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"One Belt, One Road" Strategy and the Yangtze Economic Belt

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This research paper has been prepared for the 10th Annual Meeting of the Chongqing Mayor's International Advisory Council and seeks to offer insights into how Chongqing, already a city of global significance, might continue to evolve its development as part of the strategy of One Belt One Road and the Yangtze Economic Belt.

The research has been undertaken around the idea that a city needs to organise from within as it strives to become the leading city in a regional cluster and connect with the rest of the world. It explores that drawing lessons from the experiences of some of the world's leading cities for Chongqing's own development aspirations and focusses on three aspects of successful development.

1. **Creating a cohesive economy** – to become a globally attractive location for businesses and labour Chongqing needs to continue to increase its focus on internal organisation. Through smart investment in local transportation networks, social infrastructure, telecommunications and human capital (to name just a few) Chongqing can progress further as a large, well-functioning and prosperous city.

2. **Focal point for the region** – with the benefits of scale, economic scope and a strategic location, Chongqing has the capacity to become central to the economic future of western China. By leveraging regional clusters – such as the Yangtze Economic Belt cluster with Chengdu – Chongqing and surrounding regions can offer businesses the competitive advantages that come with agglomerations of industry and labour. The more Chongqing is able to create an environment conducive to business (see aspect one) the better placed it will be to develop further as a regional leader.

3. **Connecting with the world** – with success on aspects one and two, Chongqing will be well-placed to ascend to the distinguished ranks of 'global cities'. Global cities are not just concentrations of people and businesses; rather, they are thriving, innovative and strategically connected centres of knowledge, and highly attractive locations for foreign investment. The One Belt One Road strategy presents an opportunity for Chongqing to capitalise on its strategic, economic, transport and communication linkages.

Cities are the melting pot for labour, capital and ideas. They are central to economic development and growth through history and across the globe.

But growth brings its challenges as well as rewards, and successful cities also are able to innovatively manage growing pains, through collaboration between central government, municipalities, local businesses and residents, and global

corporations.

Globally connected lead cities, such as New York, London or Tokyo have unique stories to tell, but share some key attributes. Their scale means that they need to continuously refine their planning and invest in infrastructure.

Today, employing innovative digital technologies is critical. Crucially, economic activity and social outcomes are enabled and constrained at the same time by their transport infrastructure and their capacity for communications and information sharing.

Many of the world's leading cities started out as trading hubs that, over time, attracted different industries. Industries began to cluster in these cities, to take advantage of the benefits of agglomeration such as developing pools of specialised labour, shared infrastructure and knowledge and ideas transfers.

The role for government in this has been not to attempt to pick winners, but to promote and maintain the economic and social conditions that enable clusters to emerge, be it a Los Angeles entertainment cluster, or a Silicon Valley technology centre.

Global cities have high levels of connectivity, making them natural homes for transnational corporate headquarters, financial and information services and decision making at the highest level. Global cities are able to attract and mobilise capital; enable the free flow of information and ideas and maintain a healthy and creative populace.

This paper, prepared with the assistance of Deloitte Access Economics, demonstrates this with striking examples of success, and failure, from Asia, Australia, North America and Europe.

1 Creating a cohesive economy

If Chongqing is to become a strategic gateway to western China and beyond, there needs to be continued emphasis on the internal organisation of the city.

Cities are the global engines of economic prosperity, with the rapid urbanisation of the planet one of the biggest trends in the history of civilisation. All over the world policy makers are increasingly interested in cities and their hinterlands, and companies are increasingly viewing cities as critical to serving the world's new consumers, with the ever-expanding rate of urbanisation offering an unprecedented number of opportunities for business.

Cities are cauldrons of society's most pressing problems – congestion, inequality, urban poverty, pollution and crime, to name just a few – and, at the same time, are at the forefront in the pursuit for solutions.

When cities effectively mobilise their resources to tackle these issues, local businesses and residents are the greatest beneficiaries. Moreover, well-functioning cities are attractive to foreign businesses. Understanding the evidence on what foreign businesses are attracted by provides an impartial assessment of what makes a city successful.

Two recent studies by the London School of Economics (LSE) and Financial Times (FT) have identified the characteristics of cities with high levels of foreign direct investment (FDI).

LSE's 'Cities Centre' contends that foreign firms are attracted to city regions with strong market characteristics – high Gross Domestic Product (GDP) per capita (and/or close to high GDP regions), good accessibility by car and air, strong competitiveness, high population density and low unemployment.

Beyond these fundamentals, however, city regions also need to score high on knowledge indicators like research and development intensity, number of patents, educated workforce, top universities and specialisation in high and medium-tech production or knowledge-intensive services (LSE Cities 2011).

The FT's '2014/15 Global Cities of the Future' report ranked 130 cities according to their score on a number of factors considered important to the FDI decision making process.

Singapore, the overall winner for FDI attractiveness, was also the number one destination for FDI projects between 2008 and 2013 (fDi Intelligence 2014). Shanghai and Beijing also ranked highly, coming in at 8th and 10th, respectively. For emerging market cities (with GDP per capita less than $35,000), Chongqing ranked 10th overall and Chengdu was ranked 7th.

In an increasingly globalised world where attracting regional and international investment, as well as talent, is desirable, regional connectivity promotes access to resources, provides capacity to grow and generates greater liveability. Four key components of a well-functioning city include:

- being a 'smart' city;
- transport infrastructure;
- communications and information sharing; and
- positive social outcomes.

Case study: Tokyo – An attractive modern 'Super City'

Tokyo's performance as a global, connected city was emphasised by its top ranking on the 2014 Jones Lang LaSalle Commercial Attraction Index, which measures a city's key business indicators such as economic output, population, corporate presence and air connectivity. Tokyo's standing as a global city is underscored by its fourth position in two reputable global city indices, being the Mori Memorial Foundation's Global Power City Index, which measures a city's attractiveness in terms of market size and human capital, and the AT Kearney Global Cities Index, which measures a city's global engagement.

Tokyo's performance in these global cities indices is underpinned by a metropolitan market worth US$1.4 trillion per annum[1], attracting more Bloomberg 500 companies than any other city, and a rapidly evolving human capital environment (Jones Lang LaSalle 2014). AT Kearney reckon that Tokyo has the highest number of residents with tertiary degrees in the world.

Tokyo's superior high-tech and research and development credentials provide confidence and dynamism to prospective investors and technology focused workers. This is further evidenced by Tokyo's performance in the 2015 IESE Cities in Motion Index, which highlights the city's ability to counter urban challenges through the application of knowledge-based and innovative tools.

In order to support the creative landscape of Tokyo and a consumer base of almost 38 million people, the local government has invested in world-class infrastructure to enhance business and quality of life.

While public infrastructure has primarily focused on inner city areas, emphasis has also been placed on connecting inner city areas with suburban 'eco-burbs' with the aim of improving intra-city mobility. For example, the so-called 'eco-burb' will integrate devices like solar panels, storage batteries, along with air-conditioners, washing machines and under-floor heating systems that can communicate with each other to maximize energy-efficiency. The city is also promoting smart mobility solutions.

Tokyo is supported by market leading fibre-based internet connection rolled out to Tokyo-area residents. Owned by a subsidiary of Sony, the 'Nuro' service delivers internet speeds of 2 Gbps, is one of the highest internet speeds in the world, undeniably attractive for a globally competitive modern city.

[1] *Jones Lang LaSalle estimate of total GDP for the Greater Tokyo area, 2014.*

1.1 Smart cities

Smart cities are a vision for the future of urban spaces that are more responsive to the behaviour and activities of their residents. Innovative digital technologies are employed to make better use of infrastructure, to make public spaces more useful and to improve public safety.

Congestion is one of the primary urban transportation problems faced by cities and incurs significant costs, ranging from 1.5% to 4% of GDP (IBM 2010).

Smart cities technologies such as intelligent transport systems can significantly alleviate congestion in cities – indeed the European Union has intelligent transport as one of its key initiatives for improving the quality of life for its citizens (European Commission 2015).

As another example of smart city technology, a Finnish waste collection company has adopted the use of sensors in a waste collection system to measure how full a waste container is to determine when it requires collection. This has reduced costs by almost 50% while also generating lower greenhouse gas emissions (Charlton 2013).

Smart cities are built upon incorporating the best of digital technologies into our cities and improving the existing regulation and governance by applying digitisation. This can, at times, be a difficult process.

Last year's CMIA Theme specifically explored 'Smart City and Big Data' to embrace the idea of how smart cities can improve urban transport networks, water supply, waste disposal, lighting and heating, to name just a few.

1.2 Transport infrastructure

The success of a modern city is constrained by its citizens' and visitors' access to transport infrastructure. Transport infrastructure is a broad portfolio, ranging from public transport to private vehicles, pedestrian paths, railways, shipping ports and airports.

The importance of transport infrastructure is highlighted by the increasing propensity to invest by both governments and the private sector. China has added nearly 10,000 kilometres of high speed rail lines since 2007, and this is expected to double by 2020 (Asian Development Bank 2015).

Maximising the benefit of transport to a city, often measured by reduced commute time, and reducing the cost of transport infrastructure requires an integrated approach to planning.

The activities that transport infrastructure enables and enhances are of fundamental importance to the daily operation of a city. In China, despite extensive expenditure on transport infrastructure, it is estimated that 18% of GDP is spent on logistics.

According to The Economist (2014), this is twice the proportion of the developed world. Excellence in these areas can provide a city with a competitive edge in terms of business opportunities, fostering cultural opportunities and ultimately enhancing the lifestyle of city residents. Efficient transport networks reduce many of the costs associated with living in a city.

The Yunnan Province in China provides an excellent example of how improved connectivity – particularly global connectivity – can translate into economic growth. In the 1990s Yunnan was one of China's most isolated and impoverished regions, with poor roads, underdeveloped communication infrastructure and negligible trade with southern neighbours. With significant investment in the province's transport infrastructure and strategic connections with the five other Greater Mekong Subregion nations, families along the new motorways have improved access to health services, better jobs and more tourists. Earnings for families along the corridor are now 50% higher than those not on the corridor (Groff 2015).

1.3 Communications and information sharing

Internet connectivity has already changed many aspects of the lives of individuals and provided extensive economic and social benefits. Extending the opportunities of connectivity is critical as cities, particularly within rapidly developing countries like China, transition from a resource intensive investment-based economy to a knowledge-based services economy.

Internet connectivity supports innovation and the emergence of new enterprises. For example, Airbnb started as a simple way to make money for two roommates struggling to pay their rent. With the innovative solutions offered by ICT, Airbnb now has over one million listings across 190 countries and is a shaping force in the hotel industry.

Expansions in internet access are already driving technology hubs. These hubs help innovators and entrepreneurs share ideas and connect with investors across the world. In turn this leads to the emergence of new industries, increasing growth and employment. Often these higher-tech new industries are associated with demand for skilled labour, contributing to important wage growth for a city.

Deloitte recently found that London – Europe's preeminent hub for professional services – has a technology, media and telecommunications sector that contributes over 8% of the UK's GDP (Deloitte 2014). Furthermore, these industries support the integration of creative skills, driving collaborations between business, institutions and Government, enabling more funding for technology based innovation.

The economic and social development of major cities requires investments targeted at providing access to the internet and the knowledge to maximise the benefits of technology.

In 2011, the McKinsey Global Institute found that the internet accounts for 3.4% of GDP across advanced economies that make up 70% of global GDP. Importantly, the study also found that the internet contributed 21% of GDP growth for advanced economies over the five years to 2011, while emerging economies, including China, only realised 11% of their GDP growth from the internet (McKinsey 2011a).

1.4 Social outcomes

Connectivity promotes public services, social cohesion and, when designed correctly, urban equity. Improving the connectivity of cities provides access to broader markets, driving competition and reducing the prices of goods and services for its residents.

However, global business centres can be victims of their own success, if the costs of city life are not addressed. The 'big city buzz' that cities enjoy can overstretch infrastructure, increase urban inequity and create pollution. New York, London, Paris and Tokyo are all prestigious hubs with a wealth of recreational activity, but all suffer from higher levels of crime, congestion and public transport problems (The Economist Intelligence Unit 2014).

Many cities around the world face population and demographic challenges. Growing populations, with increasing demands for access and improved quality across all public infrastructures are straining city administration and resources. To meet the demands of being a major city, leaders and planners need new ways to improve overall efficiency.

In Jakarta, city planners are trying to solve transportation congestion by improving business' and citizens' access to phone and internet. The Indonesian Transport Society believe that improved communication connectivity could reduce average citizen travel journeys by one trip per day, or 25%, improving the physical connectedness of the city (Ericsson 2014).

There are many options available to business, policymakers and residents when it comes to mitigating the negative social and economic issues facing cities. The next two chapters discuss how other cities have approached these issues, through fostering favourable business environments, strengthening ties between business and institutions, investing in innovative technologies and leveraging the opportunities afforded by digital communications (to name just a few).

2 Focal point for the region

Once a city has taken control of its internal organisation it can look to the opportunities afforded by economic and social linkages with neighbouring regions. No single city can offer all solutions to all businesses, but through regional connectivity (both digital and physical) cities can leverage their competitive advantages of scale and scope while alleviating some of the negative consequences of their size such as congestion.

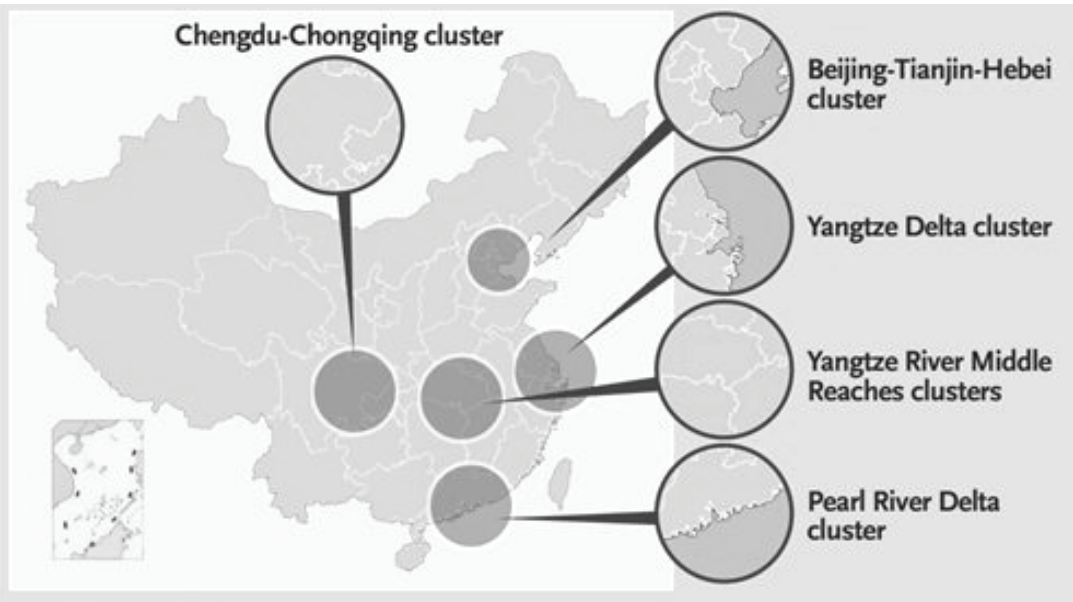
Chongqing is in a prime position to capitalise on opportunities arising from the Yangtze Economic Belt strategy. Chongqing's strategic position within the Yangtze Economic Belt places it in the centre of the new plan to promote clusters as a means of growing the economy of western China (see Figure 2.1).

With the government's focus on making the most of each area's industrial advantages and leveraging regional industry clusters, there are many benefits available to Chongqing businesses and residents.

However, to emerge as a regional leader within the Yangtze Economic Belt Chongqing will need to foster an economic environment conducive to the development and sustainability of competitive industries.

Regional economic specialisation (including clustering) is not a new concept and, as such, there are opportunities for Chongqing's policymakers to learn from the experiences of other approaches to specialisation and clusters (both positive and negative). The following sections discuss the role of clusters in promoting economic growth and how the value of clusters have been realised in cities such as London, Singapore and Los Angeles.

Figure 2.1 Yangtze River Economic Belt



Source: Global Times (2015)

2.1 Clusters and agglomeration economies

The past few decades have seen a sharp increase in the globalisation of economic activities and this trend is only expected to increase in the future, as decreasing communication costs and the proliferation of access to information make it easier to locate knowledge-intensive industries anywhere in the world.

This has led to the argument by Thomas Friedman and others that geography is becoming progressively irrelevant to global production.

However, the success of, and competitive advantages gained from, agglomerations and clusters have demonstrated that economies can benefit significantly from co-locating in a geographic area.

This system of industrial organisation offers many opportunities for economic development and it is up to businesses and decision-makers in cities to rise to the challenge of fostering environments conducive to clustering.

Clusters cannot be forcibly created; rather they develop in cities and city-regions with the necessary institutions, factor markets, business climate and entrepreneurs. It is up to leaders to create this new wave of economic growth, be that entrepreneurs at the local level or cities at the regional level.

A cluster is commonly described as ‘the geographic proximity of firms and institutions that are related in some way, which derive economic benefits from their mutual proximity and connections.

Firms choose to locate in clusters (and cluster cities) because of the advantages that arise from density, specialisation and urban size. The geographic concentration of industries enables firms to both collaborate and compete, increasing demand for downstream suppliers, fostering a pool of specialised labour, promoting the growth of specialised local infrastructure, and, through competition and proximity, stimulating innovation and new developments

Global firms are entrenched in a range of specialised industry clusters, with some clusters emerging as strategic command and control hubs for global networks.

One of the most successful examples of a global network cluster is Silicon Valley in the United States. Silicon Valley comprises a high density of complementary and competing high-tech firms, including both established lead firms (such as Google, Facebook, Apple and Hewlett Packard) and start-ups.

The co-location of business with prestigious research institutions (such as Stanford University and the University of California) and venture capitalists has provided the requisite mix of knowledge, entrepreneurship and finance needed to ensure this cluster remains the hub of innovation and control in the electronics industry.

In 2013, value added per employee in Silicon Valley was almost US$160,000, about US$40,000 more than the US average. This clearly reflects the returns to innovation and entrepreneurship in the area, with Silicon Valley accounting for 47% of patents registered in California and 12% of total patents registered in the US. What’s more, 40% of all venture capital investment in the US occurred in Silicon Valley and San Francisco (Silicon Valley Index 2014).

2.2 Drivers of clustering

Case study: Singapore's bio-tech cluster

Singapore has actively encouraged the development of a bio-cluster, offering opportunities for new businesses to partner with research institutes, corporate labs and public hospitals to develop new medicines and future therapies.

More than 30 of the world's leading biomedical sciences companies (including GlaxoSmithKline, Novartis and Takeda) are capitalising on the advantages of this integrated research ecosystem and its dynamic networks (Singapore Economic Development Board 2015).

One component of this bio-cluster, the medical technology industry, almost tripled its manufacturing output between 2000 and 2011, from S$1.5 billion to S$4.3 billion, with this component alone employing over 7,000 researchers in companies, universities and public sector institutions. This cluster highlights the benefits that can accrue to knowledge-intensive industries from co-locating with research institutions.

Evolution of a cluster – London's financial services cluster

London emerged as a global centre of commerce during the Roman occupation of Britain (from AD 43) and has retained its position as a command centre for the global economy to this day. Through the era of seaborne voyages and heightened global trade the City of London became the preferred meeting place for trade merchants and brokers, and by the mid-16th Century critical institutions such as the Royal Exchange and Bank of England had been established to support and govern traders.

As the centre of global trade exchanges, London's money market matured and by the 20th Century London was the focal point of the first global economy, supplying the short-term bills used as credit between traders.

London's burgeoning banking sector, combined with trade markets (such as the Metal Exchange) and supporting industries (such as lawyers, accountants and insurance underwriters), founded what was to become one of the world's most significant financial services clusters.

Central to the London financial services cluster was the establishment of securities exchanges and over-the-counter markets, both of which (up until the dotcom boom) necessitated in-person transactions. The need for exchange-related services to be co-located meant that the City of London held an almost monopolistic control over the financial services sector.

In present times, the internet and other communication technologies have lessened the importance of co-location to the sector, but other benefits of clustering have ensured the ongoing success of London's financial services cluster.

Research conducted by the City of London has found that four major clustering engines provide growth and sustainability of the financial cluster in London: labour supply, personal relationships through face-to-face contact, innovation, and processes of co-location and competition (City of London 2003).

- **Labour market** – the supply of appropriately skilled labour is a key factor that sustains the growth of London's financial services cluster. The flexibility of London's labour market when compared to Europe provides an important source of financial cluster dynamism. In addition, the 'intellectual infrastructure' available in the cluster has meant that internationally top labour is attracted to the City of London and this depth to the labour market encourages mobility between firms and sectors.

- **Personal relationships** – face-to-face contact between firms, clients, suppliers, regulators and policymakers remains a

vital component of the cluster. Formal and informal business networks sustain the process of face-to-face contact in daily working environments, fostering trust, producing knowledge and supporting complex multi-party transactions. Research has also found social interactions – for example at the at the gym, a club, the tennis centre – to be of significant importance to the cluster.

- **Innovation** – the localised nature of relationships between labour, customers and suppliers helps firms achieve innovative solutions. Co-location with complementary suppliers promotes competition and therefore innovation across the financial services cluster, with larger firms rating competition as the primary factor which drives innovation within the cluster.

- **Processes of co-location and competition** – in addition to promoting innovation, co-location helps firms to develop new markets and more efficient ways of delivering services and products to clients as firms seek gains in market share. In the City of London 24 out of 43 banking firms surveyed said being near leading competitors was important or very important.

Case study: Los Angeles entertainment cluster

A well-known example of an industry cluster arising from supply chain advantages is the entertainment cluster in the Los Angeles (LA) area in the United States. Hollywood, and the broader LA region, has come to dominate the global production of English-speaking motion pictures.

The favourable Californian climate, relatively cheap labour and co-location of the major movie studios encouraged many entertainment support businesses, investors and skilled labour to migrate to the area in the 1920s. The self-reinforcing benefits of the cluster – such as the availability of creative talent and supporting services – have ensured that the area is now the preferred location for businesses throughout the supply chain, from sound engineers and cinematographers to costume designers and make-up artists.

In 2011, over 247,000 people were employed in LA's entertainment industry, earning an average wage of US$117,000 (more than double the regional average). Furthermore, the sector generated over $120 billion annually, of which US$47 billion was value added (Los Angeles County Economic Development Corporation 2012).

Identifying competitive advantage

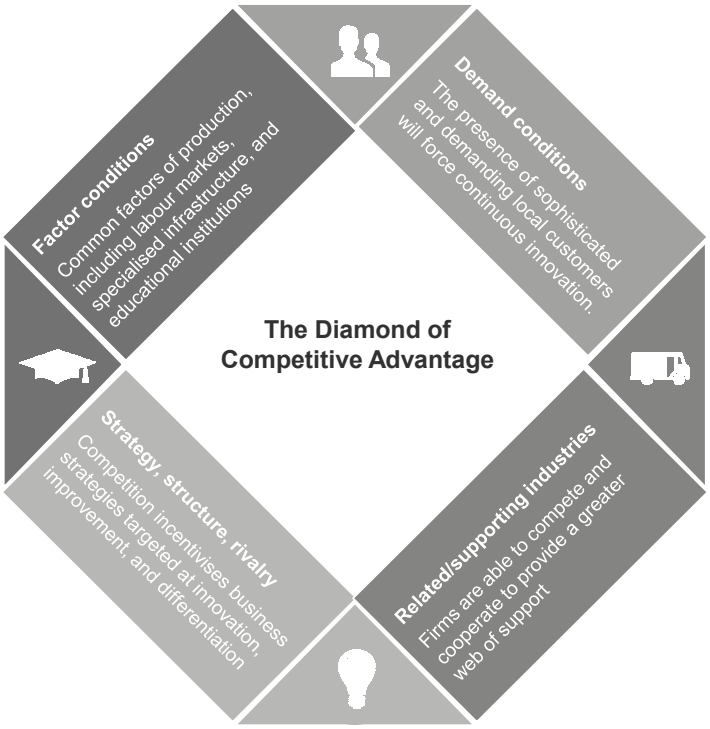
Policymakers and business can contribute to the economic success of their region by recognising the competitive advantages and disadvantages of their region's clusters.

Michael E. Porter's 'Diamond of Competitive Advantage' states that businesses within a well-functioning, competitive cluster gain a demonstrable and clear advantage over less-connected businesses within the same sector, based on four determinants – factor conditions; demand conditions; related and supporting industries; and firm strategy, structure and rivalry – as shown in the figure below. Clusters provide businesses and government with the necessary capacity to leverage all four determinants of competitive advantage.

- Clusters promote favourable factor conditions, whereby the co-located businesses benefit from common factors of production – labour markets, specialised infrastructure and the capacity to leverage educational institutions.
- Clusters encourage favourable demand conditions as common, sophisticated consumers incite competition between businesses.

- Clusters foster co-location of related and supporting industries, by providing incentives for upstream and downstream businesses to establish within the cluster.
- Clusters stimulate competition between rival businesses, driving improvements in firm strategies and structures.

Figure 2.1: The Diamond of Competitive Advantage



Source: Porter (1990)

2.3 Lessons for cluster development

Although frameworks like those shown above do provide some indication of how clusters work, there is no one set of policies or conditions that will make all clusters successful. For example, a technology cluster may require research or capital support, while a metals-industry cluster may require job training or technology deployment support.

What is clear, however, is that cluster policy is not a means of 'picking winners'; rather, policy makers should promote and maintain the economic and social conditions that enable clusters to emerge.

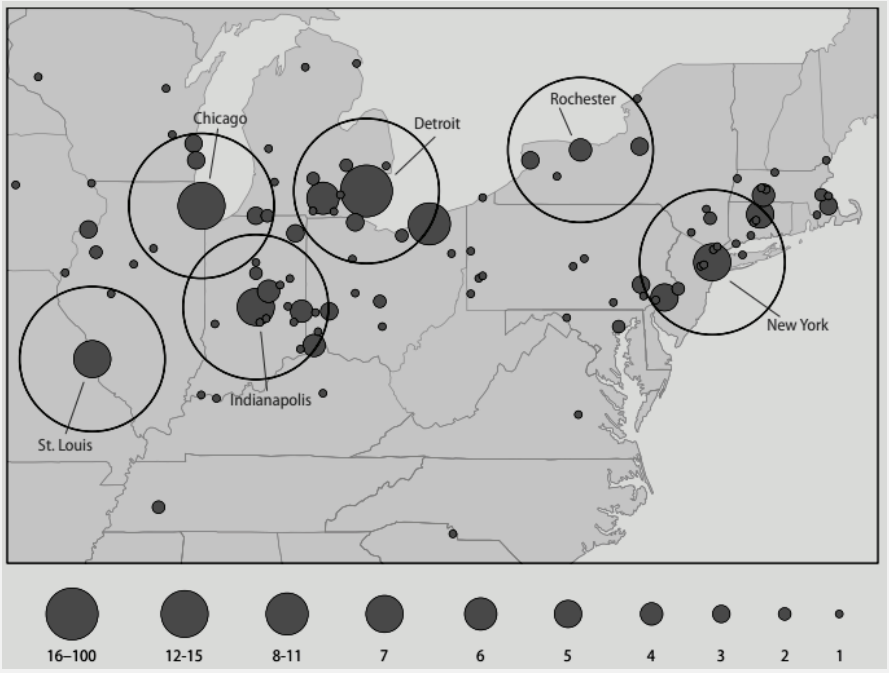
Case study: US automotive cluster

The rise and fall of the US automotive manufacturing cluster is well-known, with the City of Detroit's recent financial crisis making global headlines. This sector provides a good example of how clustering and specialisation can have negative consequences if businesses and policymakers are not sufficiently flexible in their approach to clustering.

Since the time of the carriage and wagon industries, the US has been central to transport manufacturing. The nature of manufacturing meant that agglomeration economies through clustering were important to the success of the industry and, as such, the automotive manufacturing industry became increasingly geographically concentrated.

By 1905 one-quarter of active automotive manufacturers were located in the Detroit area, producing more than half of the industry's output. By 1938 two-thirds of US car makers were headquartered in Detroit. With this came significant local jobs and economic output.

Figure 2.2: US automotive manufacturing clusters, 1910



Source: Richmond Fed (2012)

However, repeated misfortunes in the automotive manufacturing industry, for example through the oil crisis, international competition, saw Detroit's population decline rapidly, significant disinvestment and a shrinking jobs base. Where the population in 1950 was 1.8 million, by 2010 it was just 700,000 (Richmond Fed 2012).

2.4 Implications for government

Cluster thinking offers important lessons for economic development as it allows policy makers and practitioners to:

- build on the unique strengths of their region rather than duplicate the approach of other regions;

- directly engage with cluster members to identify the requirements of industry, be that research and development support or investment in world class training; and
- foster an environment that encourages the development of new clusters rather than creating a cluster from the top down.

There is general agreement that it is difficult or nearly impossible for public policy intentionally to create industry clusters where they do not already exist.

Consequently, policy makers should focus on establishing the right conditions for new industry clusters to emerge (institutions that support knowledge creation, low barriers to entry for new firms and access to capital), then recognise and support burgeoning clusters.

3 Connecting with the world

The One Belt One Road strategy emphasises the benefits available to China's cities from connecting with the world. If Chongqing can successfully rise to the position of 'lead city' in western China, it will be extremely well-placed to ascend to the distinguished ranks of 'global cities'.

Global cities are not just concentrations of people and businesses; rather, they are thriving, innovative and strategically connected centres of knowledge, and highly attractive locations for foreign investment.

There are more than three hundred city-regions around the world with populations greater than one million, of which more than 20 have populations greater than 10 million. To maximise the benefits and mitigate the costs of this rapid urbanisation, policy makers and business leaders in large city-regions can leverage the opportunities afforded by integration with the global marketplace.

The emergence of 'global cities' has clearly demonstrated the value that can be realised by connecting with other regions through trade, technology, transportation linkages and open dialogue.

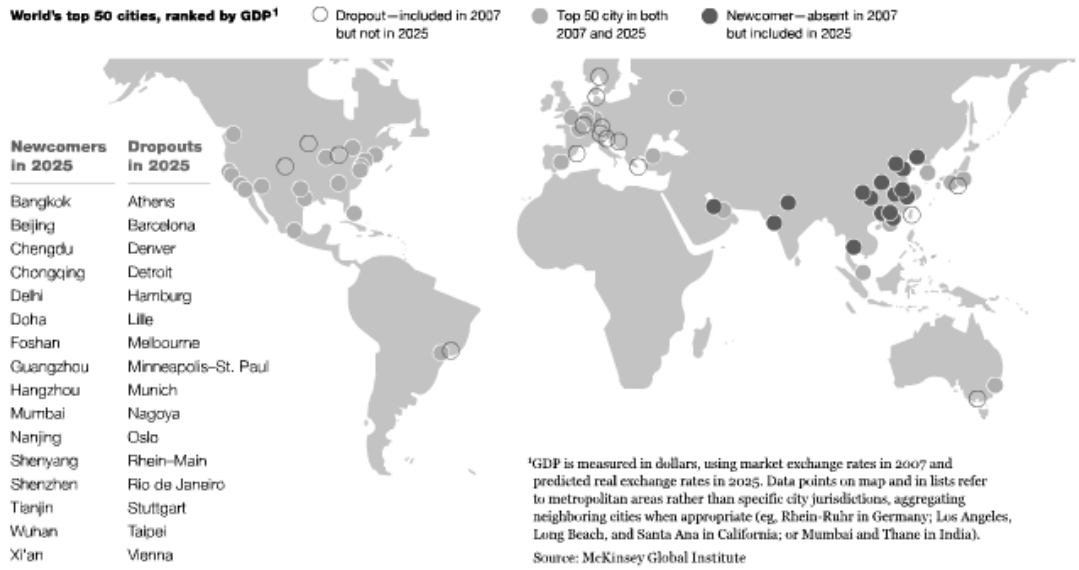
Research by McKinsey Global Institute suggests that by the year 2025 more than 20 of the world's top 50 cities (by GDP) will be located in Asia and more than half of Europe's current top 50 cities will drop off the list (McKinsey 2011b).

This rebalancing of urban economic power, McKinsey argues, will have significant implications for businesses' growth priorities, countries' economic relationships and the world's sustainability strategy.

As Figure 3.1 illustrates, Chongqing is listed as one of the countries expected to join the top 50 cities by 2025. Leveraging this growth, Chongqing has the potential to rise to 'global city' status by investing in transport and communications infrastructure, human capital and smart technologies, and fostering a business environment conducive to innovation and entrepreneurship.

If these conditions are right, connecting with other cities through the One Belt One Road Strategy will present unprecedented opportunities for Chongqing and its people.

Figure 3.1: World's top 50 cities



Source: McKinsey (2011b)

3.1 Global Cities

When thinking of prominent and renowned cities across the world, names such as New York, London, Tokyo, Paris, Hong Kong, Singapore and Sydney come to mind.

Why? What is it about these global cities that make them work like they do? Is it merely a result of being in the right place at the right time, or the outcome of a strong history and renewed focus for long term strategic planning? How does London's economy outperform the UK average by 72% (Knight Frank 2015)? How does New York's economy outperform the US average by 36%?[2]

It takes considerable, constant and iterative effort to establish the strategic, economic and social environment needed to take advantage of this increasingly diverse and information-abundant stage of economic development.

Further, any strategy and its mechanisms need to be flexible, yet structured in a way to attract the right minds and organisations needed to address emerging issues (such as inequality and sustainability).

3.2 What is a global city?

The definition of a global city, or more specifically, which of the world's cities can be classified as a global city, is much disputed.

However, as a number of prominent researchers have stated[3], global cities typically can be described as "centres of transnational corporate headquarters, business services, international finance, institutions, telecommunications and

[2] On a GDP per capita basis.

[3] Knox and Taylor (1995), Sassen (2000), Brenner & Keil (2006) and Friedman (2009)

information processing which act as a nexus of decision-making and interaction".

These "hierarchized, networked or otherwise tightly interconnected world city nodes, which serve as a major port of entry and final destination to a diverse immigrant population, constitute an important part of the global economic architecture".

This contemporary understanding of a global city stems from the early 1900s, where Patrick Geddes, author of the classical planning literature 'The Evolution of Cities', arguably first coined the term. Since this time, leading minds in the areas of global urbanisation have expanded on the term in response to global macroeconomic shifts – globalisation and the information economy – which have been emerging since the worldwide economic recession of the mid-1970s.

Globalisation

When the term 'global cities' was first used in the early 1900s, only about 10% of the world's population lived in cities. Since 2009 more than half of the world's population resides in cities, attracted to the many opportunities these economic, cultural and vibrant hubs can provide.

This centralised movement of people, and globalisation, was significantly increased in the 1970s, when foreign direct investment became dominated by capital moving into and between capital markets, rather than directly invested into production.

Despite the rise of new information technologies, which were previously believed by many to promote a return of population to regional locations, the urbanisation process is actually being consolidated, intensified and accelerated under the contemporary conditions of globalisation.

'The information economy'

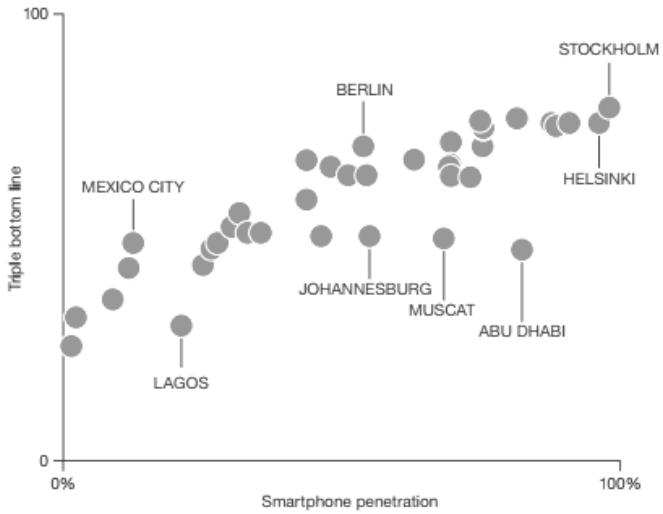
The information economy, or the progressive transition of advanced economies from the production of goods to the production of knowledge, has been a driving factor in the creation of the leading global cities of today.

Richard Florida, an urban studies theorist, relates the rise of the information economy and its implications for the role and function of urban centres and inhabitants to at least as twice as large as the transition from agricultural to industrial systems in the early 1900s. He believes that creativity is the driving force of the economy.

In 2012, Florida estimated that in the United States more than 43 million people were employed in creative class work in fields such as science and technology, business and management, law, health care, education and the arts. Furthermore, the number of creative class jobs is expected to increase by 7 million by 2020 (Florida 2012).

Ericsson's 'Networked Society City Index' ranks 40 global cities according to their ICT maturity. In 2014, Stockholm ranked the highest, followed by London, Paris, Singapore and Copenhagen. Figure 3.2 illustrates the relationship between countries' triple bottom line (economic, social and environmental) performance and the penetration of smartphones. Countries with high smartphone penetration use this mobile technology to maximise the social, economic and environmental benefits arising from well-developed ICT infrastructure.

Figure 3.2: Smartphone penetration and a country's triple bottom line performance



Source: Ericsson (2014)

The contemporary global city … and why it's not only about the economy

The combined effect of globalisation and the rise of the information economy has led to the formation of a select group of leading global cities (such and New York, London and Paris) and a complementary network of approximately 20 sub-global cities centres (like Toronto).

Global cities, however, are not only based on a thriving economy. Many animated and intense debates, triggered by these powerful economic trends, are being undertaken to understand the changing character of modern urban life – factors that are required to make cities liveable, safe and desirable place to work.

The leading global cities of today are aiming to be cities that don't exist yet. Contemporary and complex issues, such as climate change, energy and sustainability, as well as inequity are at the forefront of each major city's strategy. Addressing these factors is critical to ensuring cities remain attractive to the creative culture, a key driver of a global city.

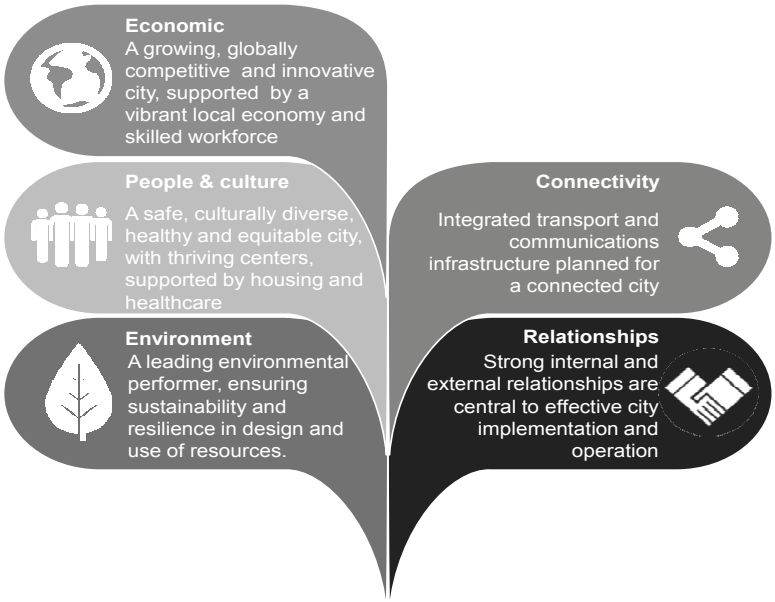
3.3 Characteristics of a global city

Extending on the topics of globalisation, information and creativity, a global city should have the necessary systems and policies in place to:

- provide the ability to attract and mobilise capital, irrespective of its origin;
- enable communication and the free flow of information and ideas, both internally and externally, and over greater distances; and
- create an environment suitable to attract and maintain a healthy, creative economy.

The figure below summarises five common elements from the respective future strategies – economic, people and culture, connectivity, environment and relationships – that also are discussed in short case studies over the following page.

Figure 3.3: Elements of a global city4



New York and Sydney have recently developed future strategies, aiming to address key barriers to their future as global representatives of their respective countries. Each strategy provides key actions and initiatives to be gradually delivered over the coming 10 to 15 years. Understanding these strategies provides a glimpse of the characteristics of a global city.

Case study: City of Sydney – Future Strategy

Sydney, Australia's truly global city, is a vital economic hub for Australia. More than A$100 billion is generated each year within the City of Sydney local area, representing over 7% of Australia's economy (City of Sydney 2015).

Connectivity plays a critical role in the City of Sydney's economy. On any given day almost one million Sydneysiders commute into the City for work, study or shopping using cars, buses, trains and bikes. International connectivity is also vital to Sydney's position as Australia's global city, with Loughborough University's 'Global and World Cities' Research ranking Sydney as the seventh most connected city to the global economy (GaWC 2014).

Sydney has set an ambitious 15 year program, called Sustainable Sydney 2030, to build on Sydney's current global city status, and make it as green, global and connected as possible by 2030. To do this, the program focuses on 10 strategic directions, including fostering a globally competitive and innovative city (which includes strengthening clusters), integrated transport for a connected city, a cultural and creative economy and implementation through effective partnerships.

Some key actions identified include:

- save on electricity network costs and reduce carbon emissions by 70% by 2030 through renewable energy, decentralised energy and energy saving measures;
- achieve a 10% reduction in mains drinking water demand with a city-wide recycled water network and a 50% reduction in stormwater pollution;
- harness new transport modes, such as active transport and car sharing, providing more room on traditional public transport modes to support a growing city with limited space;
- work to ensure that 15% of all housing in the City of Sydney will be social and affordable housing; and
- commissioning art for village centres, town squares and local parks to affirm the importance of the arts and creativity.

[4] Source: Deloitte Access Economics, summarised based on key strategic goals stated in the future city strategies of Sydney, New York City and London

Case study: New York City – Future Strategy

New York (2015) recently released its 'OneNYC' strategy to celebrate its 400th year and ensure a dynamic, liveable and safe city into its fifth century.

Critical issues that were included in the strategy include:

- the city's ageing and outdated infrastructure and services are straining to provide for a growing and ageing population;
- supporting an evolving economy by improving transportation networks, infrastructure and workforce development programs;
- inequity surpassed the national average – 45% of residents are in or near poverty;
- environment and climate change impacts on health and drivers of extreme weather;
- supporting regions to bring together fragmented jurisdictions, which currently complicate regional transportation plans, enhancements and clean energy efforts; and
- giving a voice to the community, which are constrained by lack of internet access and the ability to vote.

4 Conclusion

Over the next decade Chongqing is set to become one of the world's largest cities, both in terms of its economy and its population. By capitalising on its strategic position – and its links to the Yangtze Economic Belt and One Belt One Road strategies – Chongqing will be afforded unprecedented opportunities for economic growth and prosperity.

However, if the foundations for success are not in place, many of these opportunities may not be fully realised. Given the size of the population and geographic extent of the municipality, the challenges facing Chongqing are on a scale not seen by many existing global cities (that have evolved over decades, and in some cases, centuries).

The opportunity is for Chongqing to continue to concentrate on its internal organisation, then emphasis must be placed on rising to 'lead city' status in western China (leveraging the Yangtze Economic Belt strategy) and finally, as underscored by the One Belt One Road strategy, Chongqing must connect with the world. With strong foundations, Chongqing can become a truly global city.

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Proposals and Visions on Making Chongqing the Most Open Inland Economy by Establishing a Comprehensive Logistics Infomation System

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Chongqing is aimed to become a frontier opening area in inland region. However, the current level of opening up is medium in China and far behind of the rest 3 municipalities.

In this case, it is high time to raise its level of opening up. Fortunately, nowadays Chongqing is confronting with three golden opportunities, including “One Belt One Road” Strategy, the development of Yangtze Economic Belt strategy and the expansion of Free Trade Zone. Similarly, these opportunities are all based on the development of logistics infrastructures. For instance, One Belt and Road strategy concentrates on the railway transport, Yangtze Economic Belt strategy focuses on the waterway transport while the Free Trade Zone expansion strategy makes use of the highway transportation to connect other modes of transport.

Therefore, in order to achieve the goal, the main objective for Chongqing is to create a comprehensive logistics system. In the meantime, in order to break through the development bottleneck and maximize synergies of logistics system, it is high time to create an integrated logistics information platform.

Generally speaking, there are two patterns for operating the logistics information platform, namely business-led and government-led operation patterns. In terms of business-led operation, though it is good to build modern enterprise system, and fast to adjust functions according to different applications and improve service level. However, enterprise can hardly design an overall planning for the area economic development and achieve expected scale without the guidance of the government.

Therefore, in order to make use of government resource, ensure effective operation and design integrated development blueprint for the whole area, it is better to choose government-led operation pattern. Concretely speaking, in terms of the operation, the most important task for the government is to coordinate the relevant government departments, enterprises and industry associations to keep the channels unobstructed and information timely updated.

As a result, the system will ultimately improve the competitiveness and the level of opening up of Chongqing. With the development of logistics infrastructure, the cost saving of logistics will contribute to the formation of industrial clusters. As a result, integrated industry clusters will attract talents, boost economic development, improve the core competitiveness of the area and make a significant foundation for the development of the city in the future.

As to Chongqing, with the help of the logistics information platform, it will attract more enterprises and have the opportunity to become the core city of mid-west China and the frontier opening area of inland region.

Connectivity

Masami Iijima

Representative Director and Chairman of the Board of Mitsui & Co., Ltd.

Points for discussion:

① Aiming for Increased Prosperity through Broader Linkage

② Market China as the Focus for the Go Global (*Zǒuchūqù*) and Bring In (*Yǐnjìnlái*) Policy

① Aiming for Increased Prosperity through Broader Linkage

I find it very interesting that "connectivity" was chosen as the topic for this discussion, since connectivity is the key to the business activities of Mitsui & Co. The work of a *sogo-shosha*, or general trading company, is to create new value by forming connections between companies, between regions, and between countries.

China maintained an amazing growth rate in excess of 9% for a long period of time, from 1978, when it adopted a reform and opening up policy, up till 2012. By capitalizing on its vast resources of low-cost labor, China was able to attract foreign companies, especially in the manufacturing sector, thereby transforming itself into the world's factory. The methods used to bring in foreign investment were based on competition among individual provinces and municipalities, and among cities within provinces. As a result, numerous foreign companies established operations in China and contributed to China's evolution into an economic powerhouse. There was a drawback, however, in the form of widening gaps between coastal regions, which were at an advantage during the initial influx of foreign companies, and inland regions, which were at a disadvantage.

At first glance, policies adopted by the Xi Jinping administration, including the "One Belt One Road" concept, the Silk Road Fund, and the AIIB, appear to be focused on the idea of connectivity in the sense of linking China with the rest of the world. However, I believe that the most important aspect of connectivity is actually the development of more efficient connections within China. External connections will be meaningless unless there is effective connectivity at home. This viewpoint seems to be manifested in various strategies, including "Promoting the Development of the Yangtze River Economic Belt" and "Beijing-Tianjin-Hebei Collaborative Development".

These changes suggest that the era of competition at the provincial and city level has ended, and that China is working to raise its economy to a higher and more stable plane based on broader, comprehensive concepts and ideas.

A similar process occurred in Japan during the high-growth era with the formation of the Pacific Belt—a series of

industrial clusters extending from Tokyo through Nagoya to Osaka—which included individual administrative units such as the Tokyo Metropolitan Area and Osaka Prefecture. The various clusters that formed along this path were linked by rail and road, creating an engine that drove Japan's growth.

Chongqing City needs to go beyond links among points at the individual province and city level, and to focus instead on shared development based on broader links across entire areas, such as the 11 provinces and cities along the Yangtze River, or the Chongqing-Chengdu-Xi'an belt.

Chongqing has already succeeded in leveraging its geopolitical advantages to attract companies in the PC and automotive industries. If Chongqing is to develop third and fourth industries in addition to these two, it will need to carry out research that focuses more on value chains for various other industries.

Today more options are available to foreign companies considering expansion into foreign countries, including China. The rise of emerging countries in Asia and Africa is giving such companies an expanding range of choices, and we have entered an era in which China is just one candidate among many. Even within China, there is a much wider selection of cities in which foreign companies can establish their business operations.

In this environment, it will be necessary to consider how foreign companies can be induced to choose China and Chongqing. It will also be necessary to emphasize Chongqing's characteristics more. I believe that the perspective of broader links, which forms part of the new policies adopted by the central government, offers a clue to the achievement of these goals.

When we begin to think about economic growth and development in terms of broader links, an opportunity comes into view. That opportunity relates to the fact that broader links will make it easier to take action on environmental problems through initiatives in such areas as ecosystem protection and the establishment of a green ecological corridor, as mentioned in the Chongqing City government's theme presentation.

Obviously the Yangtze River is not just a highway for boats. All cities and provinces along the Yangtze must work together in earnest to protect this precious water resource through river management, pollution prevention and ecosystem protection. China has reached the stage at which it can no longer afford to delay action on environmental problems, including water problems. The Yangtze River Economic Belt concept seems to contain the message that China cannot hope to achieve further economic development without action to solve its environmental problems.

② Market China as the Focus for the Go Global (Zǒuchūqù) and Bring In (Yǐnjìnlái) Policy

In the past China has achieved development by attracting foreign investment, using low-cost labor to manufacture goods, and exporting finished products. In other words, foreign capital has been brought in, and goods have gone out.. This process has heightened China's economic potential, but today China is ushering in an era in which Chinese capital goes out to the world.

How will the going global/bringing in movement change under the "One Belt One Road" concept? This is a difficult question. However, there are almost no aspects of the "One Belt One Road" and "Yangtze River Economic Belt" that will require efforts starting from scratch. What will be needed is the creation of closer linkage among existing infrastructure and value chains, or infrastructure that is under construction, to enhance value chain at an even higher level. The Chongqing-Xinjiang-Europe rail link is already operating, and goods from Chongqing can reach Germany in 12 days. Shipping routes based on the "Maritime Silk Road" concept already exist and are being used by numerous vessels. The main transportation artery for the Yangtze River Economic Belt is the Yangtze, which is known as the "Golden Waterway". There are 11 provinces and cities along the Yangtze River, and the area already accounts for over 40% of China's population and GDP. Roads are already being developed along the China-Indochina Economic Corridor, which links Chongqing with Southeast Asia via Kunming. The only task remaining is the construction of a railroad from Kunming to Myanmar. These policies appear to have been put forward with the aim of strengthening the focus on how to use these existing assets more effectively and raising their value.

Chongqing is located at the meeting point of the Y-shaped junction between the Chongqing-Xinjiang-Europe rail link and the China-Indochina Economic Corridor. From a logistics perspective, there are already substantial volumes of goods going global (*Zǒuchūqù*) as a result of successful efforts to bring in (*(Yǐnjìnlái*) capital. The most obvious example of this is exports of laptops, for which Chongqing has become the world's biggest production center.

On the other hand, having created the Chongqing-Xinjiang-Europe rail link and the China-Indochina Economic Corridor, we clearly need to ensure that goods flow along these routes both ways rather than just one way.

Given China's transition from one-way exporting as "Factory China" to "Market China", I believe that we need to focus here on how to link the things that need to be brought into China to enrich the people's quality of life, with the goods that can be expected to be "brought in" in conjunction with Chinese capital "going global".

Chinese companies are already active in regions ranging from Africa and Southeast Asia to Europe and North America. At present this activity is still dominated by infrastructure construction by state-owned enterprises, but more and more private sector companies in the manufacturing and service sectors and other areas are likely to expand overseas in the future.

Capital going global will not necessarily result in bringing in goods. Goods produced in overseas countries by Chinese capital will be consumed in those countries or through exports to other countries and will not necessarily return to China.

As companies in Chongqing City start to expand overseas, I believe that it will be important, in terms of ensuring the sustainability of that overseas business, to produce goods that provide the added value needed in China and to send those goods back to China.

Align the FTZ strategy and build Chongqing into a leading area of opening-up in the inland regions

Gerard Mestrallet

Chairman and Chief Executive Officer of ENGIE

Contents

Context

As the largest direct-controlled municipality in China, Chongqing is located in the Y-shaped junction of the Silk Road Economic Belt, China Peninsula Economic Corridor (connecting the 21st Century Maritime Silk Road) and the Yangtze River Economic Belt, which gives it the unique geographical advantage of interconnecting different regions in China. Chongqing is also endowed with several roles defined in the "Guidelines of the State Council on Promoting the Development of the Yangtze River Economic Belt by Relying on the Golden Watercourse of the Yangtze River" as:

- hub role of Chongqing in the Yangtze River Economic Belt in West China, and strengthen the strategic support to the Silk Road Economic Belt;
- enhance the international transportation function of Chongqing-Xinjiang-Europe trains and accelerate the development of Chongqing as the shipping center in the upper reaches of the Yangtze River;
- build the Chengdu-Chongqing urban cluster into a modern industry base, an important economic center in West China and an open highland in the upper reaches of the Yangtze River.

In recent years, Chongqing has made remarkable achievements in the development of an inland open highland, based on which Chongqing is trying to expand the regional cooperation, coordinating the cooperation between the western region, the urban agglomeration in the middle reaches of the Yangtze River and the Yangtze River Delta. Chongqing is also expecting the national support for building China (Chongqing) Free Trade Zone for several purposes:

- facilitating free trade;
- developing an inland experimental financial free zone for steadily pushing forward the opening in financial sector;
- accelerating the construction of an international trade center, international logistics center, advanced manufacturing industry, research and development centre in Liang Jiang new zone;
- expanding Chongqing Lianglu-Cuntan Free Trade Port Area and Xiyong Comprehensive Bonded Area;
- establishing a joint mechanism for integrated Yangtze River shipping service based on Shanghai and Chongqing shipping exchanges.

The implementation of the national "One Belt, One Road" and Yangtze River Economic Belt strategy is definitely a new opportunity and mission for Chongqing, by strengthening its function as the hub and the leader in the inland economic development of western regions. By using its unique geographical position and making the most of its natural resources assets, we strongly believe that these new economic expansion opportunities will be given concrete expression through the development of proper policies and infrastructures, the details of which are discussed in the following sections.

1 Regional gas trading hub based on the free trade zone opportunity

As China's southwestern economic center, Chongqing is aiming to build the western China's first inland free trade zone. The substance is to construct an international standard investment environment and administrative system environment to boost investment. In the first half year of 2015, the GDP growth rate of Chongqing reaches 11% (No.1 in China), which is remarkable considering the "new normal" development context. In addition, Chongqing is also a major gas consumer center, ranking 2nd in China in terms of total gas consumption. The gas consumption per capita amounts almost twice the national

average. Under these circumstances and regarding the environmental benefits of natural gases versus other fossil energies, it can be foreseen that more natural gas will be needed for a faster economic development of this area. Therefore, with this coupled effect of increasing demand for natural gas and fast economic development, the creation of specialized natural gas trading market has become a necessity. Following the intention to apply for the 1st inland free trade zone, Chongqing has now a unique opportunity for considering the establishment of a regional natural gas trading hub.

1.1 Why to build this regional hub

With the development of economy and issue of the emission-reduction policies, the demand for natural gas has rapidly increased. In 2013, China's natural gas consumption was 168 bcm and ranked No. 3 in the world. Based on the estimation in the national 12th Five-year Plan, the natural gas demand will reach 230 bcm in 2015, in which the import volume will be 94 bcm. Although this target is currently considered difficult to achieve in 2015 due to gas price issues and slowdown of economic development, the demand will still reach at least 200 bcm. Therefore, security of supply and competitiveness of natural gas are very important in the highest consuming area, Chongqing. Establishing a regional gas trading hub will be favorable for settling the issues of sales price, meeting the conventional market demand and responding to the unexpected change in supply-demand balance. This means setting up a marketized trading platform and price mechanisms. A natural gas trading hub is the place where natural gas physical transactions from various sources are carried out including domestically produced natural gas, unconventional gas as shale gas and coal bed methane, as well as imported pipeline or liquefied gas; it is also a platform for financial transactions of spot/futures contracts. Consequently, a hub is actually a combination of financial futures market and physical spot market, which will not only make the pricing of natural gas more reasonable, but also help traders prevent supply-demand and price risks.

More specifically, it is economically beneficial to use market mechanisms to reflect the supply-demand balance, so as to determine the price that will promote the development of natural gas markets.

1.1.1 Market-oriented gas pricing

Different pricing mechanisms exist in China for natural gas depending on its way of supply:

- domestic gas price is linked to fuel oil and liquefied petroleum gas prices based on a netback market value method;
- imported LNG is linked to the JCC (Japan Crude Cocktail) price;
- imported pipeline gas is based on a price negotiated by the governments according to the bilateral monopoly principle.

This mixture of various pricing mechanisms is a difficulty, by distorting competition amongst different gas resources, for instance not reflecting the necessary infrastructure investments, and moreover between gas and other energies. Hence, a market reform on pricing mechanisms is inevitable in China.

In Europe, the traditional gas pricing mechanism set-up by long-term supply contracts was the connectionto the price of oil. Since the establishment of several trading hubs in different countries, natural gas market players havefound beneficial the purchase of spot gas, which lower price reflected by the supply-demand balance. Hence amixed pricing mechanism followed

with primary link to oilprice and auxiliary links to spot gas price was established, with a progressively increasing share of the spot part. The establishmentof a regional natural gas trading hub in Chongqing is expected to have the same favorable impact and be an appreciated complement forChina.

1.1.2 Supply demand balance

Currently, the needs of the natural gas market cannot be completely met by medium or long-term supply contracts. Short-term variations may indeed occur due to a sharp increase or decrease of industrial users (like power plants), the emergent demand change under different seasons, climates and supply conditions. These concerns can be properly settled through a natural gas trading hub and reflected by economic transactions. However a necessary complement will be the investment in proper gas storage solutions, to follow these variations in consumption, either of seasonal or peak-shaving character, by injecting and withdrawing gas at optimal times.

In addition to price and supply-demand balance, the establishment of a regional natural gas trading hub will help the local public better understand the value of natural gas and associated infrastructure chain, make gas transactions smoother and increase trading volumes and natural gas consumption.

Another impact will be the reduction of greenhouse gas and atmospheric pollutants emissions. The increase of natural gas utilization will certainly help achieve the CO_2 reduction goal to peak CO_2 emissions around 2030 and to make best efforts to peak early by 2030.

Since the atmospheric pollution, in particularly in urban area has become an existential threat to human health and environment, the Chinese government launched the energy revolution, in which the proportion of natural gas in primary energy consumption is aimed to increase to more than 10%. This target can be totally promoted by creating a regional natural gas trading hub, leading to the optimization and adjustment of energy structure in Chongqing area and even in China.

1.2 Requirements to build a regional gas hub

In order to create a regional hub, three requirements need to be met:

- mature gas spot and futures trading platforms with abundant gas supply;
- availability of good gas transport locations and complete infrastructures with the involvement of international energy and financial companies;
- openmarket structures with legal, regulatory and transparent systems.

1.2.1 Mature gas spot and futures trading platforms with abundant gas supply

Although the gas spot transaction in China is in the early stage, the transaction volume increases rapidly since the first launch of gas spot transaction in Shanghai Petroleum Exchange at the end of 2010. Meanwhile, valuable feedback and experience were gained in terms of transportation mode and delivery locations, which can be considered as reference for the

region hub creation in Chongqing. The delivery locations of the regional hub can also be expanded from Sichuan-Chongqing area to the upper reaches of Yangtze River until the Pearl River Delta regions where the natural gas is in short supply.

The recent development of the Shanghai International Energy Trading Hub, established inside the Shanghai Free Trade Zone, covers the organization oftransactions, the settlement and delivery of energy derivatives. The concept of gas futures market is now better recognized and well promoted, especially considering riskmanagement, price identification and supply-demand adjustment, which are much appreciated by energy and gas players. Under these circumstances, coupled with the efforts made by the Chongqing government for creating the first inland Free Trade Zone, fewer difficulties will be encountered when establishing a regional gas hub in Chongqing.

In addition, an essential asset of Chongqing is the abundant gas supply, which mainly comes from domestically-producednatural gas and unconventional gas as well as imported pipeline gas. In 2014, the total consumption of natural gas in Chongqing is 8.2 bcm, 13.7% higher compared to that in 2013. The natural gas consumption in the first quarter of 2015 achieves 1.9 bcm, 3.1% higher than that in the same quarter of 2014. The share of natural gas in primary energy consumption in Chongqing will increase to more than 14% in 2015. In addition, Chongqing enjoys the huge development potential of unconventionalnatural gas. The amount of shale gas produced (1.1 bcm) in Fuling county of Chongqing, takes over 73% of the total amount produced in China. It is expected that, the output ofshale gas in Chongqing will reach upto 20 bcm in 2020. The abundant and rapidlyincreasedgas supply has laid a solid basefor establishing a regional trading hub in Chongqing.

1.2.2 Good gas transport locations and complete infrastructures

Chongqing enjoys obvious location advantages: close to the gas resources, interconnection of several gas transmission pipelines and excellent national transport locations:

- geographical location of Chongqing is close to the main natural gas resources in Sichuan-Chongqing area, where 125 natural gas fields have been detected with 14 large scale gas fields (>30 bcm). Chongqing is also the interconnection of several main gas transmission pipelines including Kazakhstan-China oil and gas pipeline, Central Asia natural gas pipeline in the northwest and the Myanmar-China crude oil and natural gas pipeline in the southwest, West-East Gas Pipeline I & II, Sichuan-East Gas Pipeline;
- Chongqing is addressing itself tobuilding an international financial center, with attractive conditions especially for international banks and financial institutions. More and moreinternational energy and financial companies have been setting up their offices and regional headquarters in Chongqing, benefitting of the business opportunities thanks to its fast economic development, which is favorable for the execution of the trading activity, the registration and installation of the Chinese and international trading companies and their employees. Chongqing will benefit from the financial expertise already available in the city and also from the specific conditions offered within the ongoing application of Free Trade Zone such as the possible tax benefits over certain type of transactions;
- market environment in Chongqing is favorable. Energy consumption is concentrated and increasing, and Chongqing currently pursues its expansion of its sub-provincial new area, Liangjiang New Area, which composes several new industrial parks, Lianglu-Cuntan Free Trade Port Area as well as Xiyong Comprehensive Bonded Area, leading to continuously

increasing gas consumption.

Above-mentioned geographical and natural assets of Chongqing will, to a great extent, promote the establishment anddevelopment of a regional natural gas trading hub. Chongqing should then build on these strengths and push its competitive advantage, especially through new or reinforced infrastructures.This will first be realized by the reinforcement of transport pipelines, (probably) mainly designed to ensure the supply the regional area. These capacities should be extended to give a new hub the possibility to be supplied not only by regional gas resources, but also receive gas from the Western part of China, increase the amount coming from the South (Myanmar) or from the East (through LNG supplies), and reversely directs quantities to the East.

Moreover, a hub will be fully functional, only if it exists a sufficient flexibility to guarantee the demand-supply balance: this will be provided by an extension and specialization of existing storage capacities. In the Asia-Pacific region according to 2013 Wood Mackenzie Global Gas Database, Japan enjoys the largest gas storage capacity of 22 bcm. China will probably overtakes Japan with the construction of several underground gas storage facilities in 2014 and the capacity can reach 48 bcm including the Xiangguosi underground storage in Chongqing, which is the 1st underground gas storage in the southwest of China.Along with the successful commissioning of this project, the working volume of Xiangguosi facility can reach 2 – 2,5 bcm. However, this underground gas storage is committed to the security of supply and modulation of 5 provinces: Yunnan (2014 gas consumption ~0.5 bcm), Guizhou (~0.8 bcm), Sichuan (~7.3 bcm), Chongqing (~8.2 bcm) and Guangxi (~3.0 bcm), which are also the first delivery targets of the potential regional gas hub. The working volume of Xiangguosi accounts for 10% of the total consumption in the 5 provinces in 2014. However, based on the planning of natural gas consumption in 13th Five-Year Plan of these 5 provinces, the gas need will be tripled and the ratio will certainly be reduced in the coming years, which will degrade the ratio far less than 15% of the average level in the world. Consequently, the insufficient gas storage capacity and incomplete storage system are still the weakness in the aspect of natural gas infrastructures in this area. To enter details and this is not specific to Chongqing, Chinese gas storage capacities will have to address various modulation needs: seasonal ones (for heating or industrial production) and peak-shaving ones (power generation). This will entail the development of storages in diverse geological undergrounds, with a further different operational management.

1.2.3 Openmarket structures with legal, regulatory and transparent systems

Generally speaking, the Chinese market structure reform is not yet fully implemented. The successful establishment of a natural gas trading hub is normally coupled with changes of contract modes and pricing mechanisms. In 2013, China started to carry out the gas pricing mechanism reform by changing from government regulated cost to the “netback market value” method, linked to alternative energies as fuel oil and liquefied petroleum gas. The price management is changed to city gate or station delivery method, which is still not completely adapted to the market since the adjustment is not timely and frequent enough that the price still cannot reflect the fluctuation of supply-demand balance in the market. This approach does not take into account the investments needed to develop gas chain infrastructures.

Until now, there is furthermore no independent natural gas body in China to regulate these new ways of organizing the market, ensuring non discrimination, application of the rules, therefore creating the climate of trust that will motivate market

players and promote development. Under these circumstances, it is important to refer to the experiences and feedback of other countries such as United States

[1], Europe[2] and even other Asia-Pacific countries[3] in terms of policies and regulatory bodies to clarify the specific management frame work for third-party access of fuel gas pipe network for instance, and to ensure the normalized market development.

In France, as an example, the wholesale gas market is divided into three balancing zones or virtual hubs, two of which are operated under full unbundling principles by ENGIE through its transmission subsidiary GRTgaz as the independent Transmission System Operator under a fully transparent Third Party Access system. In 2013, 60 active players have exchanged some 45 bcm through these hubs.

1.2.4 SWOT analysis

Based on the analysis of the three requirements for a regional natural gas trading hub, Chongqing has the advantages such as location in terms of abundant natural gas supply and reference on the already-launched spot and futures markets in Shanghai, but it has also disadvantages such as insufficient infrastructure facilities, incomplete law and regulation systems and regulatory bodies. A SWOT analysis is shown in Figure 1.

1 USA: <Natural Gas Act> in 1938; <Natural Gas Policy Act> in 1978; <Natural Gas Wellhead Decontrol Act> in 1989; Establishment of <Federal Power Commission> in 1938 and <Federal Energy Resource Commission> in 1978.

2 UK: < Petroleum and Natural Gas Enterprise Act> in 1982; <Natural Gas Act> in 1986 and 1995; <Pipeline Code> in 1996; Establishment of <Office of Gas Supply> in 1986 and <Office of Gas and Electricity Markets> in 2000.

3 Singapore: <Natural Gas Law> in 2001; < Gas Network Code> in 2008; Establishment of < Energy Market Authority> in 2001.

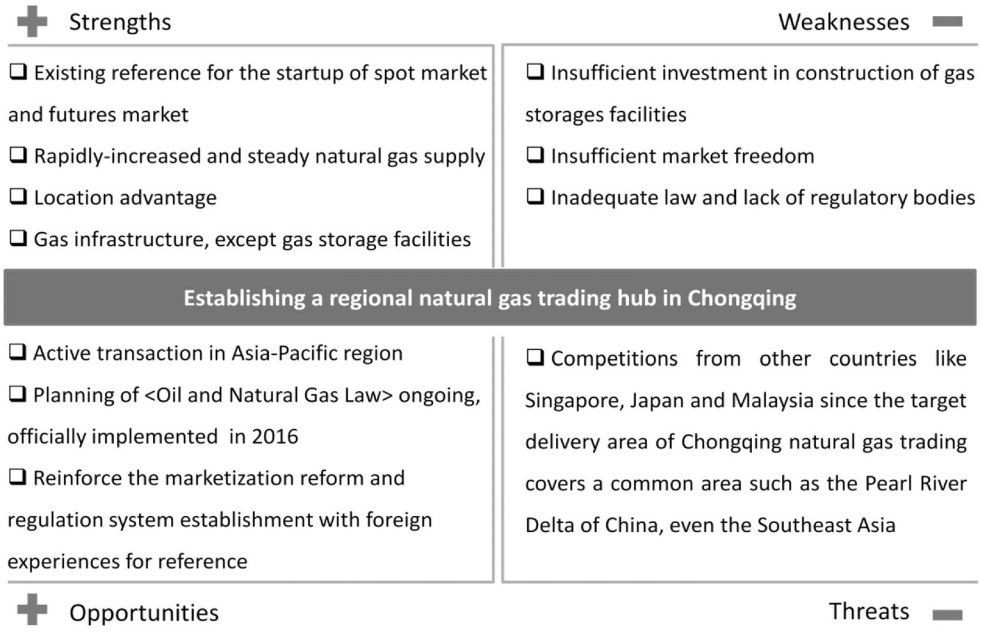


Figure 1. SWOT analysis for the establishment of a regional natural gas trading hub in Chongqing.

1.3 How to establish a regional gas hub

The development of natural gas market is accompanied by the evolution of market structures, contract modes, pricing modes and regulatory bodies. Different reform phases should proceed with different stages as shown in Figure 2.

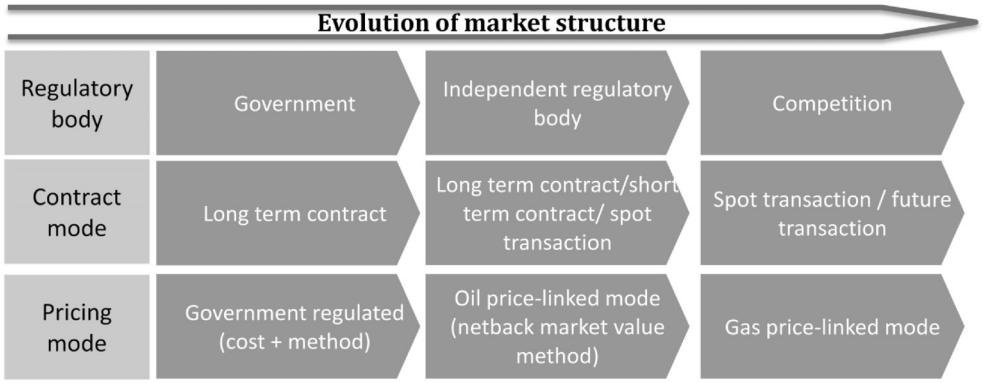


Figure 2. Implementation procedure for the establishment of a regional natural gas trading hub in Chongqing.

More concretely, four points need to be studied in Chongqing:

- realize the transition from oil price-linked pricing mechanism to gas price-linked pricing mechanism. Enhance the development of spot transactions by referring to Shanghai as an example by taking the seasonal and strategic peak modulation into consideration. Carry out the trial on futures transaction and systematize the development of both spot and futures markets. This process should ensure a smooth transition of market structures, contract modes and pricing mechanism in order to meet the present status and development of natural gas markets in the Chongqing area;
- according to the gas supply conditions and distribution of resources, promote the market development in link with

other areas where the conditions are relatively satisfied such as the Northwest area including Xinjiang, Qinghai, Shaanxi, Gansu and Ningxia provinces (Tarim, Karamay Shebei and Sulige oil/gas field) with natural gas & oil production resources nearby, high output, relatively complete gas supply and storage infrastructures. Also the south of China especially the Pearl River Delta can also be taken into consideration with good imported LNG facilities as a complement. These multi lateral and interregional connection, possibly with reversible or both directions flows, are beneficial to establish a mature gas transaction system.

- the Chinese government is considering to establish the <Oil and Natural Gas Law> in 2016, which has been discussed since more than 10 years, in order to set up a integrated market regulation and to develop spot and futures markets within a legal framework. It is also advised to set up an independent regulatory body authority for natural gas to ensure the implementation of associated regulations for production, transmission & distribution, sales, consumption and industrial standards relating to supply-demand, transportation, pricing mechanism, metering and billing issues for establishing some unified regulation on natural gas markets. It is suggested that Chongqing authorities take initiatives to participate to this formulating process by considering the specific conditions in the Chongqing area. Also in terms of regional hub, more relevant actions can be carried out by Chongqing government including the establishment of:
    - o the strategy and the roadmap for the regional hub;
    - o the natural gas infrastructure development plan for the next 10 years;
    - o as a desirable option, an intensive international cooperation to get the feedback and experience from foreign countries;
- the Chongqing government would act as a leader for planning, designing the strategy and coordinating actions meant for increasing the investment on the construction of necessary infrastructures by involving the gas production enterprises, gas supply enterprises and large industrial users. Considering the huge CAPEX and technical challenges involved in these projects, foreign players should also be invited in order to accelerate the establishment of regional natural gas trading hub in Chongqing.

The successful creation of a regional natural gas trading hub cannot be just the result of a political decision, but the direct consequence of the establishment of a free and transparent market, where all kinds of gas actors such as producers, users, shippers, banks and other financial institutions, can find the conditions to trade and exchange their products with minimal constraints. As an international gas player, ENGIE group operates 2 virtual transmission hubs, 3 LNG import terminals and around 20 underground gas storage facilities within different regulatory environments. ENGIE is ready to share this experience and to cooperate with local partners to help build up the most efficient system, taking into account the specificities of the gas market of Chongqing area.

2 Eco-city implementation for in-land economic and ecologic development in Chongqing

The Chinese government policy at national and local levels encourages the growth of low carbon greentech solutions for cities (eco-city). As urbanization continues at an unprecedented scale and pace, China must tackle the simultaneous challenges to reduce carbon emissions, ensure sustainable economic growth: energy security of supply, competitiveness for industry and affordability for people as well as respect for environment.

Urbanization is rapidly becoming the central pillar of China’s new approach for modernization and economic development. Over the past five years, at least five Ministry-level initiatives have been launched to encourage eco-cities

development. In January 2013, the Ministry of Housing, Urban and Rural Development announced an eco-city initiative. The China Development Bank will invest more than 80 billion RMB to support the scheme during the last three years of the 12th Five-Year Plan. According to the news from NDRC released on 4th August 2015, the planning of urban cluster development in Yangtze River Delta, Chongqing-Chengdu area and Harbin-Changchun area are the priorities in China by focusing on three topics: integration of rural population into urban population, development of new small and medium-sized cities as well as promotion of new types of cities' construction (e.g. eco-cities). Concern remains that some local governments are promoting eco-cities concept without adequate planning and with far greater emphasis on economic growth than on reducing the environmental impact of development. Cities may be accelerating plans with the hope of receiving national government funding, securing bank loans, or of attracting inbound investment and tourism.

The understanding of methodology for creating the eco-cities is relatively unclear in terms of partnerships, funding models and implementation capabilities, which must be in place to plan, design, build and operate low carbon solutions for the eco-cities. Low carbon solutions for cities must be a holistic development concept, which covers emission reduction, resource efficiency, environmental protection, economic development and social sustainability. Certainly, economic development naturally remains a priority, but careful planning is always needed to ensure the growth is rational and aligned with the city's sustainability goals.

China has been developing its approach to tackle the growing environmental challenges, within the framework of 12th Five-Year Plan, setting clear targets for emissions reductions, energy saving and resource management. Numerous regulations and standards have been issued to support these aims. Recent initiatives and statements from China's leaders also suggest the recognition that moving to a low carbon eco-development model is essential to ensure a sustainable economic future. But it remains unclear how local governments and the private sector will collaborate effectively to implement these policies in an integrated and sustainable manner. And some challenges remain, especially, in terms of coordination of infrastructure builders, architects, engineers and technology solution providers. Besides, research and development of greentech solutions for eco-cities is relatively immature in China, with few localized green technologies.

2.1 Requirements and solutions to build low carbon eco-cities

As the largest city in China, it is desirable that Chongqing creates its own specific general plans for low carbon eco-cities over the next decade. But the motivation should be pursuing a long-term path for sustainable development plan instead of only attracting investment. Therefore, a clear vision shall be outlined to support the evolution of low carbon eco-cities in Chongqing through 2020 and to provide clarity and guidance at this critical stage, the beginning of 13th Five-Year Plan, meaning that low carbon eco-cities should be integrated at all stages of development, adapted to local situations. Several requirements will support this goal:

- for the next 5 years, low carbon greentech solutions should be considered in the very early stages of urban planning and design. Chongqing area is an integrated system, where energy supply, transport, buildings, commerce, public services and people are closely linked and constantly interacting. Therefore, the establishment of effective low carbon strategies and greentech solutions requires an integrated approach to optimize the relationship between different types of infrastructure planning including urban planning, transport, water and energy at both district and city levels;
- low carbon eco-cities development is not a rigid concept and it is meant to be perfectly adapted to local conditions, needs and priorities. With the development of urbanization, new districts are or will be in the design or construction phase, which creates more opportunities. For instance, the waste management system in a city and agriculture in the rural area nearby

can provide biomass that is processed locally to produce biogas, which in turn becomes the fuel powering a city's transport network. This approach is fully aligned with Chongqing's gas-based strategy toward a circular economy: biomass/waste production – recycling – biomethane production – use for transport. However, local conditions impact the practicality or affordability of low carbon solutions as the availability of solar and wind resources are not ideal in Chongqing compared with other Chinese cities, which will clearly influence the decision regarding renewable energy sources to power, heat, or cooling;

- since the local government has been changing the understanding of economic development from a quantitative (numbers and speed) to a qualitative one (welfare for citizens, environmental sustainability, economic growth), it is certain that low carbon greentech solutions provide new commercial opportunities. For instance, focus is given to promote innovation in greentech in order to attract foreign companies by developing new energy applications, such as biomethane, LNG use for train since Chongqing is the gate of Chongqing-Xinjiang-Europe railways, and energy management such as the gas based solution for datacenters, energy conservation in buildings;
- government leadership, business models, financing and technologies are the basis for achieving the eco-cities concept. Business models are essential to promote technology adoption, partnerships and commercial viability. Also, greentech must be available, affordable and relatively mature to be used to meet economic and ecological targets. In addition, innovative financing is a key factor, especially for some greentech involving high CAPEX and long payback periods such as wind and solar technologies. Among all these issues, the most important one is still the set-up of appropriate government policies, which will act as the catalyst for the development of low carbon eco-cities, by encouraging and attracting Chinese and foreign private investment and participation in the following areas including urban planning & design, transport, buildings, water, renewable energy, distributed energy systems and financing of greentech solutions. The government supervision bodies also need to establish the right key performance indicators to track progress and monitor implementation.

To be better adapted to the situation in Chongqing, several domains are listed below for further consideration of Chongqing's low carbon eco-city development:

- technology innovation: since around 70 universities are located in Chongqing, large scale R&D capabilities and innovation should be clustered, associating enterprises and R&D competences to accelerate development and attract national and international skills for achieving low carbon and ecological targets;
- extensive application of existing greentech solutions: focused on development of emerging and mature low carbon industries such as the small scale solar distributed energy solution, electrical vehicle and more extensive application of electrical and CNG/LNG vehicles as well as the LNG vessels on the Yangtze river;
- energy efficiency and consumption reduction: as the biggest city and one of the largest energy consumers in China, to reduce energy/water consumption and improve waste management and energy efficiency are more meaningful in Chongqing. The target can be achieved through:
  - creation of complete energy recycling system with recycled energy used in the industrial parks nearby;
  - increase of energy efficiency using a mix of gas and renewables based solutions in specified industries, commercial zones and residential areas.

2.2 How to build low carbon eco-cities

Although the central government plays a leading role in creating the supportive framework of policies and incentives for

low carbon eco-city development, it does not exclude and is even recommended that local governments, state owned and private companies take the initiative in implementing action plans. In addition, although the environmental and economic benefits of the implementation can be achieved more effectively in newly constructed districts, there are also demonstrable advantages in applying the same principles to existing old districts where low carbon developments also need to be restructured. More challenges will arise while restructuring old districts, since it involves higher cost and the difficulties of negotiating with the owners of existing infrastructure and of operating constraints such as the extremely complex underground pipelines encountered in Jiefangbei CBD area. Nevertheless, by doing so, it can certainly create new economic opportunities that will drive sustainable GDP growth as well as improve the living conditions of local citizens.

A three stage action plan is proposed based on the analysis mentioned above:

- effective collaboration among engineers, planners, designers, solution providers, local government, investors and construction actors is fundamental to the success of the eco-cities development. This needs to be established at the initial stage to avoid an operation without fully considering the interdependencies in the planning of cities or districts. Although China does have a significant expertise in certain areas involving eco-cities, it still relatively lacks of references and experience. At the beginning, it is therefore essential to identify the gap between the needed and existing competence for low carbon eco-city development;
- once the cooperation between different areas is effectively carried out in the first stage, it will then be necessary to focus on the critical targets and obtained practice data and experience through demonstration (first of a kind) projects. The target and data required for a low carbon eco-city include local emissions targets, sources of renewable and gas related clean energy, population growth, income trends, and local climate conditions. The results can then be shared and assessed by all participants and implemented into future stages of development. The collaboration established in the first stage should be continually strengthened with continuous communication and to be flexible enough to be adapted to evolving situations. Meanwhile, to address the gap between needed and existing competence as identified in the first stage, different solutions can be applied including training programs, work-study exchanges and partnerships between international and Chinese actors based on foreign expertise and real case studies;
- based on the integrated approach and demonstration projects in the earlier two stages, proper investment is needed from governments, other public and private actors. New business models and financing methods should be developed to better balance the relatively short-term financial requirements for long-term economic, environmental and social benefits. Meanwhile, new collaboration models such as the public private partnership models need to be developed. The local government also has a crucial role by issuing supportive policies and incentives, which is proven to be more effective by rewarding successful implementation and performance, rather than simply encouraging well-intentioned designs. To really launch this action, a guideline involving key indicators should be established to evaluate low carbon solutions in the whole process including planning, design, construction, operations and maintenance, the results of which should be measurable and linked to government policies.

Implementing low carbon greentech solutions will certainly create substantial collaboration and commercial opportunities over the coming years. The ENGIE group hopes to be able to support Chongqing government in achieving its low carbon eco-city ambitions by working closely with relevant government agencies and local actors, and share the feedback and experience from other cities and projects to the benefit of Chongqing city in the next Five-Year Plan.

“Going Out” and “Bringing In”

– Suggestion for “the One Belt One Road” Strategy of Chongqing –

Bruno Lafont

Co–Chairman of LafargeHolcim

I Background Information on “the One Belt One Road ”

Chinese President Xi Jinping raised an initiative of jointly building the Silk Road Economic Belt and the 21st-Century Maritime Silk Road (hereinafter referred to as the One Belt One RoadInitiative) when visited Central Asia and Southeast Asia in September and October of 2013. This Initiative, on the basis of peaceful development, cooperation and mutual benefits, has attracted close attention from all over the world. In March, 2015, the Chinese government drafted and published the “Vision and Actions on Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road” to promote the implementation of the Initiative.

Accordingly, the Initiative designs a net which connects the continents of Asia, Europe and Africa and Pacific Ocean, Indian Ocean, and even Arctic Ocean in the future. It connects the vibrant East Asia economic circle on the one end and the developed European economic circle on the other; links China with the Persian Gulf and the Mediterranean Sea through Central Asia and West Asia; and brings China together with Southeast Asia, South Asia and the Indian Ocean. The One Belt One Road Initiativeinvolves about 65 countries (including China) with a total population of about 4.4 billion and an annual GDP of $ 21 trillion, accounting for 62.5% and 28.6% of the world’s total respectively. In 2013, the foreign trade volume of China and the countries along the route totaled $1.04 trillion, accounting for 1/4 of China’s total.

II "The One Belt One Road Initiative" and Chongqing

The Initiative brings great development opportunities to Chongqing. In the 21st Century, Chongqing, an inland city, has already become the frontier of Chinese reform and opening, a connecting point of the east and the west, the north and the south.

Chongqing has incomparable geographical advantages than other western cities in this grand plan. It is located in the Y-shaped junction of the Silk Road Economic Belt, China-Indo-China Peninsula Economic Corridor (connecting the 21st-Century Maritime Silk Road) and the Yangtze River Economic Belt.

The city will become the important strategic fulcrum of the Silk Road Economic Belt, the industry hinterland of the Maritime Silk Road and the central hub of the Yangtze River Economic Belt in west China. In particular, relying on the

golden watercourse of the Yangtze River, the Chongqing-Xinjiang-Europe International Logistics Channel and the Chongqing-Kunming-Southeast-Asia International Trade Channel, Chongqing has formed a comprehensive three-dimensional transportation network. Railway, highway, water, air, and pipe are linked seamlessly in the city, which prepares this city for an important hub connecting the Yangtze River Economic Belt and the Silk Road Economic Belt.

The efficient transportation system is a more efficient and safer way of transporting products between China and Europe. Chongqing will become a distribution and exhibition center of the European products.

Also, the step-by-step improvement of the transportation system will largely promote the cooperation between Chongqing and the cities along the two belts.

Chongqing has the opportunity or even the responsibility to play a leading role on the economic development of the upper reaches of the Yangtze River and the western regions. Besides the improvement of the transportation system that we mentioned before, the initiative allows Chongqing to renew the economic structure based on its solid industrial foundation. Chongqing government has proposed 10 newly-rising industries such as environment-friendly products, robots, intelligent equipment, new energy, intelligent cars, etc. Chongqing has obvious advantages in these fields from the perspective of raw materials, human recourses and large local demand. Nowadays, one third of smart terminals are made in Chongqing.

Chongqing is improving its trading system and enlarging the port economy. The Chongqing-Xinjiang-Europe International Logistics Channel becomes a main channel of China-Europe cargos. Jiangbei International Airport and Cuntan Port play a crucial rule in transporting. Policies on free trade zone and more customs also work well.

The One Belt One Road initiative provides possibilities of closer economic cooperation between Chongqing and cities along the One Belt One Road and the Yangtze River Economic Belt. For instance, governments of Chongqing and Sichuan have signed a memorandum on building urban agglomeration. Chongqing government also signed a memoir with Guizhou government to develop the water transport of Wujiang River, a branch of Yangtze River. They will build a mechanism on sharing shipping information, water-way management, etc.

Last but not least, the investment policy in Chongqing has transformed to giving equal priority to Foreign Direct Investment (FDI) and Overseas Direct Investment (ODI). The investment environment in Chongqing will become more and more matured because of strengthening importance of market. Wider cooperation and innovation on admission and management of investment by the government have been widely witnessed. The government takes much effort to enlarge the investment field of FDI. Meanwhile, new fund-raising and investment methods have been introduced to Chongqing. In order to realize the blueprint in the One Belt One Road initiative, infrastructure building will be one primal investment field. The initiative also provides more chances than ever before for domestic enterprises. They can invest industries and build factories in the cities and countries along the One Belt One Road.

In one word, One Belt one Road initiative is of great significance to the development, transformation and opening up of Chongqing.

III Suggestion on Implementing the Going-Out Strategy for Chongqing

With the vast opportunities that bring by the One Belt One Road, Chongqing has entered into the stage that both "going-out" and "bringing-in" are equally important. We believe that Chongqing has every reason to speed up the "going-out" pace considering the Eurasia International Railway has crossed quite some developing countries in middle Asia that has rigid demand for various investments from Chongqing.

But "going-out" is not an easy task, especially for most Chongqing enterprises and Chongqing itself. We suggest that Chongqing's "going-out" strategy could be implemented into three dimensions.

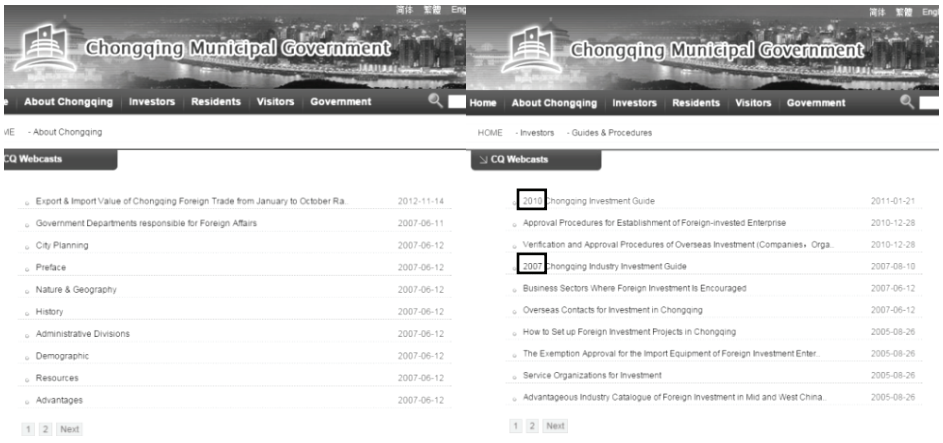
III-1 First dimension: Promote City Branding of Chongqing

Chongqing should strengthen and improve its city brand and gain more exposure in the international world, especially the countries along the One Belt One Road. Though Chongqing currently is already one of the biggest cities in the world, it still has comparatively low awareness among the business world and people in many countries. Chongqing is gaining more international awareness, but general audience's understanding of Chongqing is still weak compare to Beijing or Shanghai. I always need to tell friends and partners that Chongqing is in West China, that it plays a significant role in China's modern history and that its economy booms in last several decades, etc. I would suggest that Chongqing adopt one or all of the following methods to improve the current situation. Namely, gain more international exposure, build a more functional English website and better leverage the CMIA alumni resources.

Talking about the international exposure, the "Day of Chongqing" on July 24 in 2015 Milan Expo was a great trial. Furthermore, Chongqing should be active in hosting more international forums and making event sponsorships selectively (Expo, Olympic games), it can attract global attention and develop positive image.

Secondly, establishing a more functional English web site is a MUST in enhancing Chongqing's overseas image. Though the current government website has English version, French version, Japanese version etc., they are neither updated on-time nor user friendly, at least not as functional as its Chinese version. The following pictures are screenshots from the government

website. To help foreign business people to understand Chongqing and live efficiently in Chongqing, there are also business opportunities for English Version of WeChat, Dian Ping and other useful APP that help to gather local information.



Thirdly, Chongqing government could fully leverage the CMIA alumni resources. This year is the 10th anniversary of CMIA. Chongqing has accumulated hundreds of CMIA advisors and guests. Such CMIA alumni database should have huge impacts in the political and economic world. We believe that there must be more creative ways to inspire them further to introduce Chongqing to the outside world.

Fourthly, Chongqing could also consider creating a world class cultural or art land mark building or facility. In fact, many people might not know Chuang Mei (Art Collage of Sichuan), the best Chinese Art University is actually located in Chongqing (not Chengdu). And Chongqing has rich heritage of culture in past 100 years particularly in World War II. It's the city's responsibility to promote its shinning culture and art works to more people.

As a country full of passion to culture and art, France paid great attention to support and spread culture activities. For instance, in Paris, except for Louvre Palace, Eiffel Tower or Arc de triomphe di l'Étoile, the most recent and shining cultural icon is the Foundation Louis Vuitton. The museum was inaugurated by French President Hollande in October, 2014. Responding to design considerations of the Jardin d'Acclimatation in Paris' western-most park, the Frank Gehry-designed Foundation Louis Vuitton uses billowing glass product sails anchored to an "iceberg" core made out of 29,000 tailor-made Lafarge UHPC Ductal concrete panels. Such piece of architecture could add uncountable rewards to upgrade the city's world image. It's the newest attraction of the city, and opens up hot discussion on art, architecture and material technology. It became the new name card of Paris.

III-2 Second dimension: Economic Activities

Besides the city brand promotion, Chongqing could take actions to promote economic activities in going-out. More specifically, Chongqing should encourage both exchangeof products and manufacturing facilities or investments.

Here we'd like to share the Lafarge case to help China Business for "going-out". Lafarge, as the world leader in cement manufacturing, has built up strategic alliance with one of the biggest Chinese building material equipment manufacturer, Sinoma. Till today, Lafarge and Sinoma have collaborated for more than 7 cement & clinker production lines with total contract value of more than 5 Billion RMB in China domestic market. Besides, such collaboration has extended outside China. For instance, both groups had so far completed more than 7 complete cement and clinker lines in countries like India, Russia, Nigeria, Algeria, Iraq, Zambia, Tanzania, etc with total contract value of more than 10 Billion Euro. With such unique opportunities and cooperation, Sinoma has been recognized by other western cement producers and gain international reputation as well as market share and profits from overseas markets.

Chongqing also has leading enterprises in cars, motorcycles, railway components and robots sectors. They can learn from this practice and export their manufacturing lines along the One Belt One Road with global partners

Of course, we have to mention some risks and prevention methods for Chongqing enterprises when they adopt the

"going-out" strategy. The risk evaluation system we always adopt combined with three levels, macro-level (country-wise), industry-level and micro-level (considering the enterprise itself). To evaluate the macro-level risks, we always use PESTEL tool (measure factors in Political, Economic, Technical, Environmental and Legal aspects). For risk evaluation in industry-level, it typically contains the analysis on the industry itself. Porter's 5 forces would be always applied for industry competitive landscape study. Meanwhile, for micro-level risk evaluation, we should focus more on the fitness between going-out strategy and the overall corporate strategy and consider the match of internal resources (capital, HR, technology etc.). Chongqing enterprises not only should grasp these principals, but also should spend real efforts to establish such system inside the enterprise and really put into implementation. Principals are easy while capability to implement it is a long-term and systematic job. Chongqing enterprises need patience, and more importantly, practices.

III-3 Third dimension: Culture & Tourism

Besides the self-marketing and economic investment, we never forget the force of soft-power. More bilateral or multi-lateral cultural activities and the development in tourism sectors would have more impacts.

Chongqing, with special and high-quality tourism resources, has great potential to expand the scale as well as enhance the quality level of tourism. Chongqing cannot be an ending of the Chongqing-Xinjiang-Europe rail line, but it should be an ideal destination for travelers around the world. Cooperation creates benefits, which especially suits the cities along the One Belt One Road. The cities, including Chongqing can hold promotion activities like tourism promotion weeks and publicity months in order to introduce themselves to people in other cities. Furthermore, the cities can jointly create competitive international tourist routes and products with Silk Road features. Meanwhile the governments of the One Belt One Road countries need to make it more convenient for tourist visa application. Ideally, the Chongqing-Xinjiang-Europe rail line will gain high recommendations on major travel guides such as *Lonely Planet*. Chongqing will be a must-go city in both China and the One Belt One Road.

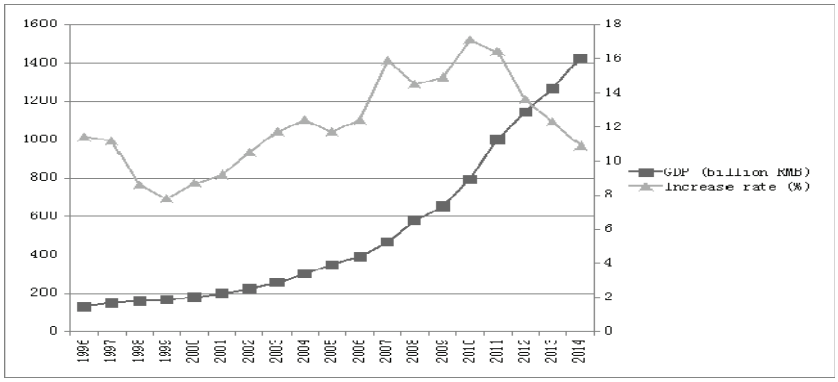
Cultural communication should be deepened. In education, more projects of exchanging students should be financially supported. More schools, laboratories and research projects can be run in a joint mode. It's very good to attract students (and interns) to Chongqing. But the common problem is it's difficult for them to get a visa everywhere in china.If Chongqing could make it easier to get a visa to Chongqing than to other places in China, it would divert these guys towards Chongqing.This is crucial and efficient to promote Chongqing's local culture, introduce new culture and technology and then develop Chongqing's economy. We are delighted to know that Chinese government has taken a step that 10,000 scholarships are provided to the students from the countries along the One Belt One Road every year. Chongqingneeds to support the growth of new cultural industries such as animation, games, movies, etc. Culture years, arts festivals, film festivals, TV weeks and book fairs should be held in each other's countries. More supporting policies need to be taken to produce or and introduce fine films, radio and TV programs.

IV Suggestion for Enhancing the Bringing-In Strategy for Chongqing

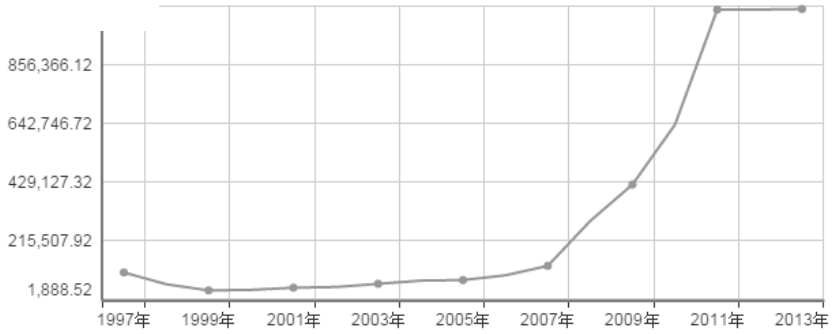
With the signing of China-Korea Free Trade Agreement in June 2015 and the upcoming construction of the 3rd Sino-Singapore Industrial Park in Chongqing, plus the One Belt One Road Initiatives, the city has face another golden era of

"bringing-in". But we regard that Chongqing should raise the entrance bar and be more selective in the new investments. Be selective not only in the industry sector itself, but also the enterprise/investor. Therefore, investors from logistics, culture and service industry that facilitate any method of connectivity are with prior importance to bringing-in.

GDP of Chongqing



Foreign Investment in Chongqing (Unit: 10 Thousand Dollars)



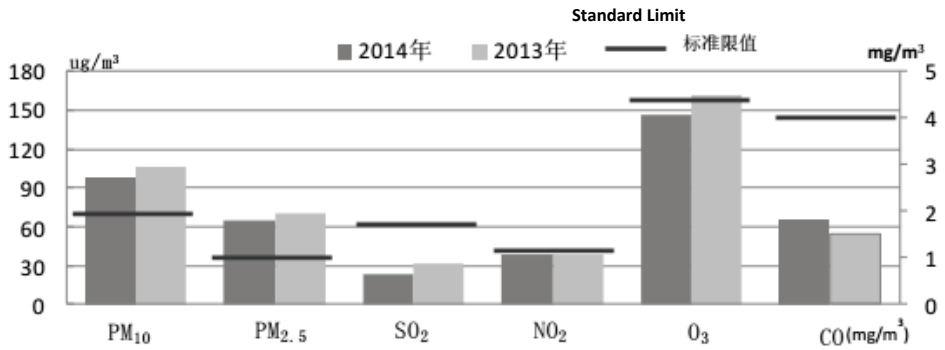
Meanwhile, the government should realize that the word-of-mouth from the existing investors are more persuasive that any promotion materials. Many investors have witnessed the fast development of Chongqing, both the hardware infrastructure and the soft investment environment. We have benefited from Chongqing's sustainable growth and meanwhile we would propose the following three recommendations that would help the city to better perform the "bringing-in" task.

Firstly, the city should continue to improve the business environment from thesoft side. According to the import and investment data Chongqing is good at attracting investors. But in recent years, some companies have the feeling that it becomes more and more challenging for making money in China Market. Apart from severe competition and overall economic pressure, the reasons would also include the service efficiency of government bodies, the transparency and consistency of some policies, as well as the realization of some investment incentives. Hence there could be many good practices in other regions or countries that Chongqing could learn from.

Secondly, environment is a major challenge for many cities in China. Chongqing could take more proactive attitudes and practical measurements towards environmental protection. We have two suggestions on this aspect.

One method Chongqing could consider is to apply more sustainable building materials in new buildings and municipal infrastructures. In fact Chongqing is doing a better job in applying new standards and new technology in sustainable material like the floor insulation materials. In 2011 we have built Lafarge's first overseas "R&D Lab for Sustainable Building" in Chongqing as an integrated part of our Lyon R&D Center. One of our customers, Yuelai International Convention Center, is the first environment and digital city project. It has used Lafarge hydromedia products in the open square which can avoid flooding and help environment with reasonable cost. Recently, Lafarge had inaugurated its first Sustainable Architecture Club in Chongqing on August 2015. 100 over local and international architectures came together to share best cases in applying sustainable material and landscape planning. And these are great example of using new technology to help the city more sustainable.

The other method is that Chongqing could encourage Home OfficePractice in suitable industry or business sector. It might be a new approach to decrease the pollution caused by car tail gas compare with other car limitation policy in Beijing or Shanghai. According to the statistics, significant portion of air pollutes in Chongqing urban area is caused by car as most industrial plants had been relocated. Home office can substantially reduce traffic jam, improve air quality, in the meantime save people's travel time without sacrificing efficiency (after all, people are making phone calls and work with computer most of time in work). If 20% or 30% employees could work-at-home, the city will see significant improvement of air quality with the reduction of transportation and improve the life quality of the citizen.



Pollution Emission in 2013 vs 2014

Besides, such practice can help to improve people's competences and IT skills and create market for Chongqing's Cloud and IT initiatives. It also fits the trend of "Popular entrepreneurship and innovation". Chongqing, with big ambition in IT

industry and infrastructure (such as Cloud Computing), could then become the highland and incubator for IT-related entrepreneurship for Western China. Chongqing could benefit more from such simple and pleasant approach to reduce pollution than issuing unpractical environmental restrictions.

Thirdly, Chongqing should strengthen the bringing-in in cultural and artistic field. Chongqing could increase its awareness to preserve its unique cultural heritages from 1940s during the anti-Japanese War and utilize its unique art resources. In urban area, Chongqing has a dozen of art museums but only limited influential art exhibitions are hold. In 2014 Lafarge had sponsored a big scale Sino-French ChiFra Art Exhibition, more than 200 artworks from 30 Chinese and French artists had exhibited their best pieces and it's the biggest China/French Oil Painting Exhibition in Chongqing History. It was a great success, but such cultural and art events are not easy and frequent in Chongqing. Chongqing should initiate more "bringing-in" activities in cultural and art fields with the countries along the One Belt One Road. Such bringing-in willhave long-term positive impact to the people in Chongqing.

V Summary of LafargeHolcim's Advices on Chongqing's "Going-out" and "Bringing-in" within the Big Picture of "The One Belt One Road "

To conclude, we believe that "the One Belt One Road" initiatives have brought Chongqing a bigger platform and Chongqing should grasp such historical opportunity.

Chongqing could take the following 4 actions to create its own way in "going-out": marketing Chongqing's city brand;

encourage local enterprises to going out, not limited to goods but open to new methods, such as export productions lines by partnering with multinational companies; leverage the CIMA alumni resources and speed up the going-out in tourism and cultural exchange fields.

For “bringing-in”, Chongqing could grasp the opportunity of the signing of China-Korea Free Trade Agreement and the construction of the 3rdSino-Singapore Industrial Park and be more selective in choosing the new investment. Meanwhile, Chongqing should further improve the soft investment environment, especially in the service efficiency of government bodies, the transparency and consistency of policies. It should take more practical and proactive measurements in environment protection. The encouragement of the home-office can reduce traffic flow and support the city’s development in its Cloud and IT initiatives. Besides, bringing-in more cultural and artistic activities are also significant to Chongqing.

Lafarge and Holcim merged together in July of 2015. The new group operates in 90 countries with 2500 operations. The net sale is 32.6 Bn FRC with 115,000 employees. As an old friend and one of the biggest foreign investor in Chongqing, LafargeHolcim group will continue its investment and development in Chongqing and wish Chongqing a better future.

Transition & Upgrading of Traditional Manufacturing Industry from the Perspective of Extension of Commercial Vehicle's Value Chain

Susumu Hosoi

Chairman and Representative Director of ISUZU

I China's economic transition promotion policy

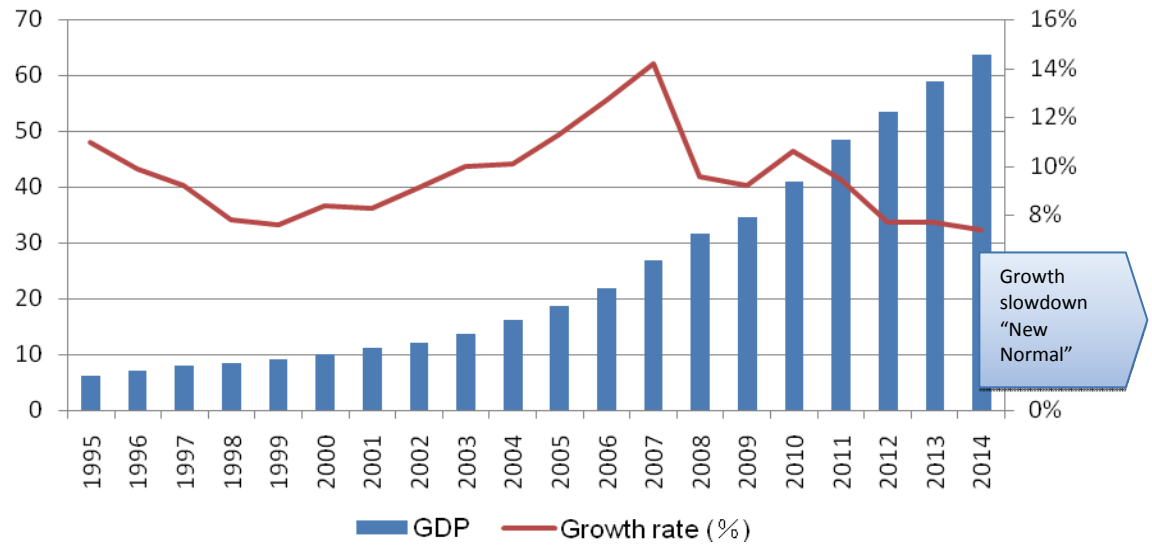
1. Economic structure transition: China's economy enters the age of "New Normal"

1) Slowdown in the growth of China's economy and the "New Normal"

Since the Reform and Opening up, China's economywitnessedrapid growth. In 2010, China became the world's second largesteconomy; itsGDP reached 63.6 trillion yuan in 2014.

Nevertheless, since 2012, China's economic growth showed aslowdown trend.Under the combinedimpact of a number of factors including changes in market supply-demand structure, rising labor cost, populationaging, prominent resource and environmentissues, and increasingly fierce competition in globaldevelopment, China's economy has entered a new economic development stage, namely the age of "New Normal".

Figure 1 Evolution ofChina's GDP and growth rate(Unit: trillion yuan, %)



Source:National Bureau of Statistics

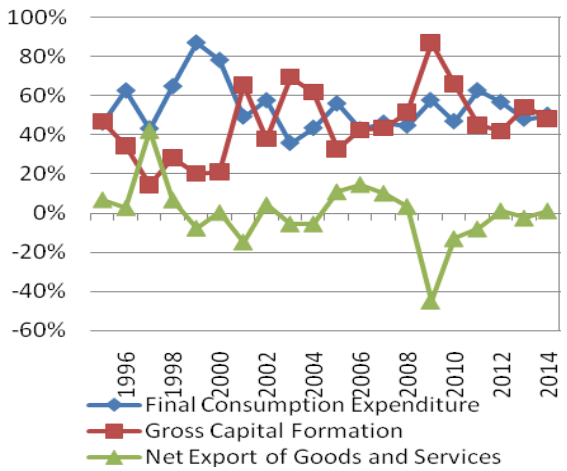
2) Adjustment of economic growth structure

In the past, the accomplishment of the growth of China's economy benefited from active investment demand and export demand (external demand), under the New Normal, the main driving power fueling economic growth will change to demandof domestic consumption (domestic demand). At present, consumption's contribution to China's GDP is about 50%, whereas in developed countries and other BRICs countries, consumption's contribution to GDP is up to 70-80%. The CPC Central Committee's economic conference in 2014 systematically summarized the characteristics of the New Normal of China's economy. In terms of consumption characteristics, individualized and diversified consumption will become the mainstream, the importance of product quality, safety and creating demand is rising day by day.Therefore, it is necessary to tap potential consumption power, and propel economic development through consumption.[1]

Besides, as the economy develops, China's industrial structure is also constantly changing. In 1995, the contribution ratioof primary industry to the economy was 9%, by 2014, this ratio has dropped to 4%; the contribution ratioof secondary industry dropped from 63% in 1995 to 46% in 2014, with the percentage steadily declined. On the other hand, the contribution ratioof tertiary industry to China's economy is increasing obviously;in 2014itscontribution ratio surpassed that of secondary industry to reach 49%. In the future, while continuing to expand the service industry, it will also drive forward the transition&upgrading of manufacturing industry.It is fair to say that China has begun to enter the age of "post industrialization". In Japan, the percentage of tertiary industry in GDPaccountedfor about 55% at the end of high economic development period, now it has surpassed 70%, andthe percentage of employees intertiary industry alsoincreased gradually from less than 50% to about 70%.[2]

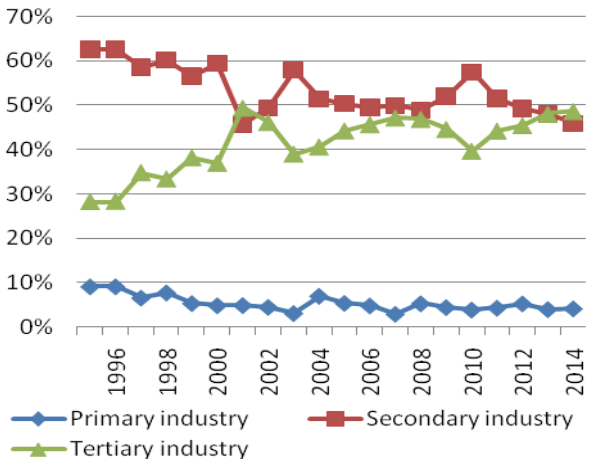
Asthe development of tertiary industry is closely associated with expanding domestic demand and employment, as far as China is concerned,the tertiary industry is a crucial factorto fuel economic growth and stabilize employment through expanding final consumption expenditurein the future.

Figure2 Contribution share of China's three components of GDP to growth of GDP (1995-2014)



Source: National Bureau of Statistics

Figure 3 Share of the contributions of China's three strata of industry to the increase of the GDP (1995-2014)



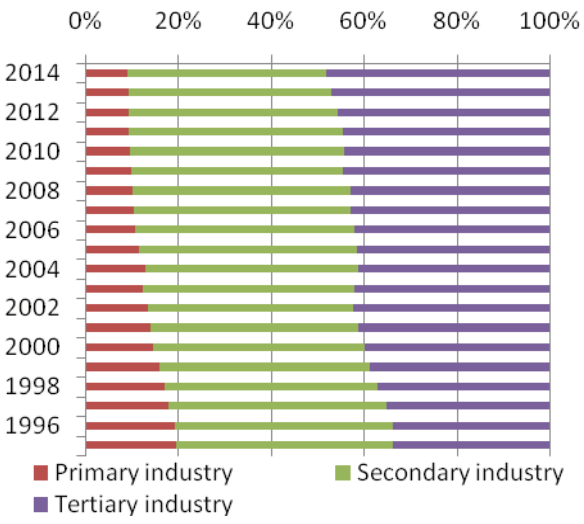
Source: National Bureau of Statistics

[1]Source: Xinhua News Agency, December 11, 2014

[2]Source: Statistical data of Japan's Cabinet

Figure 4 Evolution ofGDPcompositionof China'sthree industries

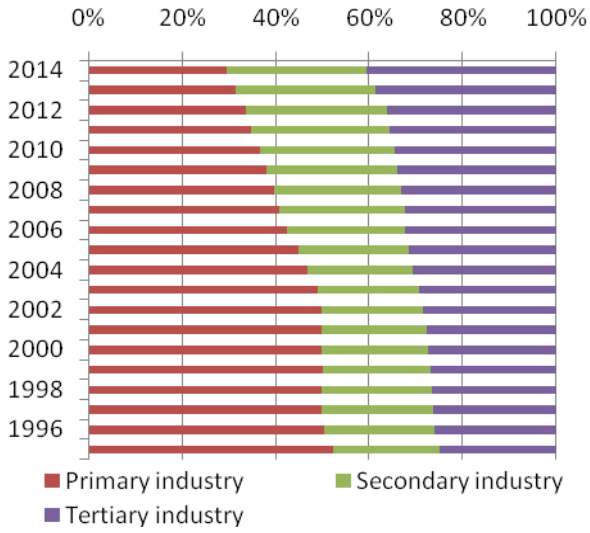
(1995-2014)



Source: National Bureau of Statistics

Figure 5 Evolution ofemployed population composition ofChina's three industries

(1995-2014)



Source: National Bureau of Statistics

II Chongqing's positionin the strategies of"One Belt, One Road"(Silk Road Economic Belt +21st CenturyMaritime Silk Road) and the Yangtze River Economic Belt

Against the macro background of growth slowdown ofChina's economy, the Chinese government put forward three majorstrategies of "One Belt, One Road", Yangtze River Economic Belt and Beijing-Tianjin-Hebei coordinated development, as China's new diplomatic and economic strategy in the new situation. Thetwo majorstrategies of "One Belt, One Road", and theYangtze River Economic Beltare closely related to Chongqing Municipality, whichshoulders major historical mission.

The following policiesdepictChongqing's importantmission in the future.

1. "One Belt, One Road"

The "Vision and Actionson Jointly BuildingSilk Road Economic Belt and 21stCentury Maritime Silk Road" clearly proposed to build new strategic supporting point for opening up & development in Southwestern regions, and develop key portal for organic connection of the 21stCentury Maritime Silk Road and the Silk Road Economic Belt; by utilizing the advantage of vast breadth and depth in the hinterland, rich labor resources, and good industrial foundation, relying on key zones of Chengdu-Chongqing city group, push forward regional interactive cooperation and clustered industrial development, build key support for Chongqing western development & opening up and open economic highland for Chengdu and hinterland area; establish Sino-Europepassagerailway transport, port custom clearance coordination mechanism, build "Sino-EuropeRailway" brand, constructtransport corridorfor connecting China and overseas countries and linkingEast, Middle and West; optimize thelayout of customs special supervision areas, innovate processing trade model, and deepen industrial

cooperation with countries along the Road.

2. Yangtze RiverEconomic Belt

"The Guiding Opinion of the State Council on Promoting Development of the Yangtze River Economic Belt by Relying on Golden Watercourse" clearly put forward to bring out Chongqing's hub role as the western center of Yangtze River Economic Belt, strengthen strategicsupport for Silk Road Economic Belt; enhance international transport function of "Chongqing-Xinjiang-Europe"railway; speed upthe construction of ChongqingYangtze River upstream maritimecenter; build Chengdu-Chongqing city group into a modern industrial base, key economic center in Western region and Yangtze River upstream highland for opening up.

3. Chongqing's strategic position

As mentioned above, in terms of geographical location, Chongqing is situated at the converging point of "One Belt, One Road" and the Yangtze River Economic Belt, it is a key strategic supporting point of the Silk Road Economic Belt, and western central hub of the Yangtze River Economic Belt. Consequently, Chongqing will play a crucial role in the future economical and socialdevelopment in China, especially in the following two points.

- Promote transition & upgradingof industrial structure as a core city of hinterland

Located in the center of hinterland area economic zone, Chongqing has constructed a solid industrial foundation, and accumulated substantial technology ability; in the future it is expected to play a leading role in the process of pushing forward industrial transition & upgrading.

In addition, Chongqing is a key growth pole in westernChina and a core city in the hinterland region, by promoting regional cooperation development of modern industries, it will not only help to boost the rapid development in the western region, but also facilitate industries to shift from coastal regions to hinterland.

- As a wide area transport&logistics hub, bring out economic radiation function

In the future, on the basis of past highway transport, by relying on "Chongqing-Xinjiang-Europe" internationallogistics thoroughfare and three international trade thoroughfares of Chongqing, Kunming, Southeast Asia, as well as Yangtze Rivergolden watercourse todevelop seamlessly integrated overall three-dimensional transport networkof "railway, highway, waterway, airline, pipeline", Chongqing's role as wide area transport&logistics hub deserves expectation.

Besides, through constructing rational,efficient, and low-cost modern logistics system, Chongqing will play the role of hubin transport & logistics and"bellwether" in the two belt construction, and contribute more to the economic and industrial development in the wide area.

III Automobile industry's strategic position in Chongqing's industrial structure transition and fulfilling transport &logistics function

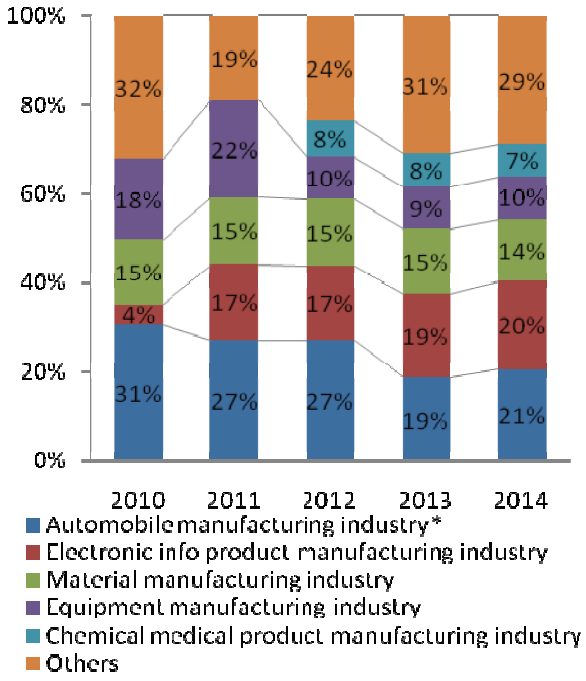
The output value of Chongqing's automobile manufacturing industrygrew from 278.2 billion yuan in 2010 to 384.7 billion yuan in 2014, with an annual average growth rate (CAGR)of18.5%in the past 5 years. [1]In recent years, asChongqing actively developed electronic information industry with a growing scale, which decreased the percentage of automobile manufacturing industry in Chongqing'sindustrial output value from 31% in 2010 to 21% in 2014. However, automobile manufacturing industry still takes up the highest percentage in industrial output value, its strategic position as Chongqing's pillar industry remains unchanged.

In 2014,Chongqing's automobile output reached 2.6289 million(with commercial vehicle of1.1132 million), overtaking Shanghai (2.40 million), Guangzhou (2.20 million), Wuhan (1.20 million), Jilin and Changchun (totaling 2.50 million), it has already become China's biggest automobile production base. [2]

In the future, for the promotion of industrial structure adjustment of Chongqing, it can be argued that automobile industry is undoubtedlyof key priority. On the other hand, the long automobile manufacturingindustrial chain andactiveautomobile industry restructuring will make big contribution to Chongqing's transitionof economic development mode.

Figure 6 Evolution of composition of Chongqing's industrial output value

(2010-2014)

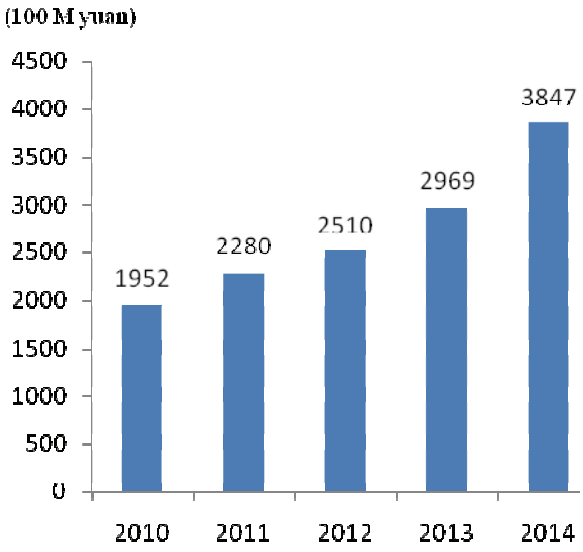


*Note:Data of 2010-2012 include motorcyclemanufacturing.

Source:Chongqing National Economy & Social Development Statistical Bulletin of past years

Figure 7 Evolution of output value of Chongqing's automobile manufacturing industry

(2010-2014)



Source:Automobile Section, Chongqing Municipal Economic & Information Technology Commission, Chongqing National Economy & Social Development Statistical Bulletin of past years

Furthermore, asChongqingshoulders wide area transport&logistics hub function, in the process of promoting transport

[1]Automobile Section, Chongqing Municipal Economic & Information Technology Commission, Chongqing National Economy& Social Development Statistical Bulletin of past years

[2]Chongqing Morning News, January 14, 2015

network infrastructure construction and management system construction, the highway transport that shoulders Chongqing's vastmajority of cargo transport volume appears particularly important. In 2014,Chongqing freight volume was 973.77 million tons, wherein highway cargo transport accounted for 83%, waterway transport15% and railway transport2%. Highway freight is mainly done via truck logistics.Therefore, it can be argued thatthemanagement ofcommercial vehicle and its operation is also very important.

IV Changes in China's commercial vehicle market environment

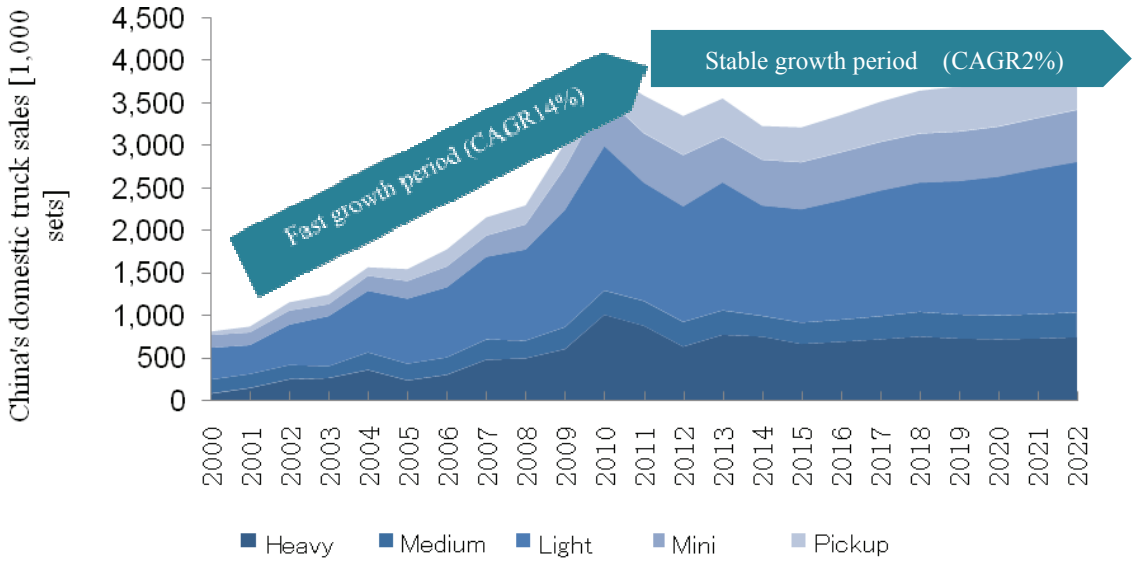
The followingdescribes China's commercial vehicle development from the perspective of changes in market environment for manufactures and users respectively.

1. Market environmentfor commercial vehicle manufacturers

Within the10 years from 2000 to 2010, the annualaverage compound growth rate of China's truck sales is up to 14%, which accomplished rapid development. However, after reaching the peak value of 3.90 million sets in 2010, the sales began to decline, it can be argued that now truck sales has entered a stable growth period.

This change in the truck sales marketto a large extent is affected by change in China's macroeconomicenvironment. In the first 10 years of the 21st century, China actively made huge investments in the public sectorto fuel economy;under the "development foremost"economic structure system, large state-owned enterprises in resource, water conservancy, and construction industries hadbrisk demand for trucks.However, since 2010, the economic growth began to slow down, the percentage of public investment continued to decline, truck sales also began to diminish. Furthermore, as advanced management models such as Internet+ began to spread, truck operation efficiency has been improved, which will alsobring certain impact to future truck demand.

Figure 8 Evolution of scale of China's truck market (2000-2022)



Source: Actual data as of2014 come from the China Association of Automobile Manufacturers; data after 2015 are estimates by Nomura Research Institute

In the situationwhen new vehicle sales reaches peak value, the past model in which manufacturers only relied on new vehicle sales to obtain profit can no longer continue. In developed countries, the market also experienced downturn period of new vehicle sales;revolving around vehicles alreadysold and in use, commercial vehicle manufacturers carried out "after-sales business", and regarded it as new source of income, and fulfilled transformation of income structure. Representative after-sales businesses include repair & servicing service (inspection, servicing, replacing consumables, etc.), operation info management system, financial service (loan, financial leasing), insurance sales, used vehicle trading, etc. In mature markets of developed countries, among income of commercial vehicle manufacturers today, more than halfcomes from after-sales business. In the Chinese market, some manufacturers began to move beyond R&D, manufacturing and sales toactively extend value chain, develop after-sales businesses, and provide integrated solutions.

2. Market environment for users (logistics enterprises)

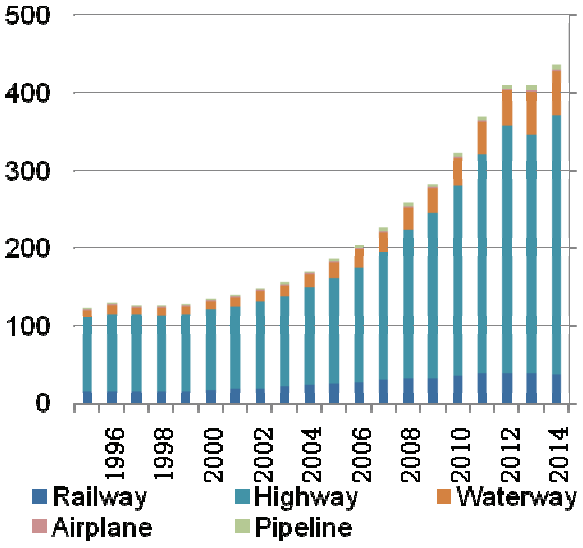
Although in recent years, China's GDP growth slowed down, overall speaking, it still maintained relatively high growth rate. Besides, associal consumption continued to surge at a pace overtaking GDP growth rate, China's cargo transport volume increased year by year. As China's economic growth shifts toward a consumption-oriented model, in the future the main force to propel China's truck market development will change to private enterprises led by logistics enterprises.

However, China's logistics industry also has many problems, in which one prominent problem is high logistics cost. As logistics volume grows, total social logistics expenses continued to expand and reach9.7 trillion yuanin 2014. Although the percentage of total social logistics expenses in GDP decreased slightly in 2014, it still maintained a level of approx.18%, about twice of that ofdeveloped countries, it can be argued China's logistics efficiency is low, and logistics cost is high.

In 2014, China Federation of Logistics and Purchasingconducted a survey[1] on 128 large and medium-sized logistics enterprises.According to survey results, in 2013 income from main businesses of enterprises being surveyed grew by 6.2% on Y-o-Y basis, whereas the cost of main business rose by 7.9% on Y-o-Y basis, net profit decreased by 7% on Y-o-Y basis. As the economy developed, prices continued to rise, the labor cost of logistics industry maintained an annual 10-15% growth rate, plus fuel fee, road and bridge toll,etcat high level, logistics enterprises are facing increasingly heavy cost burden. Therefore, in order to improve income condition, how to improve vehicle operation ratio, cut cost, and improve efficiency have become particularly concerned issues for logistics enterprises.

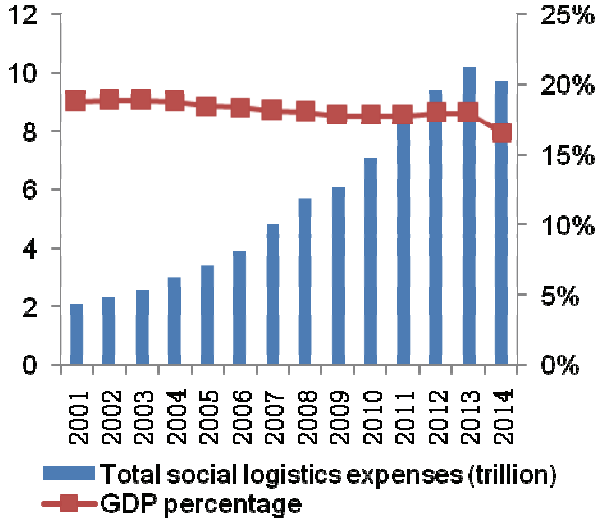
[1]"Survey Report on Alleviating Burden of Logistics Enterprises 2013" of China Federation of Logistics & Purchasing (May 2014) http://www.chinawuliu.com.cn/lhhkx/201405/09/289443.shtml

Figure9 Evolution ofChina's cargo transport volume (Unit: 100 M tons)



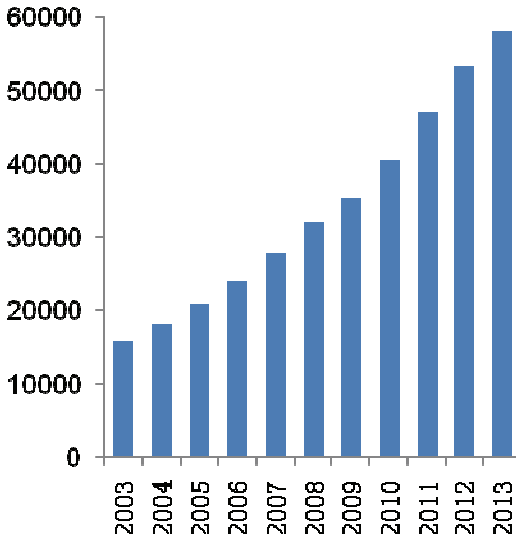
Source: National Bureau of Statistics

Figure10 Evolution ofChina's total social logistics expenses and its percentagein GDP(2001-2014)



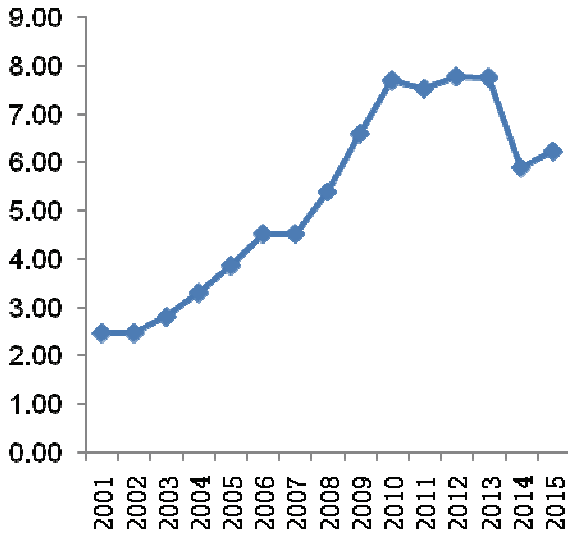
Source:National Development and Reform Commission, National Bureau of Statistics, China Federation of Logistics and Purchasing

Figure11 Evolution of average salary of employees in transportation&warehousing&post industry (2003-2013, Unit: yuan/year)



Source:China Statistical Yearbook

Figure 12 Evolution of average retail price ofdiesel in China(2001-2015, Unit: ℓ/yuan)



Source:Variouspublished data

V Service business cases of overseas commercial vehicle enterprises

As mentioned above, on the one hand,new vehicle sales in China's commercial vehicle market has reached peak value; on the other hand, as the economy develops, cargo transport volume has grown sharply;although logistics industry's business income is continually rising, it faces huge pressure of cost increase, logistics industry urgently needs to improve efficiency in

all aspects. Therefore, it can be argued that, in the future, in addition to the market demand from vehicle purchase, the demand for logistics vehicle in supporting operation and cost aspects will also continually expand.

For a long time, Isuzu Motors has been dedicated to the development and manufacturingof commercial vehicles, adhering to the corporate philosophy of"supporting transport, working as trusted partner, and making contribution to creating wealthy life", it boosts economic development through material transport. As a manufacturingenterprise, R&D and manufacturingnaturally should be its main business;meanwhile, it also becomes aware that to perform thesocial function of commercial vehicle as logistics carrier, it is not only necessary to rely on technology and merchandise to support "transport", it is also possible to provide operation support service through the actual "transport" process (life cycle) by the user over a long period tocreate more value.

In recent years, Isuzu Motors also actively carried out commercial vehicle service business. The following are its main service businesses.

1. Maintenance and servicing service

Vehicle's daily maintenance and servicing hold great importance for ensuring vehicle safety and operation efficiency in daily operation process.By leveraging its extensive and profound expertise and technological accumulation in commercial vehicle field, Isuzu Motors providesafter-sales maintenance and servicing service for vehicles. Itis characterized by puttingmaintenance and servicing services in vehicle useprocess into a package, users only needto sign a contract related to maintenance and servicing, through which all maintenance and servicing jobs are commissioned to the manufacturer.

- Service content

1) Signing maintenance and servicing contract

By putting maintenance and servicing items involved in vehicle useprocess including vehicle checkup, routine inspection, regular replacement of consumables into a package, users only need to pay a fixed amount each month, which can enable total outsourcing of everything related to vehicle maintenance and servicing. Meanwhile, it also provides contract signing form covering failure repair, and insurance compensation.

2) High-quality vehicle servicing

Technicians and mechanical engineers with professional training will implement reliable servicing. First, relevant dataare storedin onboard recorders, then computer diagnosis instruments will analyze the data, so as to ensure the replacement of parts and consumables can bemost reasonable and optimal. Meanwhile, it also provides alternative parts that can bring maximalvehicle performance.

3) Vehicle monitoring

Instruments equipped on the vehicle will monitor vehicle's operation condition, and then info will be sent to the monitoring centerforvehicle monitoring. In this way, it is able to immediately discoversigns that may trigger vehicle failure, and arrange preventative servicingbefore failure occurs.

- Effect (value offered)

1) Cut overall cost

Preventative servicingrefers to adoption of measures before the vehicle experiences failure as countermeasure, so it will easily make usersfeelthere is unnecessary maintenance and servicing cost. Generally speaking, the cost of failure repair after

the failure occurs is higher than thecost of preventative servicing, so the overall cost will be lowered.

2) Improve vehicle operation ratio

If the vehicle has low failure ratio,the downtime due to vehicle failure will be shortened, vehicle operation ratio will be improved. For logistics enterprises, failure of vehicle operation would mean losing opportunity;therefore, improving vehicle operation ratio can create obvious economic effect.

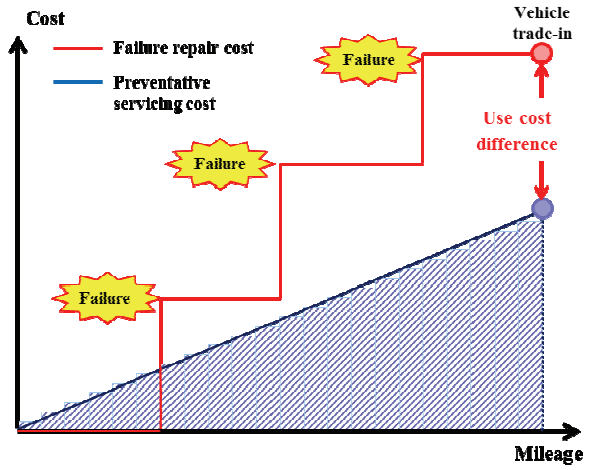
3) Promote environmental protection

Through appropriate maintenance and servicing of the vehicle, the vehicle can be kept at optimal condition, in this way vehicle's fuel efficiency is high, exhaust emission treatment is proper, which can facilitate energy saving and environmental protection.

4) Stabilization of finance

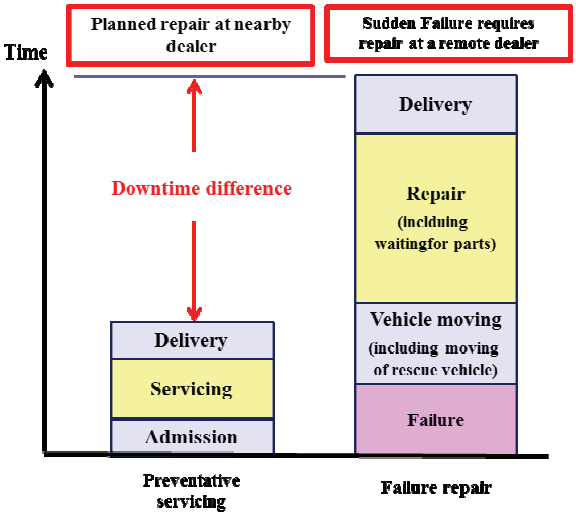
Since outsourcing service only requires monthly payment of fixed amount, it avoids concentrated payment in alump sumsuch as insurance premium within certain period, as well as high repair fee in case of failure, so as to keep stability of fund.

Figure 13 Comparison diagram of overall cost for vehicle preventative servicingand failure repair



Note:The failure repair cost includes loading compensation, and loss caused by vehicle downtime.

Figure14 Comparison diagram of vehicle downtime for vehicle preventativeservicingand failure repair



2. IT operation management service

Isuzu Motors also providesefficient operation management system and online service that support logistics business. This system involves attaching digital datarecorder on vehicles, and transmits operation data to vehicle center through networkcommunication. Withthis operation management system, it is possible to collect vehicle location info, operation conditions of units as transmission, accelerator, brake, as well as temperature and fuel consumption info, so as to improve vehicle operation management level.

- Service content

1) Understand real-time vehicle operation condition

Through GPS,vehicle's current location, and status info are displayed on map interface tounderstandvehicle real-time status. The information content includesnot onlylocationinfo, but alsovehicle driving direction, vehicle status (e.g. rest, loading, standby, empty, loaded vehicle and load weight), temperature, door opening/closing info. Through connection with large screen monitor, it is possible to understandreal-time vehicle operation condition. Furthermore, it is also possible to send real-time info desired by customers (e.g. delay, vehicle departure & arrival, operation condition) to pre-registered computer, mobile phone, etc.

Figure 15 Interface of vehicle locationnotification service

Source:Isuzu Motorsofficial website

2) Energy-saving driving monitoring

Efficient operation management system also has energy saving driving monitoring function. Through real-time monitoring ofthe implementationof energy-saving driving in the vehicle operation process, based on detailed data such as fuel fee, fuel consumption, time, distance cost and pollutant emission volume, it can develop an analysis report, which can clearly point out any improvement in driving.

3) Failure alarm service

Through monitoring vehicle operation data, it can detect driving conditions that may trigger accident such as hardbraking, and give an automatic report. Bygiving areal-time alarm, it is possible to quickly cope with vehicle failure, accident and otheremergency conditions. Furthermore, when there are sudden accidents and vehicle failures, the driver only needs to press a buttonto send vehicle's company name, vehicleinfoand current location info to the monitoring center.

- Effect (value offered)

1) Enhance vehicle operation efficiency

Through real-time understanding of vehicle current location, status info, it is possible to conductcollective management on vehicle operation;when there is emergency delivery orderand additional delivery cases, it is also possible to

realizevehicles' rational allocation, so as to improve vehicle operation efficiency.

2) Improve customer satisfaction

Logistics enterprisesare very concerned with vehicle's operation condition.Therefore,byproviding customers with real-time vehicle transport condition, vehicle temperature inprocess, door opening/closing status info,it is possible to improve customersatisfactionand trust.

3) Cut cost, reduce environmental burden through implementing energy-saving driving

By monitoring and recording vehicle operation condition, giving guidance on energy-saving driving, it is not only possible to cut fuel consumption, repress exhaust gasand CO_2emission, but alsoto cut fuel costand reduce environmental burden. After one Japanese truck company introduced this service, fuel consumption volume of heavy-dutytrucksdecreased by 11.0%. Furthermore, the idle time of over 90%drivers is 0. [1]

4) Enable fast response through early discovery of failure

Byreal-time understanding ofvehicle failure and other unexpected conditions, it is possible to quickly carry out emergency handling, contact customers, so as to minimize the impact brought by failure to vehicle operation and customers.

Judging from the above case, it is clear that through outsourcing repair &servicing service, it can ease customers' business burden, reduce overall cost; by relying on IToperation management system, it can improve truck operation efficiency, reduces fuel cost, and alleviate business burden of data collection management. In summary, these after-sales service measures bringnumerous benefits to customers (logistics enterprises), andreceive praise from customers. Automobile manufacturers carry out relevant service businessaround commercial vehicle, by providing new value catering to customerdemand, it not only increases enterprise' comprehensive ability, expands new source of income for the enterprises, but alsoidentifiesbusiness areas for concentrated reinforcement by automobile manufacturers. In thefuture, automobile manufactures will further expand value chain, and offer customers integrated solutions.

VI Suggestionto the Chongqing Municipal Government

In recent years, Chongqing's development has made remarkableachievements. However, amid changes of external environment in society, economy, and technology, guided by national policy, there is the objective need for Chongqing Municipalityto continually adjust development focus and development content. What's more, as a core city of "One Belt, One Road" and the Yangtze River Economic Belt strategy, Chongqing Municipality shoulders the historical mission of pioneering economic transition. In the future, the Chongqing Municipal Government should borrow experiences in economic development of developed countries in the past, and adopt new measures by taking into account current trends in all industries. Chongqing Municipalitycan rely on its unique characteristicsand advantages in industrial foundation, geographical environment to more efficiently andrapidly develop itseconomy.

As a core city, Chongqing is at the historical juncture to march toward the strategic position of "promoting industrial transition & upgrading, fulfilling transport &logistics hub function".We hereby put forward the following two suggestions.

[1]"Outstanding Cases of Eco-friendly Driving Activity Competition" of the Foundation for Promoting Mobility and Ecological Transportation (2013)

1. Industrial integration can help promote improvement in overall industrial ability and transformationof industrial structure, provide good policy environment for industrial integration

With economic development, popularization of IT, accumulation of information and knowledge, and rising specialization, consumers' consumption concept is changing from buying "merchandise" to buying "solution".Against such background, the center of economic development gradually shifts toward tertiary industry, whichcan befound from past global development changes.

In the future, in the process of Chongqing's transition of economic development model, efforts to rejuvenating tertiary industry cannot be relaxed. Modern tertiary industry (service industry) does not necessarily exist independently, the higher the service degree, the more likely it will transcend industrialboundary, and continually become integrated with primary industry and secondary industry. In the future, each industry's boundary will become more blurred, in other words, the scope of industrial integration will be continually expanded. In the development process of tertiary industry, it will continually integrate with other industries, in this way each industry's comprehensiveability will be increasingly improved, which further promotes upgrading in industrial structure, so as to fulfill change of economic growth pattern.

As mentioned above, in the process of extending commercial vehicle value chain, on the basis of traditional development and production business, Isuzu Motors carriedout relevant value added service businesses such as maintenance and servicing, vehicle info service, used vehicle, financing, insurance, continually expand industrial value chain. On the other hand, the accumulated info and improvement plan acquired in the customer service process can inturn give feedback to R&D& production, so as to facilitate it to improve vehicle quality, and form a virtuous cycle.

In the future, when formulating industrial policy and related systems, Chongqing Municipal Government should shatter traditional boundary between primary industry, secondary industry, and tertiary industry, starting from the overall situation, construct open policy environment beneficial to promoting industrial integration. In this way, it will not only help thedevelopment of tertiary industry, but also bring out the advantages of pillar industry (manufacturing industry) fostered and developed by Chongqing over the past years, thus fulfill transition& upgrading of industrial structure.

2. In order to improve economic efficiency, build transport and logistics hub, actively introduce IT operation management system

Situated at the converging point of "One Belt, One Road" and the Yangtze River Economic Belt, as a core western city in the West Development Strategy and the Yangtze River Economic BeltStrategy, Chongqing shouldersan important historical mission.In order to implement the above-mentioned national strategy, support economic development, in the future Chongqing should actively make investment in infrastructure including highway, railway, waterway, and aviation. Meanwhile, it will also drive forward the implementationof the relevant policies as free trade zone and bonded zone.

The above transport infrastructure and policy-driven regional construction are very important, in order to develop the overall transport and logistics, it is necessary to implement systematic management on the entire transport network toensure operation efficiency. In particular, 85% of Chongqing's freight is completed through highwaytransport;therefore, it can be argued that control of road traffic is particularly important. At present, many cities restrict commercial vehicles' operation through traffic control measures such as issuing passes, prescribing access time & access route, etc. In order to ease traffic congestion, adopting certain control measures is naturally necessary, but how to set up the number of passes and control route

& time are very important. If the setup of control route and time is not reasonable,it will exert huge impact on transport efficiency, which will in turn trigger traffic congestion. Therefore, it is necessary to effectively grasp thechanging situation, adopt more refined countermeasures, and balance the relation between transport&logistics demand and easing traffic congestion.

To solve the above problems, flexibly applying IT system can be deemed as one of the effective countermeasures. By introducingIT system into transportand logistics system, it can grasp vehicles' operation condition and status,accomplish efficiency-oriented management, so as to make contribution to improving economic efficiency, and speeding up economic development.

Today, with the development of private logistics enterprises and the entry of foreign-invested enterprises, all enterprises have respectively introduced IT tools such as logistics management system, which are used to grasp vehicle operation location, manage operation time, and regard it as one of the effective means to improve logistics efficiency. If consideration is only given to each enterprise's economic efficiency, such application is only limited to individual enterprise. If it intends to fulfill efficiency enhancement ofurban transport and local economy in wide area, it is recommended to, under government'sguidance, by publicizing each enterprise's data transmission protocol,etc, integrate key info into a uniform platform, which can be flexibly applied to build regional transport system. In this way, the government will be able to grasp the big picture of transport&logistics within the region,effectively use transport network, and accomplish maximization of overall efficiencythrough appropriate transport management and diversion.

In the future, as Chongqing's transport hub function is further strengthened, Chongqing's transport volume and logistics volume will further increase. What's more, as such function continues to expand, Chongqing's radiation effect toward economy in peripheral areawill further be strengthened. It is recommend that Chongqing should take action as soon as possible, actively improveIToperation management system, and dedicate itself to improving economic efficiency of transport, logistics, so as to accelerate coordinateddevelopment of Chongqing and its surrounding areas.

More than 30 years after the implementation of the Reform and Opening up policy, today China has entered the new historical transition stage of the "New Normal". In the process of economic development extending from coastal cities to the hinterland andChina'sconcerted efforts with neighboring countries to push forward diplomatic&economic strategy, Chongqing's strategic position, and the centralgovernment's expectation onitwill heighten day by day. We expect at this crucial transition period, Chongqingwill adopt effective measures toachievemore remarkable development.

Interconnection – Financial Support: Establishment of a Multidimensional and Efficient Financial Service Framework

- Proposal of the Establishment of a Financial Center Specialized in Infrastructure -

Katsunori Nagayasu

Chairman of The Bank of Tokyo-Mitsubishi UFJ, Ltd.

I am honored to have an opportunity to give an advisory report at the Chongqing Mayor's International Economic Advisory Council again this year.

I don't have to mention much about the One Belt, One Road strategy here, which is the general theme of the council this year. It is a global project involving over 60 countries and regions mainly in Asia and Europe with a total population of over 4 billion, and is receiving a lot of attention from around the world.

I myself have been engaged in various projects of all sizes as a bank's executive, but such a project as the One Belt, One Road strategy, for which a great number of large-scale projects are simultaneously launched on a global basis, will be an unprecedented one.

Regarding the theme given to me this time, "Interconnection –Financing Support: Establishment of a Multidimensional and Efficient Financial Service Framework", let me share my idea about the development of platforms to work smoothly with this global project based on our experience in the past projects.

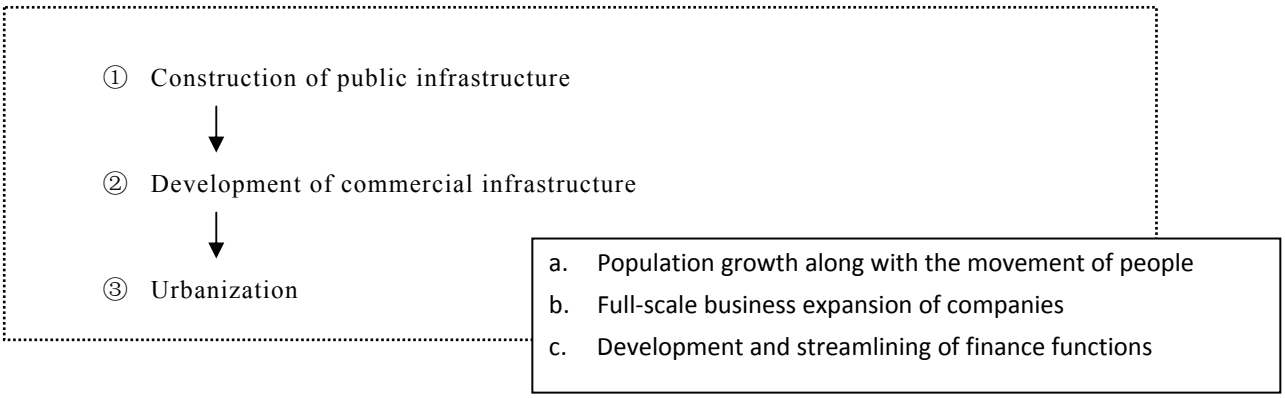
1 Development Model for the One Belt, One Road Strategy

The guidelines for action of the One Belt, One Road strategy propose the strengthening of the cooperation with neighboring countries within the Silk Road Economic Belt in wide-ranging areas including trade and investment, while prioritizing the arrangement of the infrastructure network connecting countries and regions in Asia and Europe.

In accordance with the guideline, specific actions for the development will begin with the construction of public infrastructure such as roads, ports, railways, and communication networks to connect to target regions in the initial stage, followed by the development of commercial infrastructure required in urban development, and the city will further urbanized.

In that process, population growth along with the movement of people, full-scale business expansion of companies, and development and streamlining of finance functions will take place. Various initiatives to promote strategies will be needed in each phase, and above all, financing to public and commercial infrastructure projects will be the key point to determine the result of the whole strategy.

[Figure 1: Development model for the One Belt, One Road strategy]



2 Financing to Infrastructure Projects

Financing to infrastructure projects will generally be implemented by (1) ODA (official development assistance), (2) MDBs (multilateral development banks), (3) GFI (governmental financial institutions)/ECA (export credit agencies), (4) PFI (private financial institutions), etc. In particular, (1), (2), and (3) will play the central role in the investment in public infrastructure.

In the One Belt, One Road strategy, a framework for working on the investment in public infrastructure has been built. In that framework, the Silk Road Fund will play the central role in ODA. Institutions such as AIIB, New Development Bank BRICS, and ADB will lead MDBs. GFI and ECA will be led by China Development Bank, the Export-Import Bank of China, China Export & Credit Insurance Corporation, and other institutions.

Meanwhile, the use of private funds adding to the funds by these institutions is imperative in consideration of the subsequent commercial infrastructure development, let alone public infrastructure construction. The establishment of platforms to raise private funds to be invested in projects will be the key to the success of the projects.

[Figure 2: Infrastructure project: Finance providers for financing and the scope of financing]

Financing framework	Scope of financing	Finance providers for the One Belt, One Road strategy
ODA (official development assistance)	Public infrastructure investment	Silk Road Fund, etc.
MDBs (multilateral development banks)	Public infrastructure investment	AIIB, NDB BRICS, ADB, etc.
GFI (governmental financial institutions) ECA (export credit agencies)	Public infrastructure investment Commercial infrastructure investment	China Development Bank, the Export-Import Bank of China, China Export & Credit Insurance Corporation
PFI (private financial institutions)	Public infrastructure investment Commercial infrastructure investment	Domestic commercial banks, foreign-affiliated banks, etc.

3 Development of Platforms Bringing Together Private Funds for Infrastructure Finance - Development of a Unique Global Financial Center

(1) Development of a financial center for infrastructure finance in Chongqing

Chongqing is the largest city in Western China, and its location is geographically advantageous, being connected to three routes of the Silk Road Economic Belt (One Belt) in the One Belt, One Road strategy. Now, let's discuss the development of a global financial center unique to Chongqing making use of the geographical advantage, aiming for the financing to commercial infrastructure projects in the One Belt, One Road strategy and the Yangtze River Economic Belt.

I already have mentioned that the use of private funds will be the key for the success of projects. I would like to propose the establishment of a global financial center in the pilot free trade zone, which is expected to be set up in Chongqing soon. The global financial center will be a place where private funds for infrastructure finance come together and enjoy various preferential treatments. How about proposing financial institutions to establish branches specialized in infrastructure-related businesses there as well as globally attracting talents excelled in infrastructure-related businesses?

Of course, investors in China and overseas will not be attracted just from the geographical advantage. For realizing the establishment of a financial center, bold preferential measures as below need to be prepared.

[Figure 3: Major preferential measures expected]

[Preferential measures in terms of system/procedure]
- ✧ Allowing to choose the governing law
- ✧ Allowing to choose the accounting standard
- ✧ Acceptance of applications and other documents in English and allowing the disclosure of financial statements, etc.

[Preferential measures in terms of cost incl. subsidies]
- ✧ Application of preferential taxation (tax exemption for interests/dividends/capital gain, and reduction/exemption of corporate tax/local tax/individual income tax, etc.)
- ✧ Subsidies for English proficient talents specialized in finance

Preferential treatments in the cost for communication lines and offices

(2) Relationship with existing financial centers

It is of course possible to change the framework of legal/tax systems of such existing financial centers as in Shanghai and Shenzhen. However, I believe that the establishment of a new global financial center with preferential treatments in Chongqing, the largest city in western China, will bring about much more positive impacts from the viewpoint of attracting private funds, partly due to the convenient access to the Silk Road Economic Belt, compared with the use of the existing financial centers with already-established systems.

Furthermore, the establishment of the global financial center specialized in infrastructure finance in Chongqing will also contribute to further development of Chongqing including the creation of new jobs, as effects such as the accumulation of back office functions including related IT and operations can be expected.

(3) Key for the establishment of a global financial center

The establishment of a global financial center obviously requires the development of “hard” infrastructure as urban functions, but the key of the success is the arrangement of “soft” infrastructure such as systems including taxation for investment/finance, and human resources.

[Figure 4: Major “soft” infrastructure required for the establishment of a global financial center]

① Reliable, diverse, and open investment information with convenient access
② Open and fair market
③ Simple and clear taxation for investment/finance
④ Competitive strength, financial innovation, recruitment of competent personnel of financial/investment institutions, etc. which will provide funds

Level of English support

Above all, ⑤”level of English support” will be a high hurdle for us in the non-English-speaking world. We have experienced the hurdle through the investor questionnaire answers on the Tokyo stock market, asking for

the improvement of English support in information sharing and administrative procedures such as the provision of timely regulatory information in English, establishment of English points of contact of financial institutions/administrative agencies, and provision of basic market information in English.

Regarding ④"recruitment of competent personnel", in order to globally recruit English proficient personnel or competent personnel specialized in infrastructure business in administrative agencies, back offices, financial institutions, and other places, high-quality living environment needs to be provided including the increase of international schools, establishment of cutting-edge medical institutions, leisure facilities, and other facilities, as well as preferential policies for expats. In addition, development of urban infrastructure including a hub airport connected to countries around the world is indispensable for recruiting competent personnel.

Since modern financial centers cannot function without being supported by IT communications infrastructure, infrastructure such as broadband communication lines and data centers needs to be developed. From this perspective, attracting finance-related IT companies is essential, thus various preferential treatments should be put in place to attract those companies.

For the establishment of a global financial center specialized in infrastructure finance, Chongqing will be required to build an attractive city through the establishment of preferential treatments for investors as well as soft infrastructure including the recruitment of competent personnel and provision of English support. Chongqing will be able to play the key role in the development of the One Belt, One Road strategy and Yangtze River Economic Belt by accomplishing further growth as a city and attracting global capital more than before through these measures.

4. Development of an "Information Platform" to Support Local Companies' Overseas Expansion through Government-Private Cooperation -Support for the "Zouchuqu (Go Global)"

I have discussed that Chongqing will play the key role in financing in the One Belt, One Road strategy by establishing a global financial center specialized in infrastructure finance. What is required in the execution of the One Belt, One Road strategy is, in parallel with the infrastructure development for target regions, to support the "Zouchuqu" (Go Global) trend of companies in Chongqing toward target regions from the viewpoint of the promotion of the trade with/investment in target regions and the development of industrial clusters in those regions.

Let me touch upon a new framework for further accelerating the overseas expansion of companies in Chongqing.

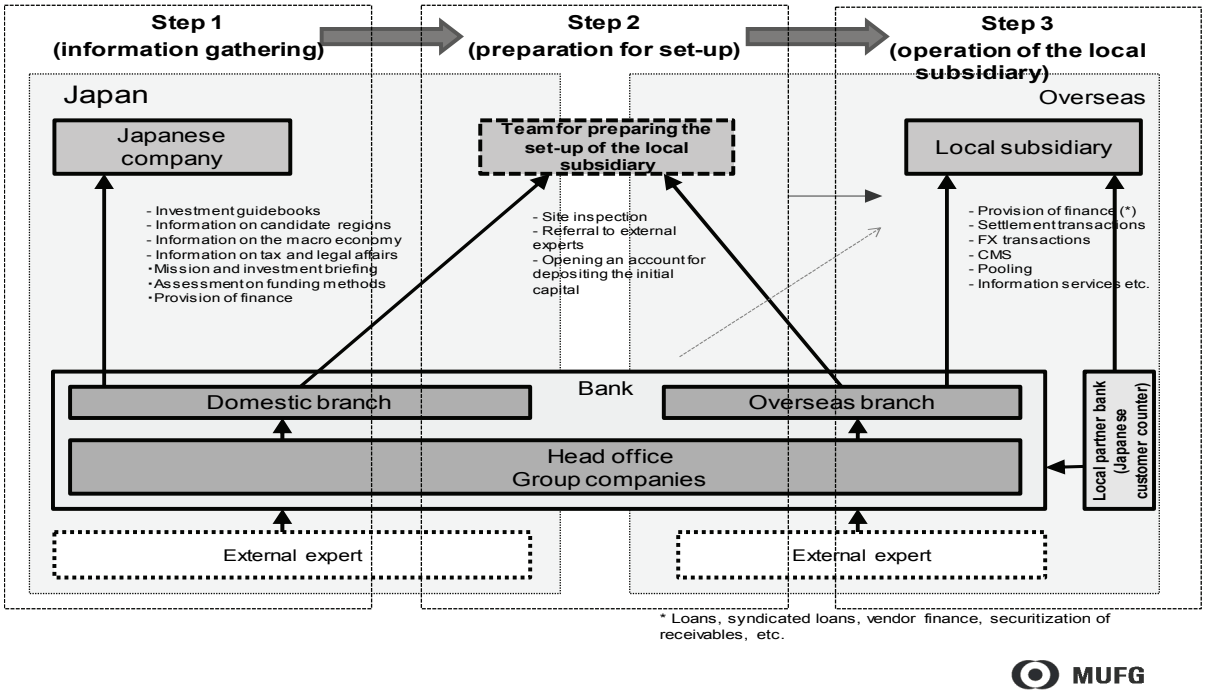
(1) Role of financial institutions in local companies' overseas expansion

The amount of the overseas direct investment from private companies in Chongqing was USD 510 million in FY2015/H1 (January through June), accounting for 84.5% of the total overseas investment by Chongqing and showing a very high 1.9-fold year-on-year growth. The "Zouchugu" trend of companies in Chongqing will further accelerate going forward, along with the development of the One Belt, One Road strategy and Yangtze River Economic Belt.

The overseas expansion of Japanese companies increased rapidly from the 80s, but after the 90s, particularly after the 2000s, the expansion of the middle market and SMEs to Asia accelerated. Our experience suggests that companies planning overseas expansion expect us, financial institutions, to provide one stop services to support the overseas expansion including information services and assistance for their expansion as well as financing. In particular, the middle market and SMEs have little experience in overseas expansion, are limited in human resources, and not in frequent contact with law firms, accounting firms or consulting firms knowledgeable of overseas operations, so they often consult with their line bank first when considering overseas expansion.

In Japan, in the context of the companies' overseas expansion and banks to support it, a framework in which banks act as consultants on various matters relating to overseas expansion and comprehensively support needs of companies planning overseas expansion has already been established. Those needs include the provision of information (comparison of candidate regions for expansion, local investment policies, and primary information on tax/legal affairs), assistance for expansion (indirect assistance for setting up a company, referral to external experts), and provision of financing (consultation on and provision of financing for local subsidiaries).

[Figure 5: Banks' support for Japanese companies' overseas expansion]



However, not all Japanese banks have been able to meet such needs of companies. Japanese mega banks including BTMU have established comprehensive support frameworks described in the previous page, while local banks and other financial institutions have limitation in the provision of information by their own. Therefore, they have collaborated with close mega banks or public institutions supporting overseas operations of Japanese companies to meet needs of companies based on multidimensional information.

(2) Development of "information platform" to support local companies' overseas expansion through government-private cooperation

Chongqing Foreign Trade & Economic Relations Commission has already been managing a fairly fulfilling platform to support overseas expansion ("Chongqing Zouchuqu Promotion 重慶市走出去促進網"), and has provided various information held by Chongqing municipal government to companies. By having financial institutions in Chongqing which frequently contact with companies timely provide such information meeting companies' needs and act as consultants for companies planning overseas expansion through the enhancement of advisory functions, a framework to strongly support the overseas expansion of companies in Chongqing can be developed, with a mutually complementary relationship with the municipal government.

The overseas expansion of companies should be supported comprehensively including financing aspect by upgrading the platform managed by the municipal government to more fulfilling information platform through the cooperation between the municipal government and private financial institutions. That will further enhance the advantage of companies in Chongqing in the One Belt, One Road strategy.

Preparing the Necessary Infrastructure in Chongqing for Construction in Line with the 'One Belt, One Road' and 'Yangtze River Economic Belt' Strategies

Case Studies Examining the Role of Government in Utilizing Private Funding

Yasuhiro Sato

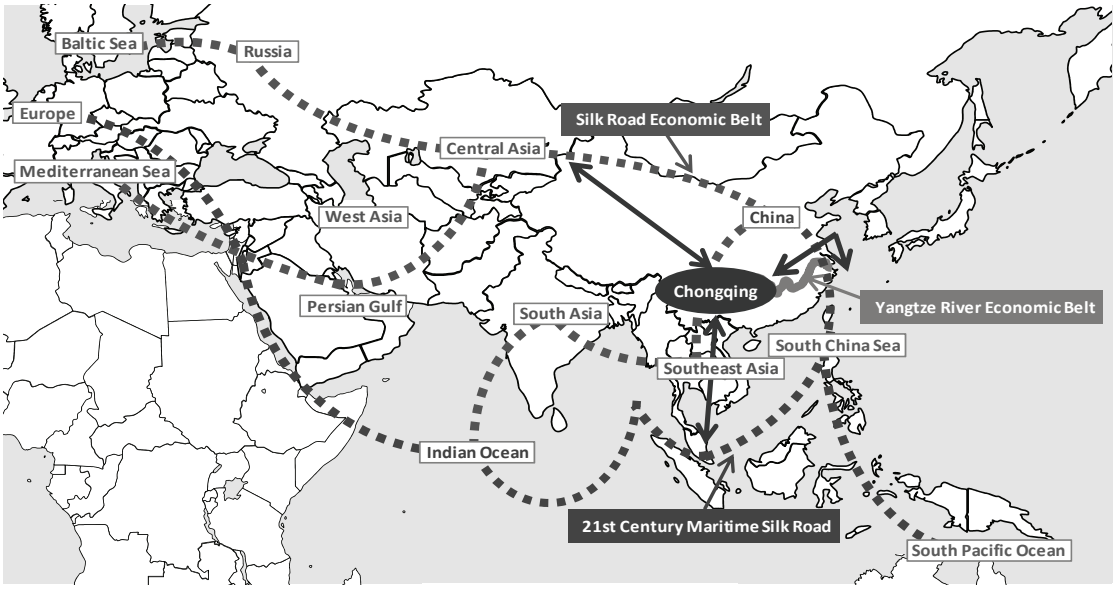
President & Group CEO, Mizuho Financial Group, Inc.

1 Chongqing and the Construction under the 'One Belt, One Road' and 'Yangtze River Economic Belt'Strategies

(1) The important role that Chongqing's infrastructure plays in the construction under the 'One Belt, One Road' and 'Yangtze River Economic Belt' strategies

As part of the transformation to a "new normal" for the Chinese economy, the government has introduced the One Belt, One Road (OBOR) strategy (consisting of the Silk Road Economic Belt (SREB) and 21st Century Maritime Silk Road (MSR)) as an important strategy for promoting regional economic integration, as well as dually opening China up to foreign direct investment and increasing outward direct investment. Another strategy as part of this transition is the Yangtze River Economic Belt strategy, a part of the plan for regional economic development within China.

Illustration 1: Chongqing is a junction for the SREB, MSR, and Yangtze River Economic Belt



Source: Illustration based on 1) *The Guidelines of the State Council on Promoting the Development of the Yangtze River Economic Belt by Relying on the Golden Watercourse of the Yangtze River,* 2) *Vision and Proposed Actions on Jointly Building [the] Silk Road Economic Belt and 21st-Century Maritime Silk Road* (National Development and Reform Commission, Ministry of Foreign Affairs, Ministry of Commerce), and 3) CNTV copyrighted "One Belt, One Road" graphic from Guancha Syndicate news aggregator site (April 13, 2015)

Chongqing is located in a geographically important area for these government strategies. For example, it is not only the starting point on the international railway freight route to Europe that supports the SREB, but is also connected to the MSR on the route between China and the Indonesia Economic Development Corridors. Chongqing is also a central city in the upriver region of the Yangtze River Economic Belt, making it the junction where all three routes meet (see Illustration 1).

In order for Chongqing to make use of its advantageous location as an important point on both of these government strategies, and to achieve further development as one of the important zones for China's economic development, it is essential to prepare and expand transportation infrastructure that can support the smooth flow of an enormous amount of people and goods. Actually, there are already a variety of important projects in the planning or implementation stages that aim to enhance Chongqing's water, land, and air transportation, as well as the concentration of abilities related to such transportation methods. For example, strengthening the functionality of upriver transportation routes and harbors on the Yangtze River; construction of a high-speed railway between Shanghai, Chongqing, and Chengdu; development of a national highway connecting Shanghai and Chongqing; strengthening the functionality of the Chongqing Jiangbei International Airport; and construction projects to enhance Chongqing as a domestic transportation hub.

(2) The Role of the government and the market in infrastructure development

In the past, the government would play a primary role in infrastructure development from the planning phase and construction all the way to operation after completion. However, in recent years there have been changes to this process and major revisions of the government's role can be expected.

In the Third Plenary Session held in November 2013, the Communist Party of China included in its policy the intention to abide by "the decisive role of the market in resource allocation" when it came to the allocation of capital and labor as a means of utilizing private sector funding and knowledge to enhance economic effectiveness and innovation. This policy of harnessing the abilities of the private sector will also apply to the field of infrastructure. Along with economic maturity comes slower government revenue growth, and along with the declining birthrate and ageing population comes an increased burden on government finances due to increased expenditures from government social programs. Thus, it can be assumed that this policy is partially a reaction to the predictions of the increasingly harsh conditions that the Chinese government may face. Specifically, increased implementation of Public-Private Partnerships (PPP) has been proposed as a means to effectively and efficiently develop infrastructure as well as decrease the financial burden on the government.

However, we cannot expect that by simply leaving it up to the market, private capital will increasingly flow into the infrastructure sector. When it comes to infrastructure development projects, there are some impediments to participation from the private sector. Namely, certain limitations on the level of revenue and the framework for its collection due to the status as a public utility,the requirement of a relatively large amount of capital expenditure, and the long period of time needed to see returns. Presented with this issue, the Third Plenary Session not only made the decision to let the market play a decisive role but also to task the government to further fulfill its role, thus providing assurances that the government will develop a system to allow for the safe investment of private capital. Specifically, this means that the development of a system for distributing responsibility and risk between the government and the market is an important issue to be considered.

While Chongqing has been affected by China-wide trends and is predicted to be hit with the same strains on government finances, in recent years there has been a lot of activity surrounding the implementation of PPP for infrastructure investment. For example, in August, 2014, Chongqing's municipal government announced its plans for revising its PPP investment model and

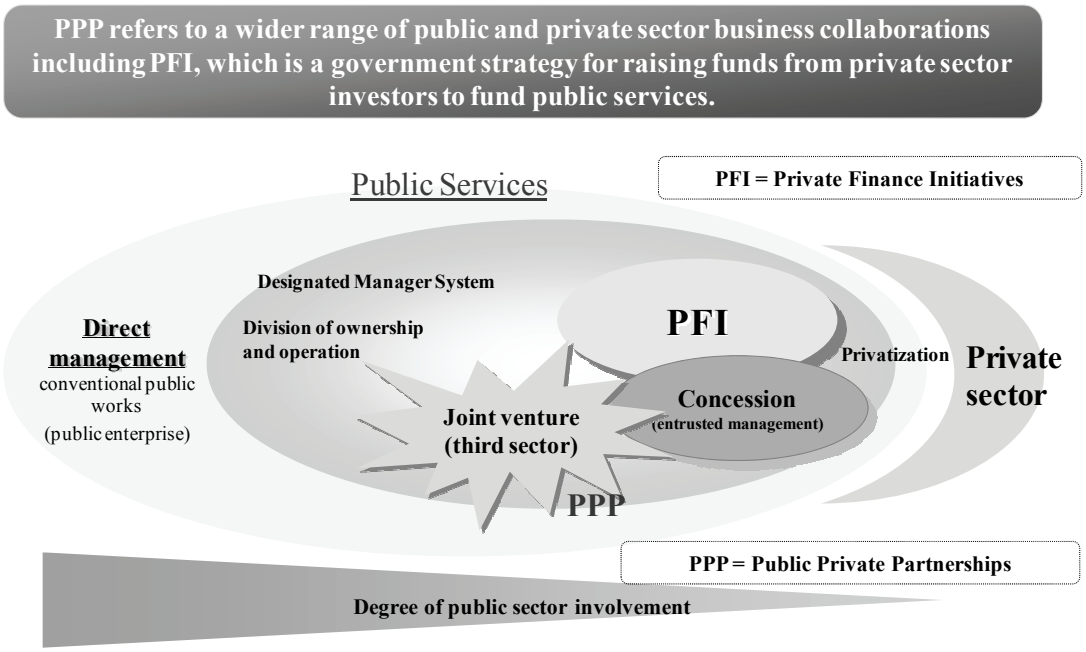
signed PPP agreements for projects worth a total of 130 billion renminbi within the year. Additionally, in the six years from 2015 to 2020, Chongqing intends to implement PPP for 800 billion renminbi worth of projects. The years to come will provide an opportunity to test whether or not PPP can be implemented effectively and sustainably in Chongqing. In light of Chongqing's initiatives in this field, this report will introduce some examples of PPP implemented for infrastructure projects in Japan and other countries around the world and some of the implications.

2 PPP Projects in Japan and Other Countries Around the World

(1) Definition of PPP

The definition of PPP varies by country and institution. The World Bank groups PPP into four general categories: 1) Greenfield (new build), 2) Concession, 3) Management and lease, and 4) Divestiture. In Japan, PPP encompasses a wider range of activities than just business collaboration between the private and public sectors, including 1) Private Finance Initiatives (PFI), 2) Concession (entrusted management), 3) Joint ventures ("third sector"), and 4) Designated Manager System (See Illustration 2).

Illustration 2: PPP in Japan



(2) PPP projectsaround the world: Case study on France's high-speed railway

In countries with a developed framework for PPP such as the United Kingdom, Canada, the United States, and Australia, PPP is utilized in a wide range of sectors such as transportation infrastructure (railways, roads, harbors, etc.), hospitals, educational facilities, housing, and government buildings.

One example of utilizing PPP for infrastructure development in a developed country is the Nimes-Montpellier Bypass, a high-speed rail line contracted in 2012. This project covers the initial construction, management, and maintenance of a freight

and passenger rail line which will link Nimes, Montpellier, and other major cities in the south of France. The project agreement was signed with Réseau Ferré de France (RFF), the government-owned entity in charge of the national French rail network, for total financing of 2.28 billion euro (approx. 15.7 billion renminbi), of which 600 million euro (approx. 4.1 billion renminbi) is subsidized by the public sector, namely the European Union/French government (52%), local authorities (28%), and RFF (20%), while approx. 1.2 billion euro (approx. 8.3 billion renminbi) is to be extended by financial institutions.

The framework for the project in this case study can be summarized as follows:

-1- Implementing an availability payment*(as the off-taker, RFF shoulders a portion of the operational risk)

* Availability Payment: In this example, the availability payment refers to the agreement that RFF shall pay a set amount of income to the concessionaire for as long as the rail line is operational.

-2- RFF guarantees that when construction is complete it will shoulder the loan that was taken on by the concessionaire during the construction phase.

-3- The EU/French government and local authorities will subsidize a portion of the total project expenses (providing 600 million euro (approx. 4.1 billion renminbi) of the 2.28 billion euro (approx. 15.7 billion renminbi) total).

-4- The remainder consists of funding provided by the European Investment Bank and public financial institutions in France, etc., and financing distributed between 11 private sector banks including Mizuho Bank.

(3) PPP projects in Japan: Lessons from the "Third Sector" and implementation of Private Finance Initiatives

PPP began to emerge in Japan in the 1960s, primarily through the establishment of joint ventures funded by both the public and private sectors, which came to be referred to as the "third sector". With the introduction of private capital into public infrastructure and urban development projects which had previously been solely funded by national or regional public organizations, the goal was to reduce the burden on the budgets of these public organizations, however there were cases in the 1990s-2000s of projects that were heavily in debt and forced into legal liquidation. The issues most often faced by the third sector are as follows:

-1- Because of the large number of stakeholders, decision-making requires a lot of time leading to a delay in restructuring.

-2- In some cases, a large amount of public funding was subsequently used to relieve the debt of third sector projects that had become unprofitable due to a lack of clarity in the respective roles of the public and private sectors or thedispatching of workers from local government agencies leadingto collusion between the public and private sectors.

It was necessary to remedy this weakness in the third sector arising from the lack of an organization tasked with prime responsibility due to the above mentioned lack of role clarity between the public and private sectors. Thus in 1999, Japan enacted the Act on Promotion of Private Finance Initiatives ("PFI Law"). In addition to the PFI Law, guidelines were established requiring the private and public organizations involved in a PFI to clarify their roles in advance, in reflection of the issues mentioned above. The PFI Law has been revised several times over the years and PFI has come to be utilized in a variety of

fields, with 489 PFI projects in fiscal 2014 amounting to a total of 4.5 trillion yen (approx. 230 billion renminbi)[1].

In the coming years, Japan will be tasked with updating much of the public infrastructure put in place in the 1970s such as roads, river management facilities, sewage systems, harbor facilities, etc. Considering the current difficult economic situation, the government stance is to further promote PFI. In order to build the foundations for this policy, the PFI Law was amended in 2011 to allow for the implementation of a system of concessions for the management rights of public facilities, and in 2013 the Private Finance Initiative Promotion Corporation of Japan ("PFI Fund") was established to strengthen the support framework for PFI projects.

In June 2014 the Cabinet announced the "Japan Revitalization Strategy", which calls for the "development, management and renewal of public infrastructure by drawing on the knowledge and financing of the private sector" while pledging to "expand the scale of PPP/PFI projects to 12 trillion yen (approx. 600 billion renminbi) [scale at the time 4.1 trillion yen (approx. 210 billion renminbi)] for the following 10 years", and setting numerical targets for the number of projects in each field. In particular the policy focuses on concessions for the management rights of public facilities, establishing a goal of implementing 2 to 3 trillion yen (approx. 100-150 billion renminbi) worth of projects in the primary fields of airports, water systems, sewage systems, and roads over the three-year period from 2014-2016.

(4) A Japanese case study: Kansai International Airport

Stage 1: KIX as a Third Sector project

Kansai International Airport ("KIX") was established as a third sector (joint venture between the public and private sectors) project in October 1984 (See Illustration 3). From the start it was a large-scale public works project with the total cost for the first stage of construction alone coming to 1 trillion yen[2] (approx. 50 billion renminbi), so a third sector approach was taken from the perspective of utilizing private capital. Financing of 30% of the total was provided by the operating company, Kansai International Airport Co., Ltd.via capital invested thereof (a 4:1:1 capital investment ratio of national government : local government : private sector), with the remaining 70% consisting of government-guaranteed bonds and bank loans, etc. However, due to an expansion of the scale of the passenger terminal, preventative measures against the sinking of artificial land, and an increase in the compensation to be made to Fishermen's

Illustration 3: A History of KIX

	KIX History	National / World Events
1958	Osaka International Airport (Itami Airport) begins operations	
1964	Jet airplanes brought into service at Itami Airport	Summer Olympics held in Tokyo
1967		Act on Countermeasures against Aircraft Noise enacted
1970		World Expo held in Osaka
1974	The southern area of Osaka Bay is chosen as a candidate for building KIX	
1978		Narita International Airport opens
1984	Kansai International Airport Co., Ltd. is established	
1987	Phase 1 of KIX construction begins	
1990	Decision to continue operation of Itami Airport	
1994	KIX begins operations	
1996		Great Hanshin Earthquake
1997	Permit issued for construction of Kobe airport	
1999	Construction of KIX Terminal 2 begins	PFI Law enacted
2006	Kobe Airport opens	
2007	A second runway, Runway B, opens	
2009	KIX access roads nationalized	
2011		PFI Law amended (implementation of concessions)
2012	Business merger with Itami Airport Opening of low-cost carrier terminal	
2014	Plans to concession facility operation rights of KIX and Itami Airport are announced	
2015	Screenings conducted of concession bids	

1 Source: *PPP/PFI Project Case Study Collection* (May 2015) PFI Promotion Office, Cabinet Office, Government of Japan (Available in Japanese only, title translation for reference only). The 489 projects consisted of: 165 educational/cultural facilities projects (33.7%), 85 health/sanitation facilities projects (17.4%), 73 roads/sewage piping facilities and harbor facilities projects (14.9%), 56 administrative government building projects (11.5%), 24 law enforcement/fire-fighting/prison projects (4.9%), 22 social welfare facilities projects (4.5%), 14 tourism facilities projects (2.9%), 50 other projects (10.2%).

2 Source: February 1984 Cabinet meeting regarding Kansai International Airport.

Associations, in the end the required funding for the first stage of construction ballooned to 1.5 trillion yen[1] (approx. 75 billion renminbi).

The airport opened in 1994, but operations were in the red for the following 10 years. It was determined that a third sector style of construction and operational management had not been effective, and ultimately, in 2012, a business restructuring took place.

The following two points can be concluded as reasons that KIX was not a successful third sector venture:

The first reason was that Kansai International Airport Co., Ltd. did not demonstrate leadership in its role as the operating company. The national government, local government, and private sector had conflicting interests as investors in KIX, thus decision-making not only took an inordinate amount of time but the ability of Kansai International Airport Co., Ltd. to operate the airport was impeded.

The second reason was the lack of government support. The Japanese government allowed for the continued operation/new construction of two competing airports, Itami Airport and Kobe Airport, creating an impediment to growth in travelers using KIX. Additionally, the government did not sufficiently support KIX financially in light of the huge amount of debt it faced at the time of opening.

Stage 2: KIX as a PFI project with concessions (see Illustration 4)

Based on the issues identified above, the Japanese government is aiming to improve the finances of KIX through the provision of subsidies[2] from 2003 onward and in 2009 reducing access costs by nationalizing major roads and rail connecting KIX with the neighboring metropolitan area. Then, in 2011, KIX merged operations with Itami Airport (ITM), and in July 2012 the operating company was split into Kansai International Airport Land Company, Ltd., which owns and manages the land on which KIX operates, and New Kansai International Airport Co., Ltd. (NKIAC), which is currently in the process of screening the sale of KIX and ITM facility operation rights to the private sector by concession. In June 2015 it was announced that the Orix Vinci Airport Consortium[3] had passed the first round of screenings. A second round of screenings and negotiations are scheduled for November of this year towards a transfer of operations in March 2016.

This case of implementing a PFI through concession divides the roles of the public and private sectors as follows:

-1- Operating rights were established for both KIX and ITM and private sector investors will take over operations. (As for investment revenue, an administration system is established where the private sector investors shoulder the risk).

-2- NKIAC retains asset ownership of both airports, receives a concession fee from the operator, and makes payments to settle financial obligations, pay rent to the land owning company, etc.

-3- For each year of operations throughout the concession period, the operator shall pay a concession fee to NKIAC. A deposit is required in order to secure the contract.

-4- In principle the operator is liable for risks arising from the operation of the facilities. However, NKIAC shall be liable for the risks in the following cases where it is determined that risks that can only apply to the manager of public infrastructure:

i. In the event of an earthquake, tsunami, or other natural disaster, the amount of funds required in excess of the portion

3 Source: 1995 Cabinet budget.

4 The amount of government subsidy provided was 9 billion yen for FY2003-2009, 7.5 billion yen for FY2010-2011, 6.9 billion yen for FY2012, 4 billion yen for FY2013, and 2 billion yen for FY2014.

5 Vinci Airports is a France-based airport operations company and a subsidiary of Vinci SA, a construction conglomerate. Vinci Airports particularly focuses on PFI for airport management, highways, and other concessions, with revenue of 38.7 billion euro in 2014. From 1995, Vinci Airports has been involved in the management of a total of 24 airports around the world.

insured by the operator.

ii. In the event that a latent physical defect is discovered in the airport facilities within a predetermined period of time.

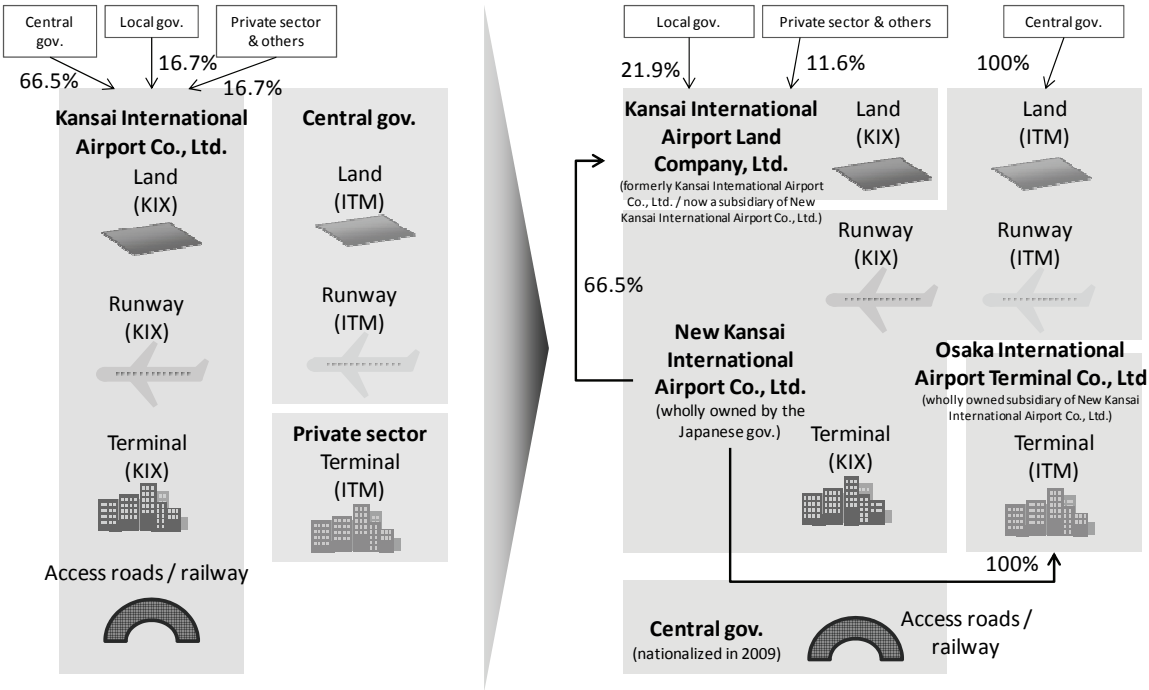
iii. In the event that laws or regulations are changed or added which specifically or by association have an adverse effect on the operations in question.

iv. In the event that NKIAC orders a retraction of the operation rights due to a situation that impedes the safe operation of both airports.

v. In the event that the artificial land on which KIX is built sinks more than predicted and additional action is required.

In order to encourage the participation of the private sector in a major public infrastructure project, it is important to clarify the roles of the public and private sector as well as the government's stance on supporting the project, in order for the private sector to be assured of the long-term stability of the project. To achieve this, it is necessary to have government commitment, relevant laws and guidelines established, and the utilization of government-run financial institutions or funds, as well as a government guarantee regarding financial aspects (the provision of subsidies or an availability payment), etc. For PPP/PFI projects, while it is important that the national government takes on the risks that are their responsibility, the support of central or regional governments where appropriate is also essential to the ability to provide high-quality public services while effectively utilizing private capital.

Illustration 4: The organization of KIX before and after business restructuring



3 Initiatives towards Implementing PPP in China

(1) Trends in PPP projects in China

After the first Build-Operate-Transfer (BOT) model project was approved by China's State Planning Commission

(currently the National Development and Reform Commission) in 1995, PPP projects have gradually developed in China. PPP is primarily implemented in the environmental, water supply, transportation infrastructure, and other public service fields.

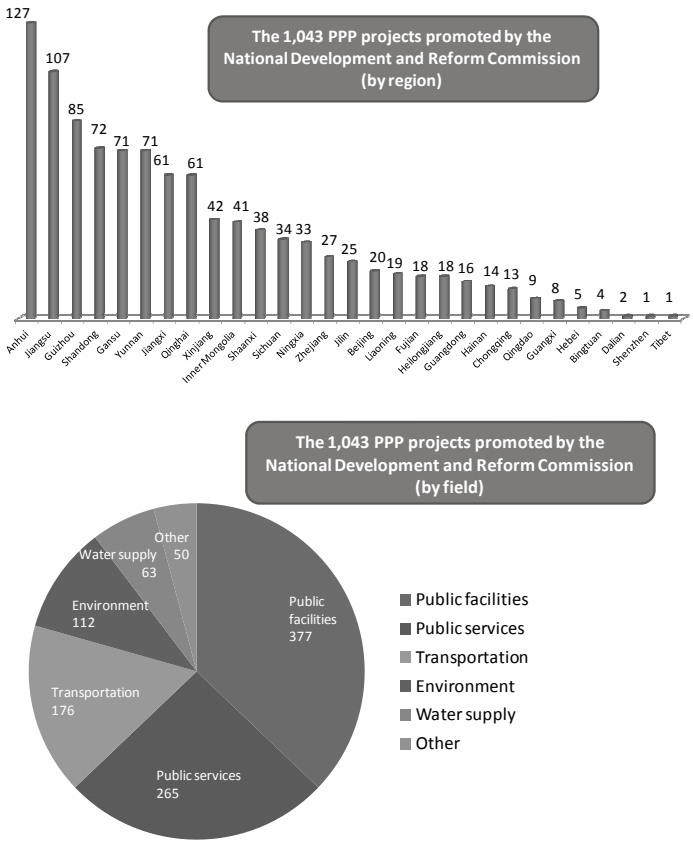
The Third Plenary Session held in November 2013 encouraged the investment of private capital and management by the private sector of urban infrastructure through management license rights (similar to the concept of a concession in Japan). From 2014 the Ministry of Finance and the National Development and Reform Commission have released successive directives regarding PPP and have collaborated with local governments to promote PPP, leading to the dawn of a new era for PPP in China.

(2) Circumstances surrounding PPP implementation

Rapid urbanization is continuing in China, with the percentage of the nation's population concentrated in urban centers rising to 54.8% in 2014. With this increasing urbanization as well as rising economic levels, infrastructure development needs are higher than ever, and given the budgetary limitations, the government is hard pressed to keep up with the expensive infrastructure investment required. Expectations are being directed at PPP as a means to fill in the investment gap and further develop infrastructure while also improving the budgetary situation of local governments.

On May 25, 2015, the National Development and Reform Commission announced 1,043 PPP projects worth a total investment of 1.97 trillion renminbi (See Illustration 5).The expectation behind the promotion of PPP projects is not only that they will contribute to the development of infrastructure but also that the investment will foster economic growth.

Illustration 5: Breakdown of PPP Projects



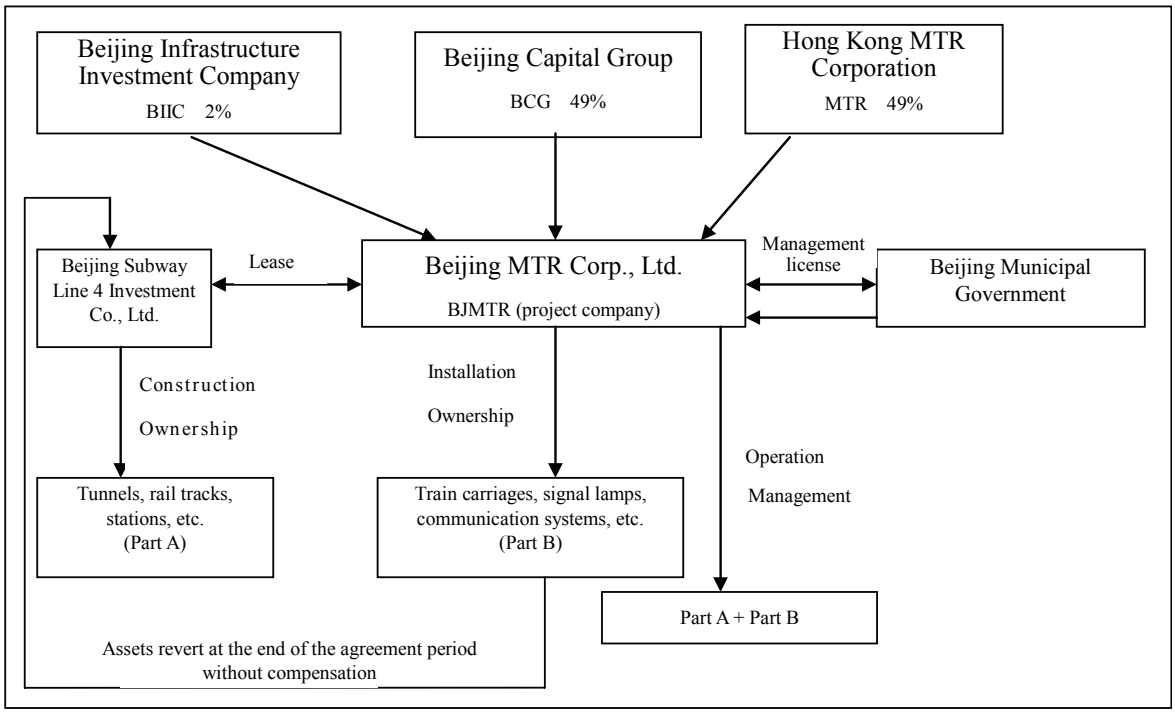
(3) Examples of PPP implementation

<u>Line 4 of the Beijing Subway</u> (See Illustration 6)

In 2006 Beijing MTR Corp., Ltd. ("BJMTR") was established by a joint venture between the publically listed Hong Kong MTR Corporation and two state-owned enterprises, the Beijing Capital Group and the Beijing Infrastructure Investment Company, with a 49%, 49%, and 2% investment, respectively. For the construction phase, the government (government-owned investment firm), was responsible for building the foundations for the rail tracks, tunnels, electrical circuits, etc., and BJMTR was responsible for building the train carriages, signal lamps, facilities and operating system. After construction was completed, the government agreed to lease the assets it owns to BJMTR for 30 years through a management license (similar to a concession), and said assets shall revert to the government at the end of the

agreement period without compensation. During the licensing period, the government reserves the right to set passenger fares, and in exchange shall provide a subsidy of 620 million renminbi per annum to BJMTR to cover operational costs and to ensure financial profitability.

Illustration 6: Ownership of Line 4 of the Beijing Subway



This project was successful for the following reasons:

-1- The overall burden of constructing a new subway line was reduced through the implementation of a management license.

-2- While the government retains revenue from the public (by setting the price and receiving profits from passenger fares), it pays a subsidy to the operator.

-3- The project utilizes outside expertise by retaining the services of MVA Transport Consultants Co., Ltd.

(4)Issues to be considered going forward

One of the primary issues as China moves forward on the PPP initiatives presented by the government as well as planned future projects, is the expansion of the framework for raising funds as well as the regulatory framework.

As the number of projects overall as well as the number of large scale projects increase, it is unrealistic to expect funds for all the projects to be raised solely from the capital of China's domestic private sector financial institutions. It is likely that eventually overseas financial institutions will need to provide financing or to participate in a financial advisory capacity. In such cases, the issue will be the relatively long-term operating period inherent in PPP projects. For overseas financial institutions, to finance a project spanning 15 to 20 years for example, in renminbi, and also to steadily raise funds from the market over the long term, is very difficult at the present time. At the same time, in order to guarantee that funds raised are backed by collateral, the regulatory framework establishing security measures must be strengthened. Unless these issues are addressed early on, it will be unrealistic for overseas financial institutions to suitably take on the associated interest rate risk and project risk.

4 Summary

From the 1990s, PPP/PFI have been utilized in countries around the world as a system for government agencies to utilize private expertise and private capital in the construction and operation of public facilities, leading to effective project management as well as reducing the burden on public investment. In China, while there are already successful examples of PPP projects through the use of BOT, etc., the full-fledged implementation of PPP is only just beginning.

As China rapidly implements planned PPP projects, case studies from other countries such as the examples above are likely to provide a wealth of insight. Namely the following four areas are of interest: (1) The use of concessions, (2) The flexibility of roles and responsibilities between the public and private sector depending on the individual project, (3) The use of external expertise and advisories, and (4) the regulatory framework related to the environment for raising funds, the management of funds, and the security of project loans.

(1) The use of concessions

- Concessions encourage the active participation of the private sector by dividing ownership and operation so as to avoid overly burdening the private sector.
- At the same time, through the specialization of operations, it is possible to incorporate ideas from the private sector to better streamline and utilize profit facilities (effective use of public assets) and subsequently achieve cost recovery from project revenue, etc. Going forward, concessions hold potential in the airport, highway, railway, and other transportation infrastructure fields.

(2) The flexibility of roles and responsibilities between the public and private sector depending on the individual project

- With the increasing business diversification in China which includes infrastructure, the appropriate division of risk between the public and private sector dependent on the types of risk inherent in the operations of each project will allow for effective and efficient operations.
- Namely, demand risk, operating risk, interest rate (currency exchange) risk, and political/regulatory risk, etc. In a case such as that of the French high-speed railway outlined above, the method for hedging demand risk was an availability payment offered by the government as a way to ensure a portion of income and to ensure the sustainable operation of the project.
- In other cases, it has proven essential for the government to provide subsidies or refinancing through state-owned financial institutions when suitable.

(3) The use of external expertise and advisories (monitoring)

- From an analytical perspective of the economic efficiency and effectiveness of investment, it is important that the advice of an independent organization is incorporated into governmental strategy. Ideally, the accumulated knowledge of external consultancies with expertise in the specific field should be actively utilized.

• Specifically, advisory services should be used at the stage when the operator is being decided. Additionally, from the beginning of operations until the end of the agreement period, advisories should be used to measure and evaluate the level of service and otherwise monitor operations in order to ensure the suitable and reliable operation of public services.

(4) The regulatory framework related to the environment for raising funds, the management of funds, and the security of project loans

Primarily, the following are needed:

-1- An environment enabling the stable, long-term raising of funds in renminbi.

-2- A system enabling the utilization of escrow accounts for managing project revenue funds.

-3- Clarification of land usage rights and pubic facility ownership (especially when implementing a BOT project).

-4- Regulatory framework involving the establishment of the right of pledge related to management license rights and anticipated project revenue, etc.

At Mizuho Financial Group, we aim to draw on our experience with PPP/PFI projects in Japan and other countries around the world in order to continue to contribute to Chongqing's development.

Improve the Soft Power of Chongqing in the Context of "One Belt, One Road"

Jean-Pascal Tricoire
Chairman and Chief Executive Officer of Schneider Electric

Abstract

As the 'One Belt, One Road' initiative becomes a centerpiece of China's foreign policy and domestic economic strategy, it brings about great opportunities and challenges to Chinese local governments and companies. Chongqing, as one of the four municipalities in China and the economic hub of Southwest China, can play a strategic role in the country's strategy. This paper, prepared for the 10th Annual Meeting of Chongqing Mayor's International Advisory Council (CMIA), provides recommendations on how Chongqing could improve its soft power in the context of the 'One Belt, One Road' initiativefrom three main perspectives:

- Increase the soft power of companies based in Chongqing both domestically and internationally
- Improve Chongqing municipality's soft power by promoting sustainable development
- Attract and retain skilled domestic and international talent

1 Chongqing as a key stakeholder in the context of the'One Belt, One Road' initiative

1.1 China's New Normal and the 'One Belt, One Road' strategy

After three decades of high speed growth, China's economy has been stabilizing at approximately 7.5% since 2012. In the first half of 2015, China's gross domestic product (GDP) grew at a rate of 7%, decelerating from the 7.3% growth achieved in the fourth quarter of 2014. The government is proactively leading a transition towards a 'New Normal' stage with the aim to shift China's economic development across multiple dimensions. Strict reforms are enforced so that China achieves a more environmentally friendly, socially inclusive, and efficient mid-to high-speed economic growth. Along with the 'New Normal' strategy, China introduced the 'One Belt, One Road' initiative which serves as a strategic national roadmap to gain further leverage in the world's economy and political affairs. The program involves 64 countries, benefiting 4.4 billion people. With a cumulative GDP of USD 21 trillion, the concerned nations currently account for nearly 30% of the world's wealth.

The countries along the 'One Belt, One Road' vary in terms of political systems, economic and population sizes, infrastructure development, access to capital, and expectations. Reaching a tangible consensus and desirable economic integration will require a significant degree of deliberation and negotiation. China is taking a leading position and demonstrating a thorough understanding on how to proceed with such a grand scheme. China is exhibiting its national soft

power by fostering an environment of consultation and collaboration to achieve a win-win situation among the involved parties.

In March 2015, China's National Development and Reform Commission (NDRC) and the Ministries of Foreign Affairs andCommerce jointed released an action plan outlining key details of the 'One Belt, One Road' initiative–*Vision and proposed actions outlined on jointly building Silk Road Economic Belt and 21st-Century Maritime Silk Road.*This latest release specified that the scope of the 'One Belt, One Road' program includesnot only the promotion of enhanced policy coordination among all countries and the facilities connectivity, but also the financial integration, trade liberalization, and people-to-people bonds.

1.2 Chongqing in the new wave of growth

Chongqing is the economic hub of Southwest China and one of the five national central cities. Administratively, it is one of China's four direct-controlled municipalities and the only such municipality in Mainland China.

Ever since Chongqing became the fourth municipality in 1997, the city has undergone dramatic development. Its economy grew from CNY 151 billion in 1997 to CNY 1.43 trillion in 2014 with an average annual increase of 14.1%, higher than the national average. In the first half of 2015, Chongqing championed the country with a GDP growth rate of 11%, 4 percentage points higher than the national average of 7%.

The sustained rise of Chongqing's economy is attributable to many factors, including the promotion of emerging industries, the fast growth of the services sector, the development of its financing services to supportthe real economy, and the leveraging of the opening-up and the 'One Belt, One Road' initiatives.

The*Vision and proposed actions outlined on jointly building Silk Road Economic Belt and 21st-Century Maritime Silk Road*, published in March this year clearly stated Chongqing's strategic role in the 'One Belt, One Road'.

Vision and proposed actions outlined on jointly building Silk Road Economic Belt and 21st-Century Maritime Silk Road, that directly related to Chongqing Jointly released by China's National Development and Reform Commission (NDRC), and the Ministries of Foreign Affairs and Commerce, March 2015
1. Southwestern region: Create new strategic anchors for the opening-up and development of the southwest and mid-south regions of China, and form an important gateway connecting the Silk Road Economic Belt and the 21st-Century Maritime Silk Road
2. Inland regions: 2.1. Make use of the advantages of inland regions, including a vast landmass, rich human resources and a strong industrial foundation, focus on such key regions as the city clusters along the middle reaches of the Yangtze River, around Chengdu and Chongqing, in central Henan province, around Hohhot, Baotou, Erdos and Yulin, and around Harbin and Changchun to propel regional interaction and cooperation and industrial concentration. 2.2. Build Chongqing into an important pivot for developing and opening up the western region; 2.3. Cultivate the brand of "China-Europe freight trains," and construct a cross-border transport corridor connecting the eastern, central and western regions; 2.4. Develop new models of processing trade and deepen industrial cooperation with countries along the corridor.

To implement the 'One Belt, One Road' initiative and the Yangtze River Economic Belt Strategy, Chongqing's government proposed "three objectives, five principles and six tasks" at the end of 2014. The city aims to align itself with the new pattern of China's economic development and to take a leading position within the nation's development strategy. The 10th CMIA represents a great opportunity to discuss how Chongqing can fully seize the potential of the 'new normal' national agenda to and specifically how it can improve its soft power.

The municipality could improve its soft power by concentrating on the following priorities: promoting the upgrade of the industrial infrastructure, moving towards the higher end of the value chain, reinforcing hub functions, and supporting diversified and efficient financing system.

2 Policy recommendations on improving the soft power of Chongqing in the context of 'One Belt, One Road'

Soft Power Joseph S. Nye 2004, Soft Power: The Means to Success in World Politics
"Soft power is the ability to get what you want through attraction rather than coercion or payments. […] It arises from the attractiveness of a country's culture, political ideals, and policies. When our policies are seen as legitimate in the eyes of others, our soft power is enhanced."

Nye's research on the topic has had profound impacts on international diplomacy. His terminology and concepts are now widely applied in other areas such as, corporate management, policy design, talent management, and eco-friendly development among others.

Schneider Electric suggests the following policy recommendations on improving the soft power of Chongqing in the context of 'One Belt, One Road':

- Increase the soft power of companies based in Chongqing both domestically and internationally
- Improve Chongqing municipality's soft power by promoting sustainable development
- Attract and retain skilled domestic and international talent

2.1 Increase the soft power of companies based in Chongqing both domestically and internationally

According to China's Ministry of Commerce, Guangdong, Beijing, and Shandong were the three provinces leading the race of non-financial outbound foreign direct investments (OFDIs), with respective values of USD 9.6 billion, USD 5.6 billion, and USD 4.4 billion as of 2014. Chongqing is lagging behind with a total OFDI reaching USD 688 million. (Source: "The statistics of China's 2014 non-financial outbound foreign direct investment by province", published by China's Ministry of Commerce in Feb 2015). Although Chongqing is not yet a frontrunner, we believe that Chongqing's enterprises have the potential to rival with Guangdong, Beijing, and Shandong's.

Challenges commonly faced by Chinese companies aiming at expanding their footprint abroad are the lack of capability and experience in investing and operating overseas, and the lack of soft power in the global market. Derived from Nye's definition of national soft power, a company's soft power is influenced by its corporate culture, brand, innovation capability, human capital, clientele, public relations, and overall governance among many others. Based on close to 180 years of history

and operationsin more than 100 countries, Schneider Electric proposes the following recommendations to improve the national and international competitiveness of Chongqing's companies

2.1.1 Collaborate with foreign institutes and multinational companies

For decades, Chinese companies have been operating predominantly at a domestic level and remained shielded from foreign laws and regulations. When companies seek to expand their business overseas, they will have to understand and comply with international as well as local laws and regulations. Chinese companies will become subject to foreign courts and litigation procedures.

Beyond legislation and regulation, Chinese companies are exposed to new mechanisms overseas regarding intellectual property rights, labor union issues, technical standards and taxation. The lack of competency and experience often leaves Chinese companies unprepared in sophisticated markets, making them more vulnerable to international competition. Domestic reforms addressing these weaknesses and preparing Chinese companies to invest and compete overseas are urgently needed.

Building expertise and human talent is a resource-intensive and long-term process. Foreign institutes and multinational companies, capitalize on decades of experience and innovation, most notably in the areas of corporate governance, intellectual property, litigation and arbitration, labor unions, taxation, and technical standards in their respective sectors.Local companies can benefit from the knowledge and experience of foreign institutes and multinational companies by establishing strategic partnerships withthem.Such collaboration with sharply reduce the learning curve of Chinese companies, and allow them to build their own capabilities much faster and more effectively. In turn, the expertise and experience acquired can then be applied to the domestic market, strengthening the competitiveness of local companies both inside and outside of China.

2.1.2 Increase brand influence

As China grows in economic size and gains more international heft, its lack of globally recognized brands can hinder its development. China is gradually transitioning from an international manufacturing power to a service-driven economy.

The *World Most Valuable 500 Brands* published by WorldBrandLab, a leading independent consultancy of brand valuation, shows that Chinese companies are slowly gaining more brand influence globally. In the latest 2014 results, the United Stated ranked #1 with 227 brands on the list, followed by France with 44, UK with 42, Japan with 39, and China with 29.

Brand equity is defined as the value premium that a company derives from a product with a recognizable brand name as compared to its generic equivalent. The more memorable, easily recognizable, and superior in quality and reliability a product is, the stronger the brand equity.

When increasing global brand awareness, Chinese companies should keep corporate social responsibility (CSR) in mind, and integrate it into the core of business operations. A company's CSR policy should function as a self-regulatory mechanism whereby a business monitors and ensures its active compliance with the spirit of the law, ethical standards, and local and internationalnorms. Investors and consumers alike pay more and more attention to a brand's CSR performance in overseas markets. They can at times result to boycotting companies they do not perceive as ethical or environmentally responsible. Such poor reputation, in addition to lost revenues in the short-term, can result in irreversible damage to the image and profitability of a brand in the long-term.

In addition, forward-looking companies should go beyond the financial bottom line and be actively engaged in actions generating positive impacts for the environment and stakeholders including customers, employees, investors, suppliers, international institutions, and communities so as to create shared value for society as a whole.

2.1.3 Promote diversity and inclusiveness in talent management

Chinese companies have historically preferred to employ Chinese talent who may not necessarily have sufficient

experience in running global operations or in understanding the local context. To be more successful in global markets, Chinese companies will have to adjust their mindset and workforce by promoting diversity and inclusion.

Diversity covers a wide array of factors, including ethnicity, gender, age, nationality, disabilities, sexual orientation, education, and religion; as well as perspective, work experience, and culture.Inclusion refers to bringing together people from various backgrounds in an environment fostering commitment, respect, collaboration, and creativity.Inclusiveness promotes diversity so that the richness of ideas and perspectives are harnessed to create business value.

Diversity and inclusiveness are both thoroughly explored by international companies. A recent report published by McKinsey demonstrated a positive correlation between diversity and financial performance. Companies in the top quartile for ethnic diversity and gender diversity are respectively 30% and 15% more likely to have financial returns higher than the national industry median. While the concepts of diversity and inclusiveness might still be new to many Chinese companies, they are certainly worth researching, piloting and implementing.

2.2 Improve Chongqing municipality's soft power by promoting sustainable development

Sustainable development is an integral part of a city's soft power. The growth and size of Chongqing's economy has created tremendous pressure on Chongqing's environment and citizens.

Chongqing is one of the world's largest megacities. In 2013, its population reached 33 million household-registered, and 29.7 million permanent residents. The urbanization rate of its permanent population and household-registered population are respectively 58.3% and 40%, 3.5 percentage points higher than the national average. Chongqing aims to go even further and to increase the urbanization rate of its permanent population and household-registered population to respectively 65% and 50% by 2020.

Rapid economic development and urbanization tightened ecological pressures. Chongqing is facing more challenges in resource shortages, pollution and congestion than many other Chinese cities. Located in the upper reaches of the Yangtze River with the Three Gorges reservoir, national key water resources, Chongqing has the responsibility to safeguard biodiversity and the environment. In *The Guidelines on Promoting Faster Ecological Progress* issued in 2014, the Chongqing government put forward the objective of building the city into a green, low-carbon, sustainable, and eco-friendly city by 2020.

As a global specialistin energy management, Schneider Electric would like to present two recommendations to Chongqing to promote sustainability at the municipality's level.

2.2.1 Improve energy efficiency

The world is entering a new wave of industrial revolution. The integration of information technology, energy technology, and material technology catalyzes the creation of numerous new disruptive innovations, industries, and business models.

The emergence of increased decentralization, digitization, and convergence of IT and OT is transforming the way in which we produce and use energy. The main factor triggering this transformation is the introduction of information technology in the energy sector.

Energy efficiency technologies are widely available to reduce energy consumption both inenergy-intensive industries and other sectors such commercial buildings. Such solutionsensure better energy management so that energy is safe, reliable, green, and efficient. Connectivity between people, devices, and smart grids allows consumers to manage their energy better and smarter. At least 30% energy savings can be achieved through energy efficiency solutions such as automatically switching off lighting and air conditioning, and promoting demand price arbitrage (i.e. consuming energy during off-peak periods when

energy is cheaper). All these measures do not impose major restraints, renovations or disturbances on the end-users.

For example, Galaxy Soho strongly benefitted from our tailor-made MRV (measurable, reportable, verifiable) system:

- **M-Measurable**

The cloud-based energy efficiency management platform brings all developed and to-be-developed SoHo properties under surveillance, and perfectly integratesthe Building Information System and Remote Energy Management onto a 3D visual platform.

- **R – Reportable**

Based on data analytics and other cutting-edge technologies, Schneider Electric developed the first mobile energy management application in the industry which analyzes data and discloses it based on customers' specific requirements.

- **V—Verifiable**

Schneider Electric provides regular consulting services to SoHo China to ensure data security, timeliness, and integrity, enhancing traceability and data accuracy.

Beijing Galaxy SoHo's carbon emission intensity dropped to 0.53kgCO^2/m^2 in May 2014, outperforming same-type buildings with a carbon emission intensity of 4.54 kgCO^2/m^2. Its electricity consumption alone saved 659.177 kg of CO^2 emissions over the same period. With the completion of this project, Schneider Electric supported SoHo China to set up an example of best practices regarding energy efficiency and low-carbon business operations in the Chinese commercial property sector.

Schneider Electric strongly recommends that Chongqing's government consider the following policies to make energy more efficient:

(1) Improve both energy and renewable energy pricing mechanisms

Economic incentives should be designed and enforced to encourage energy users to select more environmentally friendly alternatives during the decision making process. The municipal government should invest in raising awareness on energy efficiency and renewable energy so as to influence and change the behavior of energy consumers.

(2) Promote the development of green industries in the private sector

Examples of such sectors are distributed power generation, and energy efficiency and management services. Competition drives innovation and know-how, and should be encouraged by liberalizing the market and issuing licenses. The government and financial institutions alike need to promote the model of public-private partnerships (PPP) to provide efficient financing to the green industries and support their sustainable operations.

2.2.2 Promote smart city technologies to for Chongqing's sustainable development

Cities are a great illustration where efficiency could make a big difference. Covering only 2% of the Earth's surface, cities provide shelter to half of the world's population, consume 75% of global energy demand, and account for 80% of global carbon emissions. By 2050, it is estimated that urban population will account for a staggering 66% of global population. As many cities will be built worldwide in the next 40 years as were built since the beginning of urbanization.

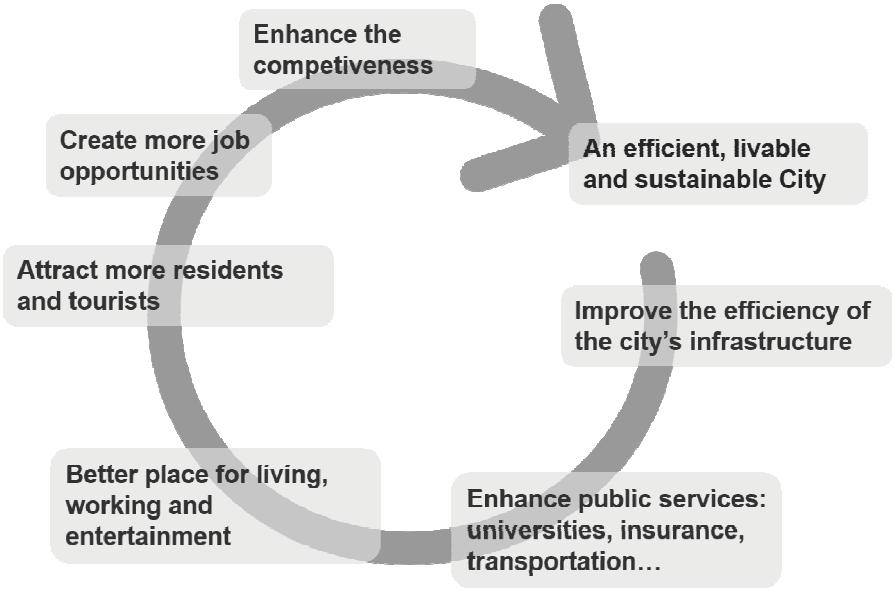
Given rising pressures on the environment and infrastructure, smart city solutions are emerging to make cities more sustainable, livable, and competitive.

The smart city concept lies in the deep integration of information technology, industrialization, and urbanization. Schneider Electric has completed more than 200 smart city projects around the world in which we helped cities to improve their existing infrastructure, enhance their overall operational efficiency, and move towards their long-term objective of sustainable development. Cities have achieved the following benefits from these projects up to:

- 30% energy savings;
- 20% reduction of water losses;
- 30% reduction of street crimes by deploying Closed-Circuit Television (CCTV) security cameras; and
- 20% reduction of travel time and traffic delays.

The increase of efficiency in a city's urban infrastructure will lead to higher effectiveness in a city's public services, thus making it more suitable to live and work in. Cities will attract more residents and tourists, thus boosting demand for local companies to generate more products and services. In turn, the city will become more competitive, triggering a virtuous circle of continuous financial, social, and environmental development as shown in Figure 1.

Figure 1: The virtuous circle of a smart city



For example, in 2010 Chicago was facing great challenges in energy, mobility, safety, public efficiency, and sustainability. The city was hampered by significant losses in electricity distribution,time-consuming commutes, and a high crime rate. Schneider Electric supported Chicago in implementing a smart city solution including smart grid automation, an energy operation system, traffic management, and a video surveillance system. The project resulted in savings of 2.6 billion MWh of energy, 2 million of water, a 13% reduction in commute time, and 50 additionallives saved per year due to reduced traffic accident occurrences.

As demonstrated with the transformation of Chicago, Chongqing can strongly benefit from developing a low-carbon development plan.

2.3 Attract and retain skilled domestic and international talent

As part of the "three objectives, five principles and six tasks" municipal agenda, Chongqing's government has the goal to promote opening-up and cooperation globally. The municipality aims to cultivate distinctive and leading industrial clusters so as to transform the city as the Western economical and political center of the Yangtze River Economic Belt. Chongqing faces

new requirements to attract, cultivate, and retain talented resources, especially in emerging areas such as integrated circuits, the Internet of Things (IoT), biomedicine, and high-end machinery equipment among others

We propose the following policies for Chongqing to attract and retain skilled domestic and international talent.

2.3.1 Provide an attractive environment for international talent

(1) Loosen administrative burden and immigration requirements

Chongqing should strengthen its efforts to ease administrative hurdles as well as immigration reforms and laws. When deciding to live and work abroad, international talent will pay close attention to the stability and predictability of local reforms, as well as the ease to navigate immigration procedures. If the process is too cumbersome, international talent will favor other neighboring rival cities.

For example, two thirds of engineers located in the Silicon Valley, one of the most renowned innovation hubs in the world, are foreign born. In June 2006, Hong Kong launched the Quality Migrant Admission Scheme, allowing international talent to settle in Hong Kong without having to secure an offer of local employment beforehand.

(2) Strive to become more environmentally friendly

While the issue of fog and haze pollution is less severe in Chongqing than in many other Chinese cities, pollution should not be ignored. Chongqing has poor air circulation in foggy days, a problem which will only be accentuated with the large-scale urban construction and industrial development arising from the 'One Belt, One Road' initiative.

Some cities have gone the extra mile with regards to safety, environmental protection, and air quality. For example, Vancouver is consistently listed as one of the top performers in global "most livable city" rankings. With hydropower accounting for 90% of the city's energy supply, Vancouver is the lowest carbon emitter per capita in North America.Vancouver set the ambitious goal to become the "greenest city in the world" by 2020 and to cut carbon emissions by a further 33%. The municipality enforced strict green building standards, requiring new buildings to be carbon neutral and existing ones to improve their energy efficiency by 20%. Vancouver implemented several smart mobility programs such as mass public transit, 248 miles of bike lanes, greenways, and car sharing initiatives.

(3) Create an attractive individual fiscal environment

Individual fiscal environment is a critical criterion for international to choose which city to move to. For Chongqing to seize the opportunities that the 'One Belt, One Road' and the 'Made in China 2025' strategies entail, we suggest that Chongqing government benchmarks its tax policies against those of other major cities in China and in the rest of the world.

For example, Hong Kong has no taxes on capital gains, interests or dividends, no value added tax, and no income tax for people who have worked for a maximum of two months out of 12 in the city. Hong Kong also signed 18 fiscal conventions to prevent double taxation. In China, Shenzhen offers a 15% individual income tax cut for all overseas highly skilled individuals in limited supply.

2.3.2 Continue to reinforce Intellectual Property (IP) protection and promote the commercialization of IP

To attract and retain qualifiedinternational talent and companies, Chongqing needs to foster an innovative environment which requires strong IP protection and stringent sanctions for copyrights infringements. Although China has already come a long way regarding IP protection, additional efforts are needed to enforce the law.

In addition, despite the large number of patents applied and granted each year in China, only a small portion reaches the stage of commercial use. The municipal government should encourage collaborationamong universities, think tanks, local enterprises, foreign institutes, and multinational companies to accelerate the commercialization process and the transformation of knowledge into commercial products and services.

2.3.3 Improve workforce through vocational education

From a demographic perspective, China's workforce is shrinking, and so is also the case for Chongqing's. In order to reap new demographic dividends, China needs to reinforce its education system, particularly to improve the technical competencies of industrial workers. The 'One Belt, One Road' and "Made in China 2025" strategies pose greater urgency to strengthen the human capital of the domestic workforce.

We recommend that Chongqing take solid actions to implement the State Council's *Decision on Accelerating the Development of Modern Vocational Education (published in 2014)* in light of the 'One Belt, One Road'initiative and Chongqing's "three objectives, five principles and six tasks"to build a highly skilled and educated workforce. New and disruptive technologies such as industrial robots,integrated circuits, big data analytics, and biomedicine are rapidly emerging. A new generation of skilled industrial workers represents the backbone of Chongqing's economical, political, societal and environmental development.

3 Conclusion

The 'One Belt, One Road' initiativeis one of the most important priorities of China's 'New Normal' agenda. Given Chongqing's economic size, geographic location, and the diversity of its economy, Chongqing has the potential to take on a strategic role in the new national stage of development. While upgrading Chongqing's industrial structure to move to the higher end of the value chain, reinforcing its hub functions, and improving the efficiency of its financing system are all important, improving the soft power of the city is vitally critical to ensure its success in the new strategic mindset of China.

This paper made objective recommendations for Chongqing to increase its soft power by: promoting the city's sustainable development via energy efficiency and smart city technologies; increasing local companies' soft power both inside and outside of China; and attracting and retaining skilled domestic and international talent. Although Chongqing will need to experiment and carry out pilot projects to test the effectiveness of the recommended actions, we believe that Chongqing can become an influential and renowned player along China's 'One Belt, One Road' strategy.

Systematic Power – Promoting the Transformation of Government's Function

Wong Kan Seng
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1. Preamble

Singapore is a young country. This year marks Singapore's 50 years of independence and 25 years anniversary for the establishment of formal diplomatic relations with China.Singapore has enjoyed relative success and gained a small reputation over the years due to the years of hard work and good leadership, but we are a small country with limited resources that does not possess significant soft power, especially as compared to China. Given the differences between Singapore and Chongqing, we have shared some of ourexperiencesin Singapore in this report, which we believecan be usefulto serve as a referencefor Chongqing in its next phase of development.

In this report, I will approach soft power from the angle of connectivity, which is a key element in the One Belt One Road strategic vision. Broadly, the report will first touch on external, then internal connectivity. On external connectivity, I will share some of Singapore's experience in participating in multi-lateral regional/international organizations to promote co-operation. Such engagements put Singapore on the map and helps Singapore tap into the pulse of the world. Internally, I will touch more on the interplay of roles between the government, private sector and the people.

2. Introduction

Over the past 35 years since its reform, China's economy has been developing at breakneck speed that is the envy of the world. As China consolidates its achievements of past decades and embarks on its next phase of economic development, Chongqing is well positioned to leverage its position in both the Yangtze River Economic Belt (YREB) and the One Belt One Road (OBOR) strategic initiatives to become a key contributor to China's growth.

Chongqing will grow, and its economy more integrated with the rest of China and the world. As the hub city located on the upstream of the YREB (长江经济带西部中心枢纽), Chongqing's integrated connectivity network of rail, air, land and river transport will allow it to seize the opportunities of the YREB and OBOR strategies to strengthen its existing links with Europe and Central Asia and to enhance its links with the rest of Asia.

Similarly for Singapore, its ideal geographical location has led it to become a successful entrepot in the 18th century. In order for Singapore's economy to grow, the Government recognised the need to develop its connectivity beyond its location along major sea routes. Through identifying rising global trends and patterns, the Singapore Government transforms and adapts its functions, both internally and externally, to remain connected to the global economy.

3. The Singapore Experience –Connecting from within and beyond

Connectivity is no longer a concept restricted by physical distance. Countries and cities can now stay connected virtually, or through means of policies and agreements put in place by governments to ensure that trade and business flow freely between countries.

Geographically, Singapore has benefitted from its location in the convergence of some of the world's major sea-lanes. More importantly, its open government and economy allows the country to recognise rising trends of the global market. With a better grasp of global demands, the Government is able to identify and address gaps from within and beyond Singapore in a speedy manner.

a. External Connectivity – Establishing Friendly Relations through Collaboration and Assistance

Since independence, Singapore has established and deepened relations with its immediate neighbours and beyond. This was achieved through the participation of numerous regional and international networks and the provision of assistance and expertise to other countries in times of need. Being a small nation, these are important avenues for achieving economic and social prosperity.

i. International Trade and Business Agreements

As a small country without a hinterland or natural resources, establishing an international network of agreements can help Singapore remain its connectivity and attractiveness for investment holding, making Singapore an ideal choice for trade and investment. Today, Singapore is home to 60-80% of the world's top oil and gas, steel, agri-commodities, and metals and mining firms. This was in part due to Singapore's policy of being an open economy, with more than 100 agreements signed with countries worldwide to promote international trade and investments. Such agreements include Double Taxation Agreements, Investment Guarantee Agreements, Free Trade Agreements and Economic Partnership Agreements.[1]

Singapore is dependent on its access to markets and fair trade practices to enhance its position and strengthen its voice on the global platform.

ii. Bilateral and Multilateral Organisations and Initiatives

In addition to establishing international connectivity through agreements for trade and investments, alliances with the global network are vital to Singapore's survival. By staying relevant through participating in multilateral organisations and initiatives, Singapore ensures that its opinions are not only heard, but matter as well.

To date, Singapore has been part of more than 10 international organisations and initiatives, with notable ones including the Asia Pacific Economic Cooperation, The United Nations and World Trade Organisation[2] The excellent relationship between Singapore and China also resulted in the setting up of the Joint Council for Bilateral Cooperation, Suzhou Industrial Park Steering Committee, Tianjin Eco-city Steering Committee, all co-chaired by the Vice-Premiers of the two countries, as well as regional collaboration councils co-chaired by Singapore Ministers and the respective provincial leaders.

[1]http://www.iesingapore.gov.sg/Trade-From-Singapore/International-Agreements

[2]http://www.mfa.gov.sg/content/mfa/index.html#

Singapore continues to hone its proactive stance in foreign policy. In recent years, Singapore has begun to undertake more active roles in the global arena. These includeits appointment as chairman of the International Monetary Fund's policy steering committee; a non-permanent seat in the United Nations Security Council, as well as a permanent observer in the Arctic Council.

The nurturing of international platforms and events to share Singapore's development experience has also promoted Singapore's role in hosting events such as the bi-annual World Cities Summit organized by the Centre for Liveable Cities (set up by Singapore's Ministry of National Development and the Ministry of the Environment and Water Resources), the Trans-Pacific Partnership free trade discussion in 2013 and sporting events including the inaugural Summer Youth Olympic Games and Singapore Grand Prix.

Through active participation and hosting of these organisations and initiatives, Singapore aims to promote cooperation amongst different nations that will benefit the region and beyond.

iii. Providing Technical Assistance and Knowledge

In the immediate years after gaining independence in 1965, Singapore benefitted from technical assistance extended by a number of developed countries and international organisations. Singapore understands the importance of forging mutual trust and friendly relations through offering of assistance and sharing of knowledge.

In 1992, Singapore set up the Singapore Cooperation Programme (SCP) to serve as the primary platform offering technical assistance to other countries. Singapore shares her experience and expertise across diverse range of topics including public governance, trade and economic development, environment and urban planning, education, healthcare, and information and communication technology. To date, the SCP has trained over 80,000 government officials from 170 countries in the Asia Pacific, Africa, Middle East, Eastern Europe, Latin America and the Caribbean.[1] Since 1997, more than 50,000 Chinese officials and thousands of Singapore officials have visited each other to study the policies and best practices of Singapore and China respectively.

iv. Providing Humanitarian Aid

In addition to providing technical assistance through sharing and training, Singapore reaches out to other countries proactively through the provision of humanitarian assistance in the wake of crises and natural disasters. Apart from donations and the contribution of relief supplies, the Singapore Armed Forces (SAF), the Singapore Police Force and the Singapore Civil Defence Force have participated in a number of peace support operations and humanitarian assistance disaster relief (HADR) missions at both regional and international levels.

Through developing goodwill towards Singapore by sharing developmental experience and providing assistance when

[1]http://www.scp.gov.sg/content/scp/about_us/introduction.html

required, Singapore plays an active role to contribute to international development as an effective, constructive and principled partner.

b. Internal Connectivity – Creating Conditions for Economic and Social Growth

The Singapore Government makes effort to not only stay connected with the international community, but within the nation as well. By staying connected and rooted to the ground, the Singapore Government was able to transform its functions to better suit the needs of its businesses and communities to ensure global competitiveness.

i. Catalysing Market Growth

Minimising State Involvement through Market-driven Environment

In this age of constant market, technological and possible political disruptions, the global business environment is volatile, uncertain, complex and ambiguous. In such a low-visibility environment, investment decisions involve great risk and are best left to market forces and private capital, without the state directing the allocation of resources to specific industries.[1]

Following this train of thought, the Singapore Government adopts a general approach to corporatise all government operations with a bottom-line, either as normal companies operating in the private sector, or as statutory boards accountable to the Ministries. Singapore's Government Linked Companies (GLCs), for example, operate without subsidies and are run on a commercial basis, under the same rules and regulations as any other company in the private sector. GLCs have full autonomy over operating and investment decisions. They are subject to all the rules or competition, and have to respond and react quickly to market forces.[2]

All Singapore ministries and statutory boards also exercise discipline in setting up enterprises, abiding by the "yellow pages" rule which stipulates that government agencies are not allowed to set up enterprises to provide services that the private sector is able to provide.[3]

Case Study: The Temasek Example

Nine years into independence, the Singapore Government found itself to be an owner of a myriad of companies. This phenomenon was mainly driven by the nation's need to attract foreign investments for the transformation of its economy from an entrepot trading station to an industrial city. The Government decided to step in to fill the gaps and became Singapore's largest owner of commercial enterprises.

[1]http://www.straitstimes.com/opinion/taking-economic-stock-at-50

[2]https://www.cscollege.gov.sg/Knowledge/Ethos/Ethos%20Issue%201,%202002/Pages/Using%20The%20Markets%20to%20Govern%20Better%20in%20Singapore%20(Part%20II).aspx

[3]https://www.mti.gov.sg/ResearchRoom/Documents/app.mti.gov.sg/data/pages/507/doc/7%20ERC_EISC_Govt_in_Business.pdf

Government loans for businesses had been spun out earlier to form the Development Bank of Singapore (now known as DBS), which today is the largest bank in South East Asia. Others ranged from minority shares in a hotel to a wholly owned Bird Park. As these businesses grow into successful commercial entities, there were no longer compelling reasons for the Government to hold majority stakes in these companies.

In 1974, Temasek was formed and inherited 35 companies from the Ministry of Finance. This provided a clear separation between the role of Government as a policy maker and regulator, and the role of Temasek as the shareholder and commercial owner of companies.

The Singapore Government took a hands-off approach to Temasek. Companies operate under the rules of a free market and no subsidies were given.With that accountability comes the responsibility to make their own decisions.The Singapore Government played no part in the commercial decisions of the companies; likewise for Temasek.

For instance, Singapore Airlines (SIA) knew it had to innovate and compete internationally to remain commercially viable. SIA never had to ask Temasek, much less the Government, whether it should buy Boeing or Airbus planes, or whether it should add or withdraw capacity from particular routes – SIA made its own commercial decisions as an airline company. Few of its international competitors in the airline industry operate with such commercial independence, away from Government subvention and influence – even today.

As an investment company, Temasek owns and manages its assets, investing and divesting with full commercial discretion and flexibility under the guidance of its Board. The Temasek Charter espouses who it is and what it does as a commercial investment company, and a corporate member of the wider community. It is governed by the Singapore Companies Act and the Singapore Constitution. Its annual statutory financial statements are audited by a major international audit firm.

To date, Temasek-linked companies account for less than 10% of Singapore's Gross Domestic Product (GDP). The Singapore Government is conscious of not becoming overly dependent on government-linked/owned companies in order for its economy to remain nimble under global market forces.

Rule-of-Law

The rule of law is central to Singapore's success and is an integral part of the ecosystem necessary for national and economic progress. Apart from physical security, the certainty and sound execution of a nation's legal framework and regulations are also elements that are highly valued by foreign investors.

Transparent and Robust Legal Framework

Singapore has built a robust legal system based on best international practices that is transparent and business-friendly. Singapore has also earned a reputation for impartiality, rigorous enforcement, and honoring the sanctity of agreements and

contracts struck under its legal framework. In 2013, the International Institute for Management Development ranked Singapore as the least bureaucratic country in Asia, based on government interference, attractive policies, transparency and accountability. This means that businesses that plan to invest in Singapore need not worry about the hassle of red tape or the slowing down of operations.Over the last decade, Singapore has made important enhancements to its legal and regulatory framework in the areas of dispute resolution and intellectual property (IP) protection.

Dispute Resolution and Arbitration

With increasing international businesses establishing presence in Singapore, a mature and effective dispute resolution and arbitration centre plays a critical role in improving its connectivity to its global business network.The Singapore International Arbitration Centre is one of the fastest growing arbitral institutions in the world, and its caseload has grown by more than nine-fold over the last decade. Singapore believes that arbitration provides an alternative and conducive channel for businesses to settle competing claims in a cost effective manner, and contributes to its attractiveness as a business hub.

Singaporealso supported the growth of institutions that provide thought leadership, and research and teaching across the range of dispute resolution procedures. The Centre for Dispute Resolution (CDR) was set up in 2008 for such purposes. The CDR also has the wider mandate to work with practitioners and professionals in dispute resolution, particularly arbitration and mediation, and to promote Singapore as the dispute resolution resource for the region.

In 2015, the Singapore International Commercial Court (SICC) was set up to hear cross-border disputes, and along with Singapore’s successful arbitration centre, will form part of Singapore’s plan to be Asia’s dispute resolution hub.

Protection of Intellectual Property (IP)

When an economy transits from being capital-intensive to knowledge-intensive, IP protection and other intangibles of commercial value then becomes crucial to securing the commitment of high-tech industries and the growth of research activities. The Intellectual Property Office of Singapore (IPOS) was set up in 2001 as the lead agency to administer IP laws, promote IP awareness, and provide the infrastructure to facilitate the development of IP in Singapore.

Singapore's IP regime has been consistently recognized as one of the best in the world by international surveys. Singapore is ranked second in the world and top in Asia for having the best protection of IP in the World Economic Forum's Global Competitiveness Report for 2012/13. Singapore has signed major international IP conventions and treaties that allow IP rights filed here to receive global protection. In 2005, the World Intellectual Property Office set up its first Asian regional office in Singapore.

Increasing Efficiency and Credibility with E-Government Platforms

The use of Information Technology has been paramount to Singapore’s development into Asia’s trading hub, helping in areas of trade facilitation, compliance, supply chain integration and information exchange. In the 1980s, Singapore started to

develop a national Info-Communications Technology (ICT) Masterplan to enhance the linkages between the government and the business community. It has since endeavored to develop systems that simplify business interactions between companies and government agencies so as to improve public service efficiency.

In 1989, Singapore launched TradeNet – the world's first single electronic-window system, to improve trade facilitation. TradeNet is an electronic data interchange system which facilitates the processing and approval of relevant trade permits through a single platform that connects 35 government agencies and other businesses (trade and logistics players) together.

The TradeNet platform increases immediate compliance to regulators in terms of timeliness and data accuracy and makes the supply chain infinitely scalable as it helps in connecting businesses connect to multiple stakeholders simultaneously. These greatly improved efficiency (processing time reduced from between two to seven days to mere minutes) and costs, further entrenching Singapore's position as a trading hub.

Another example is the Online Business Licensing Service (OBLS), a portal where a business could be registered in a matter of a few minutes, and at minimum cost.

There is also a regular process of review-and-improve to ensure that the government remains responsive to evolving business needs. This includes benchmarking against global best practices and continual improvement to maintain a globally competitive business-friendly environment. This focus on streamlining business and regulatory processes would not provide a sustainable advantage for an economy in the long run unless the initiatives implemented are continuously reviewed and improved upon.

The use of technology to simplify procedures and shorten process time is not without its compromises. Certain information may be overlooked and details omitted for standardisation purposes. The Singapore Government adopts a weighted risk approach to measure the pros and cons of using technology. It audits and improves on its systems regularly to minimize lapses and oversights of its online platforms.

Leveling the playing field for SMEs

Attracting multi-national companies (MNCs) such as those in the Fortune 500 list of companies can allow a country to fast-track its economic growth. However, its government must also develop its economy organically to ensure sustainability in the long-run. Singapore recognises this importance and places emphasis to grow its small and medium enterprises (SMEs) as a source of strength in its economy.

The Government accepted the Economic Strategies Committee (ESC 2010) proposal to develop a vibrant SME sector and globally competitive companies as the country undergoes economic restructuring. In recent budget statements, more generous funding was also made available to support SMEs as part of the explicit policies adopted by the ESC 2010 to identify and nurture 1000 Singapore enterprises with revenues over US$100million. SMEs in Singapore also have access to a comprehensive support system such as SPRING Singapore to improve productivity and pursue innovation in research and

development; International Enterprise Singapore to expand market presence beyond Singapore; and Workforce Development Agency to upgrade and train the workforce.

SMEs can benefit fromcontinued institutional support from these agencies through which various government programmes to assist the SME sector are channeled. By providing a business-friendly environment where both MNCs and SMEs can coexist, this creates an ecosystem of healthy competition and ensures the sustainability of the economy in the long-run.

ii. Talent Attraction

Talent has been and continues to be a key resource pillar of Singapore economic growth. Without hinterland and natural resources, Singapore relies heavily on the collective brainpower and resources of both Singaporeans and those whom Singapore can attract to work, invest and live here. As Singapore transits into a knowledge-based economy and competition from global competitors escalates, it is even more vital to tap on the professional skill sets of global talent to reinforce existing market sectors and create new areas of growth for Singapore.

As such, Singapore and its various government agencies, such as the Economic Development Board, Ministry of Manpower and Contact Singapore, have put in concerted efforts to create favourable conditions for working, investing and living for global talent and their families. Besides being ranked in the World Bank 2015 Report as the world's easiest place to do business (out of 189 countries), Singapore is also rated in the Global Competitiveness Report by the World Economic Forum as the best country to earn a living in Asia. This takes into account not only the city's standard of living, but also its working conditions in terms of effective labour policies and work-life balance. Singapore has also been ranked the top Asian country for its quality of life by the Mercer 2015 Quality of Life Survey.

Global talents are also attracted to Singapore's meritocratic society that embraces diversity. With meritocracy as a core principle of governance in Singapore,the Government tries to equalize opportunities and allocate rewards on the basis of an individual's merit or his abilities.

iii. Growing Our People

With manpower as its only resource, Singapore has to develop each citizen to his or her full potential. There are two major thrusts on this front, namely, building a high quality education system, and ensuring the knowledge and skillset of the current workforce is continuously upgraded to meet the requirements of a rapidly changing economy.

Formal Education System

Singapore's education system has evolved over the years. Building on the foundation of a rigorous curriculum and a system that ensures that all Singaporean children have access to quality education, Singapore is now building multiple education pathways to cater to children with different aptitudes. At the tertiary end of the education system, Singapore has

built six universities, two institutes for the arts, five polytechnics and an Institute of Technical Education (ITE) to produce the broad spectrum of graduates with the relevant knowledge and skill sets required by Singapore's diversified economy.

In particular, the universities, polytechnics and ITE have, by design, close interactions with industry, and are attuned to the nation's economic needs both in the short and long term. For example, they have aligned their research efforts and teaching programs with the economic initiatives of the country, and have also constantly reviewed its programs to produce graduates of relevance to the economy.

As it takes many years to produce knowledge workers, forward planningis essential to ensure that knowledge workers are produced in time and in sufficient number to meet the growth of new industries. Even at the technical skills level, our polytechnics have to develop new courses to fit development plans, for example, producing maintenance, repair and operations (MRO) technicians for the development of the Seletar Aerospace Hub.

Continuing Education

Beyond formal education, Singapore recognises the need to continuously upgrade the knowledge and skills of the current workforce. Recently, this notion was enhanced in the 2015 Singapore Budget, with the establishment of the SkillsFuture Council that encourages constant learning by integrating education, training and industry support for career advancement. The 'SkillsFuture' initiative provides economically active Singaporeans with the opportunities to level up their skills and knowledge in the midst of their careers and develop their fullest potential throughout life, regardless of their starting points. With the Singapore government as an active enabler, the skills, passion and contributions of every individual will drive Singapore's next phase of development towards an advanced economy and inclusive society[1].

iv. Creating a Conducive Living Environment

Family and Social Integration

Families are the basic building blocks of any country, and it is vital for the Singapore Government to cater to the aspirations of different income and racial family groups so that the nation progresses as a whole. In line with this belief, the National Family Council was formed in 2006 (renamed 'Families for Life' in 2014) to champion and promote resilient families[2]. In addition, public housing policies implemented by the Housing Development Board (HDB) aim to promote strong family ties. Schemes are introduced and revised periodically to ensure affordability of public housing, with additional incentives given to families with children and those purchasing a home near their parents.

As needs and lifestyles changes, more Singaporeans are opting for marriages in the later part of their lives. The Government recognises this shift and constantly reviews its housing schemes to address the concerns of single Singaporeans.

[1]http://www.skillsfuture.sg/

[2]http://www.familiesforlife.sg/about.html

Singapore, being a multi-racial society, needs to conscientiously maintain the delicate balance of harmonious social integration. This harmony is based on compromises, mutual trust and understanding, and treating everyone fairly, regardless of race, religion or creed.

Policies such as having national schools not segregated by race, and bringing people of different races together through public housing through the Ethnic Integration Policy (EIP) rather than having them living separately in ethnic enclaves were introduced. The spirit of community self-help, now seen in groups such as Chinese Development Assistance Council, Mendaki (a Malay/Muslim self-help organization), Singapore Indian Development Association and the Eurasian Association were also encouraged.

The weaving in of multiracialism into Singapore's ethos is vital in the creating of a "Singaporean Singapore", a key contributing factor to social integration.

Social integration goes beyond race and religion, it includes social mobility for families moving between the different social strata in a society, as well as providing social assistance to those in need as well. The Singapore social security system covers these areas by ensuring the availability of a basic safety net for all Singaporeans. It is made up of four pillars – Central Provident Fund (CPF), home ownership, healthcare and Workfare.[1]

The CPF scheme is a comprehensive social security system for working Singapore Citizens and Permanent Residents. With a mandatory social security savings scheme funded by contributions from employers and employees, it helps Singaporeans to meet retirement, healthcare and housing needs. The money allocated to the various accounts in CPF grows at stipulated interest rates that areregularly adjusted by the Government to keep up with changing demographics and societal aspirations. From time to time, the Government also contributes to Singaporean's individual CPF account when the budget is in surplus.

About 90% of Singaporean households are also houseowners, as a result of affordable public housing scheme by HDB. Housing grants have been increased to ensure that middle- and lower-income couples can afford their first homes.

Another area where the Government takes a keen interest is healthcare. The Singapore Government introduced a national medical savings scheme in the 1980s which helps individuals put aside part of their income to meet their future personal or immediate family's healthcare needs. Keeping up with Singapore's changing demographic needs, the Government introduced "Medishield Life" in 2015, a universal health plan that can better cater to an ageing population. In addition, the Pioneer Generation Package (PGP) was alsointroduced in the same yearto honour the first generation of Singaporeans post-independence.

Lastly, the Workfare scheme jointly introduced by several government agencies promotes constant up-skilling through

[1]http://www.singaporebudget.gov.sg/budget_2015/pe.aspx

supplementing of incomes and retirement savings of older workers and providing funding support for their training. This is an essential pillar of Singapore's social security landscape.

Redefining Public Engagements

As a country matures and its citizens become more educated, it is important to constantly engage the citizens through different avenues to ensure a sense of joint-ownership of the country. At a nation-wide level, Our Singapore Conversation[1] (OSC) was initiated in 2012 with the aim to engage Singaporeans on their desired future for the nation and to establish a broad consensus on the key issues that should be addressed.

The design of the OSC dialogues was inclusive and multi-sectoral. In addition to dialogues organised by the OSC Committee and its Secretariat, the broader community took initiative to organise ground-up dialogues in a variety of formats, broadening the reach of the OSC effort across Singapore's multiracial and multilingual communities. To involve Singaporeans residing overseas, the Overseas Singaporean Unit facilitated a series of overseas dialogues in cities such as London, Warwick, San Francisco, Beijing and Shanghai.

In parallel, online engagement took place on social media platforms including Facebook[2], the OSC website and YouTube. Various ministries such as Ministry of Communications and Information (MCI), Ministry of Health (MOH), Ministry of National Development (MND) established their own e-engagement platforms to engage the citizens.

4. Conclusion

In light of China's new Yangtze River Economic Belt (YREB)and the One Belt One Road (OBOR) strategic initiatives, Chongqing will face stiff competition from other cities vying to become gateway city to this new and exciting chapter of China's development.

It would be presumptuous for any external party to think that it understands the full complexity of the challenges faced by Chongqing's leaders and to prescribe solutions for them, but we hope that Singapore's experience can be useful as a reference for Chongqing in the new exciting phase of development.

In Singapore's experience, only when the Government connects and adapts to its environment in its entirety, can the nation remain competitive.

Externally, the Government can better predict future trends by engaging and connecting with foreign partners. This can be achieved progressively through a combination of active participation in global events and organisations, then gradually take a more proactive stance by hosting seminars and forums with topics that can resonate with foreign participants.

[1]https://www.reach.gov.sg/

[2]https://www.facebook.com/OurSGConversation

The Boao Forum for Asia (BFA) is an example of an international event with far-reaching impact for both Chinese and foreign cities. Modelled after the World Economic Forum, the BFA is committed to promoting regional economic integration and bringing Asian countries even closer to their development goals. In the same respect, the CMIA entering its 10^{th} year is also a testament to the continued relevance of Chongqing in the new Chinese economic landscape.

Internally, constant engaging and communicating with businesses and communities can help the Government map out Chongqing's 'China Dream'. With a common vision and goal in sight, this can then form the foundations of a mandate that the city as a whole can strive towards to. As the economy becomes more open, it has to become more efficient by allowing free market forces to dictate the distribution of resources.

We are aware that Chongqing has just taken a bold step towards harmonizing the residential status of its rural and urban population and look forward to its successful implementation.

Singapore's experience in these areas may be useful for Chongqing's reference, and we are pleased to share some ideas in this report. The abovementioned recommendations, in our experience, also build upon each other. Success in transforming a government's functions requires a combination of factors that are mutually reinforcing to create the virtuous environment for growth and transformation.

Promoting Talent Cultivation and Facilitating the "One Belt, One Road" Initiative

– Making the City More Attractive to Talent –

Yutaka Kase

Chairman of Sojitz Corporation

1 Preface: improve Chongqing's soft power

This article, in response to the third topic of this symposium – "improve Chongqing's soft power" ,will provide suggestions from the perspective of talent cultivation and human resources development on how to further improve Chongqing's appeal to talents and facilitate the development of the "One Belt, One Road" Initiative

2 Promote the cultivation of talents for the "One Belt, One Road" Initiative: the necessity of international talents

Over the years, Chongqing has been developing rapidly with the focus of automobile, computer manufacturing and IT communication industries. Now Chongqing has grown into one of the China's biggest manufacturing bases, and its economic growth is far above the national average level. I believe that the development and planning of talents for Chongqing's key industries have played an important role in achieving this.

During the promotion of the "One Belt, One Road" strategy, Chongqing needs a great number of talents. On one hand, it needs high-end technical talents to make larger and stronger manufacturing industries. More importantly, it needs international talents who are able to promote the coordinated development of economies and industries in New Silk Road region. Only these international talents have the international perspective and positive thinking, as well as great knowledge base, experience accumulation, interaction and coordination capabilities.

Three elements are essential to become an international talent: 1) self-assertion; 2) specialization; and 3) tolerance. In addition to these, you need to have a good command of the world common language –English, the most basic condition for business communication.

1) Self-assertion refers to the ability to assert your opinions explicitly and to convey them to the people concerned. The "One Belt and One Road" strategy covers more than 40 countries and regions. It is very important to explicitly assert your stance and opinions to these countries and regions concerned, and to use your strong communication skills to make yourself better understood and accepted by them.

2) Specialization refers to those independent, career-oriented talents with strong specialized knowledge. The most important point about the "One Belt, One Road" strategy is the development of new markets to offset China's overproduction

capacity. So I define a career-oriented talent as the specialized talent working in the fields of package of equipment and factory constructions and constructions of infrastructures.

3) Tolerance refers to the understanding of and the respects for foreign cultures, societies and customs, without discrimination against other nationalities, which is very important to those working in a global context.

3 Sojitz's Cultivation of International Talents

Now I am going to illustrate my company's cultivation of international talents with some examples.

Sojitz is a general trading corporation with for a history of more than 100 years and operations on package of equipment and factory constructions, water treatment projects, solar power generation projects, industrial park constructions and operations, and constructions of many other infrastructures.

For example, in 2010, our company and Mitsubishi Heavy Industries Ltd. jointly undertook the construction of a large-scale chemical fertilize factory in the Republic of Tatarstan, Russia. It was the largest international project for the simultaneous production of ammonia, urea and methanol, and its construction work was undertaken by China National Chemical Engineering Group Corporation. Completed earlier this year, it has begun the test running recently. As it is a project jointly carried out by Russia, Japan and China, the process of construction needs the inclusion of more complicated coordination efforts. This requires the site project heads and construction workers to have high skills of interaction and coordination.

To this end, our Company is responsible for internal study, daily operation teaching and engineering onsite teaching in the division of package of equipment and factory constructions, in order to cultivate the talents with the following abilities.

1) Go beyond the realm of a country or a company, and develop a good partnership with the people concerned in the partnering country.

2) Assert not only the interests of the Company and the Country, but also take full into account the interests of the partner and the partner's country as to construct a win-win partnership.

3) Coordinate and lead the experts and companies of different industries, construct a team and lead the team in operation to achieve the target.

4) Have basic technical expertise as well as the knowledge and experience in the fields of laws, taxation, finance, trading, logistics and labor management.

5) Business leaders who can let the new comers study and accumulate the four skills above through onsite work.

Besides, through internal study and other means, my Company enhances the staff's ability to use English-the world common language, and contributes to the cultivation of global talents.

It should be noted that Item 4 skill above can be gradually mastered through accumulative study and work experience, but Item 1-3 and Item 5 skills can be gradually mastered only by putting these talents with aptitudes and potentials undergoing project onsite operations. At the same time, Item 5 skill is an important link for the talent cultivation through teaching of words and deeds, and for the preservation and promotion of operation experience inside the company.

These skills above are the constituents that need our attention throughout the cultivation of talents – "leaders of projects". It is also very important to cultivate these talents working on project feasibility judgment, the risk analysis of the project' related country, structural finance and other auxiliary competent fields.

4 Propose the formulation of Chongqing "One Belt, One Road Talent Cultivation Plan"

As mentioned above, Chongqing has accelerated the industry upgrading over the years and established the key industries of prioritized development like "6 + 1". While appointing the leading enterprise to each industry, Chongqing has established the talent cultivation plan regarding "considerable roles played in talent cultivation and intensification" for these leading enterprises. (Please refer to *The Notice on Chongqing Municipal Mid and Long-term Plan (2011-2020) for the Development of Talent Teams in Key Industries* issued on October 25th, 2011)

Generally a government's talent cultivation plan tends to be very abstract and generative. However, the plan above has combined the talent cultivation strategy of the government and those talent cultivation strategies of the leading enterprises in different industries, which is a very new form of specific talent cultivation that reflect the pragmatism spirit of Chongqing.

To sum up, I suggest that Chongqing should select the key fields and leading enterprises for the promotion of the "One Belt and One Road strategy", and then formulate the *One Belt, One Road Talent Cultivation Plan* in connection with the talent cultivation plans of those selected enterprises.

I also suggest that based on the above plan, Chongqing municipal government and its departments, industry sectors and academic circles should work together to formulate the "international talent cultivation plan" involving the following constituents, and put it into practice as soon as possible.

1) Introduce multilingual cultivation programs

In order for the future progression of the "One Belt, One Road" strategy, international talents need to know more than the world common language –English; they have to study the languages used by the countries within One Belt and One Road so as to understand local cultures and business etiquettes. If the cultivation of the "multilingual" talents can come true, it will no doubt develop more attractive international talents. Throughout the construction of the above-mentioned chemical fertilize factory in the Republic of Tatarstan, these multilingual talents who understands Japanese, English and Russia have played a very important role.

For example, University of Tokyo introduced multilingual courses in 2013. Specifically, about 60 students are selected for Chinese language learning course out of the top 200 students with good performance in English scoring in the college entrance examination,. In doing this, they can fluently speak three languages: Japanese- their mother tongue, English and Chinese, becoming what we call "tri-lingual talents". Given the increasingly important role of China in the world, the learning of Chinese besides English aims at cultivating talents who can balance the relationship between Western countries and China

The final stage of the program is to have a three-week study in Nanjing University. While improving their Chinese proficiency, students can have a better understanding of the Chinese society through exchanges with the Chinese teachers and students and build a platform of interpersonal friendship.

During the study, students may make trustworthy foreign friends, build an interpersonal friendship and further development for the quality of "tolerance" that is essential to an international talent. It is believed that such courses can help to develop more talents who will contribute to the Sino-Japan friendship in the future. Chongqing may also start similar multilingual programs among college students and young corporate staff.

In addition, while carrying out multilingual programs, Chongqing may make use of those foreign students studying here.

In 2014, Chongqing received 6,127 foreign students from 134 countries and regions. In the multilingual programs, students of foreign languages can periodically be given the opportunities to exchange with those foreign students with foreign language as their mother tongue. In doing this, students can not only improve their language skills, but also have greater understanding of the country where the language is spoken. Besides, they are also given the platform for the development of personal friendship.

2) Flexible Use of Intern System

Likewise, I suggest establishing the intern system – or rather, a system that enables students to intern in these Chinese and foreign enterprises involved in oversea constructions of factories and infrastructures.

Over the years, Japan has gradually popularized the enterprise intern system. The system aims to urge students to intern in the enterprises of their potential profession, so that they have a better understanding of the enterprises and the industries. If the system is incorporated into Chongqing's international talent cultivation plan, students may know what expertise and experience are required in the pursuit of global career. In that case, the process of the cultivation can be accelerated.

In addition, if an enterprise can work out the programs about onsite interning in package of equipment and factory constructions and constructions of other infrastructures in the third-party country, greater benefits will be obtained.

3) Carry out Early Field Training on Project Site

For these talents who have completed the international talent cultivation plan, it is very important to transfer them to the project site where they can do onsite work and accumulate experience.

Enterprises should also develop a system which young and promising staff can go abroad for business, study and work, and undertake oversea jobs as early as possible. To this end, Chongqing municipal government may, if necessary, consider incentive policies of providing financial aids to these enterprises.

Youth means the flexible and diverging thinking. At this moment, if the youth have more opportunities to interact with foreign people and culture, learn necessary expertise while working and accumulating experience on the project site, I think the process of international talent cultivation that involves "self-assertion", "tolerance" and "specialization" can be accelerated.

Talents with enthusiasm about work and the ability to learn will be selected out of those foreign students, college students or youth corporate staff. With the joint efforts of the government, industry sectors and academic circles, the "international talent cultivation plan" involving the contents above is expected to be formulated and implemented as early as possible.

5 Proposal on How to Improve Chongqing City's Attraction

The facilitation of the "One Belt, One Road" Initiative needs the cultivation of excellent talents, and partly needs an increase in the attraction of Chongqing city to external elites and talents who can serve for Chongqing's development in a long-term and stable manner. To this end, I think it is necessary to improve Chongqing city's attraction. The specific contents of the proposal are listed as below:

1) Make Chongqing into an Integrated City Jointly Fuelled by the Government, Industries and the Academic Circles

In order to make excellent talents to have the continued innovation in work and the ever-improved skills in career development, it is necessary to build Chongqing into an integrated city jointly fuelled by the government, industries and the academic circles. Specifically, colleges and other schools of higher learning, research institutes including corporate R&D centers, and these enterprise clusters with state-of-the-art technologies and management skills can cooperate with each other for joint development.

2) Promote the Development of Strategically Emerging Industries of Chongqing

Chongqing has become a national large-scale manufacturing base for IT and communication industries, with focus on automobile manufacturing and computer production. At the same time, Chongqing also defines in the 12th Five-Year Plan the emerging industries to "made bigger and stronger" communication device industry cluster, electronic circuit industry cluster, energy saving/new energy vehicle, environmental protection equipment, rail traffic, bio-medical care and other emerging industries in the future. Moreover, Chongqing also promulgates and implements a series of polices for the better development of robot industry.

While fully making use of the advantages of the conventional manufacturing base, Chongqing is expected to promote the development of strategic emerging industries with a more long-term perspective, for example, the development of the strategic emerging industries regarding the problem of aging populations faced by China and other world countries.

In Japan, the robot PEPPER developed by SOFTBANK can have a conversation with human beings, and it is sold at a high price of 200,000 yen. Up to date, PEPPER has been accepted as a member of ordinary Japan families with one thousand production each month, yet sold out soon.

The aging population is not only China's problem, but a problem many countries throughout the world are facing. Family robots like nursing robot assume great business opportunities and growth potential. If the development of the family robots in Chongqing can serve as a solution to each country, Chongqing's global reputation will be greatly increased.

Hopefully, Chongqing will target the active development in 10 years and 20 years, promote the development of strategic emerging industries, invite oversea enterprises and recruit oversea talents, improve the added value of the industries, upgrade the industry structure and continuously increase the attraction of Chongqing city.

3) Build the City of Glamour by Starting with Talent Cultivation

Over the years, Chongqing has always aimed at building a city of livability and glamour. Happily we see the green trees on the two sides of the streets, the gradually improved mono-rail trams and other urban rails, and the greatly ameliorated atmospheric environment.

One of the founders of Toyota has ever said: "What matters most to the manufacturing industry is the talent cultivation". In the context of Chongqing, this line can be interpreted like this: "Talent cultivation is the most important to the urban

construction". In the urban construction, the development of infrastructures and other hardware is vitally important. The improvement of the city's glamour lies in the greater glamour of local citizens, that is, the greater soft power of the city.

By formulating the "One Belt, One Road" talent cultivation plan and accelerating the cultivation of international talents, Chongqing will grow into a more open and livable city and become the largest converging place of excellent talents.

6 Closing Words

By starting with the Yu-Xin-Ou (Chongqing – Xinjiang - Europe) railway newly opened in 2011, Chongqing operates the cargo transport rail lines to the countries in Middle Asia like Kazakhstan, Kyrgyzstan and Uzbekistan on different occasions this June. As an international logistics hub under China's "One Belt, One Road" strategy, Chongqing experiences a continuous increase in its importance. Meanwhile, Chongqing is one of internationally known large-scale manufacturing bases for automobile, steel and IT/communication industries. As the core city in the western China, Chongqing has extremely great advantages in three aspects: logistics, manufacturing and location. The One Belt, One Road strategy is a "westward strategy". In the process of advancing the strategy, Chongqing is now shaping its absolute advantages.

With the further application of the advantages above, Chongqing is able to actively develop talents necessary for the One Belt, One Road strategy and to continually improve the glamour of the city. In doing this, Chongqing is bound to become a city with extreme glamour to global excellent talents. Finally, I sincerely hope that our company's proposal will be helpful to the development of Chongqing.

The Role of Banks in Realizing the "One Belt and One Road" Initiative and the Development of Capital Markets

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1 Introduction

- The "One Belt and One Road" Initiative (hereinafter “the Initiative”) launched by China is a strategy of openness, inclusion and cooperation to create a vast economic corridor connecting inland China, other areas of Asia, Europe and Africa by land and sea to achieve the high economic growth of China and countries along the corridor through exchanges in culture, tourism and business; and connectivity in transportation/logistics and in energy and power distribution systems.
- The creation of the corridor is expected to integrate more than 60 countries into a single economic zone. The diversity they will bring will be a major driver of trade, investment and economic growth within the zone. For this to be realized, connectivity between member countries is essential. In particular, the creation of a seamless network of infrastructure, including transportation/logistics, energy and communications, is crucial.
- Chongqing can play a significant role in realizing the Initiative. Located in inland China, the starting point of the Initiative, Chongqing it is the largest commercial and industrial municipality in Southwest China with a double-digit economic growth rate since 1997. Despite its inland location, it was quick to open its door to the outside and have been implementing initiatives to internationalize itself, including aggressively promoting foreign investment.
- This paper describes the role Chongqing should play toward the realization of connectivity, the key element in creating the economic zone, from the perspective of Subtopic 3, "Financing: Build a diversified and efficient financing service system,” including what can be learned from Japan's experience, the expertise and knowhow of Japanese banks, and specific financial services.

2 Creation of a funding framework for the realization of the Initiative

- As mentioned above, the establishment of sufficient connectivity between countries along the corridor by developing an infrastructure network is essential for the realization of the Initiative. Beijing already announced last November the establishment of a USD 40 billion fund to financially support the Initiative, while an agreement was reached this May on the launching of Asia Infrastructure Investment Bank (AIIB) with authorized capital of USD 100 billion.
- These measures are expected to help address infrastructure funding needs that cannot be met by the World Bank, the Asian Development Bank (ADB) and other development banks, but ADB estimates that USD 800 billion annually over the

next 10 years is required in Asia alone. The huge amount of funds required cannot be financed by the infrastructure-building countries, nor be covered through official development assistance from advanced economies, or official support by AIIB and other multilateral development banks. The key is to involve the private sector in specific projects and make full use of the sector's vitality and funds.

- An effective strategy to leverage the private sector's capabilities in infrastructure projects is the use of public-private partnership (PPP) / private finance initiative (PFI). (The PFI is a way of creating PPPs by funding public infrastructure projects with private capital.) In Japan, PPPs/PFIs have been promoted following the enactment of the Act on Promotion of Private Finance Initiative to improve administrative efficiency and maintain the soundness of public finance. In 2013, the Private Finance Initiative Promotion Corporation of Japan, a joint public-private fund, was established for the purpose of providing risk money to PFI projects.
- Against this backdrop, the number of PPP/PFI projects has been growing steadily in Japan, and Japanese firms that have gained expertise and knowhow on PPP/PFI are now actively seeking opportunities to invest in overseas projects in areas such as railways and power stations. In China as well, the government is enhancing regulations on PPP/PFI. Chongqing, which has been actively opening itself up to the outside and supporting local industries, can play an effective part by establishing a fund to support PPP/PFI projects and, as a medium-term effort, encouraging local businesses to participate in infrastructure projects related to the Initiative.
- However, infrastructure projects entail risks as they are large-scale, long-term undertakings. Risks associated with projects in emerging countries, as envisioned in the Initiative, can intensify due to factors such as underdeveloped legal systems and volatility in industrial policies. Consequently, there is a limit to what the private sector alone can do to finance infrastructure projects, and measures to encourage public-private collaboration, such as guarantees from public financial institutions, should be considered.
- In Japan, the risk-taking functions of public financial institutions such as the Japan Bank for International Cooperation (JBIC), Nippon Export and Investment Insurance and the Japan International Cooperation Agency are being enhanced. In addition, support packages combining these public financial institutions' loans, guarantees, and trade insurance are being developed for Japanese businesses and financial institutions to encourage them to participate in PPP infrastructure projects in developing countries. China as well is considering measures to reform policy banks such as the China Development Bank and the Export-Import Bank of China in order to strengthen their commitment to government projects. China should also consider developing a framework for collaboration between public and private financial institutions, including local financial institutions, in infrastructure projects with appropriate risk-sharing.

3 Greater sophistication and internationalization of financial services required of banks

- In a PFI infrastructure project, project sponsors establish a project company in the form of a special purpose company (SPC) which generally raises funds on a non-recourse basis, where the repayment of funds is dependant exclusively on the internally generated cashflows and specific assets of the project. This type of project financing technique is referred to as project finance.
- Project finance is originated basically by banks and a high level of knowhow, including a broad knowledge of laws and skills to properly assess risks, in developing the transaction structure is required. This has limited the role of the lead arranger to certain major financial institutions, particularly those in Europe and the U.S. with a global reach. In recent years,

however, financial institutions in Southeast Asia have been actively seeking to gain expertise and knowhow on project finance by participating in local infrastructure projects.

- When infrastructure projects are implemented under the Initiative, there will be increasing opportunities for companies and banks in the countries along the corridor to participate in overseas projects and provide financing, respectively. Chongqing's local banks as well will need to gain expertise and knowhow by actively participating as lenders in project finance transactions, and enhance their capability to provide more sophisticated and international financial services, such as foreign currency funding to finance projects in foreign countries.
- We, the SMFG group, as a global financial services group, has been participating and taking a leading role in many large-scale project finance deals in Japan and overseas through a group member, Sumitomo Mitsui Banking Corporation (SMBC), by fully leveraging our vast office and affiliate network and the knowhow accumulated at each specialized department. In 2014, SMBC was awarded “Global Bank of the Year” for the third time by the publication Project Finance International, a testament to the international recognition of the level of our services. We are confident of our capability to make significant contributions to the Initiative’s infrastructure projects.
- If, in addition to sophisticated financing such as project finance, trade and financial transactions between countries along the corridor expand through the enhanced connectivity between them, local banks in these countries will be required to further enhance their basic financial services such as cross-border remittance.
- The SMFG group is a good example in this regard. We increased our trade loans and foreign exchange services amid the liberalization of trade that took place in Japan from the 1950s to 1960s, and aggressively expanded our overseas operations and boosted loans at local SMBC branches as Japanese companies entered overseas markets on a full scale basis in the 1970s following the relaxation of outward foreign direct investment. Further, we aggressively participated in project finance deals as demand for infrastructure development grew overseas, and expanded foreign securities transactions as foreign exchange controls were liberalized. In this way, we have been steadily enhancing the sophistication of and fine tuning our services to meet the changing needs of our clients.
- As seen from the above, the financial liberalization in Japan was implemented in stages over several decades, and Japanese banks responded accordingly by provided more sophisticated and international services. However, financial institutions in countries along the corridor are very likely to be required to offer highly specialized global services in a much shorter time.
- If local banks are to play a leading financial role in the Initiative’s infrastructure projects and fully meet the diversifying needs of clients as transactions between countries along the corridor grow, in addition to growing organically, they should consider forming business alliances with foreign financial institutions with advanced expertise in areas where they are weak.

4 More diversified investors in infrastructure projects and promotion of cross-border transactions

- Funds from a diverse group of global institutional investors, in addition to loans centered on banks as described above, are necessary to meet the huge demand for infrastructure projects to realize the Initiative.
- Fund providers in a typical infrastructure project are government financial institutions and private financial institutions, providers of senior loans; investment banks, main providers of mezzanine finance such as subordinated loans; and infrastructure companies and sovereign wealth, pension and infrastructure funds, providers of the rest of required financing in

the form of equity.

- Of such equity investors, large-scale institutional investors such as pension funds with ample funds and an in-house investment team often invest directly in the project company. In the case, of investors without an in-house investment team, they can engage fund managers to make investment decisions, or if their funds are relatively small, they usually invest through infrastructure funds to benefit from portfolio diversification. Establishing infrastructure funds is an effective way to diversify the investor base of infrastructure projects and attract cross-border funds.
- We, the SMFG group, have been proactively establishing infrastructure funds. In 2013, SMBC in collaboration with Kotak Mahindra Group, India's major private-sector banking group and a business alliance partner of SMBC; Brookfield Asset Management Inc., a major Canadian asset management company; and JBIC established an infrastructure fund focused on Indian, where high demand for infrastructure development is expected as its economy continues to grow, to provide investment opportunities to institutional investors.
- Many infrastructure funds are not listed on exchanges so that their prices will be less susceptible to market movements, but some investors are reluctant to invest in infrastructure funds due to their lack of liquidity and transparency. Thus, a market for trading infrastructure funds should be created in order to expand the investor base and efficiently attract additional funds on a global scale. Infrastructure funds of several tens of billions of USD are already listed on exchanges in Australia, Toronto and Singapore, while South Korea and Thailand are also readying their exchanges to list such funds.
- This past April, Tokyo Stock Exchange opened a market for trading infrastructure funds. The creation and development of infrastructure fund market can lead to the expansion of transaction channels for global players engaged in infrastructure fund-related business and institutional investors, as well as improvement the access to investment opportunities. Therefore, China should also create and develop the market in order to realize the Initiative. Chongqing, which is developing into an international city, should play a leading role in its development as part of its commercial and industrial policy.
- Issuing of project bonds by project sponsors to investors, such as pension funds, is also becoming an importance tool for channelling funds to infrastructure projects, and their issuance is increasing in the U.K and U.S. A member of our SMFG group, SMBC Nikko Securities, has been strengthening its capability to originate and distribute project bonds.
- Currently in Asia, project bonds are issued only in a few countries such as Malaysia, but Asian Bond Markets Initiative has been launched by ASEAN+3 (China, South Korea and Japan) to develop efficient and liquid bond markets in Asia. In step with this initiative, China should also develop a project bond market to expand the investor base.

5 Conclusion

- Since establishing our first operation in China in 1982, we, the SMFG group, spearheaded by SMBC, has been steadily expanding our office network and delivering a variety of financial services to companies in China. Against this backdrop, we recognized the importance of Chongqing in view of its noticeable rapid economic development, and opened the first branch in 2012, becoming the only Japanese bank to do so, which we leveraged to deliver financial products and services to companies operating in the area. We will continue to support the business expansion of companies in Chongqing and endeavour to financially support Chongqing to play a leading role in the realization of the Initiative by fully leveraging our competitive edge as a Japanese bank and as a global financial group with high value-added products and services.

For Smooth Implementation of "One Belt, One Road" Strategy

– with risk management perspectives –

Shuzo Sumi

Chairman of the Board of Tokio Marine Holdings, Inc.

Introduction

President Xi announced the idea of "One Belt, One Road" in 2013 to develop a massive economic zone in Eurasian and African continents. The idea consists of two elements; the land-based "Silk Road Economic Belt" (One Belt) and the oceangoing "Maritime Silk Road" (One Road). While this strategy holds the possibility to be a regional economic growth driver, it is also supposed to face various risks.

This thesis discusses how to manage those risks in implementing "One Belt, One Road" to lead the project to the success particularly by addressing the importance of gathering and analyzing risk data involved in "One Belt, One Road" to clarify what risks each country and region should focus on. Thus, in this thesis, the risks and risk management in general are reviewed, and the risks in "One Belt, One Road" are examined, and then a specific risk management policy is to be concluded.

1 What is risk management?

"Risk" in this thesis means "effect of uncertainty on objectives[1]" and uncertainty which can have either positive or negative effect. In other words, risks include not only pure risks, which has negative effect such as natural disasters or volcano explosions, but also strategic risks, which have either positive or negative effect such as exchange-rate fluctuation and price changes of raw materials.

Risk used to mean pure risks only. However, since ISO31000 (Risk management - Principles and guidelines) was issued in November 2009, risks of the both kinds described above have come to be more considered. (Risks in "One Belt, One Road" are discussed later in Section 2.)

These process to figure out, evaluate, and control such risks is called "risk management[2]." How organizations

[1] In the definition of a risk in ISO31000, the followings are also described as remarks; (1) "An effect is a deviation from the expected – positive and/or negative," (2) "Objectives can have different aspects (such as financial, health and safety, and environmental goals) and can apply at different levels (such as strategic, organization-wide, project, product, and process)," (3) "Uncertainty is a state, even partial, of deficiency of information related to, understanding or knowledge of an event, its consequence, or likelihood." (4) "Risk is often expressed in terms of a combination of the consequences of an event (including changes in circumstances) and the associated likelihood of occurrence.

[2] In ISO 31000, risk management is defined as "coordinated activities to direct and control an organization with regard to risk."

(governments and corporations) should practice risk management? For effective risk management, it is necessary to comprehensively find and understand the risks that may exist, and identify the characteristics of those risks. Then, it is also necessary to develop measures to treat each risk and build a structure to continuously deal with those risks. Table 1 shows the process of the risk management.

In risk management of "One Belt, One Road" strategy, (1) the risk management structure to be developed in Table 1 varies by organization (governments and corporations), so (2) identifying risks and (3) evaluating risks are discussed in this thesis.

Table 1 General Process of Risk Management

No	Phase	Description
1	Development of a risk management structure	Develop a risk management structure (structure and operation). Define the responsibility of the leader of the organization. Assign a responsible department (risk owner) to each risk. The structure should be built in the way the risk management activities will be continually improved (PDCA cycle).
2	Risk identification (risk assessment)	Comprehensively identify risks. Not only pure risks but also various kinds of risks should be broadly investigated.
3	Risk evaluation and selection of risks to treat	Gather data regarding the risks identified and evaluate each of them by particularly quantifying frequency of occurrence and effect. Then, select risks to treat by country and region.
4	Risk treatment measures	Develop detailed measures for each of the risks selected above. Invest resources particularly for critical risks.
5	Continual review and monitoring	Periodically check and control the risks selected above. Continual control on those risks is necessary.

Repeat No.1~5 (Source: Written by author)

2 Risk in One Belt, One Road

(1) Risk Identification

More than 60 countries and regions are considered to be involved in One Belt, One Road strategy with various kinds of risk. Since unlimited variety of risk exists there, we only show some examples of those risks in this thesis. Examples of risks in Silk Road Economic Belt are procurement and price increase risk, earthquake and geological risk, contract-out and expropriation risk, river flooding risk, fire and explosion risk during test and actual operations, and soil contamination and environment pollution risk. Examples in Maritime Silk Road are climate and tsunami risk, piracy risk, port facility shutdown risk, and stranding, wreck, and rollover accident risk. Additionally, recruiting and labor control risk, project management risk (such as project delay), government policy change risk, exchange fluctuations risk, and liability risk are examples for both Silk Road Economic Belt and Maritime Silk Road.

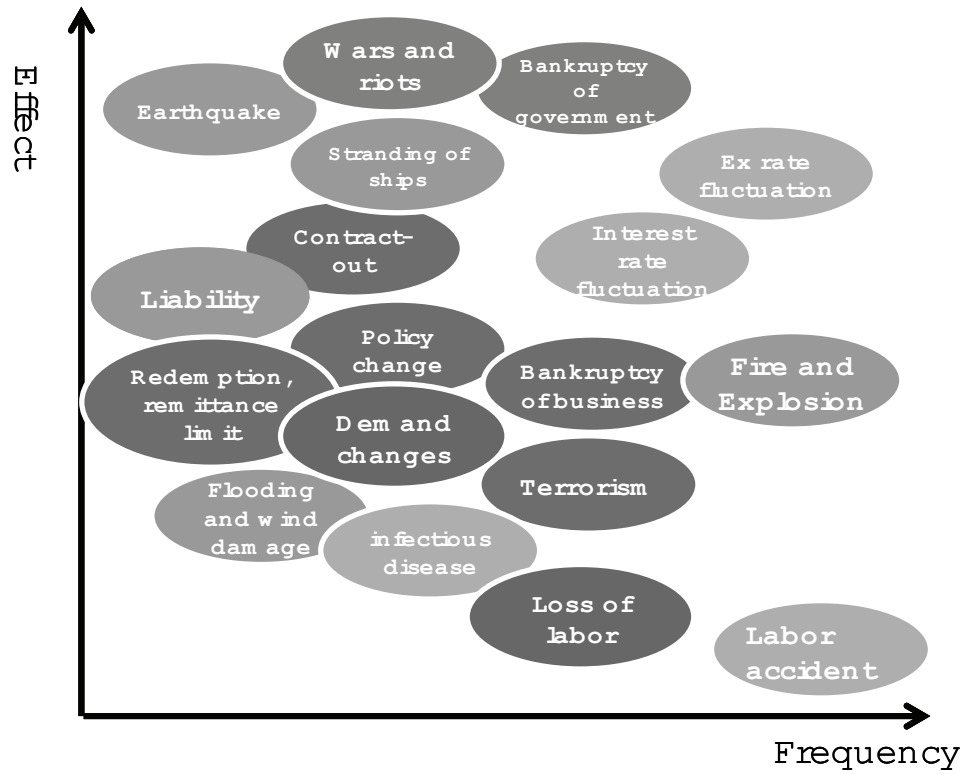
There are many other ways to categorize those risks, too. As described above, categorizing by region (risk in Silk Road Economic Belt, Maritime Silk Road, and the both) is one, but we can also categorize risk chronologically; risk in the phase of investment in infrastructure or the phase of actual operation).

Whatever way is adopted for categorization, what is important is to identify all the risks and evaluate them to select the most critical risk. The risk to be focused differ according to the countries and regions involved, and also according to type of business and industry since various industries and corporations are involved in One Belt, One Road strategy. Examples are; constructors and road-related business, railroad, plant, communication infrastructure, energy infrastructure (pipelines of crude oil and natural gas), logistics and transportation business such as trucking and shipping and travel business. Business opportunities of those businesses are expected to grow but each of those businesses will face with different kinds of risks.

(2) Evaluation of Risks

Those risks are evaluated by (1) frequency of risk emergence and (2) level of impact (such as economical loss, reputation of the business and corporation). In addition, (3) risk control state (measures that the organization is currently taking) may be considered to evaluate the risks. Figure 1 shows an example of risk evaluation (risk map) in Country X.

Figure 1 Example of Risk Evaluation (Risk Map) in Country X



For appropriate evaluation of those risks, quantitative data gathering and analysis are necessary. What is needed is not risk evaluation by feeling and experience but risk evaluation based on data analysis. Not all data can be quantified, but it must be done as much as possible for the effective risk management.

The following is the risk data that the risk evaluation above is derived from.

<Earthquake Risk>

The worldwide earthquake risk is visualized in Figure 2, which Tokio Marine Group compiled from public data. Silk

Road Economic Belt is also added to the figure to show that the earthquake risk along with the Belt is high, particularly in areas from Central Asia to Iran and Turkey. This is the probability of earthquakes with arbitrary magnitude, and the more precise damage forecast must be done with further detailed survey since actual damages depend on both building and foundation features. Thus with frequency and forecasted damages, the earthquake risk of each country and region can be quantified.

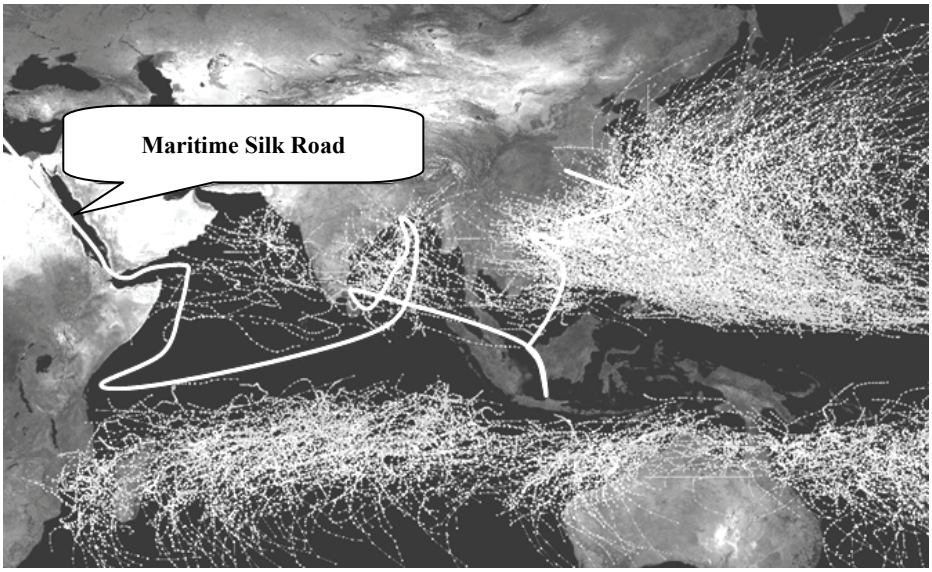
Figure 2　Probability of Earthquake Occurrence

The closer to red the color is, the higher the frequency of earthquake is.
(Source: Database of Tokio Marine & Nichido Risk Consulting Co., Ltd.)

<Typhoon Risk>

Figure 3 shows the tracks of the typhoons (monsoons and cyclones) from 1985 to 2005 and Maritime Silk Road is added to the figure. It shows that the typhoon risk near China, Philippines and Vietnam is very high. There are some typhoons around both sides of the Indian subcontinent, but there is not any remarkable risk in other regions. In addition to such frequencies, the typhoon risk can be evaluated by quantifying the power level of typhoon (atmospheric pressure) and past records of damages.

Figure 3　The Tracks of Typhoons 1985 – 2005

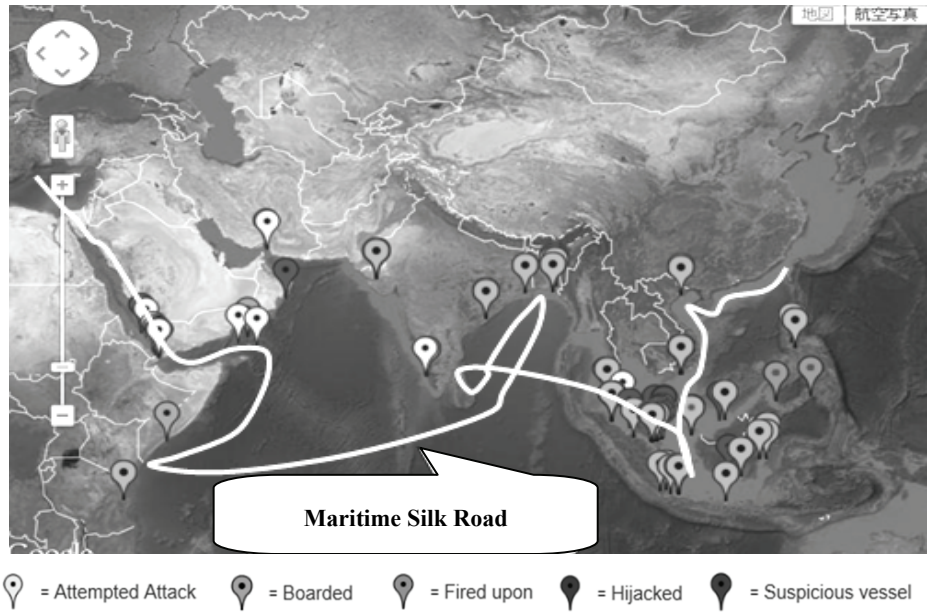


(Source: WikiProject Tropical cyclones/Track)

<Piracy Risk>

Figure 4 shows the locations of piracy incidents in 2014 with Maritime Silk Road. It shows that most piracy incidents occurred in certain areas; Straits of Malacca, the chokepoint of the ocean route in Southeast Asia, the offshore of Chittagong in Bangladesh, and Bab el Mandeb (the offshore of Gulf of Aden), where ships have to pass when they go through Suez Canal. It is also possible to visualize piracy risk along Maritime Silk Road (human damage, economic damage, reputation or trust damage, etc.) by quantifying damages by piracy.

Figure 4　Places of Piracy Occurred



(Source: IMB Piracy & Armed Robbery Map 2014)

3 Treatment of each risk

By gathering and analyzing risk data, the most critical risk in each country or region will be clear. Then we should allocate enough resources for treatment of those risks.

First, we establish a policy to treat each risk, and then we should develop a detailed strategy for that. The policy means basic rules to treat risk, and the strategy means more specific measures such as documentation, facility investment, and contract.

The risk management policy is basically (1) lowering the risk (deletion of risk, lowering probability, and lowering effect), (2) sharing risk with partners, (3) retain residual risk, and (4) avoiding risk.

Table 2 Treatment of Risk

Category		Description
Lowering	**Deletion**	Remove the risk source (ex. set up computer systems not to save personal information in order to prevent information leakage).
	Probability	Lower the probability of facing the risks (ex. build a plant in an area with low probability of earthquake).
	Effect	Lower the effect of incidents (ex. implement initial firefighting equipment).
Sharing		Share the risk with another party by contracts and risk financing (ex. insurance).
Retention		Retain the risks based on informed decision (mainly minor risks).
Avoidance		Decide not to start or continue activities that can be a source of risk (ex. will not expand business to disorderly areas).

(Source: Written by the author. In general, strategic risks, which has both negative and positive impacts are also included, but not discussed in this thesis.

For each risk, more than one treatment from the table above are to be combined and implemented rather than select just one. For example, for earthquake risk management in Silk Road Economic Belt, where earthquake risk is significantly high, building a plant after evaluating probability of earthquake and the foundation is lowering the probability of the occurrence at that location, and establishment of the initial action plan for earthquakes and developing a business continuity management (BCM) structure are lowering the effect. In addition to those lowering actions, risk can be shared by buying earthquake insurance from private insurers. However, even if risk is lowered or shared, disruptions in operation will be caused once an earthquake occurs. This is another risk for corporations to consider whether it should be retained or not.

Thus, for the most critical risks of certain types or structures of business in certain countries and regions, an appropriate policy and strategy need to be developed.

Conclusion

“One Belt, One Road” is one of the largest projects in history, and the larger the project is, the more diverse risks are involved, which make it difficult to figure out the characteristics of risk such as frequency and effect. Therefore, appropriate risk management is necessary to smoothly promote “One Belt, One Road” strategy. The first phase of such risk management is to gather and analyze risk data regarding the strategy, which make it possible to evaluate each risk and identify which risk to be focus on.

Reinforcing Chongqing's regional advantages and hub functions to expand connectivity

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1 Introduction

The grand initiatives of the Silk Road Economic Belt and the 21st century Maritime Silk Road, collectively knownas One Belt, One Road, are widelyviewed as a bold vision for creating a geo-economic powerhouse for the "Belt and Road" region and the wider world.Sprouting from the Silk Road heritage and addressingthe current major economic development needs, this initiative focuses on connectivity and cooperation among countries, primarily in Eurasia. About 60 countries and regions have taken positive actions to embrace the initiative[1] so far. With strong policy support and general enthusiasm for infrastructure investment, leading cities and areas in the "Belt and Road" regions in China are now at the forefront of construction of full-scale physical and virtual connections, such as railways, power grids, and information infrastructure networks; theaim here is to drive early yields for the community and nurture an industrial base and common market of opportunity.

According to the latest statistics from the Chinese Ministry of Commerce, trade and investment have been stronglypromoted in the "Belt and Road" region. In H1 2015,China's trade volume to the "Belt and Road" countries reached $485.37 billion, accounting for 25.8 percent of all of China's international trade. Chinese companies directly invest in 48 economies alongside the "Belt and Road", with non-financial ODI totaled $7.05 billion. Chinese enterprises contracted for 1,401 projects in 60 countries alongside the "belt and road", and the newly signed contracts volume reached US$ 37.55 billion. Foreign direct investment to China from Russia, Mongolia and Central Asian countries has doubled and that from central and eastern Europe, west Asia and North Africa increased 400% in Q1[2]. This clearly indicates that China is capable of an increased productivity output to the "Belt and Road" economies. In return, they also see an immense need to develop cooperation in trade and investment with China[3].

The One Belt, One Road initiative covers coordination, integration and connectivity in public policy, infrastructure, trade

[1]Foreign Minister Wang Yi's speech at China Development Forum in 2015,*《构建以合作共赢为核心的新型国际关系》*, http://new.caijing.com.cn/economy/20150323/3846290.shtml

[2]MOFCOM spokesperson Shen Danyang's remarks at regular press conference, http://www.ce.cn/xwzx/gnsz/gdxw/201505/05/t20150505_5283108.shtml

[3] *《"一带一路"促进中欧经贸关系发展》*,http://www.yicai.com/news/2015/06/4638691.html

and investment, finance, and human interaction among related countries and regions. Among these objectives, connectivity is the most prioritized, along with infrastructure and investment. This may be the only element that permeates all aspects of economic interaction.

Chongqing in southwestern China, an important pivot for developing and opening up the western region, enjoys a strategically advantageous geographical location and functions as a hub to connect regional economies, further extending to its counterparts along Russia's Volga River to reach Western European economic hubs. Chongqing has pioneered and led the city clusters in China's inland regions to build up multi-dimensional connectivity networks which can physically transport goods and travelers with a hugely enhanced capacity and efficiency. Now, One Belt, One Road has positioned Chongqing as an integrated hub at the center of southwest China and the Yangtze Economic Zone, providingthe megacity with landmark opportunities to embrace greaterdevelopment objectives tomerge into a larger and more consolidated market. Thisenhancedposition, however, poses challenges to municipal planners and local industries:

1. Regarding connectivity with surrounding provinces, Chongqingneeds to upgrade, complete and integrate the transportation network of water, land, air, powerinfrastructure and oil and gas pipelines.Furthermore, it will extend its land transportation infrastructure to Guizhou, Yunnan, Guangxi, and Sichuan, constructing an integrated regional transportation hub covering all Southwest provinces. Chongqing continuallyencounters resource constraints in terms of land, investment and talents[1] due to its location in mountainous river valleys. Therefore, the city needs to make intensive efforts to utilize advanced technologies and management, so as to expand capacity and promote efficiency to the utmost extent.

2. In terms of connectivity between urban and rural regions, efficiency, convenience, comfort and safety are the norm for contemporary urban and rural transportation, and these needs are now expected to be met, particularly by the greater numbers of affluent, middle-class inhabitants with increasingly sophisticated travel demands. Nevertheless, pollution caused by scaled-up traffic is also hampering growth and stability. Advanced management and control systems, more environmentally friendly transportation solutions and better commuting services are vital to enhance connectivity between rural and urban regions, as well as human interaction.

3. Connectivity goes beyond physical connections between places and people in a modern urban environment. It also means advanced and in-depth interconnection between the physical system and information system. Connectivity is not only the foundation to spawn technological and economic innovation; it has also become the core concept of the new generation of the information and communications technology industry. It is an opportunity and challenge to establish ICT systems covering One Belt, One Road regions and economies.

This paper discusses solutions and best practices to help meet Chongqing's strategic goals,based on a close investigation of the various aspects of connectivity and ABB's global experience.

[1] *《西南地区综合交通枢纽打开重庆发展新空间》*, 08-26-2014, http://www.chinahighway.com/news/2014/865894.php

2 Case Studies

With the further implementation of the One Belt, One Road initiative and the Yangtze River Delta Economic Zone, it is essential for Chongqing to seize the opportunities within these national initiatives by leveraging its geographic advantage and established industrial base. Doing so will help Chongqing to develop and improve its position by serving China as a whole and strengthening cooperation with surrounding provinces and cities.Transportation, telecommunications and energy have a high priority[1].

Additionally, Chongqing is faced with the opportunity to speed up the transformation and upgrading of its old industrial base and toaccelerate progress along the middle and lower reaches of the Yangtze River through the development of the economic belt. As such, this paper focuses on four cases thatillustratehow Chongqing can enhance connectivity with regard to the energy network, manufacturing, transportation and information infrastructure.

2.1 Connectivity of theenergy network

Situation	As the only municipality in western China and one of the most important citiesin theOne Belt, One Road strategy, Chongqing plays an essential role in regional economic development. However, Chongqing currently faces severe challengesin terms of power shortages and increasedenvironmental pressure. Due to alack of primary energy[2], Chongqing relies on external energy sources to meet its demand – most often in summerwhen demand peaks due to the use of air-conditioning units.In the past decade, Chongqing's dependence on external energysources has risen to nearly 50 percent[3]. Thehigh humidity and low movement of air in Chongqing makes it more challenging to deal with air pollution caused by such areas as industry, transport, and power generation.Furthermore, the city faces the significant task of improving itsenergy infrastructure[4]. Chongqing has made great efforts to address these challenges. The city is developing smart substations to enhance the efficiency and reliability of the electricity network. At the same time, through the energy revolution and One Belt, One Road strategy, China is actively promoting the connectivity of energy, especially non-fossil fuel based, betweenregions and countries[5]. Such national initiativesare ripe with opportunities forChongqing's energy development.
Solution	Changes to the energy network can facilitatethe connectivity of the power grid betweendifferent regions and countrieswhilepromotingthedevelopment of clean energyand the evolution of the grid as a whole. The key here is the construction of a stronger and smarter grid, of which ultra-high voltage (UHV) transmission is a core component.[6]Remote management of smart grids and the integration of renewable energy are also essential to the energy network, as these features will ensure the grid is reliable and sustainable[7]. High-voltage direct current (HVDC) power transmission, a technology pioneered by ABB,is well-suited for

[1]http://news.xinhuanet.com/politics/2015-05/27/c_1115429796.htm

[2]http://www.chinasmartgrid.com.cn/news/20140217/491258.shtml

[3]http://www.cqfz.org.cn/webSite/yjbg/yjbg/html-1714/7737.html

[4]http://www.cqfz.org.cn/webSite/yjbg/yjbg/html-1714/7737.html

[5]http://www.indaa.com.cn/tbdc/201506/t20150629_1608502.html

[6]http://www.chinapower.com.cn/newsarticle/1230/new1230362.asp

[7]http://www.abb.com/cawp/seitp202/689cde1fc799c75cc1257c1500265d6d.aspx

	long distancebulk power transmission because it is efficient, economical, and environmentally-friendly. As such, it is ideal for the transmission of power from energy-rich areas to centers of high power consumption with minimum losses. In early 2015 at the"two sessions" of provincial governments across China, high-voltage power transmission became a hot topic in the government work reports for more than 10 provinces and cities including Chongqing, Sichuan, Xinjiang, and Inner Mongolia, which coincides with the agenda of State Grid Corporate of China(SGCC)[1].
Benefits	HVDC is a key technology to ensure the connectivity of the powernetwork,promoting the optimized distribution of energy resourcesbetweenregions.It couldeffectively alleviatethe power shortage in Chongqing by providingefficient transmission of clean energy from neighboring areas, e.g.Sichuan and Tibet. HVDC also has advantages for the environment as it enables efficient use of renewable energy resources and reduces dependency on fossil fuels.
Case Study	**HVDC in Europe** NordLinkis a key project in connecting the Norwegian and Germanpower gridsfor the first timeby the end of the decade, and has been designated as one of the European Commission's projects of common interest that will help to create an integrated European Union energy market. It will increase energy security in both countries and support the integration of renewable energy into the countries' grids by allowing surplus wind and solar power produced in Germany to be transmitted to Norway, and hydroelectric power to be sentfrom Norway to Germany. The project, being executed by ABB, is Europe's longest HVDC power grid interconnection and is able totransmit 1,400 megawatts (MW) of renewable energy, enough to supply 3.6 million German households.

2.2 Connectivitywithinmanufacturing

Situation	As an establishedindustrial base, the manufacturing industry in Chongqing has been the primary driver of the region's development for decades. In 2014, industrial output by Chongqing's large and mid-sized industrial companies rose 14.6 percent to RMB1.86trillion (US$300billion) – one of the highest growth rates in the nation[2]. Faced withthe challengesofChina's "new normal" and the opportunities withinOne Belt, One Road and theYangtze River Delta Economic Zone, Chongqing is acceleratingitsindustrial transformation to maintainand enhance its competitiveness in the manufacturing industry. Byextending the industrial chain and forming industrial clusters, Chongqing has registered notable achievements inthe processingindustryand has become thelargestproduction basefornotebook computersworldwideand for automobiles in China[3].Based on its strong industrial foundation, the city has also pursueda plan tomakeitself the "robot capital" since 2011[4]. In accordance with the national Made in China 2025 and Internet+strategies, Chongqing plans topromote the integration of information technology and industry, and further develop 10 emerging industries such as chips and LCD panels, robots and smart equipment, and smart and new energy vehicles. As such, it is crucialfor Chongqing to beready forindustrial upgrading, to seize policy opportunities, and to

[1]http://www.indaa.com.cn/xwzx/yw_btxw/201502/t20150213_1589423.html

[2]http://www.gov.cn/xinwen/2015-01/10/content_2802801.htm

[3]http://www.cq.xinhuanet.com/2015-01/14/c_1113984928.htm

[4]http://media.workercn.cn/grrb/2015_03/04/GR0601.htm

	enhance connectivity with other cities in the Yangtze River Delta Economic Zone. In this way, it can better undertake the industrial transfer from the middle or lower reaches of the YangtzeRiver, and drive sustainable development in the whole region.
Solution	Mobile communications technologies, cloud computing, and "big data" analysis arecontributing to the development of the internet for industrial automation. This will boost plant throughput and uptime, enable more flexible production andimproved capacity utilization, and open the door to combining the economies of scale of standard products with customised equipment and devices. Only by taking into account the internet of things, services and people can we provide meaningful integration and enhanceproductivity and efficiency.Industrial robots play an important role in this - especially the intelligent technology that enables remote management and maintenance[1].
Benefits	Theapplication of smart manufacturing technology like industrial robots can substantially increase productivity, raise yields, and improve product quality while reducing costs. This will help China to upgrade and transform its manufacturing industry and enter a new, more efficient and intelligent development stage. Withremote management, robots areable to diagnose their own "health" and operational issues and alert service engineers who can intervene before the robot breaks down. These advances are poised to take industry to the next level of productivity, and transform the way businesses manage their global supply chains[2]. This will support Chongqing'saim to improve in its role asa "robot capital" and developlargerand more closely connected industrial clusters.
Case Study	**Robotics Remote Service** ABB has provided Remote Service-enabled robots to the Packaging and Logistics Center of DeufolBelgië N.V, a global packaging producer based in Belgium. The goal of ABB Robotics Remote Service is to eliminate, as much as possible, any unplanned stoppages by continuously evaluating the performance of ABB robots using a wireless Remote Monitoring System. For example, acustomer realized that one of itsrobots was generating a Collision Supervision alarm. UsingRemote Service, it quickly found that the robot was configured with the settings for a floor-mounted robot, instead of a suspended robot. Throughquick,over-the-phone guidance,ABBsaved the customer hours of production, travel time, troubleshooting and problem correction. Today, ABB has an installed base of 300,000 industrial robots, many of which are already equipped with intelligent technology that enables remote maintenance.

2.3 Connectivity for more efficient and reliable transport

Situation	Chongqing has a unique geographic advantage asit connectsthe east with the west and the north with the south of the country. As such, connectivity achieved through more efficient and reliable transport is essential for Chongqing if it wants toplay the role of strategic fulcrum and central hub in western China. Relying on the "golden watercourse" of the Yangtze River, the Chongqing-Xinjiang-Europe International Logistics Channel and the Chongqing-Kunming-Southeast-Asia International Trade Channel have formed a comprehensive transportation network in which several modes of transport (railway, highway, water, air, and gas pipeline) are linked seamlessly.

[1]http://www.abb.com/cawp/seitp202/6c6df4eb9832f420c1257e2500280056.aspx

[2]http://www.abb.com/cawp/seitp202/85175f3cd1a37487c1257d680072bab0.aspx

	For public urban transportation within Chongqing, railway has become the first choice as it is highcapacity, convenient and environmentally friendly. By 2014, the railway in Chongqing had reached 202 kilometers in length, coveringnine main districts and transporting 1.8 million passengers each day, which is equivalent to the population of Vienna[1]. Chongqing aims to doublethis railway network to 400 kilometers by 2020 so that 60 percent of the urban population will live within 10 minutes' walkof a station[2]. In addition to the traditional metro system, Chongqing has also developed the world's leading straddle-type monorail transportation technology and built the first monorail industrial base in Liangjiang New Area.By the end of 2014, the operational monorail length in Chongqing had reached 44 percent of the 202 km railway in operation. Furthermore, the industrial base has helped to build monorail transportation systems in other countries such as Brazil and South Korea[3]. With the Made in China 2025 strategyemphasizing the rail industry and increased business opportunities brought about by One Belt, One Road, there willbe greater opportunities for Chongqing to develop advanced railway technology. However, the transport sector's energy use is projected to grow by an annual rate of 1.9 percent, which will make this sector the world's primary energy consumer by 2020[4]. Transport infrastructure developers are highly aware that long-term environmental costs must be factored into their economic calculations. As such, building an energy efficient and environmentallyfriendly rail network is as important as the connectivity it offers and will require ongoing investment. From anenergy consumption point of view, the rolling friction resistance of the rubber roller is much higher than that of the steel wheel[5], which leads to higher power consumption in the movement and braking process of the monorail system (which uses rubber rollers[6]) than with the steel wheel system used by the metro[7]. Additionally, the energy cost of the metro system is very highdue to necessary operational systems such as lighting and ventilation[8]. With the scale of its urban rail transport systemincreasing, it is important for Chongqing to developmore energy-efficient operations.
Solution	The energy needed to propel a train accounts for up to 50 percent of the total energy consumption of a rail transportation system[9]. Regenerative braking technologies convert a train's kinetic energy into electricity and return it to the power system.
Benefits	Energy storage and regeneration systems for trains reduce operating costs, overall energy consumption and CO_2 emissions. For example, ABB's ENVILINE™ ERS (Energy Recuperation System) reduces energy costs by returning the braking energy to the power system. It can reduce the total energy consumption of a rail transportation system by 10-30 percent. Upgrades also eliminate noise that disturbs local residents, thus facilitating a more livable urban environment.
Case Study	**Pennsylvania Railways in the US** The Southeastern Pennsylvania Transit Authority (SEPTA) operates the sixth largest public transportation system in the US, serving almost four million people in and around the city of Philadelphia. Eighty percent of SEPTA's annual electricity consumption of 500-million kilowatt hours is used to power the rail network, of which 60 percentgoes towards propelling the trains themselves. However, much of the

[1]http://news.xinhuanet.com/english/business/2014-08/28/c_133591174.htm

[2]http://www.cq.xinhuanet.com/2015-06/18/c_1115658612.htm

[3]http://www.chinahightech.com/html/760/2015/0601/638383531343.html

[4]http://www.pwc.com/en_GX/gx/transportation-logistics/tl2030/infrastructure/pdf/tl2030_v2_transport-infrastructure.pdfP31

[5]http://wenku.baidu.com/view/d3ee44c35fbfc77da269b100.html

[6]http://digitalpaper.stdaily.com/http_www.kjrb.com/kjrb/html/2014-03/13/content_251429.htm?div=-1

[7]http://www.cq.xinhuanet.com/news/2010-12/29/content_21743613.html

[8]http://digitalpaper.stdaily.com/http_www.kjrb.com/kjrb/html/2014-03/13/content_251429.htm?div=-1

[9]http://mobile.163.com/14/1106/02/AAB7KAA5001166V4.html

	energy is wasted because trains must make frequent stops. Capturing and recycling this kinetic energy can reduce SEPTA's overall power consumption by more than 10 percent. SEPTA has used the ENVILINE energy storage system since April 2012, including DC power supply, protection and energy management solutions that can reduce the overall power consumption by as much as 30 percent. Equipped with lithium-ion batteries, the solution recycles braking energy to reduce energy consumption by 10 percent while simultaneously providing frequency regulation services to the local Regional Transmission Organization (RTO). Overall, the system generates annual savings and revenues of up to US$440,000 (RMB 2.7 million).

2.4 Connectivity of information infrastructure

Situation	As a hub city with a large population and a strong, strategic economic position, Chongqing has been searching for other drivers of economic growth based on its current strengths. For example, it is seeking better connectivity with the world's leading IT enterprises and promotingcloud computing, eCommerce, and other emerging industries[1]. Because datacenters are the core infrastructure for emerging technology industries, Chongqing launched aCloud and End Plan[2]by establishing the Liangjiang International Cloud Computing Center in 2010. The city aims to build an industrial scale one-millionserver data center by the end of 2015[3]. In June 2015, the construction of Tencent'sfourthmajor cloud computing center, which could achieve the computing ability of 100,000 servers,began in southwest China.In addition to meeting local cloud computing needs, Chongqing's datacenter industry could further influence the application market of the whole country, the Asia Pacific region, and even the world. Despite the great market potential, the operation of datacenters in Chongqing could face severe challenges with regard to power supply shortages and the high temperature and humidity of the local climate. Today's datacenters typically consume 30 times the amount of power per square meter ofan average office building[4]. Datacenters require high levels of power reliability as digital devices are extremely intolerant to power supply interruptions or fluctuations which can result in data loss with serious consequences. A study shows that a single power outage at a datacenter couldcause an economic loss of up to US$1 million[5]. The need for dry, clean environments and excellent heat dissipation of servers[6]are key issues that will significantlyincrease the maintenance cost of datacenters in Chongqing.
Solution	A power outage in a data center is far more costly than in most manufacturing facilities. High availability, efficiency, and flexibility of the grid connection and distribution system are of the utmost importance to datacenter operations[7]. Moreover, the improvement of day-to-day operations, such as the management of workload and energy consumption, is also a key factor in the safety and reliability of datacenters[8]. Through an integrated management platform, data center operators can manage multiple levels of integration and interoperability among a wide array of components and systems; centralized controls to

[1]http://cqcbepaper.cqnews.net/cqcb/html/2015-06/30/content_1847495.htm

[2]http://cq.people.com.cn/news/201471/201471916556042966.htm

[3]http://cqrbepaper.cqnews.net/cqrb/html/2012-03/23/content_1514854.htm

[4]http://new.abb.com/substations/data-center-electrification

[5]http://new.abb.com/cn/en/smart-technology/smart-grid-and-city/tencent-cloud

[6]http://www.miit.gov.cn/n11293472/n11293832/n12843926/n13917072/15121870.html

[7]http://new.abb.com/substations/data-center-electrification

[8]http://www.lead-central.com/AssetManager/02427e68-6f15-4f3a-9749-d37abf613741/Documents/Data%20Centers/ABB-564-WPO_Data_center-risk.pdf

	automate load shifting and real-time optimization of both facility infrastructure and IT; and two-way distributed generation to balance a data center's energy supply and demand[1]. An excellent Data Center Infrastructure Management (DCIM) system could help datacenter operators to meet the challenge of dynamically managing a flexible network so as to achieve reliability, energy efficiency and maximum utilization of all datacenter assets.
Benefits	By providing visibility, decision-making support and automation technologies on an open platform, proper DCIM solutions can support secure, bi-directional communications with mechanical, electrical and IT systems, and enable operators to"see", from a remote location, system performance and environmental factors that would typically go unnoticed until it is too late[2]. Benefits that encompass several areas of infrastructure and operations could be delivered to help manage datacenter cost, capacity and control.These include system availability and performance; capacity planning and management of power, cooling and space; resource forecasting and energy planning; facility and IT automation; troubleshooting and root cause analysis. These benefits could support Chongqing's aim to build larger scale datacenter clusters.
Case Study	**Datacenter in Manhattan** Telx, a major provider of datacenter colocation services across America, operates 20 datacenters in 13 strategic US markets and serves more than 1,200 customers[3]. Early in 2014, it implementedABB's Decathlon® for Data Centers on the 10th floor of its facility at 32 Avenue of the Americas, New York, to optimize energy consumption and cooling in the new datacenter. This is the only DCIM system that provides controls to automate both workflow and physical infrastructure processes, enabling operators to continuously optimize datacenters to the highest levels of performance. NowTelx is expanding Decathlon for Data Centers to a second phase of the company's operations on the 24th floor of the same building. Through Decathlon® for Data Centers, Telx is capitalizing on the ability to connect with, monitor and automate equipment provided by all types of third-party suppliers so that operators can manage all of their cooling equipment from a single location within the datacenter.The operator can look at all their customers across 20 sites nationwide and compare customer revenue and the amount of power each customer uses from a centralized location. In this way, the operator can understand their profitability through a consolidated system.

3 Conclusion

The essence of connectivity is to provide conditions that allow the different elements of production such as capital, labor, technology, information and service, to interconnect and flow smoothly. General economic principles show that the flow of these different elements between countries and regions will enhance the efficiency of resource allocation.[4]

[1]http://new.abb.com/cpm/decathlon-software/decathlon-datacenters/introducing

[2]http://new.abb.com/cpm/decathlon-software/decathlon-datacenters

[3]http://www.abb.com/cawp/seitp202/abdc0ab97dfdff90c1257da8005657a7.aspx

[4]Peng Gang and Ren Yijia:*《互联互通：经济新常态下的国家战略》*, http://www.rmlt.com.cn/2015/0409/381093.shtml

Connectivity between economies, no matter how large or small, is the key driver for a win-win outcome. This win-win outcome both results from and leads to mutually beneficial and closer links. Isolation from such trends leaves all players unable to benefit from the developing global division of labor, with negative consequences for their own growth.[1]

With the very fruitful visit of Premier Li Keqiang to the European Union (EU)and the establishment of the Asia Infrastructure Investment Bank (AIIB) in late June, One Belt,One Road has becomea common driver of China's various reforms and opening-up schemes, linking the development strategies of European and "Belt and Road" economies. A comprehensive network of railways, roads, air and sea links, pipelines, grids, and information technologycan be envisaged, connecting China to Europe and the wider world.[2] This enhanced intercontinental cooperation will, by definition, promote globalizationand the cost-effectiveness of free distribution of the elements of production.

While China is offering production element output to One Belt, One Road economies, its own city clusters still need large-scale, effective investment and technology upgrading[3]. We are very pleased to see that Chongqing's municipal planners as well as China's top strategists have positioned China and its pivotal city clusters as an integral part of afuture consolidated common market of Eurasia. European companies view it as an opportunity and are keen to participate and make a contribution to Chongqing's bid to become a strong regional economic and transportation hub. This will definitely drive win-win outcomes in the "Belt and Road" region and across the Eurasian landmass in general.

[1]John Ross: *Key strategic significance of One Belt and One Road*, 03-05-2015, http://www.china.org.cn/opinion/2015-03/05/content_34962895_2.htm

[2]*Wang Yiwei: One Belt One Road: Opportunities for Europe-China cooperation*, 05-08-2015, on website of Chongyang Institute of Financial Studies, Renmin Univ., http://rdcy-sf.ruc.edu.cn/displaynews.php?id=12130

[3] *《"一带一路"促进中欧经贸关系发展》*， http://www.yicai.com/news/2015/06/4638691.html

Realizing the Full Potential of the Yuxinou Rail Corridor

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During the APEC meeting, on November 8th 2014, at the 'Dialogue on Strengthening Connectivity Partnerships,' President Xi Jinping made an important speech highlighting the potential for enhanced connectivity to serve as an engine for trade growth and prosperity in Asia and beyond.

President Xi suggested that Asia should develop a basic framework of connectivity based on economic corridors, such as the framework envisioned in China's 'The Belt and Road Initiative', to meet the needs of different countries and including both land and maritime projects. In what follows, an analysis will be provided discussing this important initiative focusing specifically on the opportunities available, and challenges, to Chongqing as a major transportation hub linking China with Europe and Southeast Asia.

Chongqing's Yuxinou Railway Line has a great potential to improve the economic vitality of Chongqing and China as a whole by providing an innovative way for exports to access European markets as well as provide consumers with direct access to a broad selection of high quality imports. This new mode of transportation is a historical breakthrough, providing landlocked, heavily populated western China with access to international markets at greater speeds than ever before. Empirically, we are beginning to see many customers in central and western China switching to rail in order to reduce transit times and avoid additional costs of transferring shipments to coastal ports.

But while Yuxinou gives rise to many opportunities, it is important to also acknowledge that there are challenges for development of this innovative transport mode. Cost, capacity and frequency of departures are all key issues that hinder development.

In the following an overview of the strengths, weaknesses, opportunities and threats to Yuxinou will be offered, followed by recommendations towards ensuring that Yuxinou realizes its full potential:

STRENGTHS

1. Chongqing is the only transportation hub in Western China that integrates water, land and air transport. Located at the Yangtze River there are direct lines to the rest of China.
2. Chongqing is a huge industrial hub in Western China, where companies such as Hewlett-Packard Co., Acer Inc., Foxconn Technology Co., BASFhave production sites. There are 14 automobile companies with production in Chongqing, among others: Chang'an-Ford, SAIC-GM-Wuling, Hyundai, Beijing Automotive, Dongfeng, and Huachen. By the end of

2014, 243 of the world's top 500 companies had operations in Chongqing.

3. In 2014 the automobile producers in Chongqing reached a production of 2.6 million car units, making Chongqing the largest auto production city in China.

4. On the German side, Duisburg is one of the largest inland harbours in the world, linking up to a developed network of dozens of convergence and distribution points, including Rotterdam in the Netherlands, Antwerp in Belgium, Moscow and Cherkessk in Russia, Kutno in Poland, Pardubice in the Czech Republic, and Almaty and Kostanay in Kazakhstan.

5. Chongqing Municipality (accounting for 2.3% of China's population) has the highest economic growth rate in China (10.9% in 2014), exceeding the overall national growth rate by 3.4%.

6. Chongqing's industry is very diversified resulting in diversified imports and exports in/out of Chongqing:

- Exports: Electronics products, auto parts, machinery equipment, toys, food, and textiles.

- Imports: auto parts from Germany, high-end consumer goods, timber, machinery equipment, instruments, chemicals, food and beverages.

In 2014, exports of high-tech products increased by 25% to USD 31 billion. Among these high-tech exports, exports of notebook computers grew by 28% to USD 25.3 billion, accounting for about 40% of Chongqing's total exports.

7. National focus on further reinforcing Chongqing's strategic position as a shipping hub means that the city will, reportedly, invest up to RMB 1.2 trillion in infrastructure construction by 2020.

8. The Yuxinou Railway Line:

- First mover advantage in the area and large client base.
- Yuxinou was responsible for 33% of the total volume of cargo on the Eurasia lines in 2014.
- According to Yuxinou Logistics, who provides logistics services along the railway, freight transported into Chongqing rose by 8.3 percent.
- One-stop customs inspection located in Chongqing.
- High security: the train and its cargo are monitored 24 hours with an electronic lock and GPS.
- Temperature and humidity controlling: specially insulated containers solve the challenge of low-temperatures during the winter. The insulation product can withstand minus 40 degrees Celsius.

WEAKNESSES

1. Domestic competition to Yuxinou is high. Yuxinou faces competition from 7 main competitors in Western China: Rongxinou line: Chengdu-Lodz, Zhengxinou line: Zhengzhou-Hamburg, Sumanou line: Suzhou-Warsaw,

Hanxinou line: Wuhan-Czech/Poland, Xiangou line: Changsha-Duisburg, Yixinou line: Yiwu-Madrid, Harbin-Russia line.

2. Trade imbalances: the EU's trade deficit with China means that the volume of freight going from China to the EU greatly exceeds that going from the EU to China. According to Yuxinou (Chongqing) Logistics, 225 train services carried cargo from Chongqing from 2014 to Aug. 2015, however data indicate that the number of services running from Germanyback to Chongqing are much less than expected. This creates some issues on running regular round-trip train services between Chongqing and Europe.

3. Empty containers going from Europe to China, or being stuck in Europe due to the lack of demand for the railway line's China-bound services, creates logistical challenges and inefficiency.

4. Yuxinou Railway Line:

- The Yuxinou Line changes gauge twice. The first transfer is a change to the Russian broad gauge line on the border between China and Kazakhstan, while the second is a transfer to standard gauge at the Poland-Belarus border.
- The Railway Line lacks a user-friendly IT platform to book cargo and track its enroute whereabouts.
- Lack of a professional company marketing suited for the European market to inform potential European forwarders and customers about the Yuxinou Railway Line and its services.
- Yuxinou Logistics, who handles transport from Europe to China, on the line is unfamiliar with European market, and lacks professional reputation as well as European partners.
- The cultural awareness and language of the current English version of the Railway Line's website is unsuited for the European market and does not convey a professional image of the railway line.

OPPORTUNITIES

1. Continued growth of Chongqing as an economic hub, such as the growing internet trade bringing in large number of warehouses to Chongqing, can lead to increasing demand for Yuxinou's services.
2. Shortened transport times if gauge standards were standardised along the length of the line.
3. More efficient import-export environment if quarantine standards across the countries are unified.
4. New onwards connections: The construction of ten new railway lines have commenced or are due to commence in China.
5. New partners in Europe can increase connections across Europe expanding the customer base and area reached by Yuxinou.
6. Allowing for domestically owned containers on Yuxinou to be transshipped (or alternatively allowing the easy approval of foreign owned containers on the line) will make inter-connectivity to onwards transport more seamless.
7. Transporting on Yuxinou as opposed to seaborne shipping is immune to the challenges of flood and tide of the river ways in Chongqing.

THREATS

1. Quarantine standards of the countries across the railway line vary widely and standards must be harmonised.
2. The current subsidy / allowance provided to customers on the line, may be revoked in the future and risk increasing prices and decreasing demand.
3. Currency fluctuations impacts both transport prices and the prices of the customers' cargo.
4. Domestic connections: The rail net in China surrounding Chongqing is heavily congested which makes the transportation of Yuxinou's cargo onwards from Chongqing a big challenge.
5. The Yuxinou railway line: Temperature control of the containers is prone to power cuts, which is especially a problem when transporting food products.

Based on the above analysis, we have the following suggestions in regards to improving the competitiveness of Yuxinou:

Firstly, Yuxinou needs to improve the ease of transfer of shipments from other regions to Chongqing rail hub. Speed, cost, container equipment availability are all factors that can be improved.

Secondly, less than container load consolidation services is an untapped market with great potential. Yuxinou's advantages of being less expensive than air freight and faster than ocean freight means it is uniquely suited for offering

shippers a relatively low cost, high speed and flexible transport mode. Encouraging logistics providers to establish strategically placed consolidation warehouses and efficient road distribution networks should be a priority for Yuxinou.

Thirdly, Customs clearance is critical to both full container and less than container load consolidations. Many restrictions remain that limit the type of commodities and number of different commodities that can be loaded in one container. These restrictions are not from China but rather come from Customs in countries that Yuxinou passes through during before arriving at destination.

Fourthly, Yuxinou's utility and flexibility could be enhanced if more destinations can be added. Currently Yuxinou services one destination in Western Europe only. If containers can be allowed to unload and deliver to Central Asia and Eastern Europe, Yuxinou can attract more volume and increase frequency. This is also key to supporting 'The Belt and Road Initiative'. By adding these destinations to Yuxinou's coverage, it will greatly enhance it's competitive position in the market as well as contribute greatly to China's trade with these regions.

Finally, the key to realize the potential for a seamless integrated multimodal transport network for Chongqing, much work needs to be done to open up the Chongqing-Kunming-Southeast Asia Railway Line and to integrate existing Yuxinou, Yangtze barge together with road and air transport modes. Spreading access to Yuxinou for Southeast Asian shippers should be a top priotity and opening up a new routing for exports to Southeast Asia and other westbound destinations would provide Chongqing with unique competitive advantage. Key to the success of Chongqing as a hub for such multimodal activities is speed and cost.

Regarding the last two points, we would further suggest that Chongqing government can reach out to key shippers and logistics companies for input on which routings, schedules, destinations would be the most attractive.

Terminal costs, trucking transfer costs between port and rail hubs and airports are critical to enhancing the attractiveness of Chongqing as a multimodal hub that is able to compete with established coastal hubs. The lower the cost, the more volume that will be attracted and further savings realized through economies of scale.

Speed of transfer between modes is also a key to making Chongqing an attractive hub for multimodal transport. Efficiency of terminal operations, sufficient trucking resources and speed and flexibility of customs clearance are all important pieces to the puzzle as well as having world class logistics service providers with experienced teams and IT systems that can manage and seamlessly integrate the multiple pieces needed for multimodal transport.

How can we best support world class logistics service provider's in Chongqing? Two key factors that need attention are:

Chongqing needs a strong competitive and transparent marketplace for terminal handling, warehousing, trucking and customs clearance that encourages efficiency and cost reduction.

Customs clearance and regulations in Chongqing for in-bond transfer should be simplified and flexibility increased in order to reduce unnecessary delay due to inefficient processes.

To summarize

In summary, we believe City Government's drive to improve the competitiveness of Yuxinou and the strengthening of Chongqing as a multimodal hub with 'The Belt and Road Initiative' will have a profound positive impact on the Chongqing's development and livelihood's of it's citizens.

Reinforce ICT-enabled Transformation for the Next Economic Growth Point in Chongqing

Mats H Olsson
Senior Vice President of Ericsson Group
Executive Chairman of Ericsson Asia Pacific

Mr. Mayor, Mr. Chairman, Ladies and Gentlemen,

It is our great pleasure to attend the 10th annual meeting with the theme of “Chongqing in the Strategy of One Belt and One Road and the Yangtze River Economic Belt.”

Our recent participation in a number of forums and conferences such as China Development Forum and Boao Forum for Asia and our broad and long business presence in China have helped us gain useful insight into and comprehension of the philosophy, concept and spirit of China’s Belt and Road initiative.

We have noted that in the action plan of the Belt and Road Initiative, with the title of “Vision and Actions on Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road”, released in March by China's National Development and Reform Commission, Chongqing is mentioned to be built into an important pivot for developing and opening up the western region for the new Silk Road Economic Belt and a new platform for further developing China's "reform and opening up" policy.

Undoubtedly, the initiative will provide Chongqing with tremendous development opportunities.

To address the next growth point in the integration of Chongqing’s economic transformation into the “One Belt and One Road” and “Yangtze River Economic Zone” strategies, we view from our telecom perspective that there is a large need for ICT infrastructures and solutions to enable this transformation, as ICT is increasingly identified as a transformative force, just like the steam engine or electricity before it.

Advanced ICT infrastructure critical to empowering the transformation

To maximize the potential benefits of ICT, one of the suggestions we would like to give is to develop high-quality communications infrastructure that makes ICT as accessible as possible and functionally efficient as well.

We’ve noted that China has announced recently an "Internet Plus" action plan, aiming to integrate the Internet with traditional industries and fuel economic growth. The implementation of the action plan also needs an advanced ICT infrastructure, which comprises affordable communications infrastructure, including access to the Internet, fixed and mobile narrowband and broadband, and other digital connectivity tools.

We are entering a reality in which billions of physical objects are embedded with online intelligence and layer upon layer of digital interactivity. These connections, whether between wearable devices, cars and home-automation systems, or among networked urban infrastructure and sensor-equipped industrial machinery, will serve as enablers for more dynamic products

enhanced with a wealth of new services that improve product performance and achieve new levels of object network efficiency.

So we view that mastering the digital transformation process is likely to be the defining core competency today and tomorrow as well.

There is great momentum today in the move towards the digitalization of industries; and this momentum will continue to increase in the near future.

The key to this digitalization lies in the manner in which industries adapt ICT, in particular the upcoming 5G, as the world is going to embrace 5G as the new standard in global connectivity.

Ericsson has been proactively involved in demonstrating, measuring and developing the transformative potential of ICT and we believe that 5G is the next chapter of telecom networks designed to meet ever-more advanced and complex sets of performance requirements. And it represents a new way of thinking in the approach to generational changes in mobile technology.

Two of the main advantages of 5G technology will be its network security and low power consumption; which will enable enterprises to digitalize efficiently and cost-effectively.

5G networks will be highly efficient and faster, while supporting more users, more devices, more services and new use cases – yet without impacting costs or the carbon footprint.

ICT stimulates open and collaborative innovation

We are now experiencing that the ICT infrastructure is moving from being a means for connection into an increasingly important source for data-driven innovation, with new insights from data and information patterns holding enormous potential to generate substantial value for business and society.

ICT is just as vital to enabling innovation as it is to boosting productivity. For example, the OECD has found that the probability of innovation in a firm increases with the intensity of ICT use, and that this holds true for both manufacturing and services firms and for different types of innovation. Likewise, in the European Union, 32 percent of companies report being “active innovators,” with ICT enabling half of those firms’ product innovations and 75 percent of their process innovations.

Innovation, fueled by ICT, has rapidly become the leading driver of productivity and economic growth.

More and more nations are enacting policies that actively embrace innovation.

Recently, the Chinese government has put forward a series of policies to promote mass entrepreneurship and innovation to add more vigor to the country's economy.

We fully agree with this new initiative, because we believe it is only when innovations are widely diffused and broadly adopted by people, businesses and public institutions that any long-term sustainable impact on economies and societies can be achieved. Diffusion and adoption of innovations are what ultimately matter for any significant social and economic development.

To a certain point, we are already seeing that when ICT comes to a labor market in which relevant skills are not abundant, the benefits are often limited.

We all know that skilled human resources are at the heart of the ICT revolution. Necessary skills include policy, technical and change management skills, as well as broad information and digital literacy, and techno-entrepreneurship.

So, our second suggestion to the government is to ensure institutional provision of the skills that will enable people and

businesses to participate in ICT-fueled innovation for more and more open and collaborative opportunities.

We hope Chongqing government will take the lead in encouraging mass entrepreneurship and innovation in the drive for the economic integration into the national Belt and Road Initiative through its comprehensive innovation policies such as increasing investments in robust physical and digital infrastructures, implementing innovation-enhancing tax policies such as collaborative R&D credits, or introducing incentives to support entrepreneurship or technology transfer from universities to the private sector.

Take Sweden for example. The Swedish Innovation Strategy and its complementary 2012 Research and Innovation Bill, which increased the Swedish government's R&D investment by 25 percent from 2012 to 2016, called for specific policies to boost innovation in the life sciences, ICT, advanced manufacturing, and forestry and mining sectors that are critical to the Swedish economy. The bill also introduced "Excellence Requirements" that reward universities for boosting their knowledge- and technology-transfer activities and for working more closely with industry.

Finally, we would like to share with you some of the highlights from the report "Transforming to a Networked Society: Guide for Policy-makers".

Ericsson commissioned the report, aiming to make this guide available to local stakeholders and policy makers to facilitate their pursuit of transforming their economies and societies with the power of Information and Communications Technology (ICT).

Based on data from countries that have experienced digital transformation, the guide offers ten recommendations for policy makers:

1)Commit to a holistic, long-term transformation strategy that is integral to a national development strategy.

2)Leverage stakeholder engagement and coalitions to build a shared vision and commitment for the goal of digital transformation.

3)Tap synergies among actors in the e-transformation ecosystem, and exploit supply-and demand-side economies of scale.

4)Attend to the soft infrastructure or local capacity to master digital transformation through leadership, policies, and institutions.

5)Pursue public-private partnerships to tap private sector innovation, resources, and know-how required for transformative change.

6)Emphasize digital diffusion and inclusion for broad-based and equitable transformation.

7)Adopt strategic approaches to funding to cover innovation, flexibility, coordination, and time horizon needed for all elements of digital transformation.

8)Balance strategic direction with local initiative to generate a dynamic for national drive, local experimentation and adaptation, and fast scaling.

9)Enable change, innovation, and learning via decentralization, knowledge sharing, innovation funds, and change management processes.

10) Practice agile and participatory monitoring and evaluation from the start and throughout the transformation process.

These recommendations can be mutually reinforcing. Practicing them should help countries and local governments build capacity to master the digital transformation process. We hope these recommendations will be of some value to Chongqing government in its drive for the ICT-enabled transformation for the next economic growth point in Chongqing.

Chongqing: “One Belt One Road” and the Yangtze River Economic Belt

Adam Keswick

Deputy Managing Director of Jardine Matheson Group

Summary and Recommendations

- Chongqing is the perfect node for the integration of the One Belt One Road (OBOR) and Yangtze River Economic Belt (YREB) strategies, which should enable the city to enhance its international economic and commercial status.
- Awareness among international businesses needs raising, including of the strong foundation the Chongqing-Europe railway and other infrastructure linkages provide for Chongqing to develop as a key hub between OBOR and YREB.
- International businesses also need to have a better understanding of the role of other inland cities, and other policies in Chongqing, such as the Two Rivers New Zone and the development of the Chongqing-Chengdu economic belt.
- Strategic relationships with key European cities along the Chongqing-Europe rail route could support Chongqing’s development as a node between OBOR and YREB. These could be built through increasing trade links, including through e-commerce and international mail and logistics links.
- Future infrastructure investment will be more efficient with consideration to market forces. Using mechanisms such as public-private partnerships would support this.
- OBOR and YREB connectivity could help upgrade and transform Chongqing’s automotive sector by using existing policies to develop a free trade centre for the automotive industry.
- Chongqing’s experience in attracting international companies such as HP and their supply chains could be transferred to other emerging strategic industries such as new materials, electronic core parts, biotechnology, etc.
- Chongqing could develop a business services centre to help Chinese companies manage the political and commercial risks of doing business in OBOR countries.
- These strategies will be supported by the development of Chongqing in areas such as training of the workforce, the development of soft skills, efficient government, and a stable financial system.
- Chongqing’s economic and commercial engagement with OBOR can help demonstrate the economic rationale of the vision, and its value to the countries across Asia.
- The implications for Chongqing of the OBOR and YREB highlight positive developments in the China market for international businesses. Chongqing can work with international businesses to provide opportunities for them to grow alongside their partners in China.

Introduction

This paper examines the implications for Chongqing of the One Belt One Road (OBOR) vision and the Yangtze River

Economic Belt (YREB) policy. It shows that these strategies offer important opportunities for Chongqing to enhance its international economic and commercial status as the ideal node between the OBOR and YREB.

This paper also put forwards our views of the implications of these strategies for Chongqing, the only municipality in inland China directly reporting to the central government. The paper first puts this in context by commenting on both global developments and sub-national regional trends in China, then looks at Chongqing's internationalization strategy to date, before identifying opportunities and challenges posed by OBOR and YREB.

We believe that the municipality's existing and potential positioning in the Chinese and global economies, current trends in China's regional political economy, and its relations with other Asian economies will facilitate success in this area. At the same time, there are a number of challenges facing Chongqing which we shall deal with later in this paper.

There has been growing international interest in the Chinese government's visions of building land and maritime 'Silk Roads' connecting Asia, Europe and Africa. On separate visits to Central Asia and Southeast Asia in autumn 2013, Chinese President Xi Jinping spoke about establishing a Silk Road Economic Belt across the Eurasian continent and a Maritime Silk Road for the 21st Century linking China, Southeast Asia, South Asia, the east coast of Africa and Europe.

These two ideas – since abbreviated to the Belt and Road (henceforth 'One Belt One Road', or OBOR) – envisage the development of logistics and communication linkages which will support trade, investment, monetary flows, tourism, and people-to-people exchanges. Taken together with the planned China-Pakistan Economic Corridor and linkages through Southwest China to mainland Southeast Asia and the eastern parts of South Asia (particularly the Bangladesh-China-India-Myanmar corridor), these initiatives look forward to a much higher degree of connectivity with the more than 60 economies which will be covered under these 'new Silk Road' visions. This is of great interest to international businesses in considering opportunities in inland China.

Domestically, we note that the Chinese government has been developing ways of increasing connectivity and integration within China's borders as part of a strategy of coordinated regional development. Particularly relevant to Chongqing is the new Yangtze River Economic Belt (YREB) strategy, which will see the development of infrastructure along the central east-west axis of China, and this,too, will support further and faster development of trade and investment. Although the YREB takes its name from the Yangtze River, its scope goes beyond developing the river to include the development of urban economies and the road and rail links between them. This strategy reinforces the plans set out in the national 12th Five-Year Plan (2011-2015) to build up major urban clusters and to develop major horizontal and vertical trunk routes connecting these important urban centres.

Importantly, it is only since Xi Jinping's speech earlier this year at the Boao Forum, the publicity around the establishment of the Asian Infrastructure Investment Bank, and the publication in March 2015 of the Chinese government document 'Vision and Actions on Jointly Building Silk Road Economic Belt and 21st Century Maritime Silk Road' that international businesses have begun to consider the implications of the OBOR strategy for their operations in China and across Eurasia. International awareness of the YREB strategy is low.

Context: The Shape of the Global and Chinese Economies

The context for these plans is an uncertain and complex global economic and political environment. Important changes in the global economy include the shift of relative economic influence from developed to emerging economies. This follows a period of intensified globalization from the 1980s onwards.

The reduced gaps in the cost of labour between developed and emerging economies, and the growth in consumer markets outside the OECD have both prompted multinationals to change their approaches to global production networks through 'reshoring' manufacturing operations to countries closer to the final markets, and to consider the consumption potential of emerging markets as well as their use as the base of low-cost production. Such shifts in the international division of labour are a crucial factor in evaluating the potential for OBOR and YREB, and for Chongqing's international economic and commercial engagement.

One manifestation of shifts to emerging economies and changes in the structure of global value chains has been the relative growth in trade and investment flows involving developing economies from less than 40% of total trade in the 1990s to 60% in 2012, while 'south-south' trade flows have risen from around 6% of the total to 15% over the same period.[1] Asia, and in particular China, have been central to this, particularly when it comes to manufactured goods. The potential for further trade growth between China and developing economies to its west in Central, South, Southeast and West Asia (the Middle East) is a key factor in assessing the impact of OBOR.

Central to these changes has been the rise of China as a global economic power. China has become the largest economy in the world in terms of GDP measured in purchasing power parity, the largest trader in goods, and one of the largest holders of foreign exchange reserves. At the same time, the country's GDP per capita remains relatively low – at around 88th in the World Bank rankings.[2] The variation across Chinese provinces is also substantial: Tianjin's GDP per capita in PPP terms was USD 30,663 in 2013, compared to USD 6,351 for Guizhou. As the spectacular growth of inland cities such as Chongqing shows, there are poles of rapid growth in inland China. The World Bank has argued that the main challenges are differentials *within* rather than between regions, in particular those between urban and rural areas.[3]

The significant development gaps in China remains a feature of the country's rapid economic growth and a policy priority for the central government to narrow these gaps. These disparities grew rapidly in the 1980s and 1990s when the government as a conscious policy choice focused on coastal development. Development in coastal areas was reinforced by the integration of parts of coastal China (starting with the four Special Economic Zones in 1980) into the global economy, through manufacturing and assembly for export, making use of low-cost labour and government support in the provision of land and a competitive tax environment.

These regional imbalances were targeted in the 'Develop the West' policy framework from 2000, and have been redressed somewhat over the last decade: since 2007 aggregate GDP growth was fastest in inland China, in particular in cities such as Chongqing. This trend was partly the result of the shock brought by the economic crisis to coastal provinces whose economies depended too much on exports to developed markets, reinforced by China's post-2008 stimulus package, which included substantial investment in inland China, including in the rail networks.

Since 2012, however, these relative advantages to inland Chinese provinces may have been challenged by the emerging 'new normal' in the Chinese economy. A reduced emphasis on state-led investment could disproportionately affect inland provinces, many of which have higher investment/GDP ratios than those on the coast. Some inland provinces have also been challenged by government efforts to push back against higher-polluting industries. And coastal provinces are in general best placed to move up the value chain and should benefit more from economic restructuring, developing further policies to

[1]https://www.bbvaresearch.com/KETD/fbin/mult/EWSouthSouthTrade_i_tcm348-390302.pdf?ts=3082013

[2]http://data.worldbank.org/indicator/NY.GDP.PCAP.CD/countries?display=default

[3]http://www.worldbank.org/content/dam/Worldbank/document/Poverty%20documents/Inequality-In-Focus-0813.pdf

upgrade industry and enhancing China's global competitiveness; Premier Li Keqiang said in his government work report in March 2015 that one goal was to 'support the eastern region in taking the lead in development'.

At the same time, the Chinese government has continued to stress the importance of developing central and western China, attracting foreign investment there, and providing the foundation for economic development through investment in infrastructure. This has been accompanied by an important new element in policies to enhance the openness of western and inland China, set out in the 12th Five-Year Plan.[1] The programme envisages that inland border regions of China should create cross-border infrastructure linkages using border trade zones to take advantage of their proximity to neighbouring territories. Western China should 'open to the west', inland regions should attract domestic and international companies to relocate inland and establish trade processing and services outsourcing bases. Coastal regions should deepen their openness to the rest of the world as they restructure and move to higher value-added areas of economic activity.

Chongqing's Internationalization Strategy

All of this is important context for Chongqing's engagement with OBOR and YREB, which to be most effective needs to be developed within the frameworks of these policy developments and current political economic trends.

The past decade has seen a rapid transformation in Chongqing's engagement with the global economy. Chongqing historically was a centre for heavy industry, with minimal international economic or commercial interaction. This began to change after its elevation in 1997 from being the second city in Sichuan province to a municipality reporting directly to the central government, and with greater attention paid to western China after the 'Develop the West' (西部大開發) policy was announced in 1999. Foreign consulates opened in the city, starting with those from Japan, Canada and the United Kingdom, and foreign and Taiwanese investment began to grow, with BP, Ford, and ABB among the earliest significant investors.

The subsequent growth of the city and its middle classes was one of the features which attracted the Jardine Matheson Group to invest in Chongqing through Hongkong Land, and to develop consumer-related interests in the municipality, such as Mannings and the Yonghui Supermarket chain in which Jardine Matheson Group has a 20% interest.

When it comes to international economic linkages, a big challenge to stimulating trade from Chongqing has been logistics. The Chongqing government has proactively addressed the logistics challenge by developing road and rail linkages to neighbouring provinces, opening up potential routes to China's borders and thence to external markets, developing an intermodal port terminal at Guoyuan, and investing in airport cargo and passenger capacity (the airport ranked 8th in China in 2014 for passenger volume, and 12th for cargo).[2]

Chongqing has often been ahead of its neighbouring provinces in its strategic development of logistics links. The completion of the Three Gorges Dam project in the mid-2000s allowed 5000dwt vessels to sail up the river to Chongqing, thus opening up a potential route to coastal markets and ports in the Yangtze River Delta – although natural capacity constraints of the river limit potential trade volumes. These developments have stimulated rapid growth in foreign direct investment and Chongqing's foreign trade. Chongqing enterprises have also begun to 'go global' through outward foreign direct investment – there has been USD 640 million contracted investment in the first five months of 2015 alone.

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[1] *Zhonghua Renmin Gongheguo Guomin Jingji he Shehui Fazhan de Shi'er ge Wunian Guihua Gangyao* (*Outline Five-Year Programme for National Economic and Social Development of the People's Republic of China*). Beijing: People's Press, 2011, pp. 130-131.

[2] http://www.caac.gov.cn/I1/K3/201504/P020150403321490187521.xls

Nonetheless, the underlying challenge that Chongqing has faced in developing international trade has remained its distance from coastal ports when almost all of China's international trade has been carried out from these ports. Neither is Chongqing naturally well located for land-based trade with China's Asian neighbours, where border provinces such as Guangxi, Yunnan, Xinjiang or Heilongjiang enjoy obvious geographical advantages. This is where the OBOR and YREB strategies come into play. This is the result of Chinese national strategies, forward planning by the Chongqing government, and the growth of intra-Asian trade as the centre of gravity of the global economy shifts.

There are three geographical strands to Chongqing's positioning.

First, the connectivity across the Eurasian continent which is now central to the Silk Road Economic Belt directly builds on the Eurasian train service launched from Chongqing at the end of 2010. This Chongqing (Yu) – Xinjiang (Xin) – Europe (Ou) route, or Yu-Xin-Ou as it has become known in China, has attracted attention from international businesses interested in exporting from Chongqing. The aim of this rail route was to develop new logistics connectivity from Chongqing to Europe, particularly following the agreement in 2009 to a major investment by HP in assembly operations in Chongqing. Following the first pilot train from Chongqing to the border port of Alashankou in October 2010, and the signing in November 2010 by China, Russia and Kazakhstan of a customs agreement to facilitate single customs inspections, the first cross-border trains were successfully launched in early 2011, first to Russia, and subsequently to Duisburg. In 2011, 17 trains departed Chongqing, which grew to 41 in 2012. By the end of 2012, there were three trains departing Chongqing per week. In total, over USD 1 billion worth of goods were exported by the end of 2012.[1] Since then, the use of this route for trade has continued to grow. Since its first operation in January 2011, there has been a total of 233 freight trains to and from Europe at the end of 2014, with a total of USD 6.8 billion worth of goods imported and exported during that period.

The benefits of this route have been clearly discerned in Chongqing. It is faster than export to Europe by sea, and cheaper than by air cargo. The time taken for trains to reach Dusseldorf is around 14 days (5 days from Chongqing to the border port at Alashankou, China's busiest land border port), compared to over 30 days from Chongqing to coastal ports and then by sea to Europe.

Developing this route is not without its challenges, such as the changes of railway gauge between countries across the route and the need to regulate the temperature of containers given variable climatic conditions. To make the route more efficient, goods are being found which could be imported into Chongqing using the same service. In March 2013 the import of automotive parts for Ford began, and in 2014, the central government authorized Chongqing to be a destination for car imports. This could provide the basis for particular policies to take advantage of the OBOR and YREB strategies.

The railway connections for international businesses provide the potential for new routes to export markets. These will be, however, more relevant to specific companies. The broader implications of the railway are, first, the impact they may have on Chongqing's economic development if domestic Chinese companies are attracted to invest in manufacturing or assembly operations in Chongqing and use the railway for export to the expanding Eurasian markets (not necessarily western Europe); and, second, the consequences for global trade flows. The development of OBOR connectivity has the potential to integrate inland China more closely with parts of the global economy, in particular with the Asian and Eurasian economies to China's west, but also with eastern and central Europe.

[1] This paragraph and other material about the Yu-Xin-Ou is based on a number of internet resources, accessed 29 June 2015: http://wapbaike.baidu.com/view/6875758.htm?adapt=1&; http://wapbaike.baidu.com/view/4545843.htm?adapt=1&; http://www.yuxinoulogistics.com/detailed.asp?sid=136; http://www.yuxinoulogistics.com/detailed.asp?sid=596; http://www.yuxinoulogistics.com/detailed.asp?sid=600.

The second set of geographic linkages are eastwards from Chongqing to existing ports and markets in the Yangtze River Delta, and south to the Pearl River Delta. The former is the corridor to be developed in the YREB, on the basis of investment in infrastructure over recent years. Given the time taken to reach export markets along this belt from Chongqing, the value of this strategy for Chongqing is more in its ability to integrate markets within China, and provide Chongqing with markets in the eastern regions of the country. As well as the facilitation of shipping along the Yangtze following the completion of the Three Gorges Dam, the area of the YREB has already seen substantial investment in rail links and expressways.

For example, investment to upgrade the rail link from the main Chongqing urban area to Wanzhou, in the east of the municipality, which is expected to be completed by the end of 2016, will reduce the 247km train journey between Chongqing and Wanzhou to one hour. Links from Wanzhou east to Yichang and Wuhan in Hubei province are an important part of the Chengdu-Shanghai rail link connecting inland provinces to the Yangtze River Delta, and expanding connectivity beyond the river. The Wanzhou-Yichang link – one of the most difficult to build in China with 138 bridges and 39 tunnels in the 200km stretch from Wushan to Yichang – opened in July 2014, cutting the Chongqing-Wuhan journey time from 11 hours to 6 hours 40 minutes.[1] A planned 800km rail link from Wanzhou to Zhengzhou, Henan province, would also increase connectivity.

The third linkage is from Chongqing southwest through Yunnan to connect to the logistics corridors into southeast and south Asia, leaving China at Ruili, on the border between Yunnan and Myanmar. Again, developing connectivity here is particularly challenging given the geology, and highlights the costs involved in building infrastructure in central and southwest China where the cost for road and rail construction per kilometre can more than double the cost in coastal China. With a target for trade between China and the ten countries of ASEAN (Association of Southeast Asian Nations) of US$1 trillion per year by 2020 from US$444 billion in 2013, the potential for growth here is substantial, especially if an upgrading of the China-ASEAN free trade agreement takes place.

As the Chongqing government paper prepared for the 10th CMIA makes clear, Chongqing's geographical location places it at the intersection of these routes – northwest through Xinjiang, southwest through Yunnan, and eastwards from Chongqing along the Yangtze. The Chongqing government 12th five-year programme (covering 2011-2015) already identified these three routes as important components of Chongqing's international trade corridors. These plans, the work that has already been done in infrastructure investment, and Chongqing's central geographical location makes it the perfect node for the integration of the OBOR and YREB strategies.

Opportunities and Challenges

Given this background to Chongqing's development and to the OROB and YREB strategies, a number of opportunities and challenges for Chongqing can be identified.

The main opportunity comes from Chongqing's central geographical location as the ideal node between the OBOR and YREB, combined with its connectivity southwest through Yunnan and south towards the Pearl River Delta. The success over the last five years of the Chongqing government in developing infrastructure linkages along each of these corridors – in particular the Chongqing-Europe railway – provides the city with an important foundation for exploiting this geographical location.

The Chongqing government should consider building on this over the coming years by **enhancing awareness among**

[1] http://news.xinhuanet.com/english/china/2014-07/01/c_133453059.htm

international businesses of the forward-looking investment which has already taken place, of the great synergy between the Chongqing-Europe railway and the Silk Road Economic Belt, and of the strong foundation these provide for Chongqing to develop as a key hub between OBOR and YREB.

Given the need for international economic and commercial interests to monitor these developments, along with a number of other important policies relating to Chongqing, **it would be useful for the Chongqing government to conduct more research into the implications of OBOR and YREB, and the ways they interact with other important policies, such as the free trade zones and Chongqing's own Liangjiang (Two Rivers) New Zone.**

At the same time, international businesses will note that Chongqing is not the only city in inland China which has developed rail linkages through central Asia to Europe. Others include Chengdu, Suzhou, Zhengzhou, Xi'an. The development of these routes is a positive indication of the value of the China-Europe railway piloted by Chongqing, though it poses challenges to Chongqing's positioning. Chongqing has the opportunity, however, **toenhance its competitive strengths, while at the same time working out ways of cooperating with other cities to ensure an integrated development of the OBOR strategy**.

The Chongqing government will also need to continue to prioritise investment to support the further development of this connectivity, as the paper circulated in advance of the 10th CMIA suggests it is planning to do. In doing so it will be **important to ensure that infrastructure investment is efficient, and with consideration to market forces, to ensure that infrastructure meets market needs clearly**. In our view, this objective would be met through the use of mechanisms such as public-private partnerships (PPP), which bring market forces to bear on the provision of public goods. Chongqing is ahead of other provinces and municipalities with PPP initiatives. Last year, Chongqing initiated over RMB 130 billion's worth of PPP projects. From 2015 to 2020, there will be an average RMB 130 billion spent on PPP projects each year over the next five consecutive years

As noted at the beginning of this paper, an important feature of the development of connectivity under plans such as OBOR and YREB is that these connections – across substantial distances – are between major urban clusters. In our view, this aspect is particularly relevant to Chongqing. The city has an important advantage here already, with a substantial population of some 30 million and a relatively densely populated urban core. Over the last decade and more, there have been important steps taken to link this urban core more tightly with the major urban areas of the Sichuan basin, in particular Chengdu; now the high-speed train route between Chongqing and Chengdu takes some 2½ hours. From the perspective of the global economy and of international businesses, **the development of a significant Chongqing-Chengdu (or *Cheng-Yu* 成渝) economic belt enhances the attractiveness of investment in this part of China**, and should further reinforce the value of major infrastructure linkages under OBOR and YREB. This builds on the discussions of urbanization at the 2013 CMIA.

Indeed, we note that Premier Li Keqiang highlighted the role of the Chengdu-Chongqing economic zone in developing the YREB when he spoke about the strategy on a visit to Chongqing in April 2014.[1] While, as noted above, the YREB is useful for Chongqing in connecting the city with Yangtze River Delta ports for exports and enhancing the value of the OBOR, our assessment is that the main value of the YREB for international businesses is in its potential to integrate the domestic Chinese market. This should allow the easier and quicker flow of goods, people, and services across this geographic belt. The Chongqing government could consider **working further with other Chinese provinces along the belt to identify the concrete implications of this plan and disseminate the information to international businesses already present in China**

[1] Xinhua, 28 April 2014, available at http://english.cntv.cn/2014/04/29/ARTI1398726618783350.shtml.

so that they can make use of the infrastructure linkages to pursue further business opportunities.

The Chongqing government might also consider a specific European strategy to further develop its role within OROB and YREB, building on European government presence and investment in Chongqing, and taking advantage of the Connectivity Platform agreed at the June 2015 EU-China summit,[1] by **forming strategic relationships with key European cities along the Chongqing-Europe rail route**. This could be done through increasing trade links with the European cities, which could encompass development of international mail and logistics linkages, and building Chongqing as a key hub for the growth in cross border e-commerce between China and Europe.

All of this will need to be supported by continued efforts to develop other aspects of Chongqing's infrastructure, including the training of its workforce and the development of soft infrastructure, transparency and efficiency of government operations, and a stable financial system. In order to benefit from OBOR and YREB connectivity, the **Chongqing economy needs to continue to move up the value chain**.

One area where the OROB and YREB could help the upgrading and transformation of industry is in the **automotive sector**. This has long been a major pillar of Chongqing's manufacturing strength. As the only inland city which can carry out customs clearance for the import of cars, and with the existing use of the Chongqing-Europe rail link to import automotive parts, Chongqing could use the strategies to develop as a **free trade centre for the automotive industry**.

The Chongqing government should also capitalize on its successful experience (referred to above) in using the Chongqing-Europe rail link to build up manufacturing capability in IT products. The experience in attracting companies such as HP and their supply chains could be transferred to other **emerging strategic industries** such as the use of new materials, electronic core parts (e.g. chips), biotechnology, etc. This would be particularly effective in industries where Chongqing can play an important part in the manufacturing process.

A challenge for Chinese companies in taking advantage of the OBOR strategy is **managing the political and commercial risks of doing business in international markets across Eurasia**. Risk assessment and insurance will be important tools for this. These are areas where the Jardine Matheson Group has expertise in through Jardine Lloyd Thompson, an international insurance brokerage and risk consultancy. Chongqing should consider developing itself into a hub for the development of these services as they relate to OBOR.

One challenge facing implementation of OBOR is dealing with possible international perceptions of it being designed to extend geographical and political influence. The economic rationale, and benefits across Asia from OBOR and the related initiative to establish an Asian Infrastructure Investment Bank are compelling, and the example of Chongqing's development of Europe-China rail links strongly supports the economic and commercial interpretations of OBOR. **We believe that these initiatives will be beneficial to countries across Asia, and to international businesses active in the region, and the commercial and economic approach to OBOR taken by Chongqing is good evidence of this**. Highlighting this rationale could be part of work done to disseminate the implications of OBOR.

Finally, these issues are relevant to understanding the wider perspectives that international businesses have of China at the moment. The perceptions reported at the national level in surveys such as those carried out by the European Chamber of Commerce suggest that international businesses are concerned that China is becoming a more difficult market in which to operate. There are certainly challenges, in particular as competition from Chinese competitors grows. **This annual CMIA is a useful channel for discussing the wider business environment, and the Chongqing government's openness to the views**

[1] https://euobserver.com/opinion/129415

of international business is very welcome.

In our view, thinking about the **implications for Chongqing of the OBOR and YREB highlights the positive developments in the China market for international businesses**. Investment in inland China is still highly sought after, and as OBOR and YREB mature, the distance from international and domestic markets of places such as Chongqing will reduce, and the city's level of integration into national markets will grow. As a result, new opportunities for international businesses are emerging. **By integrating OBOR and YREB strategies into its future development, Chongqing can work with international businesses, and provide opportunities for them to grow alongside their partners in China**.

Aligning the Pilot Free Trade Zone Strategy to Establish an Inland Open Highland

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Contents

As the only municipality in middle-west of China, Chongqing is the world's west gateway to China.

As an important opening-up portal in inland, Chongqing has become the fastest developing area in western Chinaand has formed its own advantages andattraction through making full use of international and domestic markets and resources to build up an open economy system in inland.

Chongqinghas achieved a total GDP of1426.5 billion Yuanin 2014, rankingthe fourth in western China, the 10.9% year-on-year growth listing the first in China. The total value of exports and imports hasreached95.5 billiondollars in 2014 with a 39% increase year-on-year and listing the tenth in China; Exports in Chongqingranked the seventh and the total value of imports rankedthe tenth of China, both are the first in middle-west China.The actual utilized foreign capital has reached10.6 billion dollars, which is the fourth consecutive year above 10 billion dollars; 243 Fortune 500 enterprises settled in Chongqing makes the city be one of the top in middle-west China. Service trade volume has grown by 25% to 13.1 billion dollars.

Chongqing has proposed the strategy of aligning the pilot FTZ to establish an inland open highland to promote a whole opening-up in the region and actively integrate with the national opening-up and regional developing strategy.

1. Background and Strategic Significance of FTZ

(1) Background of FTZ

The globalization process is greatly accelerated after the financial crisis;high-end resources have started to flow into developing countries with the trigger of the reorganization of global factors. International enterprises are increasingly involved in local competition, bringing more and more obvious economic and regional characteristics.In the competition of the global capital and resources between developing countries and developed countries, system and institutional factors play a more important role.

Since China's accession to the WTO, the foreign trade has developed rapidly. Total value of exports and imports surpass the United States to reach 4160 billion dollars in 2013 as the world largest trading country. Developed countries in crisis tend to be conservative in ideology, thus a list of new global trade finance rules are made to exclude China, whether intentionally or not, such as TPP, TTIP, PSA, etc. If those agreements are reached to effect, China will then be at an unfavorable situation of marginalization. Therefore, effective measures are required to be brought up to avoid a passive position in international trade rules and avoid struggling in trade development.

After more than 30 years' reforming and opening, China economy now is facing a new dilemma. Weak international needs and the rising Yuan cause a dramatic fell in China foreign trade exports, challenging the old severe export-dependent development model. The slow increase of domestic needs and the overcapacity contradiction bring pressure on adjustment and upgrading of industrial structure. Moreover, lacking of vigorous development institutions causes service industry and financial industry retaining at the initial stage of exploration and development. International and domestic changes and constraints of developing environment and conditions force China to reform into deep water.

In the face of this new normal, the Chinese government clearly put forward the strategy of "One BeltAnd One Road" and the "Yangtze River Economy Belt" to win the initiative of economic development and international competition, with the hope that through the full range, multi-level international cooperation, a regional community of interests and the fate of the community shall be created to break the discourse hegemony of the developed countries in the global economic and financial rules.

If the first 30 years'reforming and opening up is just a restricted "small door" with differential treatment, preferential policies and hardware environment improvement as the main means, then the opening up in this new normal is to fully integrate China into the world economy by relying on the aligning standards, clear rules and optimized soft environment. This is a brand new opening-up model without any existing experience, approach or model, it requests an innovative carrier and focusing tool which shall perfectly fit the purpose and position of the establishment of FTZ.

Shanghai FTZ is the case born in this context. The establishment of Shanghai FTZ not only conforms to the new trend of global economic and trade development and enhances China's international competitiveness, but also carries positive and active implementation of China's opening up strategy. Shanghai FTZ aims to open and promote the reforming and establish an anti-driving mechanism with new patternsand new rules, and realize the goal of open economic transformation and upgrading. The main task of establishing Shanghai FTZ is to explore new ideas and ways for China to expand opening up and deepening reform, then form the experience which can be referred and promoted by other locations.

(2) Strategic significance of pilot FTZ

1) Test base with common international rules integration

The responsibility of FTZ is to test rule and risk, discover issues in advance and try to make contingency plan, get rid of the market barriers and institutional mechanisms for a "second accession" and accumulate experience for carrying out the negotiations of the new international trade pattern.

2) Institutional innovation highlandwithoverall and deep reforming

It is necessary to carry out the institution innovationafter familiar with and adaptation of the rules, create an international, market-oriented, rule of business environment. The pilot FTZstresses to have early and pilot implementation reform in the deep water area such as government service model, administration management system, financial operation mechanism, etc. It more stresses on the possibility to enable the experience to be referred and promoted.The pilot FTZ is not "the lowland of preferential policies", but "the highland of institution innovation". It is established to provide a demonstration for China's economic system reforming, and then promote the national reformingfrom point to surface andwith depth.

3) Boost China's deep participation in international labor division and cooperation and enhance the level of China's open economy

The establishment of FTZ strengthens China's cooperation inmultiinternational domainsand enables China with a further participation in international labor division. It builds China's participation in the international competition, promotes commodity trade and investment, breaks through the commodity trade barrier and improves trade management level. It enhances the industrial form of Chinese business service industry to be an international commodity distribution center, improves China's pricing power in bulk commodities, and gradually becomes the international pricing center to enhance China's position in international trade. It expands the breadth and depth of China's openingup andimproves the open economy, changes the pattern of China's opening up, and promotes China's comprehensive integration into the world economy, finance and trade system.

4) Support Point of National strategies

FTZ as China's channel to the worldcould not only develop itself to the full to explore the new mode of regional economic cooperation, but also voices itself on various international platform, and brings a leveraging effect in the national strategies such as "One Belt AndOne Road", the "Yangtze River Economic Belt", by taking hold of the key link that

everything else will fall into its proper place.

5) Enhance the local economy competitiveness and promote the transformation and upgrading of the second industry, inject energy into the third industry.

① The opening of the capital market allows companies to raise funds and financing channels in a more flexible way;

② The expansion of the service market will bring positive benefit for FTZ ports, airports, warehousing logistics, financial companies; the convenient service for financial, trade and customs clearance will attract more processing, manufacturing, trade and logistics enterprises to usher in new energy and development opportunities;

③ Through the integration of industrial chain and value chain, FTZ will achieve mutual penetration and support of high-end manufacturing and high-tech research and development, design, marketing, service industry, and become a agglomeration area for multi-national corporation headquarters and high-end manufacturing industry;

④ The opening finance, shipping, commerce and cultural services all are high-end industry enterprises with high output capacity, the rise of these high-end services will drive the development of regional services, therefore, service trade will usher in greater development opportunities.

6) More attraction for foreign capital enterprises

The FTZ aims to be established with laws and regulations, with convenient investment and trade environment (negative list management model) and effective trade regulatory. Attract foreign capital enterprises to accelerate their settlement in the FTZ area via financial innovation. For example, during January to September of 2014, numbers of foreign capital enterprises settled in Shanghai FTZ had increased by more than 8 times compared with the same period last year.

7) Radiation effects on the surrounding areas

Shanghai FTZintegrate the global economy by closely connecting its four central establishment, naming international economic, financial, trade and shipping; Guangdong FTZserves cooperation amont Guangdong, Hong Kong and Macao; Tianjin FTZ is to explore the joint development of Beijing-Tianjin-Hebei, and align the establishment of China-South Korea FTZ, radiate its effect to northeast Asia; Fujian FTZstresses economic cooperation between the two sides of the straitsand exchange cooperation with countries and regions along the Maritime Silk Road.

(3) Significance of aligning the pilot FTZ strategy to integrate Chongqing into "One Belt And One Road" and the "Yangtze River Economic Belt".

It is a major strategic decision of Chinese government via grasping the domestic and international trend to implementthe strategy of "One Belt And One Road" and buildthe Yangtze River Economic Belt along the golden waterway, Chongqing actively integrates into the national opening up and regional development strategies, itfirst creates a large platform by taking the three hubs and ports of Chongqing railway, water, and air and the three bonded area as the carrier, linkof various development zones (parks) toestablish an open platform system covering the whole city and promote the opening for whole region.

Chongqing is located in the Y shaped joint of the Silk Road Economic Zone, China-South Central Peninsula Economic Corridor (connecting with the twenty-first Century Maritime Silk Road) and the Yangtze River Economic Belt, with a unique geographical advantages, Chongqing is the important strategic fulcrum of the Silk Road Economic Belt, and the west central hub of the Yangtze River Economic Belt, and the industrial hinterland of the maritime silk road.

As theimportantstrategic hub of "One Bent And One Road" and the "Yangtze River Economic Belt", Chongqing is

proposed to build an inland international logistics hub, put itself in the Eurasian market to carry out the resources optimization and allocation, and this undoubtedly fits the country's three major strategies.

The aligning of theFTZ strategy meets the trend of a new round of global industrial transfer, by comprehensively considering city, industry, market, ecology and other factors in the global market shall rapidly enable Chongqing to bea major investment destination in the world.

The transformation and upgrading of traditional superior industries such as auto mobiles shall be promoted, extended and integrated through thealigning of the FTZ. By carrying out trade to Europe via theChongqing-newEuropeanrailway shall greatly improve the commodities'input and output logistics in Chongqing, which of course shall bring benefit to the local modern service industry.

Leverage strategic emerging industry via the formation of inland emerging markets to prepare for the downward and adjustment of the traditional industries and provide a sustainable economic development and keep a good growth.

With the aligning of the pilot FTZ, Chongqing shall make full use of its location, transportation, marketing and other comprehensive advantages, strengthen the role of opening westward, link eastward to better serve for the overall situation of the development of the western regions, and further explore the potential of key factors agglomeration and opening up on platform such as Chongqing airport and inland transportation hub to build an inland open highland; then accelerate the innovation of government management and regulatory system to create an international business environment with rules.

Create a trend of sustainable growth via investment promotion and the traditional superior industries transformation and quality upgrading, and fostering 10 major strategic emerging industries. By aligning with the pilot FTZ and integrating into the national strategies of "One Belt And One Road" and the "Yangtze River Economic Belt" to handle the relationship between the regional strategy and the national strategy

2. Experience and inspiration from Pilot FTZ in coastal cities and international traditional FTZ

(1) Current status of FTZ in coastal cities

Shanghai FTZ was officially established on September 29th of 2013as the first FTZ in mainland of China. Then on March 24th of 2015, the CPC Central Committee Political Bureau reviewed and approved the overall plan of the Guangdong, Tianjin, Fujian FTZ, to further deepen the reform and opening program of Shanghai FTZ. On April 21st of 2015, Guangdong, Tianjin, Fujian provinces and cities officially set up the pilot FTZat the same time. As of June 30th, relevant department in State Council promulgated 16 policy documents to support the construction and development of pilot FTZ, government in Shanghai and the other 3 newly established FTZ also introduced a total of more than 80 policy documents.

At present, Shanghai, Guangdong, Tianjin, Fujian pilotFTZ arepositioned as to face the global economic liberalization, Guangdong-Hong Kong-Macaointegration, Beijing-Tianjin-Hebei joint development and economic and trade cooperation with Taiwan, the four FTZs are with mutually promotion, mutual promotion and coordinated development, which shallincubate China's new round of reform and opening up and working as a new engine.

1) China (Shanghai) pilot FTZ: Example of Early and Pilot Implementation FTZ

Lujiazui financial area, Zhang Jiang high-tech zone and Jinqiao Development Zone are newly joined into the Shanghai pilot FTZ; the size is expanded from the original 28.78 square kilometers to 120.72 square kilometers. Among them, Lujiazui financial area will focus on the financial industry development, Zhang Jiang tech Zone will actively promotethe organic

integration betweenFTZ policy and technological innovation;Jinqiao Development Zone is positioned as the high-end manufacturing and production service industry gathering area. In overall, the Shanghai FTZ is a FTZ with the most complete function, it will closely linkwith the Shanghai Four Centers, naming international economic, financial, trade and shipping center, among which the financial innovation is with the top priority.

Although the domestic market has been opened to attract foreign investmentsince 1978, before the FTZ policy applied, the opening level of China is still relatively lowcompared with Dubai, Amsterdam and other high level open areas. The establishment of the Shanghai FTZ also means a full range, deep and higher opening up. Shanghai pilot FTZ has made positive progress in last two years and has formed experience which can be referred by other locations.

2) China (Guangdong) pilot FTZ: relying on Hong Kong and Macao and serve for the mainland

Guangdong pilot FTZ is with a total size of 11.62 square kilometers, including Guangzhou Nansha District area (60 square kilometers), Shenzhen Shekou (28.2 square kilometers) and Zhuhai Hengqin New Area (28 square kilometers). With the advantages of adjacent to Hong Kong and Macao, Guangdong pilot FTZ is to deepen cooperation between Guangdong and Hong Kong, and promote the trade liberalization between Hong Kong and Macao, improve the transformation and upgrading of processing trade, and drive the same in the Pan Pearl River Delta and inland areas, it strives to build a demonstration area of cooperation among Guangdong, Hong Kong and Macao and an import hub for the twenty-first Century Maritime Silk Road and the country's new round of reform and opening up.

3) China (Tianjin) pilot FTZ: relying on its own advantages to serve for the national strategy

Tianjin pilot trade zone is with a total size of 11.99 square kilometers, including coastal district central business area (46.8 square kilometers), Tianjin airport area (43.1 square kilometers) and Tianjin Port Zone (30 square kilometers). Tianjin pilot FTZis committed to promote the implementation of the joint development of Beijing-Tianjin-Hebei and improve the regional industrial cooperation and transformation and upgrading, jointly construct a highland with regional scientific and technological innovation and talents, and enhance the port service radiation, build a high level opening upplatform for cooperation in Beijing-Tianjin-Hebei thus further enhance the regional international competitiveness.

Tianjin pilot FTZ is the first FTZ in the north of the Yangtze River in China. According to the blueprint, Tianjin FTZwill fully rely on its own real economy, port, national strategy and other advantages, serve for the two national strategiesof Beijing-Tianjin-Hebei joint development and the "One Belt And One Road".

4) China (Fujian) Pilot FTZ: Explore a new path of cooperation with oversea countries and Taiwan

Fujian pilot FTZ is with a size of 118.04 square kilometers, including Fuzhou area (31.26 square kilometers), Pingtan area (43 square kilometers) and Xiamen area (43.78 square kilometers). It focuses on deepening cross-strait cooperation andexpand the opening and deepen the reforming, combinethe functional and institutional innovation, and actively promote an open and cooperative mode with investment and trade facilitation, talent exchanges and service industry, it aims to create a demonstration area of cross-strait economic cooperation and core area of the twenty-first Century Marine Silk Road and apilot areareform and innovation.

The four FTZs are thepioneer ofreform and opening, forerunner ofinnovative and development, theyplay an important role in carrying out the national strategies such as "One Belt And One Road", Beijing-Tianjin-Hebei joint development, and the Yangtze River Economic Belt development.

(2) Achievements of pilot FTZ in coastal cities

A series of mature experience has been accumulated since the operation of pilot FTZs in coastal cities, aspects ranging from institutional innovation, investment opening, national strategy service, risk control and radiation surrounding areas.

1) Institution innovation

Pilot FTZs promote the institutional innovation of investment management, innovation of trade supervision mode, innovation of financial institutionand regulation institution innovation in- and after-event, they proposed the establishment of administrative consulting system, the separation of examine and regulation, and centralization of review and approval and thesocializationand specializationof governmentfunctions,etc. The fourFTZs have implemented a unified, more convenient filing system supporting foreign investment enterprises setup and change in accordance with the negative list management.The decentralization in local governments has gained significant achievements, which substantially facilitatethe trade and investment.

Innovative trade patterns inShanghai FTZare as below:

- Promote trade transformation and upgrading. The main measures are: Deepen the pilot of international trade settlement center, support the development of offshore business for enterprises in the pilot zone, explore the establishment of international bulk commodity trading and resource allocation platform in the pilot zone, and expand the pilot of the futures bonded delivery.
- Promote international shipping service level. The main measures are: develop shipping freight index derivatives trading operations; early and pilot implementcoastal incidentally business of foreign trade import and export container in domestic coastal port and Shanghai port;increase international transit cargo flights in Pudong airport, and implementtheinternational ship registration policy.

There are two innovations in the field of financial in Shanghai pilotFTZ:

- With the precondition of risk control, early and pilot implement RMB capital account convertibility and financial market interest rate liberalization, implement RMB cross-border use in the pilot zone;

In March and May of 2014, branches of Citi bank and Deutsche Bank opened in Shanghai FTZ successively. Citi bank is focus on financial management business servicesuch as the cross-border RMB centralized collection and payment, cash pool, etc. Deutsche Bank mainly provides service such as two-way RMB cash pool, current accountcentralizedcollection and payment for its domestic and foreign affiliated enterprises.

- Support the establishment of the foreign-funded banks and Chinese foreign equity joint banks in the pilot zone; allowrunning offshore business by certified Chinese funded banks in the pilot zone.

Compared with other FTZ financial pilot, Shanghai FTZ financial pilot is more overall in regards of global financial new pattern via a global vision. RMB is allowed to convert freely in the area of FTZ with the prerequisite of risk control.

By learning from Shanghai FTZ, Fujian FTZ focuses on the cooperation with Taiwan and has put forward the policy of financial cooperation between Taiwan and mainland, and RMB is convertible within limits for capital projectsin the area of FTZ.

The cost of corporate finance has dramatically reduced in Fujian pilot FTZ by carrying out cross-border financial services, including cross-border RMB loans and foreign direct loans.

2) Serve for national strategy

Increase services for national strategies such as “One Belt And One Road” and the Yangtze River Economic Belt in each FTZ.

Promote anin-depth cooperation in Guangdong pilot FTZbetween the mainland and the Hong Kong and Macao, launch new initiatives such as expandingthe implementation scope of the Guangdong-Hong Kong-Macao Customs clearance "Green Customs Lock", Shenzhen and Hong Kong direct logistics channels, the third party inspection results recognition.

Focus on deepening cross-strait economic cooperation in Fujian pilot FTZ, promote the Taiwan trade facilitation;the expanding of financial cooperation has brought great repercussionsin Taiwan.

There are obvious effects of agglomeration of Hong Kong, Macao and Taiwan funded enterprises in Guangdong and Fujian pilot FTZs. Since the operation of the pilot FTZ, Hong Kong and Macao investors set up 351 enterprisesin Guangdong pilotFTZ, contract foreign investment reaches 24.14 billion Yuan, the proportion of the number of foreign enterprises and foreign investment contract amount are 84% and 91.7% respectively. There are152 Taiwan-funded enterprises in Fujian pilot free zone with the contract amount of 1.73 billion Yuan, the proportion of foreign investment enterprises and foreign investment contract amountare 57.8% and 25.1% respectively.

3) Establish an open highland (investment and open innovation)

Focus on the establishment of a negative list management model to simplify the investment process. Pilot national treatment before admission for foreign investment in pilot zones by learning from common international rules, prepare negative list for inconsistency between foreign investment and national treatment, apply the same principle for aspects out of the negative list and change the foreign investment projects from the approval system to the registration system.

Reduce the number of the items in the 2014 version negative list, which is approved by the State Council and apply to four pilot FTZs, from139 to 122, and further reduce the foreign investment limit.

Launch supporting tax policies to promote investment, such as the assessment of the value of assets to pay income tax, equity incentive to pay income tax installments. Enterprises or individual shareholders registered in the pilot zonecould pay income tax by installment with less than 5 years, suppose the asset evaluated appreciation is arising from the asset restructuring of non-monetary assets for foreign investment. In the pilot zone, reward the high-end talent and shortage talent with shares or the proportion of capital contribution, and implement the stock right incentive individual income tax installment payment policy. At the same time, regulations have also implemented for import VAT and export tax rebate for the enterprisesregistered in the pilot FTZ.

The effect of foreign investmentabsorption is obvious since the operation of the pilot FTZ.

4) Radiation effect on the surrounding areas, and focus on active promoting in each pilot FTZ

Through the construction of the Yangtze River Delta regional international trade as “a single window” and the Asia Pacific Intellectual Property Center, Shanghai pilot FTZ shall boost a rapid development of the Yangtze River Economic belt;

By promoting the transformation and upgrading of processing trade and creating a comprehensive service area for regional development, Guangdong pilot FTZ drives industrial restructuring and upgrading in the Pan Pearl River Delta region and inland areas;

By promoting the Beijing-Tianjin-Hebeijoint development, Tianjin pilot FTZmakes the use of port cooperation and other mechanisms to promote a radiation development in the inland;

Fujian pilot FTZmakes efforts to strengthen industrial cooperation between Fujian and Taiwan and cross-strait service cooperation model innovation, and drives the development of the western Taiwan Straits economic zone.

5) Effectively prevent and control of risk, regulate in- and post- the event with a steady progress in each FTZ

The 4 pilot FTZ all have designed risk prevention and control mechanism to support multi fields.

In the field of foreign investment, the office of the State Council issued the "Pilot National Safety Review on foreign investment in pilot FTZ", which has broadened the scope of the security review and enriched the contents of the security review;

Follow the principle of "first line open, second-line safety and efficiently management" in tradefield when promote the port supervision system, inspection and quarantine supervision mode innovation, strictly prevent risks of tax evasion and the quality and safety etc. at the same time.

Improve cross industry, cross market financial risk monitoring and assessment mechanism in financial field and build a macro and prudential financial management system.

At present, the Pudong New Area public credit information service platform has established after Shanghai Pilot FTZ expansion. Fujian pilot FTZ has sorted out55 risk pointswhich may occur during the relaxation of the industry access and proposed 88 measures to control. 3 districts in Guangdong pilot FTZhave set up credit information database; information management system and public platform have been put into use.

(3) International FTZ operation experience

1) Hongkong free port

Hongkong free trade port was established in 1841. Since 1872, the content and function of Hongkong free trade port have gradually expanded, it has become as the world's most free andopenport with most functions,and it is one of the world's largest trades, financial and shipping center. After more than one hundred years of accumulation and refining, the local government has formed a "positive but non-intervention" governance management style.

The major industries in HongKong are service industries, finance, tourism and trade. However, without support from the real economy, the economic development is easily influenced by economic fluctuations in other countries. At the same time, due to the lack of real economy, the development of science and technology inHong Kong has also been constrained,despite the high open degree of Hongkong, it failed to achieve technological spillovers through FTZ and failed to bringthe core financial interests. Therefore, attention should be paid to technology, service and finance when establishing China's pilot FTZ, and alsofocus on the innovation of technology by considering science and technology education with asignificant strategic position, and strive to promote innovation in the technology and management of the mainland enterprises via the new FTZ and absorb foreign advanced technology via doing by learning, pay attention to personnel training and improve their international competitiveness..

2) Netherland Amsterdam port

Amsterdam port was built in the 13th century, the port FTZ belongs to the bonded warehouse trade area, it is positioned as port ofcarrying tradeand processing, which requires a large area of land. In order to solve the restriction the economic development relying on land area, Netherland has a number of FTZs in the customs supervision library, which further extends the function of the FTZ. Shanghai FTZ expanded to more than 120 square kilometers from the initial of only 28.78 square kilometers, which to some extent has referred to the experience as such.

In addition, Amsterdam port has a close business relationship with the airport FTZ, which promote the coordinated development of both air and sea port logistics. Meanwhile, air transport is closely related to the financial field, which can be used as a reference for the development of China's pilot FTZshipping and financial cooperation, such as the possibility of aircraft financing leasing business, etc.

3) the United Arab Emirates-Dubai port

Dubai free port was built in 1985, it constitutes with a port and aFTZ andwith the size of 135 square kilometers, which is currently the world's largest free port. The main function is loading and unloading, warehousing logistics, trade and processing manufacturing. The intention of the government was to build a free port to promote the domestic economy andshift to investment-driven by thisFTZ. With the superior geographical position, preferential tax policies and complete infrastructure, Dubai attracts a large number of foreign investment enterprises, which greatly boosts the development of local economy. Dubai FTZ has a very independent regulatory body, which is a crucial reason for the success of Dubai.

Dubai FTZ could be a target of the China pilot FTZby learning from its successful experience,and this shall enable China pilot FTZto achieve economic pull. At the same time, focus on the development of financial and service industries, break the traditional FTZmode to stand on a higher starting point.

4) New York port

New York Port FTZwas founded in 1979, which is the largest FTZ in the United States, it is a comprehensive FTZfocusing on processing and supplemented bycarrying trade, international trade, and storage and transportation services. It mainly attractsenterprises with 22 tax reduction policies. This can be used as a reference for tax incentives in China pilot FTZ.

Although there are267 FTZ in the United States, the value of its output is only 20% in the total of United States trade volume, which cannot reflect the promotion effect of FTZ. The main reason is that, same as the rest FTZ in the world,FTZ in the United States are still confined to the old model of manufacturing and processing and carrying trade", it does not have an obvious breakthrough in driving relevant industries, specifically in the service industry and financial industry. It more focuses on the trade of goods, while ignoring the development of the service sector and the financial sector.

By comparison with the international FTZ, it can be found that China's FTZshould break through the traditional FTZwhich is focusing on trade and processing business model, and aim to expand the financial and service industries. At the same time, transform and upgrade traditional industries by the use of advanced technology.

5) South Korea FTZ

South Korea FTZ has an earlier start-up, in the 1970s it has established the first foreigner special export processing zone, naming Mashanexport processing zone which covers an area of 0.79 square kilometers.

The processing zone providesa variety of preferential policies such as tax relief, low rent, facilities support for foreign companies. At the same time, fully reduce acquisition, registration, property rights and land taxes. Goods imported to the FTZare exempted from customs duties and VAT, it levies tax policy of "three free and two halved" on the income tax of the foreign enterprises in the processing zone, and set up 10 million dollars and 5 million dollars as the threshold manufacturing enterprises and logistics companies respectively. Through the tax preferential policies, Mashanprovides a good investment environment for enterprises.

South Korea has attracted a large number of Japanese funded companieswithMashan export processing zone and introduced a number of technology and talent, which greatly boosted the development of the Korean economy.

In 2000, Masan export processing zone is officially renamed as MashanFTZ after expanding and integration.

In the twenty-first Century, the South Korean FTZs have rapidly grown up, which also produce a number of problems, some of the FTZare forced to shut down or restructuredue to investment difficulty. At present, there are 7 industrial FTZs in South Korea,they areMashan, Jin Di, Qunshan, Dafo, Li Cun, Donghai, Weishan, and several logistic FTZs like Busan Port, InchonPort, Pyeongtaek port, etc. Among them, the most successful operated and well-known is Inchon FTZ.

Inchon FTZ is a comprehensive logistics channel including Inchon Port FTZ and Inchon airport, the total size is about

4.4 square kilometers. Among them, size of air FTZis about 47%, which constitutes the air cargo area and airport logistic park.

FTZ attracts enterprises with tax and land preferential policies, for example, according to different industries and investment scale, foreign companies stationed in the park shall, in 5 to 15 years, enjoy tax relief, land use fees and other preferential policies; it actively encourages freight Airlines settled or expand the new freight routes; and continuously improvesairport logistics facilities, improve logistics service level and logistics efficiency, reduce logistics costs, etc.. At the same time, the developed information platform has also greatly improved the efficiency of customs clearance.

At present, the Inchon airport has advanced network with a steady growth in air passenger. As of 2013, there are more than 700 logistics operators choosingthe Inchon FTZ. The FTZ consolidates the cargo hub position of the airport in the Northeast Asia and even greater range.

Limited by ground size, the FTZ must restrict the plant size of local enterprises (i.e. must be less than 500 square meters). In order to have a successful settlement of the domestic information and semiconductor and other cutting-edge technology companies, the government is planning to change the nature of the land (change green land to industrial land) to contain more local enterprises.

Through the development process of South Korean FTZ, it could be found that localization of the FTZ must be accurate; otherwise it will fall into the situation of no business. At the same time, the transportation network and its supporting facilities must be improved, and the goods can be largely admitted with lower logistics costs. Considering the development of FTZ, the long-term planning area must leave adequate leeway. The establishment of FTZ can attract a large number of technology and talents, boost the technological upgrading of enterprises and industrial restructuring. Some tax incentives in South Korean FTZ can also be used for Chongqing.

3. Analysis of the advantages for establishing Chongqing FTZ

In recent years, Chongqinghas continuously implemented the main strategy of opening up,the platform of opening up is increasingly improved;it has a rapid growth in the open economic development, and is available in the layout and construction of FTZ, which has four major advantages:

(1) Regional transportation advantage

Chongqing is located in the center of the west of China, and superior in the conditions of water, land and air.

Chongqing has ranked the first in the country's high-speed road network density (2.4 km per hundred square kilometers) and the largest railway hub in the west. Chongqing Cuntan International container port is currentlywith the most advanced shipping technology and largest throughput in China's inland, Jiangbei International Airport is one of the country's tenth airports.

Accelerated establish a high railway networkwith Chongqing as the center and covering the world's aviation transportation hub to bring more convenience for logistic transportation in the future.

(2) Market potential advantage

Chongqing is one of the five largest national center cities in China, it is vast in investment and consumer demand, the total

import and export volume ranks the first in the western provinces and cities, the trade growth is also in the forefront.

Chongqing bonded port area economically affect Yunnan, Guizhou, Sichuan, Shanxi, Hunan and Hubei provinces, covering 0.3 billion population in the region.

(3) Carrier platform advantage

Chongqing has the first inland bonded port - Cuntan bonded port area, which is also the only "water and airport district" in China as a dual core mode of the bonded port area.

The Multi Transport Supervision Center is under accelerated construction, electronic port is on line operation, customs inspection cooperation, the "three-one" customs clearance is under comprehensive pilot implementation, cross-border trade e-commerce services is under pilot, Chongqing-new European international trains is the forefront, all of these shows that the condition of establishing the pilot FTZ is relatively mature.

(4) Improve the institutional mechanisms

With the bonded port airport and water port function area as the breakthrough point, Chongqing has speed up the open economy system and mechanism innovation and actively explored and accumulated experience in the management of aviation, customs supervision, service outsourcing, fiscal and taxation policy system and mechanism.

4. Summary, proposal and wishes

(1) Summary

It is a major step of the Chinese government to promote the construction of the pilot FTZ to deepen the reforming, expand and explore the opening up and accumulate new experience. Accelerating the implementation of the FTZ strategy is of great significance for China to promote a higher level of opening-up.

By aligning with the three major national strategies, "One Belt And One Road" and the "Yangtze River Economic Belt", Beijing-Tianjin-Hebei joint development, the future development of the FTZ willpromote regional expansion; focus on investment banking and government functions core reform with a clear time limit to accelerate the experience of replication and promotion. Specific trends are as follows:

1) The FTZ shall be further expanded telling from the regional layout, and shall focus on those hub cities which shall affect "one belt, one road".

Geographically the four FTZare still mainly located in the eastern coastal cities, thus there are necessities to extend and expand the FTZ to the central and western areas, with an overall layout trend of "connecting point to line, then from line to surface".

2) The FTZ reform is, from its focus point, toaccelerate the transformation from trade facilitation to investment promotion, financial innovation, government functions transformation, emerging business and other core issues.

- Accelerate the transformation in the field of investmentto a unified, transparent, fair and convenient institution with rules.

- Based on the construction of risk management and control system, the financial sector shall accelerate the realization of capital account convertibility and opening.
- With the negative list management as the core, further promote the government decentralization and tax incentives to improvethe investment.
- Take use ofinstitution innovation to promote public entrepreneurship and foster early and pilot implementation in new industries such as the Internet+ and otheremerging industries.

3) The FTZ from the pace of reform willcontinue to deepen the reformingand accelerate the replication and promotion of the experience of opening up.

At present, the benign effect of "institution innovation - experience promoting - forced reform" in FTZ has been initially formed. It is foreseeable that with guidelines ofthe eighteenth comprehensive deepening reform blueprint in the Third Plenary Session, the central government will further tighten the pace of reform in Shanghai, Guangdong, Tianjin, FujianFTZ, a number of systematic experience will be referred and promoted to other areas of the country. In the long run, the goal of the FTZ reform will be the implementation of the same investment negative list, the same set of financial openness and regulatory system, and the same type of government management and service model in the whole country.

(2) Proposals

To align the pilot FTZ and integrate into "One Belt And One Road" and the Yangtze River Economic Belt in depth, apart from absorbing and learning the experience from international FTZs and refer to and promote the experience of the four FTZs,Shanghai, Guangdong, Fujian, it is also required to combine its own advantages and regional strategies to actively promote innovation and reform, for example, to serve better for the strategy of "One Belt And One Road", Shanghai FTZ mainly focuses on the area of international trade cooperation promotion, financial opening expansion and complementing the hub and functional shipping infrastructure and service system.

The following considerations are proposed for the future Chongqing pilot FTZ establishment:

- Establish national logistics center

The liberation of trade shall improve the goods turnover, and the convenience of trade shall bring benefit for warehouses in bonded area in the FTZ; to better adapt to the external environment, foreign advanced logistic enterprises are requested to be introduced in to have diversified development and improve logistic international competition. These aspects shall dramatically drive local logistic industry.

Chongqing can establish the FTZ as per its development and aligning with the requirements of "One Belt And One Road", "Yangtze River Economy Belt", relying on the Chongqing-new Europe railway, Yangtze River shipping and the Chongqing airport to construct a land, water, air transport network, and rationally plan the logistics infrastructure to enable a special tax free transport channel between Chongqing and other FTZs.

With the national logistics hub platform of "three base three port area" as the core, speed up the logistics hub and logistics park construction, focus on building "one core, multi nodes" logistics infrastructure network. Greatly enhancelogistics information level, innovate in logistic mode, and accelerate the upgrading of the national logistics center hub function.

With the policy advantages of the airport FTZ, Chongqing can investigate the feasibility of carrying out the aircraft leasing business referring to those experiences in Tianjin, Shanghai and Fujian Xiamen FTZs.

With the help of bonded show transactions, it can greatly reduce the pressure on the capital of the import business, speed

up the turnover of the goods and greatly shorten the time of goods shelves.

The development of third party logistics enterprises in the competition mechanism is an important guarantee for the development automobile logistics in theFTZ. The government can set up a performance evaluation system, fairly and open choose a third party logistic enterprise for automobile enterprises in Chongqing FTZto improve the logistics information level.

- **Prepare negative list**

The four major pilot FTZs,Shanghai, Guangdong, Tianjin, Fujian currently share one negative list. A unified negative list shall allow those FTZs in the same starting line,avoiding vicious competition. With the same negative list, it could not only conductively apply to other in the future, but also bring benefit for bilateral trade negotiations in the future. The new FTZ shall apply the same list.

- **Developing industry cluster with characteristic advantages**

FTZ empathies to focus on the opening of service industry, which shall change the old opening mode that mainly open for industry manufacturing. Therefore, the establishment of FTZ shall optimize and upgrade the industrial structure and improve the productive service industry. Meanwhile, the establishment of FTZ will bring opportunities for exportation and benefit for export oriented industry. Moreover, by drawing foreign capital and business, more international institutions and headquarters, research and development institute, finance service center, and operation center will settle in the FTZ, which shall drive the industry development.

By taking the chance of pilot FTZ establishment, to further propel local economy development and get rid of the development constraints of traditional industry, Chongqing can take advantages of local resources and industry base to foster new industry support points. Developten strategic emerging industries such as integrated circuits, flat panel display, networking, robot and other high-end smart equipment, new materials, new energy and smart car, shale gas, MDI integration, bio medicine, environmental protection industry, etc.

- **Financial innovation and risk prevention and control**

Early and pilot implement the cross-border RMB business innovation and development, investment financing convenience and capitalization opening, vigorously putting forward the establishment of "pilot demonstration window of opening financial industry" and “pilot area for cross-border RMB business innovation”.

Research on appropriately loosen up the constraint of currant transactions and capital transactions.

Financial reform in the FTZ may bring risks of capital transfer and enterprise arbitrage, and the risk of short-term capital flows and regional cross-border arbitrage, thus it is necessary to improve the market efficiency to prevent and control some of the sub capital projects appropriately.

- **Regional Radiation**

Develop as the important portal of “Going out” for inland enterprises and individuals; build as the important financial innovation center, international trade portal, modern logistics hub, foreign investment center, professional service base and international communication platform for “One Belt And One Road”.

Strengthen the synergy effect between Chongqing and the surrounding six provinces.

- **Deepen cooperation between China and South Korea in terms of trade and Industry**

The establishment of China-South Korea FTZ have reduced and cancelled the tariff barriers, auto mobiles from South Korean, televisions, mobile phones and cosmetics and other advantages of products and inexpensive Chinese agricultural products, aquatic products, textiles and handicrafts will significantly enhance the export competitiveness. At the same time, the cost of Chinese enterprises for purchasing South Korean products will be greatly reduced; intermediate materials selection

scope will be expanded. This will drive a rapid increase in bilateral trade volume and substantial growth in logistic volume.

More Korean enterprises will be attracted to expand business in Chongqing if the opening up level in Chongqing FTZ iswider than that of China-Korea FTA.

China's strategies of "One Belt And One Road" and the “Yangtze River economic belt” fit with South Korea’s “Eurasian cooperation”; this shall bring more opportunities to the pilot FTZ in regards of trade and logistics.

With the shipping of Yangtze River shipping and Chongqing-New Europe railway, South Korean enterprises can open a new channel from East Asia to Europe, and Chongqing as one of the important node shall play a more important role in logistics transiting area.

In addition, the establishment of the Asian Infrastructure Investment Bank (AIIB) launched in April 2015 also shall provide possibility for the future transportation infrastructure development of Central Asia via cooperation between China and South Korea. This will further promote the development and utilization of the new European channel.

Compared with South Korea, China's high-end technology manufacturing is backward, product performance and quality need to be improved, low value added, so forced by the FTZ of China-South Korea, Chinese enterprises must strengthen the R & D investment, accelerate technological upgrading, scientific management, and enhance product competitiveness. This will also bring more opportunitiesof industrial restructuring and business cooperation to Chongqing.

The service trade between China and South Korea is mainly concentrated in the tourism, transportation, communication, finance and business services, in which tourism and communication take the dominant position. China-South Korea FTZ will play a huge role in promoting tourism service, and the relevant transport and communications industry will also obtain a rapid growth.

By "allowing the establishment of wholly foreign-owned medical institutions", the South Korean high-end beauty industry can be landed in Chongqing, so that people can enjoy the high level Korean medical beauty services without going out of the country.

- **The attraction of high-end talents and the enrich of government's think tank**

With the increase of foreign investment, the demand for talent in the FTZ has become increasingly strong. Rewards like shares or capital contribution in the form of equity of the enterprise could be provided to high-end talent and shortage talent, and implement the equity incentives and individual income tax payment policy. At the same time, establish a talent agency to provideenterprises with services of recruiting overseas high-end talents.

FTZ is not only a pioneer in new generation of trade and investment rules, but also a breakthrough in Chinese economic upgrade. In the course of the development of the pilot FTA, it has to design and upgrade the overall plan of the pilot area, institutioninnovation, prepare the negative list, and demonstrate, draft, consult and form regulations. Professional research institutions need to be setup to leverage the theoretical advantages of full think-tank, to provide services for government decision-making. This requires local and professional research institutions or universities to work together to create a platform for training and intelligence services in the pilot FTA, to provide intellectual support and talent support for the construction of the pilot FTA.

3) Wishes

The establishment of “One Belt And One Road”, and the “Yangtze River Economic Belt” and “FTZ” will bring China a new round of economic growth. As the only municipality in the western China and the future’s inland economic growth hub and the opening highland, Chongqing will play a more important role in the regional synergies.

Wish a more prosperous development in Chongqing in the future.

Reposition and Adapt: Embracing the "One Belt, One Road" Initiative

Mark Wilson
Chief Executive Officer of BP Global Acetyls

The "One Belt, One Road" (OBOR) initiative is of significance in advancing a new round of domestic opening-up and promoting the mutual development of the nations along the Belt and Road. It is noted that the OBOR initiative is a long-term, complicated and formidable systematic project, and its implementation entails a multitude of risks and challenges. The participation of enterprises in the international cooperation of the OBOR initiative calls for local governments to create a favorable environment with effective services and support and to help enterprises enhance their global operational capabilities. To that end, local governments need to position themselves properly, shift their working styles proactively, and balance the government-market relations.

I The OBOR initiative: A strategic choice to cope with challenges and to expand opening up

In today's complicated and ever-changing world, China's economy is experiencing a "new normal". Implementing the OBOR initiative will help China to deepen its opening up and to reinforce the mutually beneficial cooperation with others nations along the Belt and Road.

i. A new-type of regional cooperation mechanism

The OBOR initiative is not merely a strategic adjustment conception. Together with the free trade zone initiative, it helps China to respond to changes in the domestic and external environments. Diversification and openness are two key features of the initiative. Careful studies and systematic planning are warranted, when it comes to implementing the initiative, developing the multilateral cooperation mechanisms, and to assessing its impact.

ii. A strategic adjustment in response to economic challenges

Though the world economy is slow to recovery, countries at large are facing the challenge of sustainable development. The risks to the global economy could arise from different economies, the potential profound adjustments to the international investment and trade patterns and rules, trade protectionism, and international capital markets. For instance, the recent volatility in international financial markets, the currency depreciation of emerging countries, and the low prices of commodities have all added new uncertainties to the global economy.

Domestically, with the changes in the international and domestic environments, China's economic growth has entered the

so-called new normal which features three interwoven challenges, i.e., in the sustainable economic growth, structural adjustments, and economic stimulus policies. Some underlying problems include insufficient domestic demand, overcapacity, structural imbalance and environmental deterioration. Under the new normal, the OBOR initiative is of strategic significance to China.

iii. A pragmatic choice for further opening up and economic and trade cooperation with countries along the Belt and Road

After decades of development, China has become the world's second largest economy and gained certain advantages in funding, technology and equipment, which could benefit mutual beneficial cooperation. More than 60 countries covered by the OBOR initiative mostly came out of international financial crisis to grow in recent years, presenting potential investment opportunities. The economic and trade exchanges between China and other countries in the region, notwithstanding limited currently, are highly complementary and have enormous development potential.

Notably, energy cooperation is an important part of the OBOR initiative. The changes in the international energy landscape have brought ample opportunities for cooperation. With the economic growth, the improving living standards and the further urbanization, China's demand for oil and gas will be growing for an extended period, albeit at a slower pace. Energy security will always be essential to China. Yet, its counterparts along the Belt and Road are abundant in resources.. The Middle East, Central Asia and Russia are particularly rich in oil and gas resources, and sensible for Chinese oil companies to strategically undertake oil and gas cooperation. As a result, it is of great significance for China's energy security, to advance energy cooperation among energy producers, consumers and transit countries and jointly build a new type of energy cooperation mechanism.

In brief, the OBOR initiative could meet the shared needs of China and other countries in the region, and help complement each other in further opening up and economic development. Indeed, such cooperation could be conducive to China's domestic economic growth, Asian economic integration and economic globalization, and ultimately regional development and common prosperity.

II Risks and Challenges to the OBOR initiative

The major challenges and risks to the OBOR initiative could arise from political, economic, ethnical and cultural differences among countries concerned and the complicated domestic and international relations, making its implementation a long-term and arduous systematic project.

i. Economic and environmental factors

Due to the different resource natures, social systems, geographic positions and development stages, countries along the Belt and Road experience different stages of economic development and market openness. Efforts are needed to improve infrastructure, taxation, market access and investment protection systems, which indicate risks for investing in these countries. Therefore, the successful implementation of the OBOR initiative lies in the cooperation between China and other countries. And friendly interactions could help mitigate and manage unpredictable difficulties and risks.

ii. Geopolitical factors

Most countries along the Belt and Road vary widely in social systems, with complicated domestic political situations, dramatic policy changes, and the complex geopolitical relationships. Yet the infrastructure projects of the OBOR initiative involve huge investments, long project development and return cycles. Therefore, the success of any project depends largely on the partner countries' political and policy stability and their relations with China.

iii. Ethnic and religious factors

The OBOR initiative covers more than 60 countries and regions, and their diverse ethnic groups and complex religions present difficulties to cooperation between China and those countries and regions. International terrorism, religious extremism, ethnic separatism, transnational organized crimes, and unrests are present in some regions. These non-traditional security threats could threaten the security of personnel and equipment of enterprises and pose a serious challenge to the implementation of the OBOR initiative, especially the cooperation in energy and infrastructure.

iv. Regional cultural factors

The cultural diversity in the region covered by the OBOR initiative makes it difficult to coordinate the interests between different countries. Due to the differences in social systems, cultural traditions and values, those countries may have quite different understandings of the initiative.

v. Risk tolerance capabilities

The OBOR initiative tests the international operation capability of enterprises, and their capability in managing risk and incidents. While actively participating in the OBOR initiative, Chinese enterprises need to strengthen their talent, technology and financial strength as well as international management experience, and enhance the awareness and ability to adapt to the competitive environments in different regions, countries, and markets.

Overall, most countries along the Belt and Road are different in economic systems, political risks and social flexibility. In implementing the OBOR initiative, one may, on one hand, see the abundant natural resources and urgent need for economic development of some countries, and on the other hand, objectively understand and assess the political and economic risks of these countries to guard against risks brought about by regime changes, social unrests, debt default and so on.

III Review of government functions in the OBOR initiative

Governments and enterprises play different roles on the platform of OBOR. The first and foremost issue in implementing the initiative is to properly handle the government-enterprise relations. While actively engaging in the national strategy, local governments should position themselves properly and review their functions to guide and support the participating enterprises by the rules of the market economy.

i. Positioning of governments and enterprises

The OBOR initiative is primarily about cooperation at the national level, in which the country has five main responsibilities: first, promote coordination through diplomacy, and address misunderstanding of some countries in the region through diplomacy and public efforts; second, build cooperation mechanisms. The OBOR initiative involves cooperation both in the economic field and non-economic areas, and the future cooperation will be carried out under a variety of cooperation mechanisms, so rational planning is needed for the appropriate cooperation mechanisms between different regions and even between different countries. Third, establish government investment and financing institutions. The Asian Infrastructure Investment Bank (AIIB) and Silk Road Fund spearheaded by China have entered the stage of implementation and operation, which in the future could meet the standards of international financial institutions and take into account the interest demands of participating countries. Fourth, accelerate the domestic market-based reform. Domestic openness is the prerequisite and basis for opening up to the outside, so it is equally helpful for China to lift restrictions on market access and domestic investment in areas such as energy and infrastructure, eliminate institutional barriers that impede the flow of personnel, capital and other resources, and improve the efficiency of resource allocation. In short, the governments should adjust their roles and functions for non-economic cooperation, such as maintaining the security of transport corridors, promoting counter-terrorism cooperation at the regional level, boosting the common development of marine resources, advancing the cooperation in environmental protection in the region, and expanding cultural exchanges. Fifth, provide policy support for related industries or enterprises in specific fields. For instance, in recent years, under the influence of such factors as the domestic economic slowdown, the volatility in the international financial market and the decline in commodity prices, some companies have been affected to varying degrees and thus slashed foreign investments, needing taxation and funding support. For another example, some countries may not have enough market access and appetite for foreign direct investments, the efforts between Chinese government and the local governments are needed to facilitate the operations of Chinese enterprises.

Economic cooperation is the foundation of non-economic cooperation, and enterprises are the main players in the market and the major forces to implement the OBOR initiative. Some Chinese companies have made progress and breakthroughs in this regard. Before making investments, enterprises should, in the first place, consider the investment risks and investment returns in accordance with the principles of the market economy. The market mechanism is needed to prevent economic cooperation projects from turning into pure foreign aid projects. This is a basic condition for the successful implementation of the OBOR initiative. Enterprises should make investments in accordance with the principle of comparative advantages in international economic cooperation, conduct economic cooperation on the basis of comparative advantages, make full use of the existing comparative advantages and at the same time, create new comparative advantages.

ii. Shift of local governments' functions

As mentioned above, countries along the Belt and Road are at different stages of economic development social environments, and investment risks. Local governments may serve as the bridge and connection between the state and enterprises. In the new round of opening up, the governments need to take initiative to adapt to the changing situation and actively adjust their roles. On the one hand, they should could do well in the publicity and guidance of the national strategy, actively safeguard the rules of the market economy, provide and improve public goods, and create the conditions for

enterprises; on the other hand, local governments should provide effective services for the economic activities of micro-level market players, including investment climate research on target countries, investment risk assessment, as well as personnel and financial support. At the same time, they should make efforts to tap the market and resource potentials of their local region, promote local investment and consumption and provide a good domestic environment for enterprises "going global". These measures can also create demand and job opportunities.

IV Global energy market and BP's opportunity in "Belt and Road"

i. Conditions of the global energy market

The turbulence of global energy markets in 2014 is a return to business-as-usual, not the exception. Continuous change is the norm in our industry. The energy mix changes. The balance of demand shifts. New sources of energy emerge, such as shale gas, tight oil, ultra-deepwater oil or renewables. Economies expand and contract. Energy production and consumption are affected by disruptions, from wars to extreme weather. New policies are created to address climate change or bolster energy security. Energy companies need to adapt and to build strategically for the longer term.

According to BP Energy Outlook 2035, three key features are particularly worth noting for the future energy landscape.

First, trade patterns are shifting. The strong growth of US tight oil in recent years has had a dramatic impact, with oil increasingly flowing from West to East rather than East to West. This is likely to continue, with strong growth in China and India driving energy demand. We also expect to see the market in gas become more global as liquefied natural gas (LNG) integrates regional markets and leads to greater congruence in global price movements.

Second, the energy mix continues to shift. Fossil fuels are projected to provide the majority of the world's energy needs, meeting two-thirds of the increase in energy demand out to 2035. However, the mix will shift. Renewables and unconventional fossil fuels will take a larger share, along with gas, which is set to be the fastest growing fossil fuel, as well as the cleanest, meeting as much of the increase in demand as coal and oil combined. Meanwhile, coal is now expected to be the slowest growing fuel, as industrialization in emerging Asian economies slows and environmental policies around the globe tighten.

Third, the global climate change and environmental protection will still face serious challenges. Climate concerns were an obvious focus in 2014 as global leaders and campaigners mapped their course to Paris at the end of this year. Obviously, no single change or policy is likely to be sufficient on its own.

ii. BP's opportunity in "Belt and Road"

The changes in the global energy market and the regional pattern have provided a rare opportunity for China to further adjust its energy strategy, thus advancing energy cooperation in the OBOR initiative.

BP as one of the world's leading international oil and gas companies, has operations in around 80 countries including many countries and regions along the OBOR, such as Indonesia, Central Asia, Russia, the Middle East and other areas.

Building on its business successes in China, BP has also expanded partnership relations with the national energy companies beyond the country's borders. Among all the projects, BP is working with PetroChina in Iraq, Sinopec in Angola, and with CNOOC in Australia, Indonesia and Argentina.

The Rumaila oil field in Iraq is a good model of such energy cooperation. The Rumaila oil field is among the world's top ten oil producing fields. Yet due to the war and lack of investment, its oil production had continued to decline. In 2009, BP teamed up with PetroChina to develop the oil field. This partnership has capitalized on BP's in-depth understanding of oil fields and local situations in Iraq as well as its rich experience in operating large oil fields, and has also leveraged PetroChina's integrated oil service and engineering expertise as well as its cost advantages. Both partners have paid attention to local staff training, properly handled the relationship with local stakeholders, supported local economic development, protected the environment and resources, and thus won the recognition of the Iraqi government, the business community and local people.

Going forward, BP is committed to reinforcing our partnership with China both in the country and overseas, especially in countries and regions covered by OBOR initiative. We would like to share our profound understanding of the cultural and economic differences in different regions and rich experiences in risk identification, mitigation and management, to contribute to the implementation of OBOR initiative and to support China's energy security strategy.

Improve Soft Power of Chongqing to Support the “One Belt and One Road” Strategy

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INTRODUCTION

Chongqing is geographically located at the heart of two major policy initiatives in China:

- The "One Belt, One Road" initiative: this aims to revitalise historic Silk Routes linking China across Central Asia to Europe, and, to the south, the Maritime Silk Road connecting coastal China to southeast Asia, India and Africa.1.5 trillion yuan will be ploughed into infrastructure and cross-border linkages between Belt and Road countries.[1]
- The Yangtze River Economic Belt development initiative: Chongqing as Western hub of Yangtze River Economic Belt, under this China aims to develop the upstreamof the Yangtze River – which Chongqing as Western hub ofthis economic Belt.

Both ofthese strategic plans are important elements of China Central Government's efforts to move more of the country's economic activity to inland China, and reduce the focus on the coastal areas such as the Yangtze River delta. In addition, the "One Belt, One Road" initiative will help to absorb some of China's excess industrial production capacity and bolster its overseas trade and investment. This will in turn stimulate production and consumption demand at home.

Chongqing can enhance its connectivity and influence under the "One Belt, One Road" and Yangtze River Economic Belt initiatives, to further reinforce its strategic position as a shipping centre in the middle reaches of the Yangtze and a national logistics hub. This will also be focused on developing the city into a financial and technology centre.

The city already has good business "hardware", in the shape of efficient infrastructure and developed manufacturing capabilities, including in the high-tech sector. Leading computer and related products manufacturing have set up plants in Chongqing, including Foxconn, Pegatron and Inventec from Taiwan. Last year, exports of high-tech products increased by 25% to USD 31 billion.

In addition, the Chongqing municipal government has already issued its opinions on implementing the "One Belt, One Road" and the Yangtze economic belt strategies. It is planning to invest 1.2 trillion yuan in infrastructure by 2020, including in improving transport links with those areas.[2] This will generate opportunities for co-operation in construction, planning, management, finance and other related fields.

However, the city also needs to enhance its "soft power" if it wants tobuild up its status as a go-to destination, and a provider of goods and servicesfor businesses from in the "Belt" and "Road" countries and the Yangtze development area.

As Joseph Nye, who defined the concept of soft power, has observed: "Popular entertainment often contains subliminal images and messages about individualism, consumer choice and other values that have important political effects."[3]

There are various ways to unleash a city's "soft" influence – ideas, images, theories, know-how, education, discourses, culture, traditions and national or city symbols, quality of life, a reputation for openness to entrepreneurship and innovation.

Chongqing already has a wealth of "soft power" assets. It has vibrant culture, deep history, good cuisine, innovation, favourable policies aimed at foreign business.

This paper offers some advice on how to do this. It will look at some of the ways in which other cities and countries have

[1] HSBC Global Research - One the New Silk Road III

[2] http://economists-pick-research.hktdc.com/business-news/article/Research-Articles/One-Belt-One-Road-Yuxinou-Railway-Development/rp/en/1/1X000000/1X0A2XUF.htm

[3] Joseph Nye, "Soft Power and Higher Education", in Forum for the Future of Higher Education, January 2005

UK Department

honed their "soft" influence and appeal.

It will also offer suggestions on how Chongqing can strengthen and deploy its soft power in the context of the "One Belt, One Road" and the Yangtze River economic belt initiatives.

Through "soft power" Chongqing could gain an extra edge both within China and in countries along the "One Belt, One Road" routes.

Major Economic Indicators[1]

Total municipal population: 29.9 million (2014)
GDP:1426.5 billion yuan, grew by 10.9% year-on-year (2014)
Per Capita GDP: 47,859 yuan (2014)
Industries: automobiles; military; iron, steel and aluminium industrial centre in China. Recently, electronics and related industries grew strongly.
Famous spots: The Three Gorges, Dazu Rock Carvings

RECOMMENDATIONS FOR THE CHONGQING MUNICIPAL GOVERNMENT

I recommend that the Chongqing municipal government considers the following suggestions on how the city can improve and leverage its soft power to support the national "One Belt, One Road" strategy.

1. MAXIMIZE "CITY BRAND" IMPACT ALONG THE "BELT" AND "ROAD"

A city's brand is all about how it is perceived both by its own inhabitants and by peopleliving elsewhere. A city's brand, or image, can focus on many things. A positive brand, for example, can build on and showcase characteristics like:

- a high quality of life, attractive surroundings
- local culture and historical heritage
- a vibrant, diverse economy and businesses environment
- a friendly business environment, where it is easy to set up new businesses and obtain funding
- openness to tourism and foreign talent
- modern infrastructure
- educational facilities

A good brand can help a city to stand out from the rest of the country. By attracting business, tourism and bright employees, it can help to underpin a city's economic performance.

Chongqing already has many of the features listed above and can build on them further.

"One Belt, One Road" is a complex cultural and economic bridge between east and west that unites people. Strong city branding can benefit Chongqing to set the right tone and position itself in this initiative development.

[1] http://china-trade-research.hktdc.com/business-news/article/Fast-Facts/Chongqing-Market-Profile/ff/en/1/1X000000/1X06BPV2.htm population

I suggest Chongqing highlights things like its cultural and historic heritage and its approach to business (e.g. industrial parks, top universities) to establish a "brand" to showcase its characteristics that will help position it as a good place to do business, banking, cross-border trade and investment and visit within the "One Belt, One Road" context.

Chongqing has ambitions to become a financial hub for inland China; a manufacturing centre for the IT sector; a free trade zone; and a transport hub leveraging the Yangtze River's waterway capacity and air, rail and road connections to Europe.

By raising Chongqing's profile, a strong city brand could help support these ambitions.

Two examples could offer helpful insights.

New Zealand was the first country to embark on a massive marketing campaign at the national level. It launched its global slogan, "100% Pure New Zealand" in 1999 and poured USD 41 milliondollars into broadcast advertising alone over twoyears. As a result, the number of foreign tourists jumped 53%, while wine exports grew sevenfold.

From 2003, the country developed a second brand called "New Zealand New Thinking," with the aim of nurturing innovative industries.By now, the country has an established brand, or reputation and image, for being a good place to live, visit and do business.

Seoul, South Korea, has emerged as a hotbed of design, fashion, and technology in recent years. However, the city of 10 million people, has a pressing need to reinvent the city.Seoul is eager to turn itself into a large-scale experiment for the sharing economy. The city government has officially embraced the new brand – "Sharing Economy". The project is working in partnership with NGOs and private companies to connect people to sharing services and each other, recover a sense of trust and community, reduce waste and over-consumption and activate the local economy.

2. PROMOTING THE CULTURE AND TOURISM ALONG THE SILK TOAD

The Silk Road Spirit is an historic and cultural heritage shared by all countries around the world. This is the same as Chongqing, an historical and cultural city in China with more than 3,000 years of history.

The city is located at the centre of the ancient Bayu Area which is the birthplace of one of the most distinctive cultures at the upper reaches of the Yangtze River – Bayu Culture (巴渝文化).

Chongqing, with its beautiful mountains and rivers, is a famous destination for tourists. It has numerous natural scenic spots such as the Three Gorges, Dazu Rock Carvings. In 2014, Chongqing received 2.64 million overseas tourists, bringingaforeign exchange revenue of USD 1.35 billion.[1]

I recommend that Chongqing carry forward the spirit of friendly cooperation of the Silk Road by various means:

- Promote extensive cultural, academic and personnel exchanges. These can encourage different cultures to learn from each other and flourish together; and promote friendship among people of all countries.
- Consider holding tourism promotion weeks and publicity months in other countries along the Belt and Road. Events like the "Chongqing Day" in the China Pavilion at the recent Milan World Expo are good examples of how to showcase the

[1] Statistical Communique of Chongqing Municipality on the 204 National Economic and Social Development

performance of classical Chinese folk music and modern fashion folk fusion, showcase Chongqing's appeal, and give visitors a chance to enjoy Bayu's cultural charm.

- In cooperation with "Belt" and "Road" countries, create international tourist routes and products with Silk Road features.
- Make it more convenient to apply for tourist visas in countries along the Belt and Road.
- Hold cultural years, arts, film and food festivals, as well as TV weeks and book fairs in Chongqing and in other countries.
- Build up digital tools(presence on social media and websites) to showcase Chongqing's attractions and social events. These social tools are powerful ways to create and deliver a brand to huge audiences in China and around the globe.
- Encourage the corporate world help project Chongqing's appeal to the world and help Chongqing residents and tourists to enjoy the spiritual and emotional charm of the cultural sector. There are clear business benefits for corporate investors in partnering with tourism and other cultural institutions.

3. ENTREPRENEURSHIP AND INNOVATION

A vibrant entrepreneurial scene and openness to innovation are key to helping economies grow and thrive. They can also be important elements of "soft power".Cities that are welcoming to entrepreneurs and to innovative business ideas can be perceived as being attractive destinations overall.

The "One Belt, One Road" project presents big development prospects for more than 65 countries. By building on China's approach to "OpeningUp", it will widen and deepen cross-border economic cooperation, providing a wealth of opportunities for entrepreneurship and employment.

(1) Foster private-sector entrepreneurship and innovation

- I recommend that Chongqing continue its effort to deepen reforms and unleash new creativity for mass entrepreneurship and innovation in the privatesector. This will eventually result in the transformation of the government's focus from public to private ownership.

- I advise the city toencourage entrepreneurs and private companies to participate in infrastructure construction projects,as well as emergingindustries like new-generation information technology, biotechnology, new energy technology and new materials.

(2) Promote more entrepreneurship education

The concept of encouraging students to have an "entrepreneurial spirit" is a relatively new one in China's university sector.

The key challenge for entrepreneurial education is to bring about a cultural and behavioural change in people – encouraging them to follow in the footsteps of entrepreneurs, rather than fearing change and hanging on to "iron rice bowl" government jobs.

Inspiring stories like that of Alibaba could and should encourage ambitious young Chinese to jump on the entrepreneurship bandwagon.

- I advise Chongqing's government to work together with local universities and businesses to set up an entrepreneurship centre. Such a centre could play an important role in training student entrepreneurs; offering young entrepreneurs guidance on setting up and running businesses. Offerings could include workshops and business planning tutorialsfor start-ups, and employment guidance.
- I suggest the Chongqing government to integrate its existing resources to bolster the successful model further. For example, The Liangjiang New Area was formally established in 2010. It was the third national development and opening zone in China – and the first in the inland – approved by the State Council, after Shanghai Pudong New Area and Tiajin Binhai New Area. The Liangjiang New Area offers a good environment for university graduates and entrepreneurs to start their own businesses through things like investment training and start-up services.

Chongqing government could work together with corporates and industry parks to provide strong support and resources for entrepreneurship.

- As with a lack of skills, it can be case that start-ups do not possess the physical resources or facilities they need in order todevelop particular projects. The government should consider to provide a number of initiatives, particularly incubator and accelerator schemes, that can help overcome these concerns by providing access to publicly owned facilities.
- I also recommend the Chongqing government build up a start-up community for people to have an environment to share experiences, ideas, talent exchange, and most importantly, build networks between countries along the Belt and Road.

A useful example is the Chinese University of Hong Kong Centre for Entrepreneurship (CfE), which was inaugurated on May 24, 2005.

The Centre has united scholars in the areas of research, education and community service to inspire the spirit of entrepreneurship and nurture entrepreneurial thinking.

Last year, the universityin collaboration with Google's Empowering Young Entrepreneurs Program, offered a year-long event, bringing together the brightest talents to discuss and exchange ideas on the two things cherished by most, if not all, economies around the globe: innovation and entrepreneurship.

It also provided networking opportunities peppered throughout the program. Entrepreneurial trainees had the opportunity to draw from a deep well of expert mentorship.This start-up community adds another valuable resource to the ecosystem.

A study by Google and the Chinese University of Hong Kong Centre for Entrepreneurship in late 2014 revealed that Hong Kong's start-up ecosystem has tripled in size since 2009, with notable growth in start-up accelerators and incubators, as well as funding sources.

4. INNOVATIVEFINANCING

Soft power is not just about meetings and collaboration. Some aspects of it – especially the "soft power" that comes from being known as a location that offers a good business environment and welcomes innovation – must be backed by reliable funding.

Raising capital is one of the most difficult parts of getting a business idea off the ground – so many start-ups need a helping hand.

I advise the Chongqing government consider various ways to support entrepreneurship. These could includelocal government funding; collaborations with established corporates; and new financial funding concepts such as crowdfunding.

Here are some successful models they can adopt.

(1) Government Direct Funding

All publicly funded schemes are designed to encourage new and growing businesses to bring wealth and ultimately create jobs. To help achieve this, the government makes available a portion of capital to help and encourage enterprise through small business grants. This capital gets distributed through a variety of government bodies and agencies. Most businesses are eligible at any one time to apply for a number of different business start-up grants and support schemes which are distributed in a wide variety of forms.

There are various models that Chongqing government may consider to adopt:

- Direct grant, it is usually given out for activities such as capital investment projects, training, employment.

For example, in Hong Kong there are various bodies supporting start-ups. The government funds a big range of things – everything from creativity and design, to environment management, financing loan or insurance, research and development, to training funding opportunities.

- Soft loan is a special type of grant where the terms and conditions of repayment are more generous than they would be under normal financial circumstances, such as, less interest rates or even maybe no interest for pay back, or the repayment terms could be longer period.

For example, there are hundreds of organisations that offer soft loan and guarantees but the most notable is government funded scheme “Start Up Loans”. This offers new businesses loans of up to £25,000 for 6% interest with a 12 month repayment. To date, it has helped to fund over 10,000 start-ups with over £50 million invested.

(2) Business fund for entrepreneurship

Apart from direct government funding, I also suggest the Chongqing government consider collaboration with corporates to provide funding for start-up businesses.

A useful example to consider is this:

HSBC has been a strong advocateof a cross-industry scheme in the UK called the Business Growth Fund (BGF). This is a privately-owned, venture capital company with funding of up to £2.5 billion (24.7billion yuan). It is backed by five of the UK’s main banking groups, HSBC included.

It was establishedincollaboration with the British government to increase the availability of lasting growth capital for small and middle-market companiesin order tobolster the UK’s soft power.

The fund is focused on rapidly growing businesses with revenues of £5m to £10m and offersfunding of up to ten years. Currently with more than 50 investments, it seeks companies that will prospectively become household names with good past performance, have a proven business model and desire to grow.[1]

The BGF is intended to plug a long-term structural gap in the market in the UK. This gap has been aggravated by the difficulties of the current financial climate, particularly by a lack of available credit and over-reliance on debt.Additionally, the focus of private equity on larger transactions and management buy-outs rather than the provision of growth capitalhave left many firms without many options for investment.

[1]http://startups.co.uk/business-growth-fund/

The fund intends to provide longstandingfinancing for growing companies that do not have access to that kind of capital. It also provides mentoring by experienced businesspersons and investment experts.

I believe that it is a model that could also assist Chongqing's small and medium-sized businesses.

(3) Crowdfunding

A number of new funding concepts have in recent years given entrepreneurs in Western countries new ways to raise capital.

Crowdfunding sites like Kickstarter and Indiegogo have become an increasingly popular way for start-ups to fund new ideas and business.

For example, Kickstarter, based in New York, lets people raise money for projects that fits into one of 13 categories. Applicants need to post a short video and description of their endeavour in a bid to raise support. Anyone can donate, and backers often receive promotions or the first release of a product.

Some 4.7 million people have pledged more than USD 760 million to 47,000 Kickstarter projects in the past four years, according to its website.

Crowdfunding sitessuch as these have helped aspiring filmmakers, comic-book creators and Web entrepreneurs aiming to get inaugural products to market. Successful venture-backed start-ups often subsequently use the sites to find users and reviewers of their technology.

In this model, I suggest Chongqing government to act solely as regulator to ensure that common standards are being observed and the legal framework is in place.

5. ATTRACTING TALENT

Every business needs dynamic, motivated staff. Good staff can help spark innovation, facilitate the business development, bring vitality to the enterprise, and help improve or maintain a company's reputation and "soft power."

The same concept applies for cities. Motivated, happy and diverse populations form a key element of a city's brand and attractiveness.

It is important for Chongqing to attract and retain excellent talentsboth from within China and from other parts of the world.

To do so, Chongqing should try to build a liveable, attractive and efficient and well-run city, continue to build out its infrastructure, and fully increase its overall cultural strength and reach.

One key way to attract and retain foreign workers is to make it easier for them to obtain the necessary permits to move to/stay in Chongqing.

This will eventually lead to an ideas-led economy that bolsters innovation in everything from music and technology to sustainability and design

The Chongqing city government should consider the following approach, adopted by Shanghai:

Shanghai recently launched a series of immigration policies to attract worldwide talent to support the development of Shanghai sci-tech innovation centre. The new police relaxing the identification standards of overseas talent, conditions of permanent residence and also introduces measures to simplify and accelerate the procedures.

In addition it also offers more convenience to encourage foreign talents to start up business and invest in Shanghai. Shanghai is set a goal of 160,000 set in a city talent plan for 2015 and it is expected to have 210,000 foreign experts by 2020.

CONCLUSION

In conclusion, I make the following recommendations to the Mayor of Chongqing:

1. Maximize "City Brand" impact along the "Belt" and "Road"*(more details can be found on page 164)*

- Build up a brand that leverages the city's existing cultural strengths and openness to dynamic businesses.
- Spreading and deepening both the city's characteristics that will help position the city as a good place to do visit, business, cross-border trade and investment.

2. Promoting the culture and tourism along the silk road *(more details can be found on page 165)*

- Consider holding "cultural year", arts, film and food festivals, as well as TV weeks and book fairs both in Chongqing and in countries along the "Belt" and "Road"
- Encourage cross-border educational and cultural exchange projects
- Build up digital tools to promote the city's attractions or social events
- Encourage the corporate world help project Chongqing's appeal to the world

3. Entrepreneurship and innovation*(more details can be found on page 166)*

- Foster private-sector entrepreneurship and innovation, as well as encourage entrepreneurs and private companies to participate in infrastructure construction projects along the "Belt" and "Road"
- Promote more entrepreneurship education such as work together with local universities and companies to set up an entrepreneurship centre and also build a start-up community

4. Innovative Financing*(more details can be found on page 167)*

- The government funding in the form of direct grants or soft loans is crucial.
- Chongqing government should also consider collaborating more closely with the private sector to diversify financing
- Another approach to raising capital for new start-ups business ventures involves crowdfunding. Sites such as Kickstarter and Indiegogo have become an increasingly popular way for start-ups to fund new ideas and business in the United States.

5. Attracting talent*(more details can be found on page 169)*

- Continue to build out its infrastructure to build a liveable, attractive, efficient and well-run city
- Make it easier for foreign talent to live and work in the city

“One Belt and One Road” Strategy and Social Innovation for Development

HITACHI

1. Conforming to the “New Normal”, and Developing the “Zhongchuang Space”

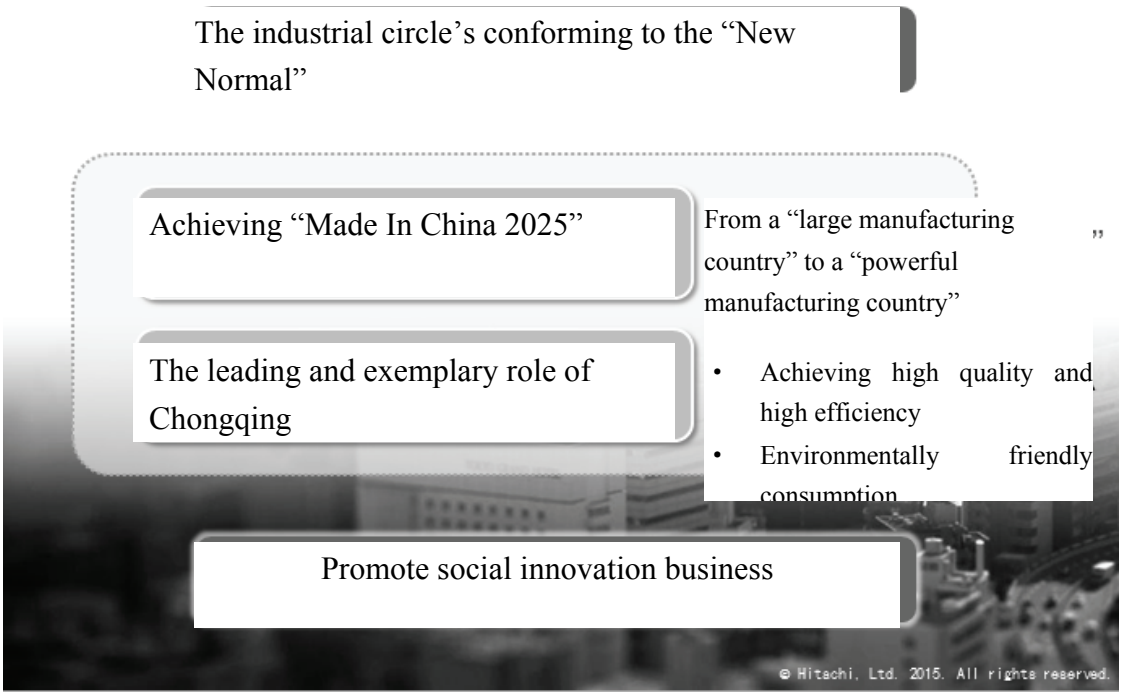
At present, China's economic growth is entering a “new normal”, therefore, the industrial circle also needs to accelerate the adaptation to this "new normal". The manufacturing industry shall transform its growth model of taking “mass production and cheap labor force” as advantages to that of emphasizing “the promotion of quality and efficiency”; and the emphasis of investment targets shall also be laid on the investment with the objective of “achieving high quality and high efficiency” from that of “expanding the scale and enhancing the capability”. In addition, from the perspective of energy and resources, the consumption pattern is changing from “heavy consumption of energy” to the “environmentally friendly consumption”. In short, all industries are making improvements in energy efficiency; at the same time, the pattern of economic development will also be changed, and the center of gravity of economic development will be transferred to “the tertiary industry” from “industries with large environmental load”.

The routes for realizing these transitions are defined in the One Belt and One Road Strategy and “Made in China 2025”, which puts forward a series of strategic measures for transforming China to a “powerful manufacturing country” from a “large manufacturing country”, such as leading the economic development with innovation drive, creating the high quality and preponderant competitive power, transforming to green manufacturing and service-oriented manufacturing. The years to come will torture the implementation of these strategic measures.

At present, Chongqing has made many remarkable achievements in its economic development, and the economic growth rate is much higher than the average level of the state. Therefore, we believe Chongqing shall play a leading role in the process of realizing “Made in China 2025”. From another perspective, owing to the leading development, Chongqing is facing many problems needing to be solved, such as the rising labor costs and excess production capacity; in this sense, the current relevant strategic planning shall also be detailed. In addition, with respect to the preparation of strategic measures, their implementation would need more efforts and wisdom, so we believe that other cities have a higher value of expectation on the measures that Chongqing will adopt.

In order to achieve “Made in China 2025”, China’s manufacturing industry is bound to adopt a variety of measures in the coming days. Now, I’d like to introduce the “social innovation business” of Hitachi, and I hope it will be helpful to the development of China's manufacturing industry.

Conforming to the “New Normal”, and Developing the “Zhongchuang Space”



In 2006, namely nine years ago, Hitachi proposed the concept of “the social innovation business”, and put forward the policy of “constructing the social infrastructure being more reasonable and more convenient through the application of IT technology”. The consumer electronics business was the pillar industry of Hitachi in the past; however, it suffered a sharp deterioration in its earnings owing to the brutal global competition. Therefore, the company promptly changed its business structure, turned its focus to the business with higher added value, and strengthened the “social innovation business”. Consumer electronics business is the capital intensive and knowledge intensive industry requiring excellent talents, high research and development capacity, and huge investment in equipments; but at that time, the company did not believe that such high investment could certainly bring high returns.

Thereafter, in order to strengthen the “social innovation business”, Hitachi adopted various measures, to which the key was “expanding the application of IT technology” and “making co-creation with customers”. Through the flexible use of IT technology, the company can visualize the new tasks and new business opportunities of customers, and discuss the issues of reexamining the value chain and launching new careers. Therefore, in order to achieve these strategic concepts, it is essential to make flexible use of IT technology.

Realize the Upgrade of the Manufacturing Industry through “Making Co-Creation with Customers” and “Expanding the Application of IT Technology”

The first thing that should be stated is the importance of “Making Co-Creation with Customers”. The so-called “Co-Creation” refers to the process of making a full dialogue with customers, understanding their tasks and demands in the

perspective of the customers, and then carrying out the corresponding measures together. In order to promote the related countermeasures for customers, we shall provide the products, as well as the related services.

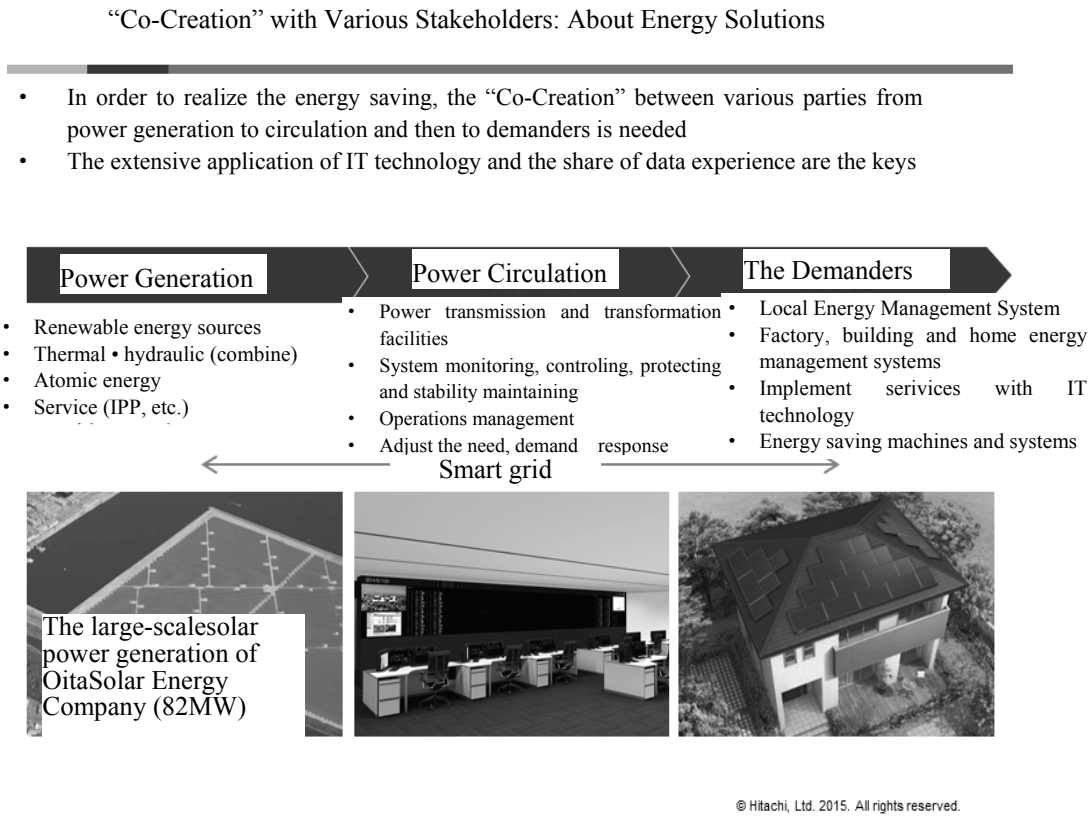
For example, Hitachi has provided a large number of equipments and machines for its customers, meanwhile, it has also contracted the service business such as spot-inspection maintenance and operations management; now, it is expanding these services. What's important is that the efficiency of these services contracted by Hitachi has been greatly improved. Moreover, because of the increasingly critical application of big data and analytics, Hitachi believes that it is essential to expand the application of IT technology for helping customers to create value.

"Making Co-Creation with Customers" and "Expanding the Application of IT Technology"

- Define the value of the provided products and expanding services through "Making Co-Creation with Customers"
- Improve the service productivity through "Expanding the Application of IT Technology"

1 Realize the Upgrade of the Manufacturing Industry through the "Co-Creation" with Various Stakeholders

The realizing of the social innovation businesssometimes also requires making "Co-Creation" with various stakeholders. Taking energy saving and low-carbon life for example, from power generation to circulation and then to demanders, a variety of suppliers will be needed to provide various equipments, machines and services.



In order to realize the overall energy saving and low carbon life, the efficiency of every single equipment and machinery shall be improved, and their overall operation shall also be optimized. For this reason, it is important to expand the application of IT technology, and make clear the matters such as "whether the energy supply is beyond the needs of the demander, and whether there is any waste", "whether there is unevenness in the distribution of energy", "whether there are contradictions between systems", and then find the solutions. If the Smart Grid, Demand Response, FEMS (Factory Energy Management System), BEMS (Building Energy Management System), HEMS (Home Energy Management System), and other measures as shown in the figure are expected to maximize their effects, the essential deed is to "expand the application of IT technology", and make "Co-Creation" with various stakeholders such as the customers, equipment suppliers, and energy suppliers.

Here, I'd like to explain the importance of making "Co-Creation" with various stakeholders with an example of the One Belt and One Road Strategy. At present, the global logistics market is growing at an annual growth rate of 8%, the demand in Asian countries and regions, especially in China, enjoys a dramatic expansion, and it is expected to achieve a double-digit growth. However, with respect to the logistics demand increasing simultaneously with the economic development, the efficiency of logistics in China is quite low due to the reason that the logistics infrastructure has not been perfected; compared with Japan, the logistics cost corresponding to GDP in China, especially the operating cost occupies a very high proportion.

The IT Department, Logistics Department and other departments within Hitachi Group are cooperating with each other to carry out intelligent logistics in China. So we shall take advantage of IT technology to improve the operation of logistics, and make analysis on and optimize the big data gained from the informatization, so as to make a contribution to improving the medium and long termoperational efficiency of customers and creating new services.

“Co-Creation” with Various Stakeholders: About Logistics Solutions

Various measures for promoting intelligent logistics

Integrate various logistics data, and realize optimization through analysis with IT technology

- Reduce the logistics cost and environmental load through jointly goods consolidation and distribution
- Achieve high efficiency of the supply chain (according to the allocation plan, inventory plan, and transportation/moving plan, etc.)
- Support the implementation of business strategies (cost analysis and risk visualization, etc.)
- Create new services

2 Providing Advice and Suggestions for the Sustainable Development of Chongqing

The innovation through “Co-Creation” is very important for realizing the upgrade of the manufacturing industry. As for the development of social innovation, in addition to “Co-Creation with Customers”, the “Co-Creation” with the government and academic institutions is also quite important. If Chongqing wants to take a lead in realizing “Made in China 2025”, it has to specifically implement the measuresbeing related to the integration of consumers, government, academic institutions and industrial circle. Moreover, for the strategic emerging industries, it has to take further measures to strengthen them through expanding the application of IT technology (data analysis and technology sharing).

The experience and techniques of Hitachi can make a contribution to the upgrade of the manufacturing industry, and to the low carbon and energy-saving. We expect that the innovation combined with industrial policies may take root and sprout in Chongqing, and we also look forward tocontinuing the cooperation with Chongqing.

Providing Advice and Suggestions for the Sustainable Development of Chongqing

Realize innovation through “Co-Creation”

- Promote the specific implementation of the measures being related to the integration of consumers, government, academic institutions and industrial circle
- Further strengthen the strategic emerging industries through expanding the application of IT technology
- Hitachi expects to make a contribution to the upgrade of the manufacturing industry and the low carbon and energy-saving with the experience and techniques accumulated in Japan

Industry Internet - to Build an Innovative World City

Robert Y.L. Mao

Hewlett-Packard Company Consultant
Chairman of China Region

Chongqing, located at the intersection of the Silk Road economic belt and the Yangtze River economic belt, is a strategic hinterland of maritime Silk Road, and thus has an extremely important strategic position. Currently, in the context of China's strategy of building "one belt and one road" and the Yangtze River Economic Belt, Chongqing will well position itself to get in line with local strategies and national strategies and make efforts to become an innovative world city.

The "one belt and one road" and the Yangtze River economic belt development strategy aims to build a new system of coordinated regional development that spans central, eastern and western regions that have different levels of economic development. In the new system, how will Chongqing achieve industrial transformation and upgrading, extend its industrial chain and move up the value chain of high-end industry?

China is in the period of transition from"Made in China" to "Created in China" and "intelligent manufacturing in China", and it is a trend to develop the Industry Internet. The Industry Internet is an inevitable trend of global industrial development, with Industry 4.0 concept of Germany, the Industry Internet concept of the USA, and the fusion and innovation of Internet and industry proposed by China as the important directions of future development in this regard. With the maturation of the Internet of Things, big data, cloud computing, mobile Internet and other technologies, China is transiting from consumer Internet to Industry Internet. Industry Internet will realize trans-boundary integration and development of traditional industries and helps reshape the whole industrial chain. Industry Internet will also promote the transformation and upgrading of enterprises.Most of Chinese traditional manufacturing enterprises are at the lower end of the global supply chain, and they are facing greater pressure of industrial transformation and upgrading. Industry Internet includes various industry chains ranging from R&D, design, production and sales to collaboration and cooperation, and links upstream and downstream industry chains. In addition, Industry Internet makes the industry supply chain related information transparent, so as to enhance the efficiency of enterprise transformation.

Industry Internet based on "Internet plus" is aimed at changing the situation in the past industrial age that production, service and consumption processes were out of touch, that is it was basically a one-way chain, in which production decided consumption, and most of consumer goods were stereotyped. Generally speaking, it is a one-way macro chain from production to distribution;then the retail system, and finally consumers. However, things are different in the Internet plus age, in which it is a two-way chain, and consumers have a greater choice, and consumers hold the decision-making power. That's because productive resources are changing.

In the past two decades, the Internet could be called consumer Internet, which solved people's dining, drinking and entertainment issues at the consumer side, and thus emerged famous domestic Internet companies such as Tencent, Baidu and Alibaba, and foreign ones such as Amazon and Google. The maturation of consumer Internet further boosts the development of Industry Internet, and agriculture, industries and services all have to be integrated with the Internet to form Industry Internet based on productive services.

HP, as one of the world's leading IT companies, took the lead to propose new style of IT that enables cloud computing, security, big data, mobile computing, and other technologies to form an integrated solution, provide an IT support platform for building an innovative modern smart city, and integrate all big data related technologies to build an industry-leading, comprehensive, scalable, open big data platform industrial center. Moreover, HP will combine its rich accumulation in the global cloud computing area and industrial practices in China and leverage its innovative integrated infrastructure and open HP Helion Hybrid cloud and HP's sophisticated industry-wide solutions to realize organic connection between traditional industries and the Internet and help the enterprises realize quick business transformation and achieve the interoperability of "one belt and one road" core concept.

The integration of IT with economy and society results in explosive data growth, and data has become a strategic resource of China. Adhering to innovation-driven development, accelerating big data deployment and deepening big data applications have become the internal need and inevitable choice for stabilizing growth, pushing forward reform, adjusting structure, benefiting the livelihood of people and promoting the modernization of government governance.

HP has been committed to the construction of innovative cities worldwide, and has helped many cities to build innovative smart city.

- We helped London Social Security Administration with public opinion analysis covering 22 social media channels; with HP's video analysis function, terrorist facial recognition that took over 10 days can now be done within 30 minutes.
- We helped Dubai with comprehensive video monitoring, providingreal-time remote monitoring for police officers in a mobile manner.
- We helped Los Angeles to integrate its public systems and build an interconnected, smart virtual operation center. In case of any event at any location of the city, the staff will arrive at the site in ten minutes to handle it.

All along, HP and Chongqing have close cooperation, and their comprehensive strategic partnership involves the laptop industry, logistics and trade, the financial sector as well as cloud computing and big data industries. HP China cloud, through leading industrialupgrading and accelerating service innovation, builds an automotive big data cloud public service platform in cooperation with the Chongqing Municipal Government. Through cloud and big data technologies, the system brings together all kinds of after-market formats in the automotive area to create a big data opening and sharing system for the automotive industrial chain and breaks traditional industrial barriers to optimize the industrial structure and further explore the market vitality of the automotive industry. In addition, the landing of the HP industry community cloud in Chongqing marks a good start of the new round of strategic partnership between HP and Chongqing. Centering on big data, cloud computing,

information security and mobile Internet, HP will continue to support Chongqing build an innovative industry community cloud platform, accelerate the clustering of industrial ecology, and promote the collaboration of the industrial chain so as to fuel regional economic growth. The cloud platform based on HP Helion will achieve the following goals:

- Fusion of industrialization and informatization: to combine new information technologies with Chongqing's industry strategy to achieve the fusion of industrialization and informatization and promote industrial upgrading and urban development;
- Industrial clustering: based on industry public services of the industry community cloud, to accelerate industrial clustering and promote collaboration of the industrial chain to fuel regional economy;
- Ecological infrastructure: to build cloud service ecology and gather industries, technical talents and service providers to improve the industry environment;
- Resource integration: with the industry community cloud platform built by HP and Helion partner alliance, to gradually integrate cloud resources of Chongqing to form a network where industries serve communities.

HP China cloud is aimed to connect upstream and downstream resources for various kinds of industries through cloud computing technologies, and break geographical restrictions to form agglomeration effect, and provide comprehensive solutions for industrial upgrading and the realization of Industry Internet.

A digital revolution is surging in China, and the Internet is radically changing Chinese people's way of life. As the Internet penetrates deeper into the various industries, enterprises will more closely embrace the Internet. Thecloser they are with the Internet, the more efficient will their operations be and the higher their productivity. The Internet has not only become one of the future new engines of China's economy, but more importantly, it will change the modes of economic growth. The Internet can provide new impetus for GDP growth in terms of productivity, innovation and consumption.It is expected that by 2025, Internet will contribute to increase of China's annual GDP growth from 0.3% to 1.0%, which is about 7% to 22% of the total GDP growth. However, the final potential realized depends on the government's focus and support for Internet economy, the enterprises' willingness to promote digitalization, and employees' adaptability. In different industries, the biggest potential values created by the Internet lies in the following four aspects:

- Reduced trading cost: The Internet can realize real-time communication and cooperation among companies, consumers, researchers and public department, improve productivity through e-commerce and network-driven supply chain management, and enable direct connection between the manufacturer and consumers.
- Application of big data analysis: Big data analysis can help companies collect and analyze the massive data stream generated by machines and humans, so as to improve decision making and market insight.
- Ability to satisfy long-tail demand: The application of Internet and the automation of transactions allow enterprises to meet more diversified needs of niche market and customized products at lower costs.
- New competition mode: The Internet significantly lowers the threshold to enter the market, so that startups can grow fast and join the competition. Outdated operation mode and companies that fail to adapt to the new situation may be eliminated from the fierce competition.

China’s Internet has brought along an energetic information communication and technology industry, rising social network and the world’s largest online retail market. As traditional industries start to leverage Internet technology to improve productivity and create new business models, the Internet will demonstrate greater potential. Developing Industry Internet is an important method for China to implement innovation-driven strategy, an important approach to promote industrial transformation and upgrading, and a key measure for improving the international competitiveness of Chinese enterprises. We must take the rare opportunity and adopt effective measures to quicken the development of an industry Internet that is competitive in the international arena.

China is moving towards a new era of digital transformation, and HP would like to supportChongqing become an innovative world city and take the lead to enter a new era.

Chongqing from the Perspective of Central Asia

Sanjeev Gandhi

Member of the Board of Executive Directors of BASF SE

It's a great pleasure for me to participate for the first time at this year's CMIA. This forum is exceptional in its scope, its ambitions, and the results it has generated.

It is also an opportunity for all of us to discuss an important topic in China: one belt, one road.

On one hand, this topic makes me think of history – because the Silk Road has a long and important role in linking Europe and Asia.

On the other hand, this topic is an entirely modern one. It highlights a new opportunity whereby Chongqing can take the lead in supporting the development of the Central Asian markets. By building on Chongqing's role as Gateway to Western China, businesses like ours have a unique possibility to tap into the opportunities of this region to build our companies and also the local economies.

Some of the practical challenges of bridging China to Europe include enormous distances and high variations of temperature along with basic needs such as food, transportation, energy, and housing.

This translates into new opportunities for a variety of industries. Makers of insulation panels, high quality building materials, and cold-storage vehicles and warehouses will find opportunities here. Back in 2010, China's NDRC published a development blueprint for the cold storage industry focusing on agricultural products, highlighting the need for an additional 10 million tons of cold storage capacity and an additional 40,000 refrigerated trucks by 2015. Today, this need is only increasing: China is one of the top three countries in the world with high long-term growth rates in cold storage capacity.

Transporting goods long distances & difficult terrains needs durable, lightweight and fuel-efficient vehicles, both road and rail. Automakers and component manufacturers who can take up this challenge will find good business potential.

Last but not least, sustainable food production and distribution means requirement for drought tolerant crops that can thrive in tough conditions. The growing demand for nutritious food will result in farmers' growing demand for higher yields – which agchem industry can meet.

This will also require highly efficient irrigation. The manufacturer of durable, reliable irrigation systems will be serving these same market needs. At the same time, the growing manufacturing sector will need to keep wastewater clean so that it does not impact arable land. This means a need for new wastewater treatment plants and filtration systems.

The people who work in all of these industries will require durable, high quality clothing and footwear. The old model

was to produce goods in China and sell them in West. Today, we have a new definition of "West": Produce in Chongqing and sell to the rest of Western China.

Chongqing's development of the Western China markets can also serve as a testing ground for how to best serve the growing needs of the pan-Central-Asian markets.

Chongqing has a long and proud history as a gateway to Western China. Lets view Chongqing from a different perspective: by its strategic position as the gateway to central Asia.

Chongqing needs to further develop the value chain in particular by attracting tier 2, 3 and 4 companies to take advantage of raw material availability, and to extend the existing value chain upstream and downstream.

Expanding research in the applied sciences — can be an excellent way to enhance employability for industries. The development of service industries such as logistics and transportation will serve the manufacturing industry

To further build up infrastructure that connects Chongqing with the Rest of the West, the new Silk Road is now becoming a reality. Logistics between Chongqing and other important hubs like Chengdu need to be cost effective and highly efficient. A great example is the pioneering Chongqing-Xinjiang-Europe railway link via which Chongqing has already established links with Central Asian nations, a fairly good basis for extension of cooperation.

A strong pool of trained workers can be a great potential for Chongqing's returnees: by attracting trained returning workers from the coastal areas, Chongqing's growing business sector can use the knowledge of these workers to support very high-quality, competitive manufacturing industries.

One important way all of us can contribute is to ensure that we have a shared commitment to sustainability. This means that we for every business decision, we balance three aspects: social, environmental and financial.

At the same time, we can use our resources to promote Chongqing to the rest of our industry or our industry value chains. In our own business, we aim to become the nexus of an industry hub that can serve a wide variety of markets. But of course we cannot do this alone!

BASF, is the world's leading chemical company and we aim to "create chemistry". Therefore I look forward to creating chemistry together with all of you.

Looking ahead, as Chongqing serves the needs of the developing West, it is my hope that Chongqing will set high standards for sustainability: building on the key learnings from around the world such as emissions control, water management, talent development, land management, and more.

We all know that doing business in Central Asia is not easy – but with persistence, patience, and passion, we can make the opportunities into reality.

China takes the lead to establish a high standard for Central Asia, and join hands with other leaders around the world in making this region a vital hub on the new Silk Road.