

Challenges & Opportunities for Hong Kong in China's Regional & International Strategies

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Maritime Silk Road Society, Hong Kong September 14 2017



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China's strategic challenges

- Ageing population
- Shrinking workforce
- Growing global protectionism
- Demand for domestic consumption, incl. services
- Slowing growth
- Inequality

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Hong Kong's strategic challenges

- Labour costs & loss of local manufacturing value-added
- Lack of clusters
- Real estate costs
- Competition from other Chinese ports
- Lack of advanced R&D
- Culture?
- Other?

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The global innovation contest

- "The Fourth Industrial Revolution is unfolding at an exponential rather than a linear pace". President Xi Jin Ping, World Economic Forum, Davos, 17 Jan 2017
- "Hong Kong's competitive edge is slipping away fast..."
South China Morning Post July 3 , 2015

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China's solution is in 2 parts

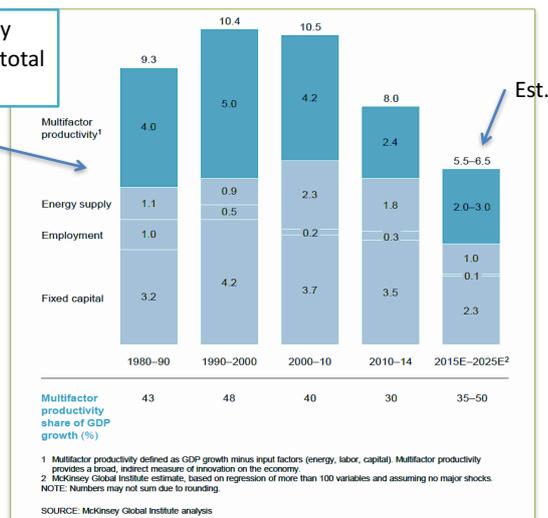
- (1) Greater productivity...which means innovation
- 2) Regional integration & new foreign engagement

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Innovation has contributed over 30% of China's productivity growth

Multifactor Productivity growth 48% to 30% of total Productivity growth



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China's response (1)
Continuing investment in Innovation Ecosystem & Capabilities

“China should develop a dynamic, innovation-driven growth model.”

President Xi Jin Ping, World Economic Forum,
 Davos, 17 Jan 2017

“Innovation-driven development has become a trend, not only for the country, but across the world...”

Chief Executive Carrie Lam Cheng Yuet-ngor.
China Daily July 2, 2017

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China's response (2)
Regional integration & new foreign engagement

- 1. Regional integration & cluster creation**
 - Jing-jin-ji (Beijing-Tianjin-Hebei Cluster)
 - Greater Bay Area (Pan Pearl River Delta)
 - Industry & high-tech clusters

- 2. New international trade & investment relationships**
 - Silk Road Economic Belt and 21st Century Maritime Silk Road (One Belt - One Road)
 - New Free Trade Zones
 - Third phase of Chinese innovation: new Outward Foreign Direct Investment

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China's response (1) Innovation Ecosystem & Capabilities

What is an industry cluster?

A regional concentration of related industries

An **Innovation Ecosystem** is more than a cluster. It is a complementary set of business, government, economic, social and cultural elements that create new ideas & new businesses.

An Innovation Ecosystem is the **new basis of global economic advantage.**

What we can learn from the Silicon Valley Innovation Ecosystem

The Old Economic Basis: **Endowed assets**

natural resources
location
low cost labour

The New Economic Basis: **Created assets**

educated workforce
research
intellectual property
physical infrastructure
business infrastructure
All integrated in an *innovation ecosystem*

Features of an Innovation Ecosystem--1

- Dynamic markets & demanding customers
- Transparent business rules & enactment
- High quality, flexible and mobile work force
- Risk capital (Angels, VCs, PE)
- Accessible business services
- Business climate that rewards entrepreneurial risk-taking & accepts failure & learning
- Attractive living environment

Features of an Innovation Ecosystem--2

Government support to the ecosystem:

Vision

Legal system (including protection of IP)

Infrastructure –transport, logistics,

Support for R&D

Education that encourages creativity

Incentives incl. tax system

Investment in R&D

A culture that supports openness and exchange of ideas (e.g. Silicon Valley *vs* Route 128)

Why is government support of R&D critical?

Business contributes 60-70% of national R&D spending – mainly on development,
– but invests little in *basic* research

Example:

US business R&D expenditure (as % of total business R&D)

<i>Basic</i> research	6%
<i>Applied</i> research	20%
<i>Development</i>	74%

Government has a critical role to fund basic research

Regional integration & cluster creation: Jing-jin-ji (Beijing-Tianjin-Hebei) Integrated Cluster

(including Xiongan New Area)

130+ m. people, 10% of national GDP.
Equal in area to New England, USA
> \$300 bn. investment over 10 years



Goals of the Jing-jin-ji Integration

- Construction of world-class megalopolis in BTH region for an inclusive and environmentally sustainable city cluster
- Creation of a regional science-technology innovation market
- Transforming Beijing into a national scientific and technological innovation hub
- Upgrading of Hebei industries
- Equalisation of education, health care, and other basic public services
- Elimination of the poverty belt around Beijing and Tianjin
- A "one-hour commuting circle" across the area

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Roles of key cities in integration

- Beijing: nation's political and cultural centre, and a national scientific and a technological innovation hub
- Tianjin: revitalization as a base for advanced manufacturing and international shipping
- Hebei Province: clean manufacturing and wholesale trading

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**Regional integration & cluster creation:
The Guangdong – Hong Kong – Macau Greater Bay Area
(Pan Pearl River Area) or (9+2)**



Goals of Greater Bay Area Initiative

- To strengthen the region's role in the global economic supply chain.
- To build a megalopolis that includes
 - Hong Kong and Macau, plus nine Pearl River Delta cities:
Shenzhen, Guangzhou, Zhuhai, Zhaqing, Dongguan, Huizhou,
Foshan, Zhongshan, Jiangmen.
- To strengthen key industries of the area:
 - high-tech manufacturing,
 - transportation (sea and air cargo services),
 - trade-related services (sourcing, trading, freight-forwarding, finance etc.)
 - the digital ICT industry.

Hong Kong's competitive advantages in an integrated cluster

- Centre for foreign investment into China & beyond
 - Since 1979, 63% of all foreign investment in Guangdong came from Hong Kong
 - biggest offshore RMB center in the world
- Rule of law and attractive fiscal conditions
 - Knowledge on implementation of trade and investment rules regarding China
- Gateway to the Maritime Silk Road
 - Closer Economic Partnership Agreement (CEPA grants to Hong Kong incorporated companies exclusive market access to China for certain industries and products
- Logistics expertise for global business
- Tourism and cruise line expertise
- Attractive living conditions –(but housing?)

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New international trade & investment relationships

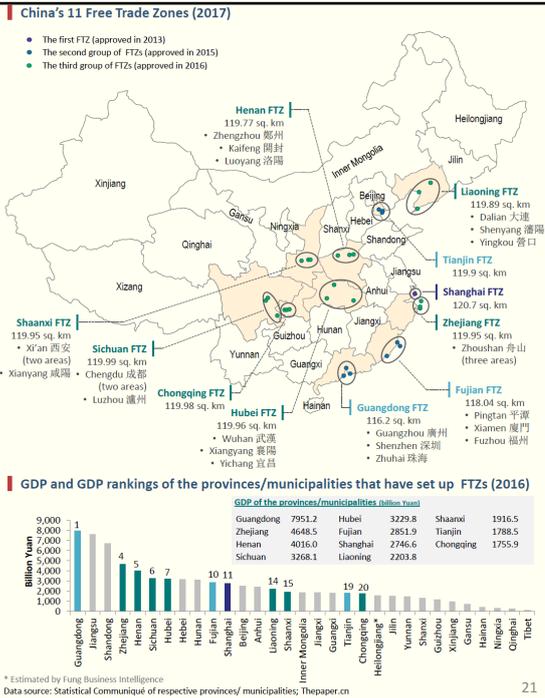
- Silk Road Economic Belt and 21st Century Maritime Silk Road (One Belt - One Road)
- 11 new Free Trade Zones
- Third phase of Chinese innovation: new Outward Foreign Direct Investment



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Competition from 11 Free Trade Zones



Source: Fung Business Intelligence, 2017

Funding sources for OBOR

- Policy Banks (CDB and EXIM)
- Silk Road Fund \$40 billion, backed by China Investment Corporation (sovereign wealth fund)
- OFDI by Chinese companies
- Asian Infrastructure Development Bank: \$100 billion of initial capital
- Non-Chinese MNCs now in OBOR projects (e.g. GE \$2.3 bn. sales in 2016; Caterpillar, Honeywell, ABB, DHL, Linde, Siemens, BASF, Maersk Group, etc)
- 50 separate bilateral investment treaties (BITs) and several multilateral investment treaties (MITs)
- China needs the capital and cooperation of other advanced nations to fund OBOR

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Chinese loans are not yet the major factor in OBOR, but growing

Foreign Loans by the Policy Banks (CDB and EXIM)

- The total loan portfolio of the two policy banks (CDB and EXIM) was \$675 bn. So accumulated Chinese lending to foreigners was about half of the OFDI total.
- As of 2016, total lending to OBOR countries from the two policy banks (CDB and EXIM) was \$101 billion (15% of total loans).

Source: David Dollar, *Order from Chaos*, Brookings Institution, May 8, 2017

China's OFDI: not yet significant for OBOR

OFDI by Chinese companies

- In 2016 China's Outward Foreign Direct Investment *stock* was \$1.3 bn.
- OFDI *flow* in 2016 was \$170 billion, but half went to HK (final destinations not yet known).
- As of end-2015 68 OBOR countries had received 12 % of Chinese OFDI (\$160 bn, but 17 % of global FDI (2011 data).
- In 2016, 8.5 percent of China's OFDI flow went to OBOR countries.
- Chinese companies are not yet investing heavily in OBOR. The main destinations for direct investment are Europe, the United States, Australia, Canada.
- But they are less risk averse than Western investors, which could benefit OBOR countries in the future.

Source: David Dollar, *Order from Chaos*, Brookings Institution, May 8, 2017

Capital needs will be huge

OBOR:

- Total cost est. \$4,000 billion
- 900 deals reported under way, worth \$890 billion

Greater Bay Area

- \$500 bn?

Jingjinji (Beijing-Tianjin-Hebei Integrated Cluster)

- More than \$300 bn over 10 years)

Continued funding for R&D in China

- 2% of GDP per year--\$220 bn per yr + increase = \$2,500+ over 10 years

Free Trade Zones --?

Total approx. needs over 10 years: \$700 + bn. per year

OBOR funding is an opportunity for Hong Kong

- Funding need will be in RMB trillions
- Chinese companies are not yet investing heavily in OBOR. The main destinations for investment are Europe, the United States, Australia, Canada.
- China needs the capital and expertise of other nations to fund OBOR

OBOR funding is an opportunity for Hong Kong

- HK can help MNCs get access
- Non-Chinese MNCs now active in OBOR projects
 - GE \$2.3 bn. sales in 2016; Caterpillar, Honeywell, ABB, DHL, Linde BASF, Maersk Group, etc.
- HK can offer OBOR project expertise & an intermediary for investors
 - 86% of OBOR projects use Chinese contractors, 27% have local ones; only 18% have foreign firms
- HK can act as intermediary and base for foreign investors
- Can HK also be an innovator in the Greater Bay Area?
 - E.g., the Lok Ma Chau Loop, as a HK/SZ high-tech zone

What can HK learn from China's innovation ecosystem?

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China has built an innovation ecosystem and the outputs are growing fast

Resources devoted to innovation:
2% of GDP; 45% of US annual investment

146 S&T parks + 00's of economic and industrial zones

Over 1600 foreign R&D centres

Top scientific journal publications 13.8%*

Technological intensity increasing

Patent applications (leading the US)

* In 2015 China was No. 1 in computer science, mathematics, physics and astronomy, earth and planetary sciences, engineering, energy, chemistry & chemical engineering; No. 2 in pharmacology, biochemistry, genetics, molecular biology, immunology, agricultural and biological sciences²⁸

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China's innovation ecosystem has been driven by Four Forces through Three Phases

The first two forces

1. **Customer** –market size, fast growth, micro-niches, rapid income growth, diverse tastes
2. **Culture & ambition** –entrepreneurialism, government ambition & funding of China's innovation ecosystem

The first two phases of development

- I. From Copying to “Fit For Purpose”
- II. From Followers to World Standard



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Three Innovation Phases in China

1. From Copying to “Fit For Purpose”
2. From Followers to World Standard
3. From New Resources to New Knowledge

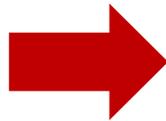
From: to: to: ?



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Phase 1: from *Shanzhai* products to *Fit for Purpose*



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Phase 2: From Followers to World Standard

Haier: Now # 1 global market share
8 design centres worldwide; open innovation
Sophisticated supply chain; organisational innovation

Alibaba's ecosystem:
Alipay, Alimama, Aspara, Aibaba Cloud Computing,
China Smart Logistics, MyBank. Data capability

Tencent: Social networking: WeChat & on-line services

Yuwell: Medical devices for home use

Xiaomi: Mobile phone open innovation ecosystem

Mindray: US-certified medical devices



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World Standard fintech companies

Driven by huge unserved customer base (900 m on line)

Big players:

Ant Financial –Alipay, Yuebao

China UnionPay (card issuance and clearing)

China Rapid Finance

Tencent’s WeBank

Start-ups

7 Chinese companies in the *Fintech 100*, including

ZhongAn, internet-based property insurance

Qufenqi, electronics retailer with consumer finance

Lufax (Shanghai Lujiazui International Financial Asset Exchange),
peer-to-peer lending, trading of financial assets

WeCash, internet credit assessment

Chinese companies have reached world standard by learning to innovate “with Chinese characteristics”

Ten characteristics

1. Greater focus on local needs and customers
2. Acceptance of ‘good enough’ standards
3. Incremental, not radical innovations
4. Willingness to supply special needs
5. Use large numbers of staff to solve the problem
6. They work their staff harder
7. Fast trial and error –fail fast, but learn
8. Less formal, faster processes
9. More intervention by the boss
10. Closer ties to government

1. Focus on local needs and customers



Joyoung soy milk cooker



TCL's Dual TV

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China is now in the *Third Phase of Innovation*

From New Resources to New Knowledge

Expansion into Western markets

Driven by two created factors:

3. Capabilities of firms, honed in tough competition & responsiveness to customers in China

4. Cash (Capital) due to local success, market size & growth, govt. support

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China's Third Innovation Phase From New Resources To New Knowledge

Chinese companies now seek to dominate global markets thru OFDI—to become insiders

- Firms searching for markets, brands and technology inside EU, US
- Supported by “Go Global” & OBOR policies,
- OFDI shifting to finance, services, transport, IT, manufacturing
- Firms are shifting to *radical, disruptive* innovation

Examples: Huawei, Haier, Geely, Sany, Lenovo, Goodbaby

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From New Resources to New Knowledge

Two Strategies:

- Acquisitions for market share, brand and knowledge:
 - BAIC-Saab
 - Lenovo—Motorola Mobility
 - Dongfeng—Peugeot-Citroën
 - Geely—Volvo
 - Sany-Putzmeister
 - German Mittelstand cos.
- Setting up Foreign R&D centres
 - EU for technology & process knowhow
 - US for basic science & technology in innovation clusters
- These priorities mean that Chinese firms have shown only moderate strategic interest in OBOR

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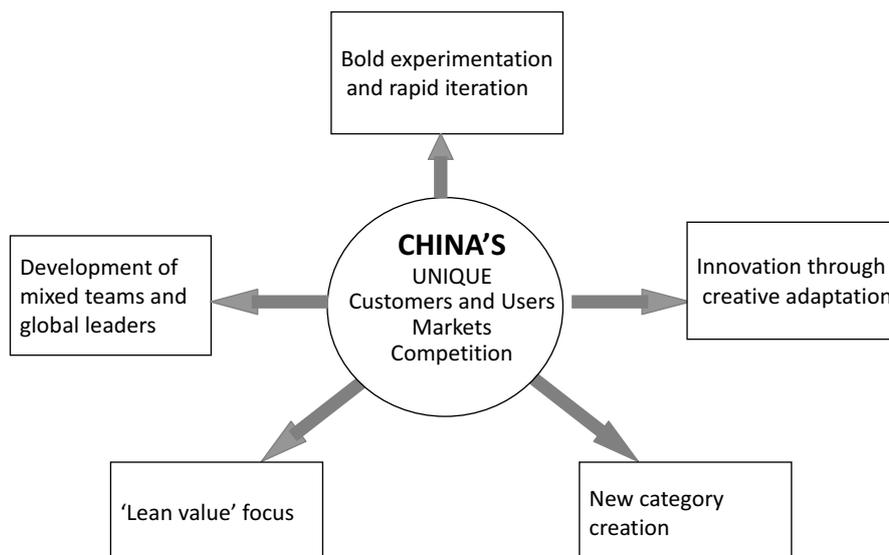
What we can learn from China's innovators

- *Culture*
 - Government's role in building the ecosystem:
 - Bold Vision
 - Innovation central to Five Year plans, + special initiatives-
Made in China 2025, OBOR, clusters
 - Market forces, supported by Government
 - Business-government-university collaboration to establish technology leadership
 - Internal competition amongst best companies
 - Strong business leadership
- *Customers & market forces*
 - Intense focus on understanding markets
 - Responsiveness to China's customers—young, demanding, extreme
 - High diversity and differences across regions
 - Increasingly sophisticated demand
 - Pressing needs for solutions
 - Opportunities to go global
- *Capabilities*

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Capabilities companies can learn from Chinese companies



Source: George S. Yip and Bruce McKern, *China's Next Strategic Advantage: From Imitation to Innovation*, The MIT Press, 2016.

Issues ahead for Chinese companies

Chinese companies have been particularly successful in:

- Customer-focused sectors
- Efficiency-based sectors

Chinese firms are not yet strong in:

- Science-based sectors
- Engineering-based sectors
- Systems integration
- Services: Health, Insurance, Environmental remediation
Food quality & safety

Chinese firms are not yet strong in creating **global brands**:

They need to learn to:

Adapt managerial style to foreign environments

Manage international corporate networks

Set priorities for capital investment

Develop creative innovators for complex challenges

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Opportunities ahead for Hong Kong?

- Integration into GBA: supportive role
- Innovation hub in collaboration with Shenzhen
 - Focus needed on key technologies & basic R&D
 - Develop advanced manufacturing for local industry
- Global information access & logistics
- Intermediary for foreign capital into OBOR, GBA & other clusters
 - HK biggest investor in Shanghai Waigaoqiao Free Trade Zone: \$500 bn by 2017

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Opportunities ahead for Hong Kong?

- Assist firms with open innovation
- Assist foreign MNCs to innovate in China; set up R&D centres
- Build on attractiveness of HK to foreigners for regional HQ
- Help Chinese companies to go global:
 - brands, management
- Maintain HK's attractiveness as model of governance and efficiency
- Strengthen creativity in schools, universities in the region. HK as the design icon?

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Vision for Hong Kong

Government and business together are the critical driving force for a shift in strategic vision

They have a critical role in creating the innovation ecosystem:

- Hard elements:
 - Funds & focus for basic R&D
 - Regional infrastructure and land use
 - Incentives for start-ups
 - Schools, universities & technical colleges
- Soft elements:
 - Supportive business environment
 - Tax and incentives
 - Education, training, language
 - Culture
 - Openness to world

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