globalised, and is rapidly changing as can be seen in the divergent prices of natural gas in 2011-2016. For example, in 2012, the spread between NE Asia average spot price at around US\$15 and UK average price was about US\$5/mmBtu. To investors, such kind of price divergence was extremely important because it is closely monitored by spot suppliers of liquid natural gas. In order to maximise these suppliers' profit, they would look to ship their liquid cargoes to the most profitable destinations, typically NE Asia and Japan.

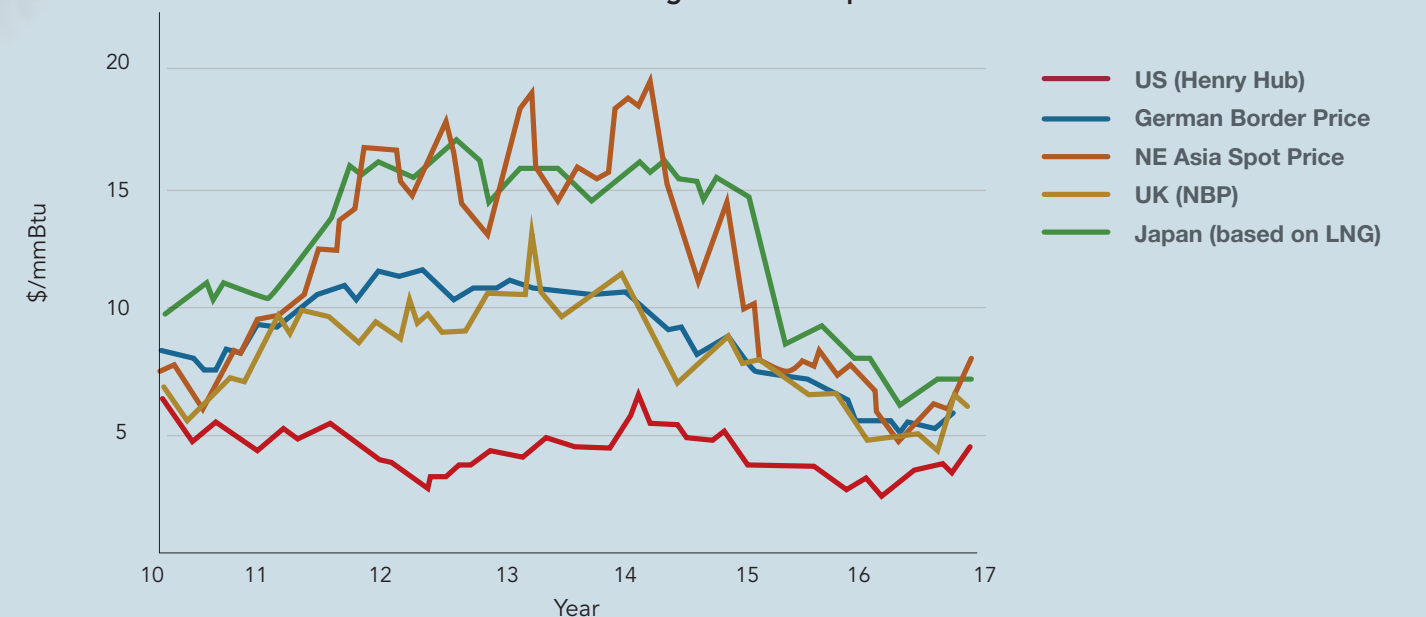
The convergence of natural gas prices will speed up with the maturity of trading hubs and the increasing capacities of LNG's production facilities and cargoes. Since 2016, average gas prices in NE Asia and Japan have been around US\$6/mmBtu, while US prices were around \$3.5/mmBtu, illustrating the relatively narrow global price range. Obviously, there must be a price gap between US and Asia due to the varying shipping costs.

Price convergence has caused two significant changes in the gas market: shorter contract periods and the delinking of gas and crude oil contract prices. According to the International Gas Union, there is a gradual shift from long-term (5+ years), fixed destination contracts to short-term (less than 2 years) and medium-term ones (2-5 years), due to an increase in the number of contracts that have the flexible destination option and also due to the emergence of new producers and consumers. For contract prices, historically, natural gas prices have been indexed to the price of crude oil and therefore most gas contracts use an oil price as the main index. Recently however, natural gas prices have been increasingly delinked from crude prices, with the potential to get much cheaper.

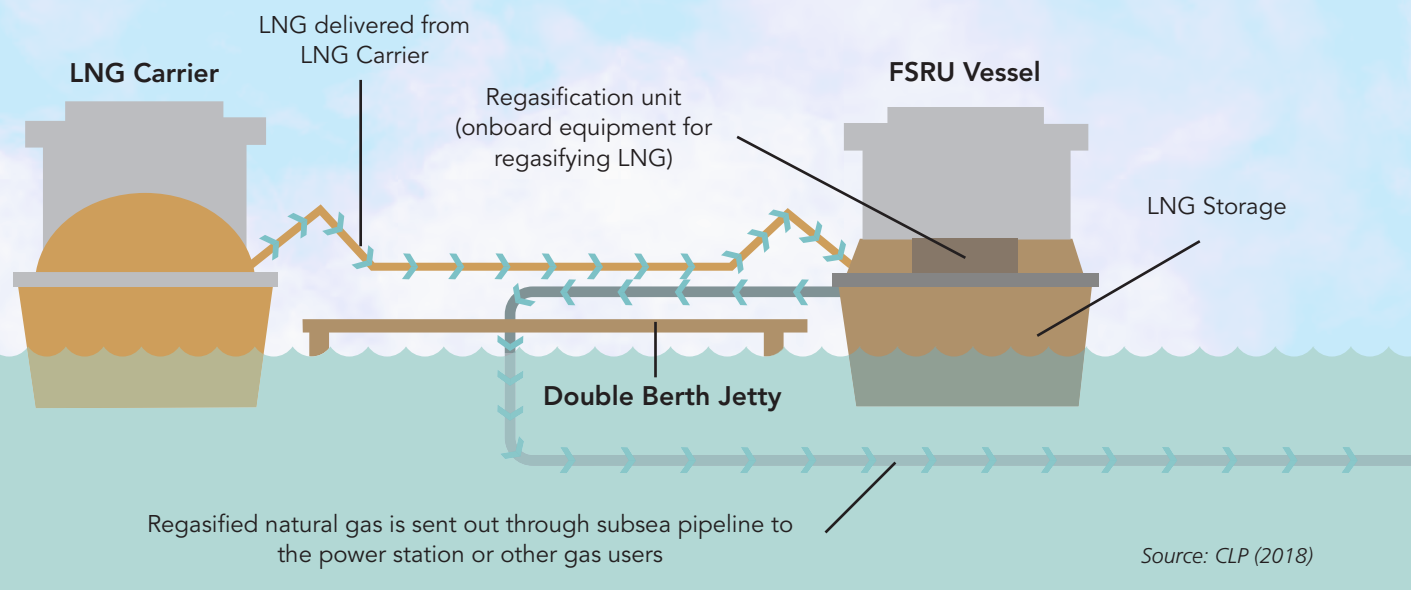
Fuel price index of CLP



Convergence of LNG prices



Floating Storage Regasification Units



is access to an international gas market right now, why is there a need to build this new infrastructure? This is because the profit of power companies in Hong Kong is determined by the Scheme of Control Agreements^{3,4} with the government. Profit is equal to the permitted rate of return for each year and this is capped at 8% of the total value of their Average Net Fixed Assets for that year. That is, the profit of the power companies relies upon how many fixed assets the companies have built. Consequently, the power companies are constantly interested in investing in more fixed assets, such as the FSRU, in order to generate more profit. The effectiveness of FSRU in terms of gas price stability and supply security is not the key concern of the power companies. Hence, we should take a look at the development of the LNG market and check if using an offshore LNG terminal is effective in the near future. We conclude, as long as the LNG's prices are globally converging

and the infrastructure of the LNG's market is becoming mature, the effectiveness of FSRU is justified.

How Hong Kong can meet net zero carbon emissions by 2050

While Hong Kong had been putting some effort into curbing air pollution and reducing carbon emissions, an urgent and challenging target emerged: achieving net zero carbon emissions by 2050⁵. To achieve this carbon neutral state, various international cities and countries have set strategies such as⁶:

- Enhancing education and public awareness to reduce consumption
- Enhancing building energy efficiency – for example, energy saving works (e.g. retrofitting and retro-commissioning) mandatory for all existing large buildings, and mandating all new buildings to be net zero carbon emissions
- Promoting green transport

– such as mandatory zero emission vehicles to replace all conventional fuel-driven vehicles

- Deep decarbonisation in the energy (power) sector – such as using renewable energy and nuclear energy as the major energy sources, supplemented by fossil fuel generation equipped with carbon capture and storage technology
- Technological breakthroughs – rigorous technological breakthroughs and advancements to reduce and offset carbon emissions

Indeed, decarbonisation in the energy sector is the most critical pathway. Enhancing building energy efficiency alone cannot achieve a net zero target although 90% of electricity consumption is from buildings. Promoting green transport implies accelerating the adoption of electric vehicles, which pushes the emissions back to the power plants. Hence, not surprisingly, the Hong Kong

“ A challenging target – achieving net zero emissions by 2050 ”

government proposes to use nuclear and renewable generation (solar and/ or wind) as the major energy sources. Nuclear and renewable generation are generally considered as having a “virtual” zero carbon emission. However, even nuclear energy and photovoltaics have a certain amount of lifecycle green house gas emissions compared to other renewables. But, other concerns may negatively affect Hong Kong in the adoption in achieving the zero-emission target.

Fukushima and worldwide opposition to nuclear power

The increased use of nuclear energy, may be constrained by public concerns. The nuclear energy currently imported from mainland China contributes around 25% of Hong Kong's electricity supply. In the 2014 consultation document (Future Fuel Mix for Electricity Generation), the government proposed to import more nuclear from mainland China, but met with societal concerns due to the 2011 Fukushima incident. Indeed, if we look internationally, four regions have undertaken to end nuclear power generation completely – Germany, Switzerland, Belgium and Taiwan.

How about renewables? Land scarcity does not allow Hong Kong to deploy large-scale solar or wind farms, and offshore busy sea lanes ensure that wind farms are impossible. In June 2019, the Hong Kong government published *Public Engagement on Long-term Decarbonisation Strategy*⁷, where it is estimated that according to current technologies, there are only modest realisable renewables including solar, wind, and waste-to-energy at about 3%-4% of total demand, by 2030. The government therefore proposes regional cooperation allowing Hong Kong to tap into renewables available in mainland China.

Note that the government also considers that importing more nuclear energy from mainland China is a kind of regional cooperation. The existing connecting grid is being enhanced to supply around 30%-35% of Hong Kong's fuel mix.

A carbon neutrality coalition

The effectiveness of regional energy cooperation around the world is well documented in the government's consultation publication. For instance, there are interconnective grids between

Norway, Sweden and Germany allowing Denmark to export excessive wind power when necessary, and to import Norwegian hydropower, Swedish nuclear power and German solar power when the wind is still.

Obviously, this kind of regional cooperation is not comparable to that proposed by the Hong Kong Government in the engagement document, in which Hong Kong invests in nuclear and renewable generation capacity in mainland China and transmits the power to Hong Kong. In terms of energy policy, it is not a good practice, as mainland China also requires green generation to meet the net zero emission target. Although the government's energy policies have considered the criteria of reliability, security and availability, and affordability, the more appropriate energy policies should include the consideration of “equity”. That is, we need to consider if Hong Kong's energy policies negatively affect the “reliability, security and availability, and affordability” of mainland China's power market. Currently, the more power is imported from mainland China to Hong Kong, the more unreliability is imposed on China's power system and end users.

Moreover, if the government insists on the proposed regional cooperation, it should be aware that the technologies of power systems are enhancing rapidly, for example in intelligent grid systems and ways to store electricity, such as giant battery plants. It is therefore recommended that such kind of cooperation should be revised every five years to meet the 2050 target.

Instead of considering regional cooperation through importing predominantly nuclear generation capacity, we should explore other viable alternatives, such as a carbon neutrality coalition.

The importance of planting trees

Although land scarcity prevents Hong Kong from implementing a carbon sink strategy locally, we may still consider the path of carbon neutrality⁸ by means of planting of trees in the Belt and Road countries

and mainland China thereby obtaining a carbon credit to offset Hong Kong's carbon emissions⁹. Indeed, mainland China can initiate a Carbon Neutrality Coalition¹⁰ for Belt and Road countries. With Hong Kong's investment in offsetting carbon emissions, China could develop a Green Belt and Road. Note that reducing emissions from deforestation and forest degradation in developing countries is also a kind of carbon neutrality¹¹. IPCC¹² presents a research output that the carbon neutrality potential is estimated up to 23 GtCO₂ dominated by reduced rates of deforestation, reforestation and forest management, and concentrated in tropical regions.

A green future

Assuming that Hong Kong uses gas-fired power plants to supply the 63,000 million kWh consumption requirement in 2050 (this implying around 1% increase annually),

with the current emission factor (488gCO₂eq/ kWh), Hong Kong needs to offset 30.8 million tonnes CO₂e which would require planting around 52 times Hong Kong's land area¹³. According to Pakistan's cost factor¹⁴, current marginal abatement cost (US\$/tCO₂e reduced) is around \$10 to \$25. The estimated offsetting cost for Hong Kong from now until 2050

would be around US\$308 million to US\$770 million at current US\$ prices in total. With 68 Belt and Road countries to plant trees in, there is plenty of scope for Hong Kong to start the carbon neutral process now and meet the future net zero emission target by 2050. Assuredly, this kind of "regional cooperation" would result in a win-win situation.

What are carbon offsets?

A carbon offset is a reduction in emissions of carbon dioxide or other greenhouse gases made in order to compensate for emissions made elsewhere. Offsets are measured in tonnes of carbon dioxide-equivalent (CO₂e). One tonne of carbon offset represents the reduction of one tonne of carbon dioxide or its equivalent in other greenhouse gases.

Offsets typically support projects that reduce the emission of greenhouse gases in the short or long-term. Common project types are renewable energy, energy efficiency and forestry projects.

The potential for global forest cover

The restoration of forested land at a global scale could help capture atmospheric carbon and mitigate climate change. Bastin et al. used direct measurements of forest cover to generate a model of forest restoration potential across the globe. Their spatially explicit maps show how much additional tree cover could exist outside of existing forests and agricultural and urban land. Ecosystems could support an additional 0.9 billion hectares of continuous forest. This would represent a greater than 25% increase in forested area, including more than 500 billion trees and more than 200 gigatonnes of additional carbon at maturity. Such a change has the potential to cut the atmospheric carbon pool by about 25%.

Science, July 2019



Courtesy of the UN Photo by Mark Garten

▲ Greta Thunberg, the 16-year-old climate activist from Sweden, sails into New York Harbour flanked by a fleet of 17 sailboats representing each of the United Nations Sustainable Development Goals on their sails

“ Changing one disastrous energy source for ‘a slightly less disastrous one’ is not progress

”
Greta Thunberg
climate activist

*How about Hong Kong?
How should we generate power?
Gas, nuclear, renewables?
What do you think?*

Carbon sinks

Carbon sinks are natural systems that soak up and store CO₂ from the atmosphere. Forests are great examples. During photosynthesis, trees and plants sequester or absorb CO₂ from the atmosphere, using it as food for growth. The carbon from the CO₂ becomes part of the plant and is stored as wood, stems and leaves. Although forests do release some CO₂ in their natural succession, a healthy forest typically stores carbon at a greater rate than it releases carbon.

The existing carbon sink in Hong Kong is only about 1% of the total carbon emissions, hence the importance of a regional carbon neutrality policy.

Public Engagement on Long-term Decarbonisation Strategy, 2019

References:



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Is Taiwan's nuclear-free vision feasible?

Interview by Eric Collins

Professor Chi-yuan Liang, Chair Professor at the National Central University of Taiwan, gave a City Seminar presentation on *A Prospect for Taiwan's Post-Referendum Energy Policy* in June. Professor Liang questioned whether the government's vision of a non-nuclear future will be feasible given constraints around natural gas and renewables, along with the population's continued opposition to expanding coal-fired plants.



In November 2018, Taiwan went through a major democratic exercise, holding referendums on ten issues including energy. How successful was the exercise?





Taiwan energy referendum

- Against air pollution – reduce output of thermal power plants 1% year-on-year.
- Stop construction of coal-fired thermal power plants.
- Go green simultaneously with nuclear.

Of the ten referendums, three were on energy issues. This reflects the discontent of citizens on recent electricity shortages and air pollution, and rising doubt about the government's energy transformation policy. The referendums were: firstly, against air pollution – to reduce by 1% year-on-year the electricity production of thermal power plants. Secondly, to stop construction of any coal-fired thermal power plants. And thirdly, to go green simultaneously with nuclear, that is to repeal part of a recent electricity act to completely stop nuclear-energy-based power generating facilities by 2025. All three referendums related to energy were passed but are non-binding in effect, so the plan to make Taiwan nuclear-free by 2025 need not be affected by the referendum results.

Can Taiwan achieve 20% renewables by 2025?

There are constraints on Taiwan's

	2017	2020	2025
 Renewables	4.6%	9%	20%
 Gas	34.6%	33%	50%
 Coal	46.6%	50%	30%
 Nuclear	8.3%	–	0

low carbon energy development. Taiwan is one of the most densely populated regions in the world, and is characterised by fragmented land ownership making buyouts complicated and time consuming. In order to achieve 20% renewables, the government projects that 73% of capacity will be solar. But finding the 25,500 hectares land required for ground-mounted solar PV instalment is a problem.

As for wind power, Taiwan has established 336 on-shore turbines along less than 200 km of coast line, but typhoons, earthquakes, environment protection, and fisherman and navigation disputes are causing problems for further development. On-shore turbines have also attracted protests from environmental groups and residents. Where are we going to build another 260 turbines in the coming six years as required? Overall, we can say that the implementation

of solar power and wind power is behind schedule, and it is highly questionable whether the 20% target can be achieved by 2025.

How far is Germany's energy transformation a model for Taiwan?

Germany has been particularly successful in the development of renewable energy. But geographically, Germany is very differently situated to Taiwan, and can either import or export its electricity to neighbouring European countries through a continental grid. Taiwan's electricity grid, by contrast, is independent and isolated. Due to its unstable characteristic, renewable energy cannot substitute for base-load power plant, such as nuclear and coal-fired plant.

It is worth noting that electricity prices in Germany have risen sharply, and that due to the

elimination of nuclear and the reintroduction of some coal, there has been an increase in greenhouse gas emissions.

Also, we need to check the feasibility of the scheduling. Germany decided to abolish all nuclear power in the year 2000, but in 2019 nuclear still accounted for 13% of electricity generation. By contrast, Taiwan's government will close all nuclear power plants by 2025, in addition to abolishing an almost completed nuclear plant (Lungmen Nuclear Power Plant). The policy change is drastic while the time to execute is too short.

What is the role of natural gas in Taiwan's energy supply?

Taiwan's gas is mostly imported in the form of Liquefied Natural Gas (LNG). The cost of gas-fired LNG plant is higher than coal but the CO2 emissions are about half. To substitute four nuclear plants with



Blackout

The frailty of Taiwan's energy supply was highlighted by an island-wide blackout in August 2018. Supply to the largest gas-fired power plant was accidentally shut down, causing a 4.4 GW plant to go offline. With insufficient reserve capacity to make up for the shortfall, more than six million households and hundreds of industrial users were impacted. In the months before the blackout, reserve margins went as low as 2%, far below a country's typical 10% -15% comfort levels.

gas-fired power, the electricity price will increase by 40% from the 2013 price. Gas-fired power accounted for 34.6% in the total electricity generation in 2017, one of the highest percentages in the world, even higher than in gas abundant countries such as the United States (31.9%). According to government energy transformation policy, the share of gas-fired power in electricity generation will increase to 50% by 2025.

However, the stockpiling of LNG is very low, only 13 days on average over the year, and as low as 7 days in the summer time. This compares to Korea (53 days), mainland China (51 days), and Japan (36 days). Taiwan's LNG stockpiling capacity is too low to be accepted as secure, as was seen in the August 2018 blackout. If two typhoons hit Taiwan within a week, energy security would be threatened.

What impact has the Fukushima nuclear accident had on the international community?

Of the countries with nuclear power programmes, 27 countries are unchanged and continue to develop nuclear energy. This includes three countries which have experienced nuclear accidents – The United States, Russia and Japan. Only Germany, Switzerland, Belgium and Taiwan will end the development of nuclear.

What do you see as the role of nuclear in Taiwan?

The current "zero nuclear policy" diverges from the international trend of energy development, and is not a mainstream policy. Also, the projection on reserve margin rate during 2017-2025 made by the government is too optimistic. The reoperation of Nuclear 2 could help relieve the electricity shortages of recent years.

However, Taiwan still needs to face the challenge of 11% loss in electricity supply during 2021-2025 due to the zero nuclear policy. That will cause five major problems: electricity shortages, regional electricity unbalance, price surges, out-of-control carbon emissions, and energy insecurity. These impacts will affect Taiwan's economic growth and employment outlook. In the light of this, I believe that the Nuclear 4 Power Plant should be recommissioned.

What is the optimal electricity mix in Taiwan for 2025?

Considering external environmental costs (US\$40/ metric tonne CO2), the optimal electricity mix in 2025 would be 32.5% coal-fired power generation, 40% gas-fired, 10% renewables, and 17.5% nuclear. This would avoid the problems caused by the government's current energy transformation policy. And most importantly, this energy mix would comply with the three referendums of November 2018. Consequently, it might serve as an alternative for the government to reformulate its energy policy.

Environmental costs of coal and gas				
	Coal-fired (Linkou Power Plant)		Gas-fired (Tongxiao Power Plant)	
	Old technology	New technology	Old technology	New technology
Greenhouse gases	0.975 kg/kWh	0.789 kg/kWh	0.46 kg/kWh	0.4 kg/kWh
Particulates	36 mg/Nm3	20 mg/Nm3	28 mg/Nm3	little
Sulphur oxides	200 ppm	30 ppm	20 ppm	10 ppm
Nitrogen oxides	300 ppm	30 ppm	40 ppm	18 ppm

Source: Taiwan Power Company



Professor Chi-yuan Liang
Chair Professor
National Central University

The Wang Dao Sustainability Index

How ancient Chinese thinking can guide us in modern society

Interview by Eric Collins

Professor Chao-shiuan Liu is President of the Foundation of Chinese Culture for Sustainable Development and a leading educator and politician in Taiwan. Professor Liu served as Premier of Taiwan from May 2008 to September 2009. He has also served as President of National Tsing Hua University in Taiwan (1987-1993), President of Soochow University (2004-2008) and President of the General Association of Chinese Culture (2010-2016). Professor Liu gave a presentation on "Wang Dao Sustainability Index (WDSI)" in May as part of the City Seminar Series at the College of Business.

Why did you develop the Wang Dao Sustainability Index?

The basis for the western concept of global governance has been shaken to the core over the past two or three decades. We currently face a chaotic world order, a widening gap between rich and poor, energy resource depletion, ecological imbalance, and global warming. We regard culture as the very foundation of sustainable development, and couldn't help but ask what contribution ancient Chinese thinking might make? Finally, we decided to try and correlate the ancient traditions and the modern.

At one end we started from the political philosophy more than 2000 years ago in China – Mencius and Confucius – and at the other end we had the very pragmatic goals set out by the United Nations Sustainable Development Goals in 2015. Modern sustainability theory has been around for at least three decades since Gro Harlem Brundtland, the then-prime minister of Norway, submitted "Our Common Future" to the UN in 1987. The 17 SDGs, adopted by the UN in 2015, gave us a wonderful opportunity to work with something concrete.

In correlating the ancient and the modern, we wanted to see if we could give contemporary societies, especially developing countries, an alternative way of looking at things instead of just following the established western way of thinking.

How difficult was it to identify the key ideas in Confucian thinking?

At the beginning I must admit we were all confused. Confucian thinking itself is something of a confusion! The thinking is at once grand, huge and deep but if you look at it from another angle it's so abstract, and difficult to make operational. Some fellow scholars were getting frustrated, so I thought we should go back to the beginning, look at the theory of the Chinese philosopher Mencius, and extract a few key ideas that might be useful for the modern situation.

Why do you talk about environmental equilibrium rather than protection?

If you look at the Environmental Protection Index at Yale University, they talk about the law of legal infrastructures and the right way to implement things, but they ignore consumption. How can you talk about sustainability without considering consumption? When Mahatma Gandhi visited England in the 1930s, at one point he asked rhetorically if every Indian were to live like a British person, how much growth would we need to serve the common purpose? That's why

What is the Wang Dao Sustainability Index?



The Wang Dao Sustainability Index ranks the sustainable development performance of countries around the world. The WDSI utilises the Confucian precept of Wang Dao as its core premise: the virtuous "Way of the King" as opposed to the "Way of Hegemon". The index comprises three major domains, Global Ethics, Inclusive Development, and Environmental Equilibrium. These then produce 11 dimensions (see graphic above) and 64 component indices. Based on this system, the WDSI collects relevant data from the public domain. In the initial phase, the Index evaluated the sustainable development status of 74 representative countries and their economies.

Source: <http://www.wangdaoindex.org/>

the inclusion of consumption in the index is so important. It changes the whole picture.

How relevant is the WDSI to the contemporary world?

We didn't have any idea that our outcome would correlate so well with the UN SDGs. Once we got the 0.9 correlation coefficient that scared me. We had started from some political philosophy of 2,000 years ago, and then from the contemporary, pragmatic needs of all the nations around the world, and then you find the data so well correlated, that's wonderful isn't it?

Would Mencius have been in favour of globalisation?

Mencius mentions three kinds of people who all want to conquer. The warriors conquer nations, the alliance makers conquer their peers, and the over-developers conquer nature. Rather, we should do our very best to find harmony. Wang Dao means "by benevolence" and is the opposite of hegemony which in Chinese (Ba dao 霸道) means "by force". This is aggressiveness. These people make wars, enter into trade wars, and terrorist wars, and our idea is that this approach has to stop. Let's step back and look around. There are better ways to do things.

What sort of impact is the index having in contemporary society?

The index system works like a mirror, so it reflects both strengths and weaknesses. That gives a chance for decision-makers to reflect on suitable policy for their

particular country. However, it doesn't tell you what to do. It's merely a guide to make your own plan of action and improve the situation. This is a distinctive reference containing the essence of Chinese culture. For instance, in the area of environmental protection, countries such as

0.9

The correlation coefficient between the UN Sustainable Development Goals Index and the Wang Dao Sustainability Index

Mencius



Mencius, also known by his birth name MengKe (孟軻), was born in the State of Zou, now part of Shandong Province. He was an itinerant Chinese philosopher and sage, and one of the principal interpreters of Confucianism. During the Warring States period, Mencius served as an official and scholar at the Jixia Academy in the State of Qi from 319 to 312 BC. According to legend, like Confucius he travelled throughout China for forty years to offer advice to rulers for reform. Finally, disappointed at his failure to effect change he retired from public life.

Source: Wikipedia

Canada, the USA, Australia normally rank pretty highly. But WDSI scores environment quite differently prioritising equilibrium not just protection. Nobody really mentioned the per capita waste concern. And by the way Taiwan doesn't do well here either.

How well do westernised countries score in your index?

Japan, Korea, China, Taiwan, Vietnam are heavily influenced by Chinese culture in history yet the ranking shows that the ones who westernise first rank highest. Quite ironic! But in other ways, not. Westernisation was the right move to get out of the bondage of the old system in the 19th and 20th centuries. But I think in the 21st century there are more important elements to be considered in their own cultures. You can borrow the good things from other cultures for a period of time and you can modernise. Then you reach some point where it's a bottleneck.

Is westernisation the only way forward?

One of the surprises of our index was that the so called post-communist East European countries scored very well. I have had the honour to represent Taiwan and participate in the Havel Forum in Prague in the Czech Republic on two occasions. Both times there was a special platform discussing "Is capitalist democracy still the way to go?" After being relieved from Communism doctrines these East Europeans were very serious about finding their distinctive

“ The Earth provides enough to satisfy every man's need but not for every man's greed ”

Mahatma Gandhi

Wang Dao Sustainability Index 2018 — principle findings

- Norway, Sweden and Denmark – with societal models based on socialist democracy, the welfare state, and environmental protection – closely approximate the sustainable development model of the Wang Dao precept.
- East Asian countries rank in the middle segment of performance, but with enormous differences. They can further pursue sustainable development whilst regaining traditional cultural confidence.
- In terms of sustainable development, the United States, like the People's Republic of China, appears to be a "fragile superpower".
- The small and medium-sized East European "post-communist countries" are steadily advancing on the path of sustainable development.
- A number of countries are relatively far from attaining ideal sustainable development goals, often embroiled in military conflict and under the tyranny of powerful hegemony.
- Overall, at 0.9 the WDSI correlates highly with the UN Sustainable Development Goals Index, but with a large difference in its rankings of emerging and developing economies.

Embodying universal values, the WDSI has the potential to provide an alternative reference for the entire world – especially developing countries and economies – in their pursuit of sustainable development.

way forward. For a while they tried to grab the American way of development, but very soon they changed direction. They kept a lot of good policy from their communist past, blended it with new directions and found their own way. If you look at the Southeast Asian countries, they were also liberated from being colonised, and then many grabbed the American way of development as in the Philippines. Now, Asian countries have to think about their own values.

How did you come across the concept "fragile superpower"?

I was quoting the American political philosopher Susan Shirk. My observation is that if you compare the two giants nowadays, America has a system with small Wang Dao internally but they play hegemonic measures outside of the country, and China is the opposite on both counts.

Is it important to keep information flows open?

The countries with the least sustainable development model include those who had been sealed off from the outside world for some years. Openness will lead to understanding. Professor Samuel Huntington used to talk a lot about a clash of civilisations. There are different civilisations and cultures in the world. Some are stronger, some weaker. But what has happened is the stronger ones tend to self-moralise their own culture and all of a sudden become more righteous. But that's not acceptable and that's how civilisations clash. Openness is key.



Professor Chao-shuan Liu
President
Foundation of Chinese Culture
for Sustainable Development

Modern slavery

How blockchain can break the bondage of 45 million trapped in shocking work conditions

Mark Blick is Head of Government Solutions at Diginex, a global blockchain solutions and financial services company headquartered in Hong Kong. Diginex partners with the public and private sectors globally to help design and implement complex blockchain solutions across a wide range of applications. This article is an edited version of a presentation that Mark gave at the CityU MBA SHARP Forum "Kindness sustains: novel uses of blockchain for social good" in May 2019.

By Mark Blick

What is modern slavery?

Recruiting a person for compelled labour or commercial sex acts through the use of force.

The use of blockchain to support cryptocurrencies has attracted significant worldwide attention. Less celebrated is the technology's potential to prevent deception in cross-border human resources recruitment. 18 months ago, I was not familiar with the issue of modern slavery. The Mekong Club, a Hong Kong-based NGO, has helped educate me on the scale and the depth of this issue. In the words of CEO Matt Friedman:

"There is no city in Asia that has had more exposure to this issue. With the tools that are being developed and the pledge that is coming out, I think Hong Kong will eventually be a best practice when it comes to corporate involvement in... helping to address human-trafficking."

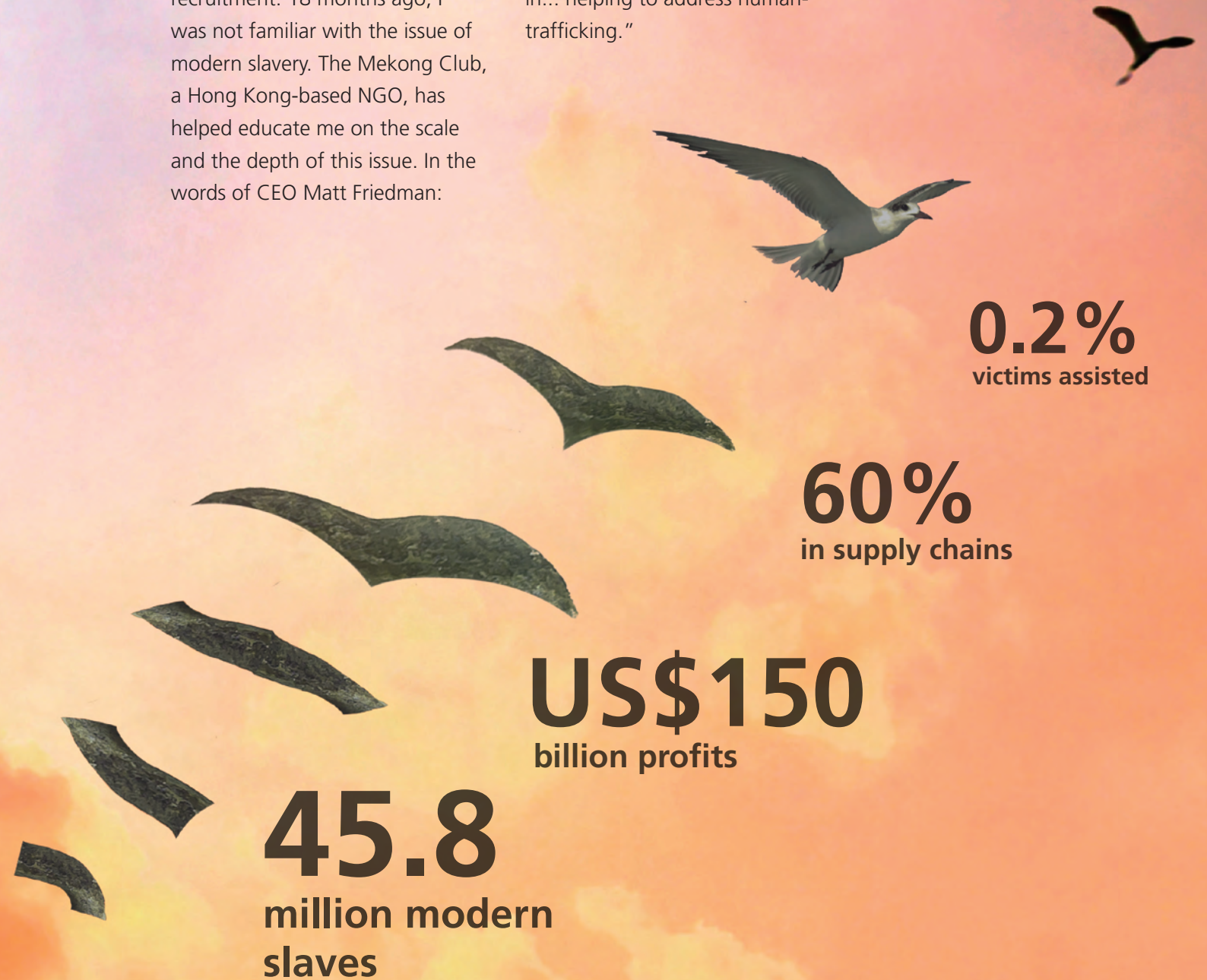
This has led me to getting heavily involved in projects focused on combating slavery, child labour and unfair working practices via distributed ledger technology.

0.2%
victims assisted

60%
in supply chains

US\$150
billion profits

45.8
million modern
slaves





I try to understand the advantages of blockchain around transparency and disclosure. Regulation and policy frameworks are key. They drive an intersect with private sector implementation which can effect behavioural changes. This is particularly the case in what we call pre-competitive collaboration. In this phase, companies, governments, intergovernmental organisations and NGOs come together to try and solve issues.

Diginex's main blockchain project working to combat modern slavery is called eMin. Our aims are practical yet far reaching. We aim to significantly reduce the potential for employment fraud and forced labour; incentivise agents and corporations to act ethically and responsibly; reduce costs of migration between countries and companies; and process visa, work permit and employment applications with one identity. Overall, our purpose is to harness the power of blockchain technology to empower those at risk of exploitation.

Slavery – a thing of the past?

People have this concept of slavery as someone being snatched and taken away. That certainly is still the case, but what we focus on is forced labour within complex

The UK Modern Slavery Act 2015

- Changed the disclosure and transparency requirements for large multinational companies.
- The regulation was emulated across Western Europe, in North America, in Australia and in Canada and as the regulation progressed it got more teeth.

The Mekong Club

The Mekong Club mobilises the private sector to disrupt and combat modern slavery by engaging, inspiring and supporting businesses to take control of their supply chains through tools, workshops, awareness raising and capacity building. The Mekong Club is a Hong Kong-based NGO made up of 33 business members of some of the world's largest multinational companies in retail, footwear, and apparel hospitality and finance.

Source: themekongclub.org

private sector supply chains. Around two-thirds of the 45 million modern slaves are people who voluntarily move from one country to another. They are simply looking for a better job, and then in the course of that journey they are exploited. Today, there are more people impacted by modern slavery than there are Canadians, and there are more

people in slavery than there have been in any other time in history. It might be a young boy forced on to a fishing boat to work 18 hours a day without coming into port, or a sweatshop worker who toils 17 hours a day making jeans without a day off or any pay.

How does it happen?

Modern slavery is in the supply chains of the world's largest food manufacturers, apparel manufacturers, and electronics manufacturers. We are talking about the food that we eat, the clothes that we wear, and the cosmetics that we use. How does this modern slavery happen? Say, a person agrees a move from Cambodia to Thailand. Recruiters gain the trust of victims or their family members, but then may offer false promises of well-paid employment. They often offer young, vulnerable people facing hardship the chance to improve their lives and the lives of their families. In most cases, the victims have no idea of the reality that they will find themselves in.

Debt is a key tactic

Traffickers often charge excessive recruitment fees that require victims to borrow money or provide cash advances to the victim or the family, which must be paid off.

The victim is then held until the debt is completely paid. Often the lender uses false accounting, invents additional debt, or charges excessive interest to heighten the debt and create uncertainty over the timeframe for payment. In some cases, oppressive or illegitimate contracts are used to justify forced labour. Often, these fraudulent agreements are signed by victims who cannot read or are presented in a foreign language they don't understand. Victims are told that if they leave the work for which they have signed a contract, penalties or fines will follow.

The average fee that a migrant worker pays in order to secure a role in the apparel manufacturing industry is US\$3,000-4,000. Migrant workers are taking out loans from the very same people that are charging them the fees in the first place in order to secure the role. They are often being charged punitive interest rates, they often don't speak the local language, and they are fearful of going to the local police. They are physically or verbally abused and, crucially, there is a lack of cross-border oversight.

Hidden in complex supply chains

Complex supply chains made up of multiple levels create many

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Our purpose is to harness the power of blockchain technology to empower those at risk of exploitation

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opportunities for modern slavery to flourish. Take the manufacture of a coat. Tier one suppliers are the people who make our coats and here we have some degree of visibility. But beyond that, in tier two you have the people that make the buttons, and then in tier three you have people who make the pigments and dyes that go into the buttons that go into the coats. If you look at Nestle who work with 165,000 small stakeholder farmers around the world, it's very difficult for them to get transparency up and down their supply chain.

Transparency

The role of the employment agency is key. Say I'm someone in Bangladesh and I want to go to Malaysia. I work with an employment agent in my country of origin. Then I work with an appointment agent in my country of destination and I sign contracts in both. There are some employment agencies that do the

right thing and some do the wrong thing. For those that want to do the right thing blockchain enables them to demonstrate to the large global brands that they are capturing information and they can be transparent as to their process.

eMin recently worked with a company who was happy to declare it worked with an auditing company. It made declarations around its holistic social governance policies, with 10,000 workers in Southeast Asia, and that the air conditioning was kept on 21 degrees all year round to promote a positive work environment. Then we found out that it only turned the air conditioning on for two days a year when the auditors came through. Every other day of the year the company turned it off, making a significant saving in electricity. With eMin's new procedures in place, the auditing company now captures the temperature of that factory in real time. External parties,

The blockchain contract

1 Contract protection

Contract copies are stored on the blockchain and cannot be altered or destroyed.

2 Data protection

Employment contracts that are stored on the blockchain are secured using a private personal key, offering unprecedented levels of security for the worker.

3 Data auditing

eMin anonymises all data, and with permission, can perform periodical surveys to audit for any abnormalities or agreement breaches.

4 Data consolidation

Useful data can be anonymised and collated, such as information on migration trends, average costs for worker movement, and industry demographics.

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The employment agency has a key role in transparency

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NGOs, auditors, trade finance teams at banks can all understand more.

A race to the top

Companies are divided roughly into three groups. Those who culturally and ethically have always striven to do the right thing. We know who they are, that's part of their brand, they're well known for it, and they aspire to be the best. The second group of companies are people who have run into legislative difficulties due to their working practices. Therefore, they

need to demonstrate that they're trying to improve. Then you have the third category of companies trying to catch up. But certainly, in the first two categories there is a very sizable universe of large multinational companies who are trying to demonstrate to the world they're doing the right thing around social governance.

Rather than going to a thousand factories once a year and saying: "I'm coming on 28th May with a clipboard, please get ready for me", how do we capture real-

time information that makes the trip a lot more valuable from a resource perspective? We complete as much of the quantitative data collection before the auditor arrives so they can then focus on capability building and the gaps in the quantitative data.

Shrimp farming in Thailand

We're very proud of our first pilot in Thailand working in the shrimp farming industry. Our aim is to improve the operational effectiveness of labour recruitment and record management practices.

Our team spent one week on-the-ground in Bangkok and Phang Nga, engaging with workers, managers, corporates, auditors, non-governmental organisations and intergovernmental organisations to get feedback on the eMin tool.

More specifically, the eMin team garnered insights from managers and employees from shrimp farms that are being used to modify the process flow of the eMin mobile application and to integrate additional functionality.

Beginning with 350 workers across 17 shrimp farms, the next step for the eMin team will be to roll out the tool to wider groups. In partnership with data intelligence and analytics company Verifik8, we aim to reach 5,000 workers on 100 farms in Thailand, within agriculture and aquaculture. We have more pilots planned across Asia in the next few months.

Learn more about modern slavery
www.slaveryfootprint.org
www.mekongclub.org
www.eminproject.com



Mark Blick
Head of Government Solutions
Diginex

In search of the outlier

As algorithms evaluate job seekers, how to get hired

Timothy Lee is Managing Director, Head of Transaction Banking Greater China, BNP Paribas and a member of the College's Business Career Development Advisory Committee. Here he talks about how he started in finance, the impact of Fintech, and the qualities he looks for in graduates seeking to enter the finance sector.

Interview by Eric Collins



How did you start out in finance?

Mine is one of those classic Hong Kong stories. I was born and raised in Hong Kong but due to the handover situation back in the 1980s, the family decided to emigrate to the US. We moved to San Francisco and I spent about 11 years there going through middle school, high school and college.

After graduation I decided to come back to Hong Kong to take a look at where I grew up, and find my roots. This was coincidentally the time when the Hong Kong and China economy really started taking off. So, it was a fortunate time and I ended up looking for a job here and that's how I started my career in banking back in the early 1990s.

What was your first job in Hong Kong?

I landed a management trainee place with HSBC and that was going to be three years of accumulating experience in Asia and then back to the US, and it has ended up being 20 years plus in Hong Kong. My tenure kept getting extended as there were so many more opportunities here compared to back in the US.

Six years later you decided to move on from HSBC. Why?

All professionals – and students – need to keep abreast of the latest developments. The reason for the move to Citibank was that global cash management was being developed in Asia. A lot of banks

started looking at the flow banking business. Cash management and trade finance were coming together as a core driver of the banking industry. I realised this could be an opportunity to learn something new.

You then moved to a US startup. What did you learn?

When you move into a very small company you realise that the decisions that you make every day will have an impact. You see things more from a management perspective. That also gives you an opportunity to reflect more on management practice. How do you motivate the team? With a very small firm you really see the critical value of being able to collaborate successfully.

What's your advice on working with startups?

Well the Hong Kong economy overall has changed quite a bit. It was largely supported by a number of small and medium enterprises that were mainly manufacturing driven but that's changed drastically. Nowadays when we say startups it's often about Fintech. So, for a student who has tech background, and is mobile from a career perspective, it would not be a bad place to start.

How is Fintech affecting employment opportunities?

The banking landscape is changing. I read an article last year in Harvard Business Review which said that 30% of all banking jobs may disappear because of the changing

technology, social media, etc. But my view is that if 30% disappears, another 20% to 40% might be created. We will lose some job roles in client servicing or manual processes in back end operations, but then other jobs will be created because we need to utilise and facilitate the new technology.

How is Fintech changing the way banks work?

We need to keep reinventing ourselves, keep learning about what drivers are really changing the economies, bank corporates or personal clients. For example, in wealth management which is the asset management side of our business, relationship managers were once the key. Nowadays it's still about one-to-one relationship, how I serve my clients, but a lot of things are moving onto robotics. So, if a wealth management client is looking for an investment product, they will either contact us by phone or through an app. Robotics technology will be involved from the get-go. The robot can generate price quotes, place orders, do the settlements pretty much on a Straight Through Processing (STP) basis whereas before it was fairly manual. Now with so much application interface required, we need a lot of engineers or tech-savvy individuals.

Is blockchain making a difference to transaction banking?

I would carve transaction banking into two large segments, cash management and trade finance.



▲ Timothy Lee and his colleagues in the Transaction Banking Team

Within trade finance last year the Hong Kong Monetary Authority launched a very important initiative, eTradeConnect, using blockchain. BNP Paribas is one of 12 participating banks and this is all about digitising the entire open account work flow. The eTradeConnect blockchain network has moved everything onto a digital platform where it's open and secure. This is the way that we will be moving ahead. Hong Kong is obviously one of many ecosystems trying to push for that. Others are in Singapore and in China, and once these ecosystems start converging, we'll see a big adoption of blockchain technology.

How have you engaged with the College of Business so far?

I was at the career fair last September and it was good to meet the student population. I haven't had a chance to engage directly with the students in any mock interviews yet and that's something that I want to do and help prep a little bit.

What qualities do you look for in graduates entering the finance sector?

A lot of times graduates come in and focus purely on their academic results and what they've done. I've often told students that by the time they get to interview, all the CVs look pretty much the same to me. Our HR Department uses algorithms to pick up keywords or certain key patterns. Obviously, a lot of corporates also now go to social media to do some research on candidates as part of the process to try and to understand individuals better than just a couple pages of CV.

What I would look for is the individual's personality. I guess a lot of universities prep the students pretty well in terms of how to write a CV and these have become something of a commodity now. What we're trying to extract is the personality. How would you fit into our culture? How open-minded are you? Are you mobile? Do you want to learn? Can you collaborate? So, it's really the culture, the personality of the individual we're looking for.

How do people from a US educational background compare to those from Hong Kong?

I do see a difference in my interaction with graduate trainees or going through the recruitment process as an interviewer. I would say that students coming from overseas have a more open mindset now, and maybe a more positive attitude saying: I want to try. It's an intangible quality that I see. I can't really say that's what open-minded means. It's through the conversation and through their own personal experience that I find they convey a bit more. Hong Kong students can convey more on their knowledge and views on what's going on outside Hong Kong.

What questions do you ask in interview?

Well, I might ask: Why are you interested in my firm? What do you know about what BNP Paribas does? What are you looking for in working with us? And I'm never looking for a correct answer. Then the second thing is to communicate

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I'm never looking for a correct answer

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about what they're interested in outside of banking, and outside of Hong Kong. So: Are you aware of what's going on globally? What are some of the key events happening now? When we talk digital: What are your interests in digital technology? I feel Hong Kong students can focus more to effectively communicate in an elaborated conversation.

Is the willingness to travel overseas significant?

Absolutely, Hong Kong has always been a world city, it's very international. In my interviews I am always looking to hear a positive message on physical mobility from student candidates because I look after greater China.

Is lack of communication ability to do with Hong Kong's education system?

There's the pressure to conform and just to focus on getting through school to get a diploma. What you're actually learning and the quality of your interactions with others during your school years may, I guess, be perceived as something that's not so valuable, whilst in fact it's really important. A lot of schools and universities in Hong Kong have prepped their students well, but they're pretty much model answers – and I'm not looking for that.

So, you are looking for the outlier?

Exactly. When I see something in the resume which is different, I

tend to question. I want to drive my conversation through that to bring out the personality of the individual. I don't want pre-planned and very polished answers that I know students are taught. I'm trying to find out who a person is, and invite them to express themselves by diving into something different.



Timothy Lee
Managing Director
BNP Paribas

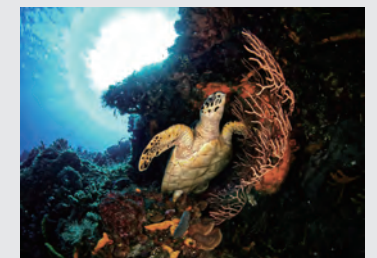
College of Business Photo Competition 2019 – A Better World

Winner: "Dancing turtle" by Boss Cheng, BBA Finance

Date: 2018/11/27

Location: Cozumel, Mexico

"Advertising has us chasing goods that we don't need. Slow down and enjoy nature. A better world is all around us."



Commendation

"With the moving speeches from Miss Greta Thunberg and the work of numerous scientists and individuals for the cause, this is a very timely photo reminding us that HOPE for 'A Better World' – is not lost, but only if we are all determined to protect our planet and walk the sustainable way of continuing our civilisation. This photo captures the larger part of our world that is often unseen and ignored, yet subtly reminds us of the critical agenda of an endangered Earth. It achieves the technical and artistic baseline, but it is the photo's context that wins the final decision." – **Anthony Lau**

Anthony Lau was the Grand Prize winner of the 2016 National Geographic Travel Photographer of the Year Contest. His work has been featured in numerous leading news outlets including CBS, BBC, Bloomberg, The Guardian, The Washington Post, etc. Anthony is also an alumnus of the College. More about Anthony: <https://www.anthonylauphoto.com>



The green economy transition

How the European Bank for Reconstruction and Development supports transition projects

Interview by Eric Collins

Interview with Dr Alexander Plekhanov, Director for Transition Impact and Global Economics and Richard Jones, AIIB-EBRD Business Development Director of the European Bank for Reconstruction and Development.

Alexander Plekhanov and Richard Jones gave a presentation on "EBRD Transition Report 2018-19 – Work in Transition" at CityU in March 2019. City Business Magazine took the opportunity to extend the conversation.



EBRD

The European Bank for Reconstruction and Development is a multilateral developmental investment bank founded in 1991. The EBRD uses investment as a tool to build market economies. Initially focused on the countries of the former eastern bloc, it has expanded to support development in more than 30 countries from Eastern Europe to Central Asia. Headquartered in London, the EBRD is owned by two European Union institutions as well as 68 countries including China and India. Despite its public sector shareholders, it invests in private enterprises, together with commercial partners.

Could you tell us a little bit about the early history of the EBRD?

Richard: The EBRD was set up relatively quickly to meet the challenge of an extraordinary moment in Europe's history, the collapse of communism in Eastern Europe. The bank was actually established just before the dissolution of the Soviet Union which became a founding shareholder. That explains why the legacy states of the Soviet Union, including those in Central Asian countries, subsequently became shareholders and recipient countries. The EBRD was a European-led initiative, a Franco-German-British arrangement. Although it was a French idea, and the first President

was French, the headquarters was placed in London, and it had a City of London culture grounded in merchant banking and was an investment banking platform from the beginning.

When the Soviet Union collapsed, what was the bank's transition philosophy?

Alex: The time when the bank was established coincided with the peak of the Washington Consensus. There was a belief that a lot could be done by maximising the involvement of the private sector and minimising the involvement of the state. The early days were very much about supporting private ownership and privatisation. The other elements that people recognised as important had to do with building institutions, such as the frameworks of the legal system behind the markets, and transfer of skills. In the early days of transition, there was a very strong decompression of wages and rising inequality, and market-relevant skills were in very short supply. People who had the skills commanded a high wage premium.

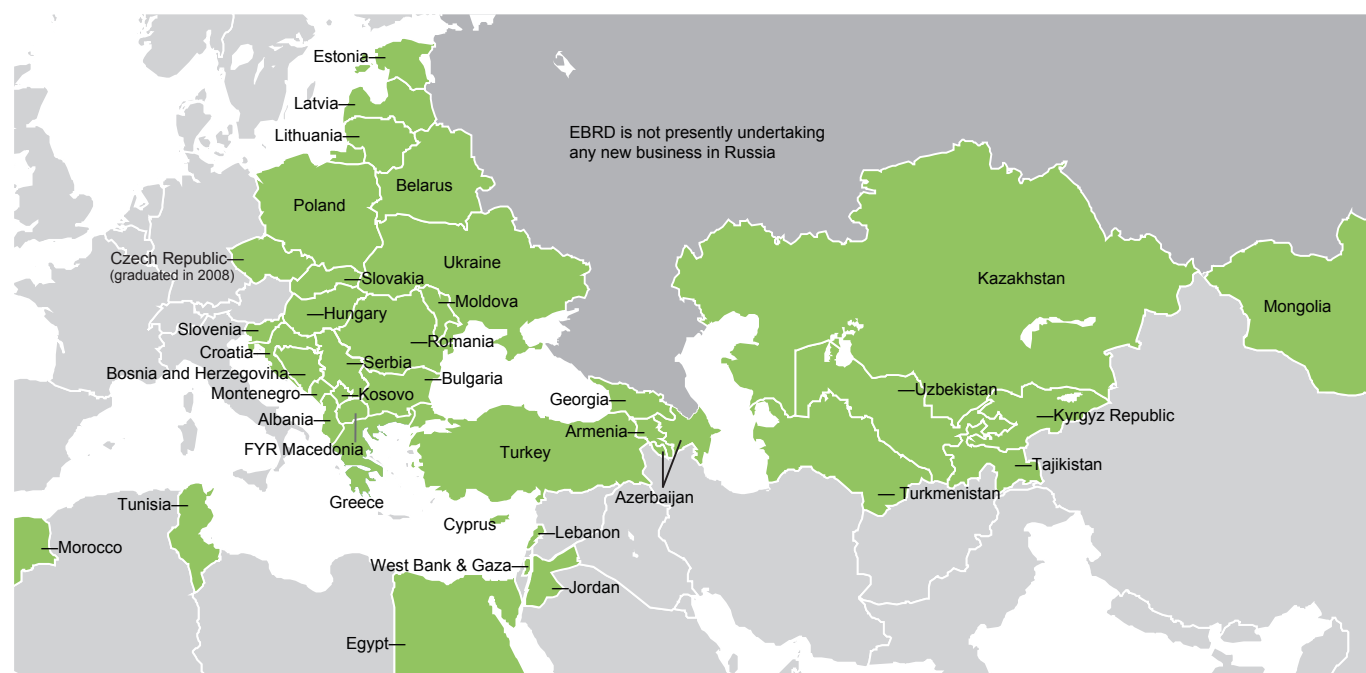
So that was the early vision. Over the years the understanding evolved that private ownership on its own can achieve only so much. A well-functioning state, backed up by functional institutions is also needed, and so the concept of transition grew organically. With greater realisation of green aspects and the pollution that can come

with rapid development, people came to see the Soviet legacy as one of very dirty industrial production. Previous central planning models didn't have any environmental shadow pricing built into them. Over the years people also felt that if reforms came with a lot of hardship and rising inequality, there could be a strong backlash which in the long-term may be very counterproductive for economic development and market building. So, the inclusion angle became a lot stronger.

I think that the East European economies at large benefited a lot from foreign direct investment and skills transfer but some economies got integrated much more strongly into the global system than others. So, an emphasis on integration came into the EBRD thinking. Then with the Asian crisis of 1997, the ensuing 1998 crisis in Russia and the neighbourhood, and also later when the 2008-9 crisis hit, people realised that the resilience of economies was also key.

In 2016 we formally revised our vision of transition to incorporate all these elements. So, in addition to a competitive interpretation which has a lot to do with building well-functioning private-led markets, there is now emphasis on governance, on green, on inclusion, on economic integration, and on resilience. These are the six pillars that the bank works with at the moment.

EBRD's investment footprint



Source: EBRD

How important is the idea of economic integration in the EBRD's work?

Alex: In general, integration is built into implementation of our mandate these days. We have looked at the experience of union building around the world and I think in general, making trade across borders easier, making movement of skills and capital easier, are good things. If it comes at the expense of building harder borders around a union that may be problematic so that's one balance to strike.

A lot of economic integration has come about with the export of institutions. In NAFTA the US is the core and they try to organise production and the rules of the game in Mexico a little bit along US lines. The European Union does the same, with accession countries having to sign up to the "Acquis Communautaire", the accumulated body of EU law and obligations

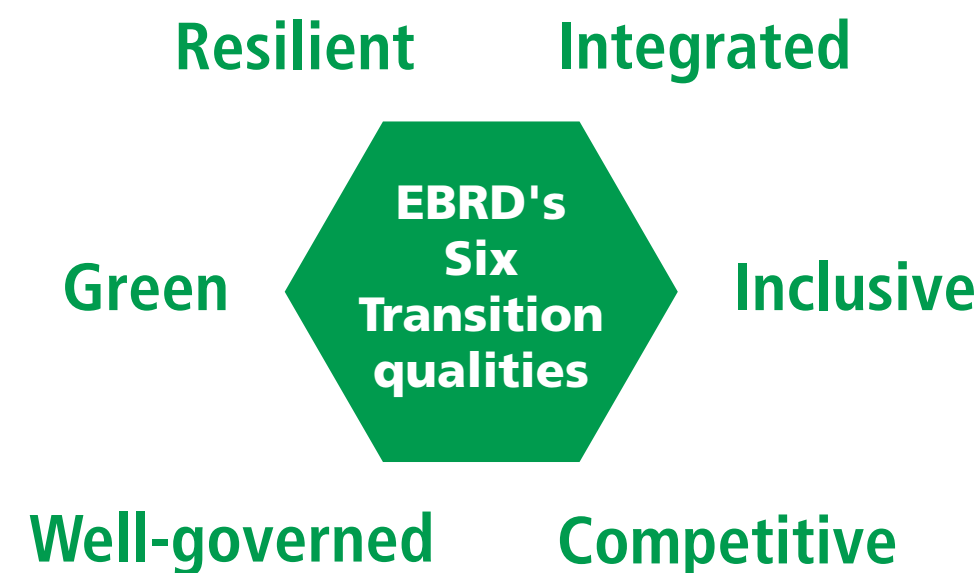
from 1958 to the present day. The EU accession process is a lot about building institutions, legal frameworks, ways of doing business that are similar to the core EU. Again, if we look at ASEAN in Southeast Asia this is anchored by Singapore and Malaysia. Over time there is an institutional convergence which is a very important element of institution building for developing economies.

In Central Asia however there is a real challenge. The supranational institution here is the Eurasian Economic Union, formed of Armenia, Belarus, Kazakhstan, Kyrgyzstan and Russia. These countries have a fairly low level of economic and political institutions to start with. There is no core country with developed economic and political institutions that could be exporting to build the union-wide institutions, and that is what we highlighted in the Transition

Report some years back.

When the EBRD assesses new projects, how important is the environmental aspect?

Richard: I think the EBRD was the first multilateral investment bank to have an environmental feature in its founding articles. We have always emphasised environmental compliance, risk avoidance and mitigation in projects that we finance. Increasingly however, it's also about environmental finance. This is very much focused on energy efficiency and helping firms and banks unlock the commercial benefits of reducing energy waste. This is also about policy dialogue with authorities to ensure that tariffs are set at a properly cost-effective level so that commercial incentives are in place for reducing energy waste. We have had a very strong programme for the past 15 years or more on energy efficiency finance across different sectors.



But more recently we've looked at resource efficiency and especially the use of water as water stresses in the Eurasian region are increasing, and also green power generation. We have a new focus, called the Green Economy Transition, and we are very focused on working with governments on the regulatory frameworks that permit investments in green energy and which we're financing on an increasing scale. This is an area where China of course is also very active industrially.

How did China's membership of the EBRD come about in 2016?

Richard: I think there have been discussions for many years in terms of the transition concept to market economy. I think that was interesting to Chinese policymakers. Another thing is that China is taking a greater role in the international financial architecture and organisations. I believe the EBRD was the last major multilateral

development bank that China joined. And I think from the bank's side there was a recognition that China was a very important player in the regions where the EBRD was operating, and therefore it made good sense.

There is a significant overlap between areas where the EBRD and BRI are working.

Richard: Well yes, although BRI is quite hard to understand and define. If you look at Chinese outbound investment, then there are certainly areas where investments may align with our objectives, and in those cases, we are interested to talk to those investors and see if we can work together.

How can the EBRD and BRI projects align?

Richard: To take the China-Belarus Industrial Park project, there are several aspects. Firstly, we need

to be financing projects that meet our standards so that's for example about environmental and social compliance standards. It's also about doing very careful financial due diligence to assess the risks, and about having a level playing field so that you are not benefiting firms from one block at the expense of another. For commercial reasons, the production in this industrial park will have to meet standards that are going to be compatible with export markets, principally the EU.

China has a lot of experience building industrial parks at home. How far can these projects be replicated in BRI projects?

Alex: Some industrial parks are immensely successful and some are ultimately rather problematic, such as in Saudi Arabia. I think they are very good examples of industrial parks that struggle to take off just because it's hard to find the skills



▲ Great Stone China-Belarus industrial park

and materials to populate them with production. For any project that is built it's really the analysis of that particular project, where it fits into the economy, what it links to which is key.

In our bank, Chinese contractors have always been free to bid for contracts that are competitively procured and I think they are successful about 25% of the time. This means there is serious expertise in China that is very competitive by international standards.

Where Chinese companies have a particularly competitive expertise in an area, they are always welcome in a competitive tendering process.

How optimistic are you that BRI projects are environmentally beneficial?

Richard: If you look at the leader

statements around the BRI, then green is very strongly emphasised but you have to look at the individual projects and that reveals the direction of the BRI. Although the BRI is looking at ways to green and climate proof infrastructure investments and although it's looking to finance green power, there are also examples of projects in coal-fired power generation which look as if they are going in the other direction. I guess the jury is out.

How do you envisage the EBRD's working relationship with China evolving over the next decade?

Richard: Well institutionally China is a very small shareholder, something like 0.1%, so I think the centre of gravity and governance of the bank is always going to be the

EU and the European perspective. The relationship with China is more about Chinese businesses and Chinese banks in the countries where the EBRD is working. We'll want to continue to develop our business relations with those companies and banks where it makes sense from the perspective of our mandate and also to keep an eye on the risks of being a partner for our countries of operations.

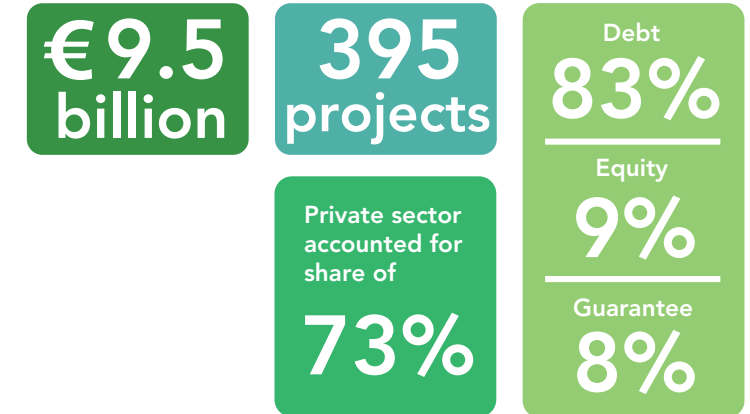
How to create BRI projects which are more sustainable?

Richard: Well I don't think the problem is with Chinese financial institutions per se. China has excellent banks and industrial players who can do these projects very well in many cases. But I think you do have problems if you have first of all packages of investment that are agreed in a fairly closed

EBRD investment in 2018

Top 10 investee countries (€m)

1	Egypt	1,148
2	Turkey	1,001
3	Greece	846
4	Poland	556
5	Ukraine	543
6	Kazakhstan	472
7	Romania	443
8	Uzbekistan	397
9	Serbia	396
10	Belarus	360



Source: EBRD

system and in an opaque way. If it is a political agreement where the financier and the contractor come with the project design all in one package that isn't clear to outsiders, then you're ruling out the expertise of the international community – including the Chinese international community. If you don't ensure that the standards are set from the outset, the economic due diligence, the environmental and social assessments, and the way that the project is going to be governed, that's a recipe for trouble.

Alex: I think also we have to look at infrastructure projects and their failures and successes in a broad context. Take Greece, which is by far the smallest economy to host the modern Olympics. I think it's about five times smaller in terms of GDP than Spain or Korea,

the next smallest economies. So, Olympic infrastructure for Greece relative to the economy was very expensive and the way it was used after the Olympics has not been very smart in terms of converting this infrastructure into legacy. The Olympics made a very sizable contribution to Greece's financial problems, that became

apparent after the 2008-9 financial crisis. These problems of making infrastructure smart and making it work for the long-term have existed since the beginning of time. I think the key is really for the recipient countries to be very smart about the kind of infrastructure they build, where, and how they use it for the long-term.



Dr Alexander Plekhanov
Director for Transition Impact and Global Economics
European Bank for Reconstruction and Development



Richard Jones
AIIB-EBRD Business Development Director
European Bank for Reconstruction and Development

The road less travelled

Algorithm detects hospital frequent flyers with over 90% accuracy

By Dr Eman Leung

Dr Eman Leung is a co-investigator of the CityU's first Theme-based Research Scheme project: Delivering 21st Century Healthcare in Hong Kong. He was an Assistant Professor of Management Sciences, College of Business, City University of Hong Kong until September 2018. Below, Eman describes his humbling journey across the elderly care continuum as he developed his research programme with the support of the Theme-based Research Scheme.

We constantly make assumptions about the world we live in. Every day we make assumptions about how people around us will act towards us and react to our actions. In science we make assumptions about the system we seek to study. To elaborate on Einstein's famous quote, in most cases these assumptions are wrong. But assumptions are to an extent useful, because they shape

something potentially unknown into something with which we are familiar. They give us at least the illusion of a solid ground on which to stand and leap towards the future. Maybe even to plant a pivot that lets us move the earth.

Mathematical perfection vs messy reality

Nowadays we apply scientific models and algorithms to solve real-life problems. But here's the

challenge: Whilst influential models are perfectly engineered by some of the best minds in history, real life is messy and in constant flux. To study reality is to peel through layers and layers of complexity – and in my humble opinion, there is no reality more complex than the one presented in our healthcare system.

In the simplest terms, a healthcare system needs to balance the care quality of the individual patient, the health of the population and total healthcare costs with the concerted effort of a continuum of service providers. But the picture is made complex because these providers serve different purposes and different mixes of health professionals, who are themselves credentialed with different kinds of qualifications and experiences.

The road less travelled

The temptation is to take a simple slice of this reality and supplement an oversimplified definition of the problem with pre-existing assumptions – rather than study the intricacy of the interdependent slices of reality.

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Assumptions are made
and most assumptions
are wrong
”
Albert Einstein



“

All models are wrong, but some are useful

George E. P. Box

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Under the leadership of Professor Frank Chen of the Department of Management Sciences, CityU's Theme-based Research Scheme (TRS) Delivering 21st Century Healthcare in Hong Kong – Building a Quality-and-Efficiency Driven System followed the road less travelled, and took on the daunting challenge of studying the multidimensionality of the healthcare system.

While most junior faculty would have been encouraged to focus on what was most immediately publishable, I had the good fortune of working under the mentorship of Professor Chen, and was encouraged to study what is scientifically and societally impactful. I am grateful to Professor Chen who, despite his dedication to mathematical rigour in a more theoretical pursuit, has shown me immense patience and trust in the long incubation period during which I struggled with the reality of engaging healthcare providers and making sense of healthcare data.

Kick-starting an academic career

Despite my experience as a data scientist in Canada and the US, and

as a manager of the quality and safety portfolio for a university-affiliated hospital in Canada, I didn't begin my career as an academic until 2014 when I relocated to Hong Kong and was recruited to the City University of Hong Kong. I was very fortunate to be able to kick-start my academic career by serving as a co-investigator on Hong Kong's first TRS in healthcare quality and efficiency. The TRS is a collaborative effort that transcends the boundaries of universities. All universities in Hong Kong take part, with the School of Public Health and Primary Care of the Chinese University of Hong Kong as our closest partner in this effort.

Leveraging data science

The TRS supported my programme of research, whose objective was to leverage different data science methodologies to address the following question: How do we assign an optimal ensemble of community, primary, acute, subacute, and outbound care services to each patient in accordance with the triple aim of our healthcare system, i.e. better care for individual patients, better health for the population, and lower cost per capita?

Together with Professor Chen and Dr Guan Jingjing, and with the help of a team of nurses and social workers managed by Ms Hera Leung, we embarked on a journey to apply data-driven operations research and analytics to study the interconnectedness of medical and social services that provide community-dwelling elderly and elderly residents of residential homes a continuum of care, and their concerted impacts on the elderly.

Sharing data and challenges

Much time and effort went into engaging the various medical and community service providers that make up the elderly care continuum. We were very privileged that different service providers along this continuum shared with us not only their data but also their challenges in providing person-centered care in a system that is under strain. Despite seemingly unsurmountable systematic obstacles, they still manage to advocate for their clients and patients. Such sharing helps us understand the context of their local clinical practices. In turn, we were committed to helping them better understand their data and

The challenge

How do we assign optimal care services to individual patients and meet the triple aim of our healthcare system?



Better care for individual patients

operations, and to improve the quality of both. The outcome of this partnership has been fruitful, as reflected in the pipeline publications and the implementation initiatives that have been recognised by the Hospital Authority (HA) described below.

Detecting 'hospital frequent flyers'

In terms of research, we have submitted for publication studies addressing challenges identified by providers across the elderly care continuum. At one end of the care continuum where community-dwelling seniors require no active clinical intervention, I have applied a novel machine learning methodology to simultaneously identify through data and algorithm perturbations: 1) the cutoff that delineates high vs low hospitalisation risk given the sample and time span, 2) the highest performing machine learning algorithm in classifying individuals' hospitalisation risk, and 3) the



Better health for the population

minimum number of indicators required to profile individuals who are 'hospital frequent flyers' in terms of hospitalisations. The result reveals that out of hundreds of features included in the initial pool, just 13 are sufficient to classify those who are likely to be frequently hospitalised with above 90% confidence.

AI-driven screening for fall risk

The most significant contributor to frequent hospitalisation is an event that is tragically commonplace for many elderly – falling down, and this resonates with the findings in the research literature. We therefore applied and compared the performance of different machine learning algorithms to profile elderly people with high fall risk through the identification of a minimum set of screening items. These could best predict which elderly in the community would most likely be screened positive by in-depth clinical fall risk assessments administered by health



Lower cost per capita

professionals, and should therefore receive appropriate intervention.

\$1 invested in homecare for community-dwelling seniors can save \$9 in medical costs

Moving down the care continuum, for those community-dwelling seniors who require homecare services, we foraged the data linkage between medical and social services to estimate how much community home care services can save on medical costs. Given the goal of informing real-life decision making, our economic evaluation was based on observational study conducted within the context of how services are actually delivered, rather than the controlled environment engendered in experimental trials. With the messiness that the reality brings to observational studies, however, we adjusted for the cohort's socio-demographical, clinical and functional statuses; health service utilisation history; and the individual elderly's frailty process over time in our model.

As different types of home care services simultaneously delivered to the same client impact on each other and on the medical system as a whole, our economic evaluation was conducted within the framework of generalised cost-effectiveness analysis. This enabled us to group patients according to the combination of home care services they received, and to estimate the risk-adjusted medical cost-reduction effect of each type of home care service in the presence or absence of other types of home care services, either individually or in combinations, to enable comparison with a counterfactual scenario and with each other.

Based on our analysis, \$1 invest in home care services delivered in the community can save from \$9 to \$69 depending on age and what concurrent home care service or services they are receiving. The preliminary finding of this study was cited in the Our Hong Kong

Foundation's report on the Hong Kong healthcare system, and was mentioned in a public address delivered by the Chief Executive of HKSAR as a piece of evidence supporting the government's policy in investing in community care.

Informing acute and postacute care assignments with an ensemble learning algorithm

In the acute care setting, we conducted extensive data mining on the Electronic Health Record to model the acute care cost using mixture models tailored to the clinical reality of "alternate level of care". In this model, even patients who share the same acute clinical statuses and demographic profiles are probabilistically associated with different length-of-stay alternatives as a function of population aging-specific factors. We then integrated this mixture model-based alternate level of care estimator with a dynamic joint estimator of hospital readmissions that we had

developed, and whose accuracy in predicting readmission over a one-year period reached 85% in both retrospective and prospective patient samples. Finally, we created an ensemble learning algorithm that is able to recognise the patterns in what patient segment-specific ensemble of primary, acute, convalescent and outbound care services may yield the smallest (and the largest) 28-day readmission rate with above 80% accuracy.

Is residential care a revolving door to hospital?

Hong Kong ranks number one in the percentage of older people being institutionalised in residential care facilities or old age homes. At the very end of the care continuum, we are currently preparing for publication of an economic evaluation of outbound medical care to residential care home. The estimation is based on data extracted from a residential care institution to identify the utilisation of hospitals, clinics, and outbound medical services provided to the residential care institution as well as services provided locally by residential care homes.

An opportunity to make an impact on our aging population

The TRS has given me the mandate to make visible impacts in the community. It has been my privilege to have an opportunity to work with the statistician and clinicians at one of the largest hospitals in Hong Kong to begin implementing the ensemble learning algorithm introduced above. The goal of this

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Models are perfectly engineered, but real life is messy

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collaboration is to achieve data-driven discharge planning at the point of admission to the hospital thereby addressing the grave challenges our aging population post to our healthcare system.

The chance to implement one's own algorithm in the clinical context to support actual clinical decisions is an immense privilege and a rare opportunity where the algorithms could be prospectively and repeatedly validated. Moreover, the implementation work at the hospital has caught the attention of senior management at the head office of the HA which has recently created two channels, the Data Collaboration Lab (HADCL) and the Data Competence Centre (DCC). The aim is to bring data science and AI to clinical service delivery and management to all public medical facilities in Hong Kong.

The ensemble learning algorithm we developed and piloted at the hospital got us selected by the Data Collaboration Lab as one of six inaugural project teams to access the Hong Kong-wide HA data. With the territory-wide data that are made available through HADCL, we can further improve our algorithm. It is our hope that the algorithm can eventually be implemented in selected health clusters across the whole of Hong Kong.

The true visionaries

We could never have overcome all the daunting challenges we faced in studying the complicated healthcare system and its imperfect data without the support of our medical and community partners and the conducive environment created by our Dean, Professor Houmin Yan. Professor Yan's vision and unwavering support got us where we are today. Also, we could never have achieved the balance between the scientific excellence and societal impact if not for the generous support of our donors who share both our vision and pioneering spirits in achieving an innovative, evidence-based and AI-driven solution for the healthcare problem. I feel extremely fortunate that our fundraising work has been supported by a very competent Development Office. I am particularly grateful to Ms Lolitta Wong, the development professional posted in the College, who not only provided us with valuable strategic assistance but managed to understand and communicate projects of academic complexity to our patrons, and teamed up with us to work on pitches to ensure the sustainability of the project.

Gratitude and goodbye

I am indeed immensely grateful for the generous support of the

donors. Phase one of the donation project has yielded an AI-driven approach to the detection of "hospital frequent flyers" and a low-cost screening for fall risk, which are not only academically interesting but can also serve as a platform for fostering care coordination between medical and social services – a direction that my medical and social service partners and I are embarking on.

The second phase of my project was originally intended to provide intervention to elderly participants who were identified as high-risk during phase one of my project, and evaluate the impact of the intervention using a wait-list control study, but I had already left CityU before the study began. Nevertheless, I have no doubt that the new custodian of the project – and the many new directions that the project has taken in the short time since I left – will enable TRS to add value to the community.



Dr Eman Leung
Assistant Professor
Faculty of Medicine
The Chinese University of Hong Kong



▲ Core members of the project: (from left) Dr Eman Leung, Dr Jingjing Guan, Phyllis Chau, Hera Leung, Alison Lee and Professor Frank Chen

Passport to an exciting career

Interview by Eric Collins

Dr Jih-chu Lee is vice chairman of Shin Kong Financial Holdings, Shin Kong Life Insurance Co. and MasterLink Securities Co. in Taiwan, and has worked in top managerial roles across the academic, political, and financial spheres. Here she reveals the key moves to working across sectors for a varied and challenging working life. Dr Lee is a member of College International Advisory Board of the College of Business.

How did your career start?

After receiving my PhD at the age of 26, I taught economics as a professor at National Chengchi University. During my tenure, I attended Harvard University and Stanford University as a visiting scholar. I also worked as a visiting professor at Peking University and Tsinghua University.

What was your next move?

After ten years as a faculty member, I was invited to serve as chairman of the National Youth Commission of the Executive Yuan. Later, I was elected as a legislator. After that, I served as vice chairman of the Financial Supervisory Commission, supervising and managing all financial industries including banks, securities, insurance, and then took over as chairman of the Taiwan Bank and Taiwan Financial Holdings. And then I moved forward into business, I was offered the opportunity to work with Shin Kong Financial Holdings Group and served as vice chairman. So all in all, I have worked in a wide range of fields including academia, government departments, the Legislative Yuan, state-owned



enterprises and private financial enterprises.

How did you move into business?

When I was at the end of the term of chairmanship at Taiwan Financial Holdings Group and Bank of Taiwan, two private financial companies invited me to serve at their companies, and at the same time I was invited to serve as the vice president of National Chengchi University where I had taught previously. This was a choice for two different directions in life. After thinking about it, I finally decided to accept the invitation of Shin Kong Financial Holdings Group.

At that time, Shin Kong Life was facing great operational difficulties. The insurance industry has a great social responsibility as the provider of assistance when policyholders face the most vulnerable moments in life, such as old age, major injury, and death. If I could help this life insurance company, which had more than 3 million policy holders, to develop positively it would be a very meaningful contribution to society, so I decided to accept the challenge.

How valuable is this experience of working across different sectors?

I feel that having experienced the industrial, government and

academic worlds, as well as working in roles representing public opinion, I have a deep understanding of the strengths and blind spots in each field.

That's why I believe that possessing a more diverse background will definitely help us think and judge more comprehensively.

Can this "revolving doorway" benefit universities?

Undoubtedly. If scholars work in government or business and return to academic circles, they are highly valued because they can provide academic and practical perspectives especially in the fields of business or social sciences. I believe such cross-disciplinary exchanges will in the future become key for solving more complex problems including social problems.

How closely do the various sectors work in Taiwan?

The interaction is relatively close compared with Hong Kong. It is not unusual for university professors to serve in government departments, or to serve in the corporate world as independent directors. The schools also encourage professors and the business community to cooperate strategically, such as setting up research and development centres.

What advice do you have to achieve mobility between various sectors?

When there are opportunities for cross-departmental development, be confident in yourself and don't be afraid to take this step. I personally

think that the most important thing to learn at school is to develop a clear logic, the motivation and ability to learn new things in-depth, and to embrace the culture of new teams with humility; with these conditions, I believe one has the basis of a transferrable skill set.

If you were starting out today, what would be your first move?

I would still look to the education sector. As a faculty member you have the opportunity to deepen logical training, independent data collection, and problem solving. I feel that systematic thinking and independent judgment is the foundation for performing well, no matter which field you might work in.

How important is international experience?

I would be happy to help students gain international experience. That could be studying abroad, or in learning situations where there are multi-national teachers and an open learning environment on campus. In the face of technological innovation and free trade environments, any outstanding talents, whether in employment or entrepreneurship, must frame their vision globally and not confine themselves to a single country.

How well are universities attuned to producing graduates for the digital era?

There's no doubt that the new era requires new abilities of our students. Firstly, the ability to master and use information. Second, to

transform information into useful knowledge, which in turn involves skills such as clear logic, computing knowhow, and a basis in professional knowledge. Third, the interest to develop lifelong learning, often across domains. Fourth, team training, because our current era emphasises a combination of speed and working with complex cross-domain tasks.

What career tips do you have for our undergraduate students?

For your first job, don't pay too much attention to the money or position. The key point is to identify work that has potential and interest for you as soon as possible, and to invest in work where your performance is naturally outstanding. Each position is an opportunity to accumulate experience for the next job, so don't be afraid to experiment. The cost of failure when you are young is very low. But the lessons learnt are assets for the future. Even if you don't like your current work, you should earnestly invest in it, because with serious input from your side you can always learn something.



Dr Jih-chu Lee
Vice Chairman
Shin Kong Financial Holdings

Global Business and EMBA+MPA hit the road to Eastern Europe

By *Isabella Sun*

Isabella Sun is Chief Student Learning Manager of the EMBA (Chinese) programme. She recently accompanied the EMBA+MPA programme on a visit to the Czech Republic and Slovenia. This is her account of the trip.



▲ EMBA+MPA students in Prague

The College's undergraduate course Global Perspectives on Contemporary Issues and EMBA+MPA programme went truly global in early June, moving their classrooms to Eastern Europe, and finding plentiful evidence of the Belt and Road Initiative (BRI)

along the way. Led by Professor Julie Li, Associate Provost, Co-directors of the EMBA+MPA programme Dr Gang Hao and Professor Wayne Yu, and Dr Chak-fu Lam, BBA Global Business (GBUS) Programme Leader, 27 GBUS year-one students joined 29 students

of the EMBA+MPA programme for the 8-day study tour. Destinations were Prague, capital of the Czech Republic and Ljubljana, capital of Slovenia.

The two groups of students participated in an array of learning activities including lectures, keynote addresses, company visits and networking events. This offered novel opportunities for interactive learning across the generations as the BBA students were able to connect with leading China business practitioners and others in the EMBA+MPA programme.

Dr Chak-fu Lam said, "One of the most memorable experiences was a networking dinner. BBA and EMBA+MPA students sat together and, at first, it was a challenge for students to mingle as they were still new to each other. But after a while, students got to relax a bit and talk to each other. They shared ideas, exchanged phone numbers, and most importantly, built connections. I think a few internships for first-year students were offered on the spot!"

The first stop was VŠE, The University of Economics, Prague, located in the centre of the old city. Founded in 1953, this is the largest institution of higher learning in the fields of economics, business, and information sciences in the Czech Republic. Numerous Czech political and business leaders have emerged from here, including the current Czech President Miloš Zeman.

On the first day of study, Mr Jan Brazda, CEE (Central and Eastern Europe) Advisory Partner, PwC, gave a keynote speech on Public Private Partnership (PPP) Projects in the Czech Republic and CEE. He explained that PPP is a contractual arrangement between public authority and private sector which results in greater private participation in the project, including value engineering and impacts on public finances spread over time.



▲ Wai-shing Heung from the BBA with Lu Liu from the EMBA+MPA programme

"According to China International Contractors Association (CHINCA)'s analysis, from a regional perspective, CEE countries are ranked second place in Belt and Road regions. The future BRI national infrastructure development potential is huge and will remain on the rise. Among them, the ASEAN and CEE countries have the strongest market demand." It is expected that China will continue to deepen its investment in the infrastructure market in Central and Eastern Europe, providing further financing options to strengthen logistics connectivity throughout Eurasia and will continue to focus on investments such as transportation and oil and gas pipelines enhancing cross-border flows in related industries.

In Central and Eastern Europe, the funding gap for infrastructure construction is expected to reach 615 billion euros by 2025, and this situation will be significantly improved due to the involvement of PPP projects.



▲ At the airport – Ready to go!



▲ BBA Global Business students fly to Europe as part of the Global Perspectives on Contemporary Issues course

In the afternoon, Ambassador Jianmin Zhang of the Chinese Embassy in the Czech Republic came to class, revealing that 2019 is the 70th anniversary of the establishment of diplomatic relations between China and the Czech Republic. Back in 1949, the Czech Republic was the fourth country in the world to recognise the People's Republic of China. At that time, the young republic needed to develop and could not do without the strong support of the international community. The Czech Republic had a very good industrial base and gave China a lot of support – for example, helping to establish state-of-the-art farm in

Cangzhou, Hebei.

Of course, visits to local business were an essential part of the trip. Czech glass crystal is famous throughout the world, and the Lasvit brand is one of the best, bringing a feast of visual light in glass crystal.

We also visited the headquarters of CITIC Europe, established in the Czech Republic as a platform for expansion in Europe. CITIC Europe plans to develop its business activities especially in manufacturing sector, travel industry and food industry, as well as other areas of business.

To Slovenia

After crossing the Charles Bridge in Prague, we arrived at the University of Slovenia, Ljubljana. Founded in 1919, this is the oldest and largest institution of higher learning in Slovenia and the alma mater of the first lady of the United States, Melania Trump.

Our first class, Slovenian Economy – From Yugoslavia to the European Union, was presented by Professor Mojmir Mrak. He explained that Slovenia's GDP per capita is now about 20,000 euros, equivalent to 80% of the EU's national average, but that the situation had been very different when Slovenia was

founded in 1991. After gaining independence from Yugoslavia, Slovenia faced hyperinflation. The country did not even have time to design and print banknotes. For half a year, everyone used the vouchers of the Ministry of Finance.

To steady the economic situation, a currency was introduced through a managed floating exchange rate system. Deflationary monetary and fiscal policies were followed to reduce inflation, trade was liberalised to strengthen relations with the West, and structural reforms were brought into focus to stabilise the banking industry. In the end the problem of the external debt was solved. Throughout, people had hard currency in their hands and did not need to use local currency to buy things. This greatly suppressed inflation and eased panic. There was recovery and positive growth by 1993, and since then Slovenia's integration into Europe has been cemented by joining the EU in 2004, and adopting the Euro in 2007.

On the second day, Mr Danilo Türk, former President of Slovenia and former Assistant Secretary-General of the United Nations, arrived in the classroom. During his one-hour speech, he mentioned a series of hot issues such as the relationship between Central and Eastern Europe and the Belt and Road, and the Sino-US trade war. The Three Seas Initiative summit had recently been held in Slovenia – representing countries around

the Baltic, Black and Adriatic seas. One of the main goals was to set up a fund to finance infrastructure projects. China's BRI is very relevant and many of the countries in the Three Seas Initiative are also along the Belt and Road which is having a great impact in Europe.

Mr Türk however foresaw some problems in the cooperation between China and Europe because of the complexity of the EU system. The main challenges are coordinating the economic development needs of the EU system and China, the relationship with the United States related to trade wars, and intellectual property rights. Europe also has very high environmental standards. All in all, it will be easier to invest in manufacturing industry than infrastructure. In sum Eastern Europe needs a large-scale cooperation framework system, and organisational relationships are very important for future development.

Last call was a company visit to a Slovenian Unicorn. Outfit7 is responsible for the world-renowned mobile pet application Talking Tom Cat. The app launched in July 2010, and after several successful years, was acquired by United Luck Group Holdings Limited for 1 billion US dollars in 2017. As of February 2019, Outfit7 apps have achieved more than 9 billion downloads. How did Slovenia produce such a unicorn in a small country with a population of only 2 million? The case study was divided into three

parts: human resource management and startup culture; entrepreneurial innovation leadership expansion; and the growth of a unicorn – sustainable development and innovation.

Post-acquisition, the company faces various challenges including how to further expand, changes in its corporate culture, and how to achieve a reasonable return on investment while retaining the core of the company's success.

This was the first time that EMBA students shared the classroom with undergraduate students. We saw energy and hope in this next generation and wish all of them a great future!

A big thank you

Lastly, a big thank you to Dr Jennifer Cheung for her generous donation which made this trip possible for the GBUS students.



Isabella Sun
Chief Student Learning Manager
EMBA (Chinese) Programme

One degree. Two majors. Infinite opportunities

By Dr Isabel Yan

A new world of work is emerging. Technologies driven by automation and algorithms are already making an impact and new roles are being created. Latest research suggests that careers will be longer, people will change jobs more frequently, and skills that you learn at university will lose their “sell-by date” more quickly than ever before. As the job market changes faster than ever, the keyword is “agile learning”.

More options

One way to embrace these changes is to take a double major. This is a great way to expand your skill set, experience multiple fields of study, and gain exposure to different professions and industries. You might also take the opportunity to get onto internships in different industries. So, when it comes to landing that first job, you will have more networking opportunities, and more options.

Futureproof

A double major also gives you a great chance to learn some of the foundational technologies of our time. Whatever your job, it is likely that AI/ big data/ blockchain is going to play an increasing role in your working life. To meet the demand, many of the double majors in the College of Business contain a strong tech component.

So if you want a career, say, as a digital marketing specialist, a double major in Marketing and Information Management will probably make you more competitive. Whereas if you see AI as key to the future of your work as an accountant, a double major in Accounting and Information Management would equip you with the relevant skill set.

But don't take my word for it. In a super-competitive job market, what are our corporate leaders saying?

Employers say “Yes” to double majors

“ A double major is a good illustration of the graduate’s learning ability and discipline. The degree provides a broader knowledge base for the graduate to build on and move forward.”

Francis Tong

Former Group Human Resources Director
Hutchison Port Holdings

“ Double majors are special. When I see something different, I want to know more.”

Timothy Lee

Managing Director
BNP Paribas

The College of Business offers one of the most varied selections of double majors in Hong Kong. Get a head start in the race to futureproof your skills.

Grab the chance now!



Dr Isabel Yan
Assistant Dean
Career Services



CB Double Major



College of Business

香港城市大學
City University of Hong Kong





Dabble, discover and rediscover

Marthinus Strydom studied on the Joint BBA Degree in Business Economics with Columbia University School of General Studies, and has joined the trade finance team at Deutsche Bank in New York City. Here are Martyn's highlights – along with his career tip.

By Marthinus Strydom

Picking a highlight of my time at CityU and Columbia is impossible because I was fortunate to have so many opportunities. Whilst at CityU, I had the opportunity to travel to Singapore and Germany for conferences, South Korea for a study tour and be subsidised by the College of Business to attend summer school at the London School of Economics. Through Columbia I then had the exceptional experience of studying art and music in Paris for an entire summer. I am thankful to both my universities for providing me with these international opportunities.

Although for most of the last four years, I was set on a career in academia or at an NGO such as the World Bank or United Nations (there is a College of Business video to prove this), I now look forward

to starting my career in the trade finance team at Deutsche Bank in New York City. I am truly excited about the work I will be doing because it involves the intertwining of the private and public sectors.

More important than why my own job excites me, is a valuable lesson that I have learnt whilst navigating a particularly complex process of career selection. It is a lesson that I wish to share with all students at CityU.

Do not stick dogmatically to a single career path

Your time at university is both about finding yourself and about crafting yourself into someone you are proud to be. I strongly encourage students not to stick dogmatically to a single career path from day one. Instead dabble in different

ideas, discover and rediscover what interests you and what drives you. Don't pursue a particular path for its money or prestige, but at the same time, if the work of a lucrative and prestigious field truly interests you, do not be hesitant or shy about relentlessly pursuing it. Stay true to your own interests and strengths, it is your best chance of being successful.



Marthinus Strydom
Graduate
CityU-ColumbiaU
Joint Bachelor's Degree Program

NEWS

2019 College Teaching Excellence Awards

Students, alumni and colleagues participated in the nomination process for the 2019 CTEA exercise. Such was the quality of the candidates, exceptionally a total of four faculty were recognised this year for their outstanding contributions to teaching excellence: Dr Qianqian Huang (Economics and Finance), Dr Zachary Leung (Management Sciences), Professor Muammer Ozer (Management), and Professor Wayne Yu (Accountancy/ Economics and Finance).

The Selection Committee commended the quality of applications received and the exemplary professional practice and teaching work recognised with the following citations:



Dr Qianqian Huang is an enthusiastic teacher who brings a variety of instructional strategies and methods to the classroom. She is sensitive to students' needs and offers timely academic advice and guidance to students for their personal and professional development.



Dr Zachary Leung is a devoted teacher and coach who prepares students for open business competitions with impressive results. He has been innovative for translating and repackaging the training contents into a formal course which develops students' case analysis skills in business.



Professor Muammer Ozer is a dedicated teacher who is always fully prepared for his classes, teaches with vigour and insight, and transforms students to the next level through discovery quests and reflective practice underpinned by clear teaching philosophy. As the DBA Programme Director, he plays a leading role in renewing and reforming the DBA curriculum as well as providing personalised advice and guidance to his students.



Professor Wayne Yu is an inspiring teacher who is able to create an interesting interactive learning environment to spark students' interest and critical thinking. His teaching is well recognised by students of various levels from undergraduate to postgraduate and executive education. He has contributed to new course development, revealing the advancement of knowledge in his discipline.

The College is committed to fostering a culture of teaching excellence as well as a caring learning environment for our students and has established this teaching award scheme to recognise the very best teachers in the College.

A special note of thanks goes to our benefactor **Dr Jenny Chan** for her generous donation which has made the establishment of this teaching excellence award possible.

NEWS

Professor Xufei Ma honoured with Silver Medal



Professor Xufei Ma from the Department of Management has been recognised at the Journal of International Business Studies (JIBS) 50 Year Celebration for his substantive research contributions. He was awarded a Silver Medal at a presentation held at the Academy of International Business Conference in Copenhagen on 25 June.

Published by the Academy of International Business, JIBS is ranked

top in the international business field and listed among the UTD 24 journals.

"I am humbled by being recognised among the best international business researchers in the world, some of whom are founders of the journal, the academy, and the field," Xufei said.

"Our field never lacks interesting topics, and we are now experiencing important issues such as the current globalisation-deglobalisation trend, Belt and Road initiative, and Greater Bay Area development. All of these will definitely provide abundant opportunities for international business researchers to address the grand challenges faced by policy makers and managers."

It is the third time Professor Ma has received recognition in the international

business field, previously receiving the Haynes Prize for the Most Promising Scholar by the Academy of International Business (2006) and the Dunning Fellow by the John H. Dunning Center for International Business (2017).

Professor Ma's current research examines strategy, innovation, and management of multinational and entrepreneurial firms in and from China's emerging economy. His research has appeared in leading journals such as Strategic Management Journal, Academy of Management Journal, Journal of International Business Studies, and Journal of Management. As a management professor teaching EMBA courses, he is also a frequent contributor to practice-oriented meetings, journals, and forums.

CityU students triumph in HSBC/HKU Hong Kong Business Case Competition 2019

A team of four undergraduate students, **Martyna Chmielewska**, **Holly Kong**, **Belle Chan** and **Ella Xu** represented CityU in the HSBC/HKU Hong Kong Business Case Competition 2019 on 30 May. Battling through two gruelling rounds of competition, the group faced teams from seven local universities before eventually triumphing in the Championship.

"I am very proud as I saw how they have developed their case solving and teamwork skills this past semester. I also feel a great sense of accomplishment that they were able to win the Hong Kong competition by defeating very good teams from other universities," said the team's coach and trainer **Dr Zachary Leung**, Assistant Professor of the Department of Management Sciences.

Team member Holly said "The cases we tackled, both in the competition and during training sessions were quite varied and required the application of these skill sets in distinctive contexts. In light of this, I have broadened my business knowledge across industries and polished my hard and soft skills."

Martyna said "I would recommend students of various disciplines to take up case analysis practice as it has been one of the most enriching experiences for me and I think it will help anyone in the future career. Not only have we learned how to deal with time pressure, but also how to stay creative and open-minded when facing business problems we have never encountered before."

The HSBC/HKU Business Case Competition is an annual competition organised by the Faculty of Business and Economics and the Asia Case Research Center of the University of Hong Kong. It aims to enhance students' business skills and global perspectives, and nurture them to be future business leaders.



CityU hosts International Blockchain Olympiad Competition 2019

Co-hosting with Hong Kong Science and Technology Park and The Hong Kong Blockchain Society, the College of Business organised a 3-day finale of the International Blockchain Olympiad (IBCOL) in early July. IBCOL promotes a disciplined and multidisciplinary approach to building blockchain and distributed ledger applications. The world-class student competition highlights the challenges of applying blockchain and distributed ledger technologies for real-world applications, from technical, business and legal perspectives.

34 participating teams gathered in Hong Kong on 5 July and attended a workshop at CityU. On 6 July, 30 teams from Brazil, Canada, China, Estonia, Hong Kong, Hungary, India, Pakistan, Philippines, Russia, Taiwan, the UK, and the US were shortlisted to showcase their projects at a symposium at CityU

and an exhibition at HKSTP InnoCentre. On 7 July, 19 teams were shortlisted for a final pitch. The awards ceremony was held on the same afternoon.

Professor Houmin Yan, Acting Dean of the College

of Business, expressed his gratitude to the Hong Kong Blockchain Society for initiating such a forward-thinking competition to showcase blockchain technology and develop young talents. He said, "It is a great platform for students, scholars, business and industry leaders to exchange innovative ideas and intelligence on blockchain and cryptography that could make an impact on the world."



Judges and guests comprising of industry experts and academia were involved in the final evaluation. **Mr Albert Wong**, CEO of Hong Kong Science and Technology Park, **Mr Charles Mok**, Legislative Councillor and **Dr Isabel Yan**, Assistant Dean (Career Services) of CityU College of Business presented the awards.

Please join us in congratulating all the winning teams of the competition!

Students meet record number of companies in Business Career Fair



The 2019 edition of the Business Career Fair attracted a record 35 companies, including S&P 500, multinational companies and startups. A wide spectrum of industries including banking, fintech, IT, accounting, property, retail, hospitality, and logistics were present at the September fair. This

was a great chance for our students to meet recruiters, understand first-hand what was on offer, and maybe even land an interview on-campus.

In her opening remarks, **Dr Isabel Yan**, Assistant Dean (Career Services) said, "The annual Business Career Fair is a big event for our students to have a dialogue with recruiters and get to know more about various industries in the business world. It is very encouraging to see that the number of participating companies has been rising over the years. We sincerely hope that our business partners can continue to support and employ more of our local students."

Professor Albert Ip, Convenor of the Business Career Development Advisory Committee, commended CityU students for their good quality. He said, "We are glad to learn from recruiters that CityU students are talented, have good attitude and show leadership attributes at work. These good qualities are essential in the business world today. As the biggest business school in Hong Kong, CityU works closely with our corporate partners to address their talent needs."

This fourth annual edition of the fair was organised by the Business Career Development team of the College of Business.

NEWS

Orientation for first cohort of CityU-Tsinghua EMBA+MPA programme at Tsinghua

The first cohort of CityU-Tsinghua EMBA+MPA programme have begun their Master of Public Administration (MPA) learning journey at Tsinghua University. The 33 students gathered in Beijing in August for an array of orientation activities, having started their Executive Master of Business Administration (EMBA) module at CityU in Hong Kong back in April.

An inaugural opening ceremony was held on 24 August in Beijing. Guests attending the ceremony included **Professor Way Kuo**, CityU President; **Professor Houmin Yan**, Acting Dean of the College of Business; **Professor Bin Yang**, Vice-President of Tsinghua University; **Professor Xiaojuan Jiang**, Dean of the School of Public Policy and Administration at Tsinghua University, as well as **Professor Wayne Yu** and



Dr Hao Gang, Co-directors of the programme at CityU.

The first batch of the programme's advisory committee was announced in the opening ceremony. The advisors include **Dr Baige Zhao**, Chairman of the Expert Committee of International Think Tank under the Chinese Academy

of Social Sciences; **Mr Tianyi Wang**, Chief Executive Officer of China Everbright; International Limited; and **Mr Zhifeng Han**, Vice-Director of the Department of Fixed Asset Investment at the National Development and Reform Commission under the State Council.

Students work for social enterprises in South Africa

Each summer, the College of Business sends students to Students' Health and Welfare Centres Organisation (SHAWCO), Cape Town, South Africa for 5 weeks of experiential community service learning. This year, 23 students joined the SHAWCO programme. Apart from doing research, classes, and placements at social enterprises in Cape Town, students also got the chance to explore the beautiful landscapes of the South African city and have a full cultural immersion in various activities.

"The SHAWCO programme has made my summer meaningful. We explored around and had a lot of fun," said participant **Curlie Chui**. "After visiting South Africa, I have a wider global vision and better understanding of



social problems in the country. It would definitely be a trip that won't fail you."

To showcase their learning outcomes from the trip, SHAWCO participating students organised a South African Culture Fair at CityU in September. The

fair was supported by CityU's funding for student-initiated projects. Students brought a taste of South African culture via sharing, games, a photo exhibition, and last but not least – food and drink tasting.

Comings & Goings

We welcome our new faculty who joined us between March 2019 and September 2019

Professor Xiao Li

Professor
Department of
Management



Professor Xiao Li received his PhD from the University of Toronto. His research interests include strategic networks, institutionalism and leadership. His teaching interests are strategic management, international business, and leadership. His research works have appeared in top-tier management journals such as *Academy of Management Journal*, *Strategic Management Journal*, *Administrative Science Quarterly*, and *Organisation Science*, etc. He was awarded the Cheung Kong Scholar Chaired Professorship by the Ministry of Education, China, in 2016. He is currently an editorial board member of the *Academy of Management Journal* and the *Strategic Management Journal*.

Dr Shan Zhao

Associate Professor
Department of Economics
and Finance



Dr Shan Zhao received his PhD from the Toulouse School of Economics, France. Prior to joining the Department of Economics and Finance at the City University of Hong Kong, he was an Associate Professor of Finance at the Grenoble Ecole de Management, France. His areas of research include corporate finance, corporate governance, and institutional investors. His publications have appeared in the *Journal of Financial Economics*, *The Review of Financial Studies*, and *Strategic Management Journal*.

Dr Yi-chun Chen

Assistant Professor
Department of
Accountancy



My name is Yi-chun Chen, and I am very happy to join the CityU Accountancy family. I hold a Bachelor's degree in Accounting and History from National Taiwan University, an MSc degree in Accounting from National Chengchi University, and a PhD in Accounting from the Hong Kong University of Science and Technology. While studying for my PhD, I visited Georgetown University for one year. My research has focused on financial intermediaries, disclosure regulations, and corporate social responsibility. Lifelong learning is fundamental to a happy and successful life. I hope that I can help my students develop professional skills, and also trigger within them a deep and passionate interest to keep learning. In my spare time, I enjoy hiking, jogging and cooking.

Dr Jinzhi Lu

Assistant Professor
Department of
Accountancy



Dr Jinzhi Lu's research uses economic models to analyse the consequences of accounting standards and market regulations. Dr Lu earned his PhD in Accounting from the University of Chicago Booth School of Business. He also holds a BA in Economics and a BSc in Mathematics from Wuhan University, and a Master's in Financial Mathematics from the University of Chicago. Dr Lu teaches financial accounting at various levels. Through his courses, he hopes to equip his students with the necessary knowledge to understand financial statements, and stimulate their interest in accounting. Outside academia, he enjoys playing board games and strategy games. He was one of the top players of the board game San Guo Sha.

Dr Pedro Enrique Gomez

Assistant Professor
Department of Accountancy



Dr Gomez received his MS and PhD in Accounting Information and Management from the Kellogg School of Management, at Northwestern University. He received a BA in Mathematics, Statistics and Business Economics and a BSc in Accounting from the University of South Florida. His research focuses on auditing, financial reporting and capital markets.

Dr Chiyong Cheong

Assistant Professor
Department of Economics
and Finance



Dr Chiyong Cheong is excited to join City University of Hong Kong starting this fall. Chiyong earned her PhD from the Finance department of Kelley School of Business, Indiana University. Before joining the doctorate programme at Kelley, she studied at Sungkyunkwan University in Seoul, South Korea for a Bachelor of Business Administration degree. Chiyong's research is in the area of corporate finance and financial intermediation. Her dissertation is on labour and finance. She is interested in looking at how firms make financial decisions in the light of unseeable forces, such as employment quality or intangible assets.

Dr Will Liu

Assistant Professor
Department of
Economics and Finance



I received my PhD in Finance from McCombs School of Business, University of Texas at Austin. My research interests are financial intermediation, financial markets, and corporate finance. My current research focuses on competition and market power of financial intermediaries and the stakeholder perspective of corporate governance.

Dr James O'Donovan

Assistant Professor
Department of
Economics and Finance



Dr O'Donovan received his PhD degree in Finance from INSEAD. Before his doctoral studies, he obtained his MSc in Quantitative Finance from University College Dublin. He is an empiricist with research interests in asset pricing and corporate finance.

Dr Junming Liu

Assistant Professor
Department of Information
Systems



Dr Junming Liu received his PhD from the Rutgers Business School at Rutgers University. His general areas of research are data mining, supply chain analytics, smart city, and large-scale optimisation, with a focus on developing data mining techniques for emerging big data and supply chain applications.

Dr Ding Ma

Assistant Professor
Department of Marketing



Dr Ding Ma received her Bachelor's degree in Electrical Engineering from Beijing University of Chemical and Technology, her first Master's degree in Financial Engineering from New York University, her second Master's degree in Statistics from Stanford University, and her PhD in Management Science and Engineering also from Stanford University. Her research interests include, on the methodological side: structural modeling, optimisation, machine learning; and on the substantive side: branding, digital marketing, social media, public policy.

Dr Yong-chin Tan

Assistant Professor
Department of Marketing



Dr Tan received his PhD in Business (Marketing) from Singapore Management University. His research focuses on new technologies and digital strategies in online and offline retail. Prior to his doctoral studies, he obtained his Bachelor's in Business Management from Singapore Management University, and worked at Nielsen and Kantar Millward Brown.

Dr Chi Wong

Assistant Professor
Department of Marketing



Dr Wong's research interest lies in consumer information processing, cross-cultural consumer psychology, and marketing communications. His research has been published in top-tier psychology and business journals, such as Journal of Personality and Social Psychology and Journal of Consumer Research.

Dr Zhiya Zou

Assistant Professor
Department of Information
Systems



Dr Zhiya Zou completed his PhD degree in Information Science at the University of Iowa and his Bachelor's degree in Automation at Tongji University. He participated in the prestigious complex systems summer school hosted by Santa Fe Institute in 2017. His research interests lie in the broad areas of business analytics, data science, and information systems. With an interdisciplinary background, he has collaborated with people from various areas, such as physics, marketing, operations management, sociology, public policy, etc. In addition to research, he is also an active open source advocate devoted to providing readily made tools for data collection and analytics.

Dr Zhi Chen

Assistant Professor
Department of
Management Sciences



Dr Zhi Chen obtained a Bachelor of Engineering degree from Tsinghua University in China, and holds a PhD degree in Management from the National University of Singapore. He was a postdoctoral research associate in the Department of Management at the Imperial College Business School. His main research interests include firstly, decision making under uncertainty with different levels of data availability and its applications in decision analysis, operations management, system control, and engineering; secondly, cooperative game theory for joint activities and its applications in production economics, risk sharing and risk management.

Dr Venus Lo

Assistant Professor
Department of
Management Sciences



Dr Venus Lo received her PhD in operations research from the School of Operations Research and Information Engineering at Cornell University. Prior to Cornell, she received her Master of Mathematics in Combinatorics and Optimisation, Master of Accounting, and Bachelor of Mathematics from the University of Waterloo. Her research focuses on assortment optimisation and pricing problems in revenue management. In particular, she is interested in designing efficient algorithms with provable performance guarantees for revenue management problems.

We extend our best wishes for future happiness, professional fulfilment and prosperity to faculty who left us between March 2019 and September 2019

Dr Cuili Qian

Associate Professor
Department of Management

Dr Ai-an Greene

Assistant Professor
Department of Accountancy

Dr Daniel Preve

Assistant Professor
Department of Economics and Finance

Dr Margaret Zhu

Assistant Professor
Department of Economics and Finance

Dr Chih-hung Peng

Assistant Professor
Department of Information Systems

Dr Christoph Schneider

Assistant Professor
Department of Information Systems

Dr Jing Wu

Assistant Professor
Department of Management Sciences

Dr Yixuan Xiao

Assistant Professor
Department of Management Sciences

Dr Stella Li

Assistant Professor
Department of Marketing

Alumni class notes

Share your news with classmates and CB alumni! Tell us about the highlights of your year – family, career, accomplishments, and interests. We will publish your updates in the “Alumni class notes” section of City Business Magazine and on the CB website.

Simply submit your information (name, major, graduation year) and your news to us. Don't forget to attach photos with your write-up!



Clare Wong MSc in Finance'08

Hello my alma mater and fellow schoolmates, a quick update to catch up here. I have changed the work department internally in an investment bank. I have been working as product business analyst on client onboarding systems within corporate investment bank for almost a year. Here I have opportunities to learn operational workflows, systems product design particularly in user workflow and UX. My daily task is to liaise with teams to collect systems requirements for our operation teams to onboard clients, which allows me to learn many things such as KYC, due diligence and risks. Thanks to MSc Finance programme for equipping me with useful analytical skill set in my daily tasks. Cheers and talk soon!



Professor Chun-kwong Chan DBA'15

It is just a year since I took up a professorship in FinTech with CUHK, after many years at HSBC Canada and Asia Pacific overseeing technology teams in retail banking & wealth management. The DBA training gave me the "entry qualification" to be an academic, and more importantly the opportunity to share my practical experience with our next generation leaders in technology and business. Not until I attempted to publish my thesis as an academic journal paper did I realise the amount of effort and perseverance needed. It took us more than three years to finally get the paper accepted for publishing by Internet Research, a SCI/SSCI listed journal. All the best to the CityU DBA programme, continuing to be the best in the region, and encouraging contributions of academic research to benefit the community at large!

Dr Irene Tung MBA'15

Greetings, everyone! I am currently the Head of International Economics Department of the International College of Central South University of Forestry and Technology in Changsha, Hunan Province. I received my PhD degree in June 2019. I am grateful for the MBA learning experience at CityU and always recommend our high-performing students to apply for the CityU MBA programme. I miss the time at CityU, especially the residential trip where we learnt a lot. Best wishes to all my fellow alumni!



Zizhou Zhao EMBA'17

I am an EMBA (Chinese) alumnus and vice chairman of the EMBA Chinese Alumni Association. During my time at CityU, I began to practise long-distance running. After graduation, I participated in the 13th Xuanzang Road Business School Gobi Challenge on behalf of the College in May 2018. My teammates and I completed 112km in four days and three nights. The team won two awards. Through training and competition, our friendship was enhanced, and we also trained our body and perseverance. After finishing, I felt that I was stronger than ever. No difficulty is insurmountable! It was a windfall for me to study at CityU.



Sandy Lam BBA Business Analysis'16

My study at CityU helped me develop solid technical programming skills and statistical knowledge which are applicable to my current work. I am currently working in HSBC data and information management department. I interact with different business departments, collect their requirements, build data models and present different reports. It is full of challenges but also a great source of satisfaction in my life! Studying at CityU provided me a strong foundation in order to explore advanced data modelling techniques. To continue my passion, I have also completed my master's degree in risk management science at CUHK. The learning experience at CityU was definitely fruitful! During my time, I received lots of help and updates from professors no matter for study or future career path. I feel grateful to the professors and business school resources. As of now, I still revise notes and remember what I have learnt at CityU as that knowledge and skills are very useful and practical in my work. Treasure the moment with CityU and enjoy your study. Wish you all a wonderful journey in your life!



Icy Zhao MA Quantitative Analysis for Business'19

When I had my first internship in Hong Kong in 2017, I fell in love with this place. Time flew by in my postgraduate studies in 2018-2019, and I loved the city even more. Here is a place with talents from all over the world. Everyone here has something to learn from. Life pace is fast, but with greater pressure, the faster you grow. I believe in "back to basics" – doing simple things wholeheartedly and repeatedly, and excelling in them. Real masters usually work very hard at their expertise. You will never know how much others have paid to achieve today's achievements. So, keep it up! I hope I can find a sky of my own in Hong Kong. I also hope that CityU and every student here, as well as Hong Kong, will get better and better!



Angela Leung MBA'19

The MBA was a key milestone for me to step up my personal development. It was a fruitful and unforgettable learning experience for the two and a half years of study. It was challenging, yet it was fun and provided me a strong and powerful platform to strengthen both my soft and technical skills. One of the most precious experiences was the residential trip to Cambodia where I worked on a consultancy project with my fellow classmates for a regional company. It truly enhanced my strategic thinking and problem-solving techniques and prepared me to challenge for more in my career.



Candy Lee MSc Operations & Supply Chain Management'19

I have just stepped out of my comfort zone and moved to another company. It was a tough decision to make as that was my first full-time job, and I spent seven years there to develop my career. My former supervisor is my role model; he is a good leader who has offered me opportunities and time to acquire new knowledge and skills. He has made me become a better me! At last, he has also taught me: Never stop, keep taking new challenges!



Tan Yen Sing BBA Accountancy'19

Arriving in Hong Kong without knowing what I would go through in the next four years, CityU provided me with various "Go Global" opportunities. I am grateful to have the chance to participate in study tours, exchange programmes, international case competitions and conferences across top universities in mainland China, South Korea, Australia and the US. Furthermore, CityU also focuses on students' employability, and I completed three internships for different positions including banking, finance and accounting, and have worked in Malaysia, Hong Kong and Australia. Thank you CityU for the memorable four years and all the very best to CityU in the future!