



Buildings standing illuminated and shrouded in clouds are seen from Victoria Peak at night in Hong Kong

# Hong Kong - One country, two economies

By Ben Bland

On the edge of Hong Kong's Victoria Harbour, workers are building a cavernous station that will be the terminus for one of the most expensive high-speed rail links ever constructed. The USD11 billion fast train linking Hong Kong to mainland China is meant to be a showpiece for integration between the semi-autonomous territory and its mother country.

Instead, the over-budget and behind-schedule project has turned into a symbol of the deteriorating political and economic relationship between Beijing and Hong Kong. It could be a foretaste of the profound difficulties that lie ahead for the global financial centre.

To smooth rail departures, the Hong Kong government is planning to place Chinese border police inside Kowloon station, much like French police conduct checks on outgoing Eurostar passengers at the King's Cross terminus in London.

The proposal might have been convenient for travellers but was worrying

Hong Kongers, even before the detention last year by the mainland police of five Hong Kong publishers who sold works critical of China's ruling Communist party.

The apparent abductions have shaken the confidence of the city's 7 million residents – and international investors – in the legal autonomy and civic freedoms that Beijing guaranteed to Hong Kong for 50 years from 1997, the year of the British handover.

The case of the booksellers has crystallised anger over growing interference by Beijing. Opposition legislators have vowed to block the rail project rather than allow Chinese police to operate in the heart of Hong Kong.

"To me it's unacceptable and it is worrying for the Hong Kong people," says Kenneth Leung, a lawmaker in the city's legislative council. "We don't want integration with China because our style and way of thinking can't be integrated."

After delays caused by technical difficulties and cost overruns, the political

opposition could mean further problems for the 26km rail line to Shenzhen, just over the border in China. It had been scheduled to open in 2015 but will not be operational before late 2018.

Unfortunately for Hong Kong the battle over its future is coming as its China-dependent economy faces the "worst time in 20 years," according to John Tsang, the financial secretary.

"Hong Kong is really dependent on China and external trade," says Lily Lo, an economist at DBS, the Singaporean bank, in Hong Kong. "The Chinese economy is slowing down and this is a structural slowdown so we don't think there will be a V-shaped recovery any time soon. There's no quick fix."

The rail link and other large infrastructure projects are supposed to secure a place for the city as a hub in the sprawling and wealthy Pearl River Delta region on the southern coast of China. A 30km sea bridge and tunnel is being built to connect Hong Kong with the casino centre of Macau and the

mainland city of Zhuhai and is also beset by cost overruns and delays. Escalating tensions, both with Beijing and within Hong Kong, are further complicating these projects and adding to the economic clouds over the territory.

Its traditional pillars of wealth – tourism, retail, trade, financial services and property development – have all been hit by cyclical and structural downturns that have exposed the reliance on China, which accounts for 40 percent of trade.

Over the past decade, China has opened its economy further and more investors are doing business directly with the mainland, causing Hong Kong to lose its relevance as a gateway. Its container port, which was the world's busiest in the 2000s, has fallen to fifth place, overtaken by Shanghai, Shenzhen and Ningbo. Facing a severe shortage of space, high costs and Chinese rivals with strong government support, more downward pressure is likely.

Previously Hong Kong benefited from rapid growth in China and low interest

rates in the US, given that its currency is pegged to the dollar. Now the situation is reversing, with China facing a period of restructuring and slower growth, while the US Federal Reserve is expected to raise interest rates further, although many investors are betting it will not happen in 2016.

China's gross domestic product is forecast to grow by about 6 percent this year. In Hong Kong, the government predicts that it will be lucky if GDP increases by 1-2 percent.

Mr Tsang and Li Ka-shing, the billionaire whose interests in Hong Kong stretch from ports to property and retail to telecoms, have both warned that the economic outlook is worse than that faced during the Sars epidemic in 2003, which killed 299 people and prompted the last sharp slowdown.

Retail has taken the biggest hit in the current downturn. Sales had been buoyed when wealthy Chinese consumers flocked to the territory to buy luxury goods and cosmetics, but takings slipped 11 percent year on year during the first

five months of 2016 and the number of mainland tourists dropped 12 percent in the same period to 17 million.

Chow Tai Fook, the biggest jeweller in the world by market capitalisation, is seen as a bellwether for mainland demand for Hong Kong's luxury goods. Its sales in Hong Kong and Macau fell on an annualised basis by 22 percent in the three months to the end of June. Other companies, such as handbag retailer Coach and watchmaker Jaeger-LeCoultre, which viewed Hong Kong as a cash cow, have been closing stores.

Even Hong Kong's humble tea shops – known as Cha Chaan Teng – have seen a slide in sales of their cheap noodles and milk tea. At Tsui Wah, a popular chain, profits for the year to March fell by more than half to HKD7 million (\$9.3 million).

Shaun Rein, who runs China Market Research in Shanghai, warns that the slump in retail is not simply the result of the Chinese slowdown or the crackdown on extravagance and corruption by President Xi Jinping. "There is a deep-seated an-

## Hong Kong - One country, two economies (continued)



Hong Kong Chief Executive Leung Chun-ying (right) watches as military personnel march during a flag-raising ceremony in 2014. Thousands of protesters watched from behind police barricades yelling for him to step down



A plan to place Chinese border police inside Kowloon station was worrying Hong Kongers, even before the detention last year by the mainland police of five Hong Kong publishers

imosity to mainlanders in Hong Kong,” he says. “So why would they want to go somewhere they are not welcome when there are so many other choices?”

Retail, tourism and associated sectors such as transport account for 35 percent of Hong Kong’s GDP and employ 1.4 million people. Other key parts of the economy such as banking, property and trading services are also suffering. Declining interest from mainland buyers has contributed to falling house prices, although Hong Kong still has the most expensive housing in the world as a proportion of median income.

Yu Kam-hung, managing

director of investment properties at CBRE, an estate agent, predicts that prices could fall up to 10 percent over the next year, and they are already 10 to 15 percent off their peak of 18 months ago. Some developers are taking aggressive measures to close deals, such as offering buyers top-up financing to cover the initial deposit and other costs excluding a bank mortgage.

“We think it’s a sign of desperation and a negative reflection on the market,” says

Denis Ma, the head of research in Hong Kong for JLL, another property company. He says the situation is likely to get worse

before it gets better, with a glut of new supply still coming on to the market. “A lot of land sales are going through at the low end of expectations [...] so developers aren’t that optimistic about the market outlook,” he adds.

Banks with exposure to the mainland are starting to feel the fallout as Beijing allows some defaults from state-owned companies, as well as private enterprises, in an attempt to manage the huge debt overhang that threatens to undermine growth and stability. Bank of East Asia, which is one of the local lenders most exposed, saw its impairment losses double last year to HKD2 billion

because of China’s woes. It recently laid off 180 staff.

Unemployment is running at 3.4 percent, and Ms Lo says the rate is likely to increase next year, feeding back into further weakness in property, retail and banking, and adding to the feeling of resentment.

Moody’s, the credit rating agency, says the headwinds facing Hong Kong’s banks “will pressure the system’s asset quality and profits, and test its resilience, given the territory’s elevated property prices and the banks’ growing linkages with mainland China.”

The concerns about Hong Kong’s economy have been compounded by fears

over the city’s autonomy and legal independence, which are at the core of its attraction for international companies. Since 1997, global investors, from banks to retailers, have put their faith in Hong Kong’s British-style legal system, which contrasts sharply with the capricious, Communist-party controlled system in the mainland.

Suspensions that Beijing has been meddling more in Hong Kong have been increasing since Mr Xi came to power in 2012 and launched a crackdown on dissent that has been slowly extending beyond the mainland’s jurisdiction.

These misgivings intensi-

fied after the five booksellers vanished between last October and December, before appearing in mainland police custody accused of distributing politically sensitive works.

One of the five - British citizen Lee Bo - disappeared from Hong Kong, leading many to believe he had been abducted by Chinese agents in violation of local law. He later claimed, under apparent duress, that he had gone to the mainland of his own volition.

The British government said the incident “unnerved” the business community.

Executives are reluctant to speak on the record about their concerns for fear of upsetting Beijing but, in private, they are anxious.

“For many businesses, the incident has raised questions about the rule of law, which is one of the absolutely key aspects that makes Hong Kong work and gives people the confidence to do business here,” says an executive from one foreign chamber of commerce in Hong Kong. “The rule of law is not an abstract. People care about how it works in practice.”

Additional reporting by  
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## Damage control

The Hong Kong government, caught between its masters in Beijing and an increasingly divided population at home, has struggled to respond convincingly to its troubles.

Economically, the government has always taken a laissez-faire approach and the currency peg means Hong Kong is unable to implement its own monetary stimulus. The government has offered some tax breaks to boost consumption and investment, while property developers are calling for it to reduce stamp duty on non-residents to boost the sector. Economists, however, say the effect of such measures is likely to be limited.

Opinion polls suggest the public has little faith in CY Leung, Hong Kong’s chief executive, who was elected by a 1,200-member

body dominated by pro-Beijing elites.

He was heavily criticised for his main policy speech at the start of the year. This offered few solutions to problems such as widespread social inequality and unaffordable housing, but paid homage 48 times to One Belt, One Road, Mr Xi’s lofty but vague plan to build a Eurasian infrastructure network that will not pass through Hong Kong.

“I feel our government is only trying hard to please the central government but is neglecting the actual needs of Hong Kong people,” says Leung Wai-faat, a 23-year-old project co-ordinator for a construction company.

It is possible that elections for the partially democratically elected legislative council in September could alter the balance of power

in Hong Kong, if only slightly. Most analysts, though, expect the deadlock between opposition lawmakers and the pro-Beijing faction to continue.

If that happens and relations with Beijing remain tense, it will be very difficult for Hong Kong to mitigate the impact of its structural and cyclical problems.

“I’ve already told my son that he should make sure he has his own career because he cannot presume that our family business will be thriving in Hong Kong when he grows up,” says one tycoon close to the government. “The trust gap between Beijing and Hong Kongers keeps growing and that is very worrying at a time when our economy is already facing so many challenges.”

By Jack Clark

TECH

# Google sprints ahead in AI building blocks, leaving rivals wary

**T**HERE'S a high-stakes race under way in Silicon Valley to develop software that makes it easy to weave artificial intelligence technology into almost everything, and Google has sprinted into the lead.

Google computer scientists including Jeff Dean and Greg Corrado built software called TensorFlow, which simplifies the programming of key systems that underpin artificial intelligence. That helps Google make its products smarter and more responsive. It's important for other companies too because the software makes it dramatically easier to create computer programs that learn and improve automatically. What's more, Google gives it away.

But for some competitors, there's a big downside to adopting Google's standard. Using TensorFlow will help Google recruit more AI experts by training them on the same tool it uses internally, spotting their code, and hiring the best contributors. It could also let the search-engine provider exert outside influence over the burgeoning AI ecosystem. If the internet giant dominates in this field, it could gain an advantage in the fast-growing cloud-computing business, turning the popularity of its software into real revenue.

"It's the next big area, and people are worried Google's going to own the show," said Ed Lazowska, a computer science professor at the University of Washington who has served on the technical advisory board of Microsoft Corp.'s research lab. "There is a network effect, and it's a really excellent system."

Google initially used TensorFlow internally for products like its Inbox and Photos apps. The company made it available for free in November. Technology companies like Microsoft Corp., Amazon.com Inc. and Samsung Electronics Co. rushed to give away their own versions, hoping to get the most outside developers using their standards.

The company that wins will benefit from the collective efforts of thousands of developers using, but also updating and improving, its system. That's an advantage when it comes time to make money from the new asset. Whoever has the most popular software will have the best chance of creating commercial cloud services for AI because potential customers will already know how to use it.

Success in these types of open-source projects sometimes yields big rewards. Google released Android for free in 2008, and it's now the most widely used mobile operating system with over 400,000

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**■ If Google dominates in this field, it could gain an advantage in the fast growing cloud computing business**

developers and more than a billion users. Google generates billions of dollars a year from ads shown on Android devices and the cut it gets from revenue app developers make through the operating system.

Since emerging, TensorFlow has become the most popular AI programming project on software code sharing service GitHub, leapfrogging well-regarded systems created by universities and corporate rivals, according to data gathered by Bloomberg.

On launch day, TensorFlow had around 3,000 "stars" on GitHub, meaning that number of programmers had bookmarked the code, indicating interest. As of July 13, it

had 27,873. Two other popular AI software projects, Theano and Torch, have less than a fifth of that following. In 2014, Torch was the leader. A Microsoft tool called CNTK, released for free in January, and Amazon's free DSSTNE, which rolled out in May, have so far failed to dent Google's lead much.

Linux, an open-source operating system launched in 1991, now helps run everything from supercomputers to phones to airplanes and helped turn Red Hat Inc. into a USD13 billion enterprise software company. Linux has 33,967 stars on GitHub. "It's kind of crazy," said Dean, a top Google engineer and one of the main developers of TensorFlow. "We're almost to Linux level."

Google will soon begin generating revenue from this lead. It plans to offer a version of TensorFlow that runs on its Google Cloud Platform service, letting people and businesses pay to run their AI software in Google's data centers.

Google made the software free so it could give the community a useful tool "and everyone could standardize on that," said Corrado, a senior research scientist at Google. "In a giant green field, trying to build a fence around the next blade of grass is really absurd.

It's really better to help everybody run into that field."

That openness, and continual Google updates, have lured developers like computer-vision startup Matroid, which re-wrote its software to work with TensorFlow, after building on another free AI tool called Caffe. Kindred, a robotics startup, made a similar switch.

Not everyone is so keen. As TensorFlow's usage grows, some companies are realizing an increasingly important part of the technology toolkit is controlled by Google, and they don't want to exacerbate that trend.

They're "skeptical about using a language backed by another large company," said Soumith Chintala, a Facebook Inc. artificial intelligence researcher and one of the people behind Torch.

The unease stems from the fact Google can tweak TensorFlow to suit its own purposes, he said. If the company changes the software too much, then other companies that have adopted it will need to make a copy of the software and rewrite it to suit their own needs – an expensive and time-consuming process known as forking.

That's led some to look elsewhere. SkyMind, which makes free AI software, has had

more than five customers tell it they are wary of using TensorFlow, said CEO Chris Nicholson. He declined to name any of the companies, citing non-disclosure agreements.

Since TensorFlow launched, designers of other AI programming projects have been inundated with queries from companies that don't want to rely on Google. Several reached out to the creators of Theano, developed mainly at the University of Montreal, to see if they can donate resources to the project, according to Yoshua Bengio, a professor who leads AI research at the school.

The same happened with Torch, said Chintala. Facebook does much of its AI research with Torch, and Chintala helps guide development of the project in his spare time. He and other backers moved Torch into a non-profit organization called SPI Inc. in May to make it easier for more people to work on the language and donate to it.

"One of the reasons we want to stick with Torch is to create a strong counterpoint" to TensorFlow, said Clement Farabet, who helped develop Torch. He now works at Twitter Inc., which uses Torch to run AI systems that analyze images and select tweets people may want to read. It's better for the community if there's a choice of AI software, he said.

Google could solve some of these problems by donating TensorFlow to a neutral third-party, said Bengio, who has discussed his ideas with the company. This structure could "provide neutral software for all," he said.

Google has no plans to do that, but it's open to letting outside people have a say in what code gets merged into the main software, said Jason Freidenfelds, a spokesman for Google.

Google's strategy may be dictated by past failings, said Reza Zadeh, chief executive officer of Matroid, who worked at Google a decade ago. Back then, Google developed the Google File System and MapReduce to store and analyze lots of data. It published research papers on them, but no code. Some employees at Yahoo! Inc. used the research to create Hadoop, technology that underpins public company Hortonworks Inc. and larger private rival Cloudera Inc.

"They've learned from that," said Zadeh. **Bloomberg**

# Millions of orchids grow on former mine site in upstate NY

By Mary Esch

**M**ILLIONS of orchids are now growing in a hundred-acre wetland in the Adirondack Park that developed on waste from a vast open-pit iron mine, a transformation scientists say is most impressive because it happened naturally.

"It's a testament to nature's ability to heal itself," said Grete Bader, a graduate student who recently wrote her master's thesis about the plant life at the former Benson

**I've been involved in orchid-rich habitats all over the country for 40 years, and I've never seen anything like this.**

DONALD LEOPOLD



A grass pink orchid is seen where waste from a former iron mine was disposed of in Star Lake, N.Y.

Mines, about 35 miles from the Canadian border.

The wetland, which remains privately owned and off limits

to the public, formed on part of thousands of acres of coarse sand left over when granite ore was crushed to extract

iron from 1900 until 1978. That bare sand eventually gave way to moss, lichen, grasses, sedges and trees, including willows, poplars and tamaracks.

Orchids arrived as dust-like seeds from surrounding areas. The wetland is now home to six species of bog orchids, including millions of rose pogonias and grass pinks.

"I've been involved in orchid-rich habitats all over the country for 40 years, and I've never seen anything like this," said Donald Leopold, a professor at the State University of New York College of Environmental Science and Forestry.

Leopold first explored the site 30 years ago, but the staggering number of orchids wasn't quantified until recently when his graduate student, Bader, tallied them up in her thesis.

Several factors contribute to the thriving plant community at the site, Bader said, including a variety of fungi that colonize a plant's root system and enhance its ability to absorb nutrients.

"What's really cool to me as a plant ecologist is how this site

went from bare mine tailings to a diverse wetland plant community over the past 60 years on its own, without any formal restoration initiative," Bader said during a recent visit to the site.

Bader and Leopold suggest that the site would be a worthy addition to the Adirondack Forest Preserve if the owner was interested in selling it to the state.

But the landowner's lawyer says there are no plans to sell the land or allow public access. "Benson Mines wasn't even aware of the orchids until the researchers made them public," said attorney Bernard Melewski.

He said the orchid site is a small part of about 2,000 acres of sand and crushed stone mining waste that the company hopes to ship to markets when a nearby railroad spur is renovated.

Even if the site remains untouched by development, the orchids may be a fleeting phenomenon as the natural forces that brought them here continue to reshape the landscape. Already, an aggressive non-native reed called phragmites is choking out other plants in large swaths of the wetland.

"The orchids here today require full sun," Bader said. "Between invasive plants and natural succession to a closed canopy tamarack-black spruce bog, we're going to see them decline." AP

## ASK THE VET

By Dr Ruan Du Toit Bester



### 6 WAYS TO GET RID OF TICKS IN CATS PERMANENTLY

**I**TS Parasite season again in Macau and there are 6 ways to get rid of ticks on your cat. Many of these can be done at home. Home care that focuses on prevention mixed with tick removal will help you protect your cat from ticks, and the diseases associated with their bites and toxins.

#### 1. PROTECT YOUR CAT FROM THAT FIRST BITE

The best way to get rid of ticks is to protect your cat from getting bitten in the first place. Get your cat on a consistent monthly regimen of tick medicine to prevent these nasty parasites. You can supervise your cat outdoors where ticks are more likely to live. You can place an insecticide called permethrin outside. Douse cotton with it and put in biodegradable cardboard tubes. Mice will collect the tubes for their nests, and then it will kill any ticks that bite the mice. Birds also feed on ticks, and control the population near your home.

#### 2. VISIT THE VET

It can be helpful to visit the vet, especially the first time you see a tick on your cat. The doctor can diagnose possible di-

seases related to a tick bite. He can also demonstrate tick removal so you know how to do it when you're on your own, and can recommend flea and tick powders for prevention.

#### 3. USE MEDICATION TO KILL EXISTING TICKS

Many medications will make your cat's body hostile for ticks. The easiest tick medicines are applied as a liquid to the cat's skin, between the shoulder blades. The medicine will kill existing ticks and deter future ones. Tick medication is really strong and can be dangerous. Make sure to buy it only from your vet or a reputable pet store, and to get the right amount for your cat's weight.

#### 4. REMOVE TICKS WITH A SPECIAL BRUSH

There are special flea and tick brushes that will remove ticks and fleas from your cat's body. Make sure you are ready to catch the ticks that fall off the body, so that you can dispose of them properly.

#### 5. REMOVE TICKS WITH TWEEZERS

There are special tweezers that remove



ticks safely. When a tick attacks your cat, the head actually gets buried underneath her skin. Grab the tick with the tweezers as close to your cat's skin as possible. Slowly but firmly, pull the tick out. Once the tick is out, wash the area of the bite with a pet wipe or some cat shampoo to clean it.

#### 6. DISCARD THE TICK ONCE AND FOR ALL

There are several ways to make sure a tick is gone forever, once it's off your cat. You can burn it or wrap it in cloth and flush it down the toilet. A tick will also drown in alcohol. Don't put it in the

trash, as it is likely to escape and bite again.

Hope this info helps  
Till next week  
Dr Ruan

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