

PPP Case Studies

People's Republic of China

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Background

PRC's PPP projects

EIU's
Infrascope
highlighted the
PRC's
“phenomenal”
wealth of
project
experience

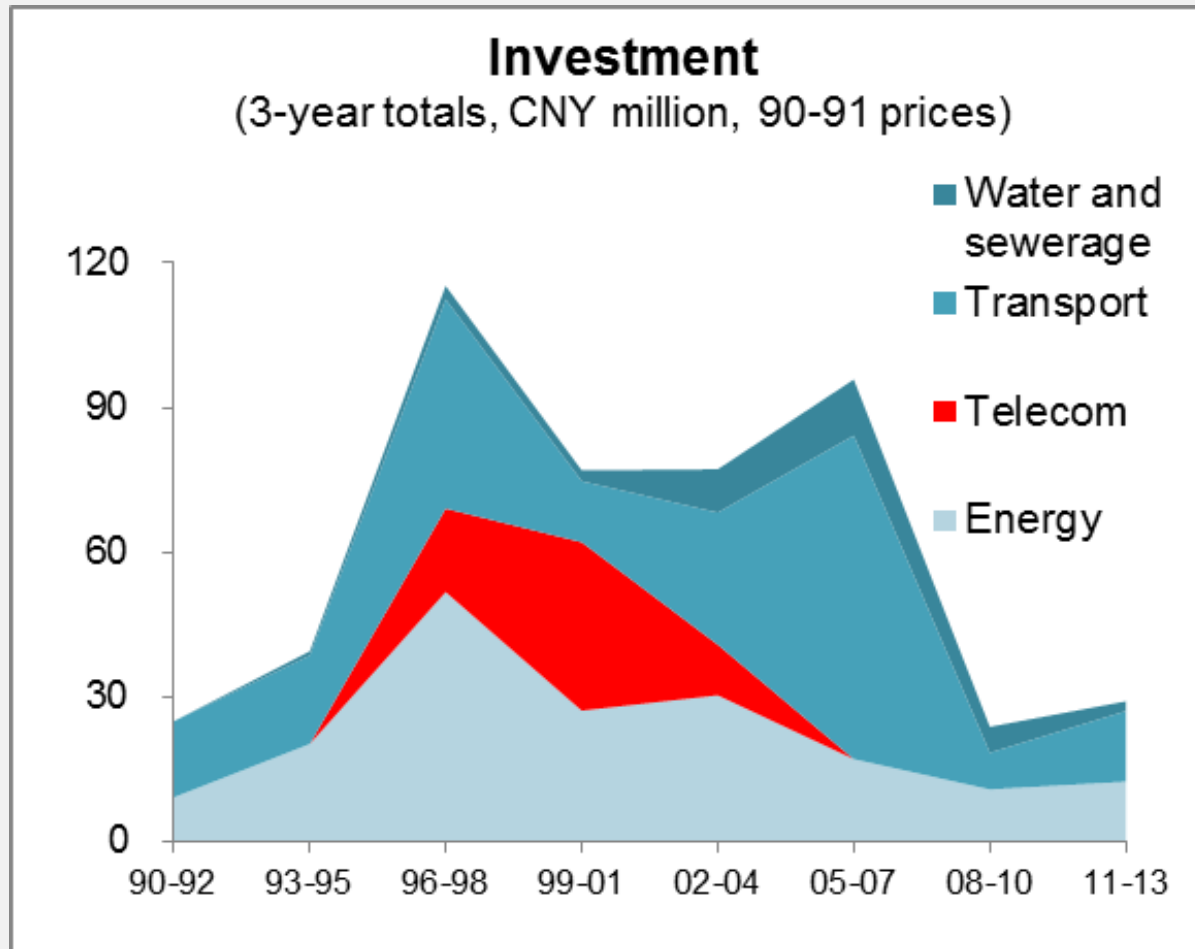
1,186 infrastructure PPPs finalised in the PRC from 1990 to 2014

Compared to 838 in India, 126 in the Philippines, 108 in Indonesia, 73 in Sri Lanka, 65 in Bangladesh

648 active PPPs in the UK, 567 in the Republic of Korea, 127 in Australia (as of 2013)

Source: World Bank. 2015. Private Participation in Infrastructure Projects Database and Burger P. and I. Hawkesworth. 2013. Capital Budgeting and Procurement Practices. Organization for Economic Cooperation and Development. Paris.

PPP activity in the PRC

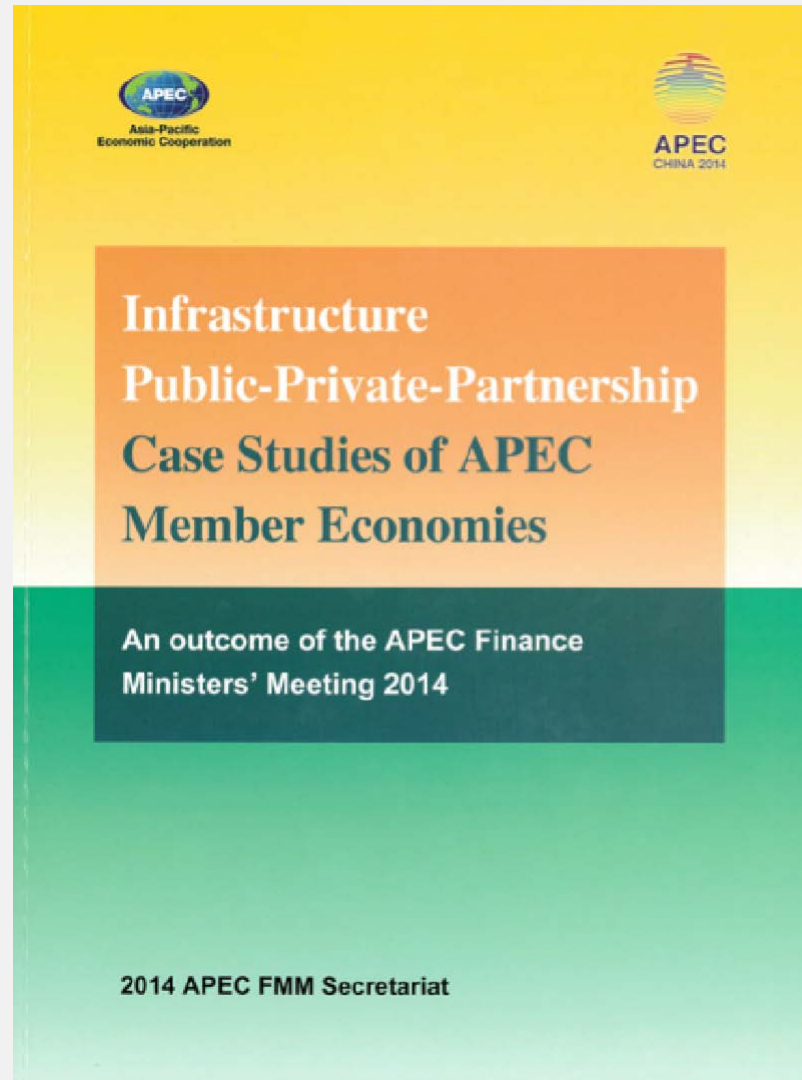


Note: Excludes projects that are led by a majority-state owned enterprise
Source: World Bank PIAF Database and IMF

The PRC has focused on infrastructure PPPs with user revenue

- Beijing Subway Line 4
- Shanghai Huadian Xinzhuang Industrial Park combined cycle heat and power project
- Baiyinchagan-Yongtaigong Highway, Inner Mongolia
- Improvement Project of Southern Main Pipe for Sewage Treatment, Shanghai
- Xinxian-Changyuan Section of Jiyuan-Dongming Highway
- Changzhou City Sewerage Treatment Plant
- Shenzhen University Center Project
- Nanjing Jiangbei Waste Incineration Plant
- Caofeidian Desalination Project
- SZWG Diversification of Property Rights Reform
- Konggang Hospital
- Department of Tianjin Northern Suburb of Changchun Government Repo Sewerage Treatment Plant
- Wuxi Kowloon Motor Bus Company
- Jiangning District Gas Joint Venture
- Changsha County Township Sewerage Treatment Projects
- Beijing Olympics
- Chengdu No. 6 Water Supply: BOT Contract
- Maashan Water Supply: Joint Venture Contract
- Libin Powerstation
- Beijing Line 10
- Chongqing Jiangbei Water

Sources: ADB and APEC FMM Secretariat. 2014. Infrastructure PPP Case Studies of APEC Member Economies. An Outcome of the APEC Finance Ministers' Meeting 2014 (available at http://mddb.apec.org/Documents/2014/MM/FMM/14_fmm_019.pdf)



Beijing Line 4

Project summary

One of the arterial lines in Beijing
 28.2 kilometer
 24 stations
 11 interchange stations (4 stations are to be constructed)
 Run time of one trip: 48 mins
 30 year concession

Goes through education area (Peking Univ., Tsinghua Univ., and Renmin Univ.), high-tech area (Zhongguancun), and attraction spots (Summer Palace, Beijing Zoo)

Opened in September 2009



Construction cost and commercial risks are shared

Government financed tunnel, track and stations, with the rolling stock and other equipment privately financed

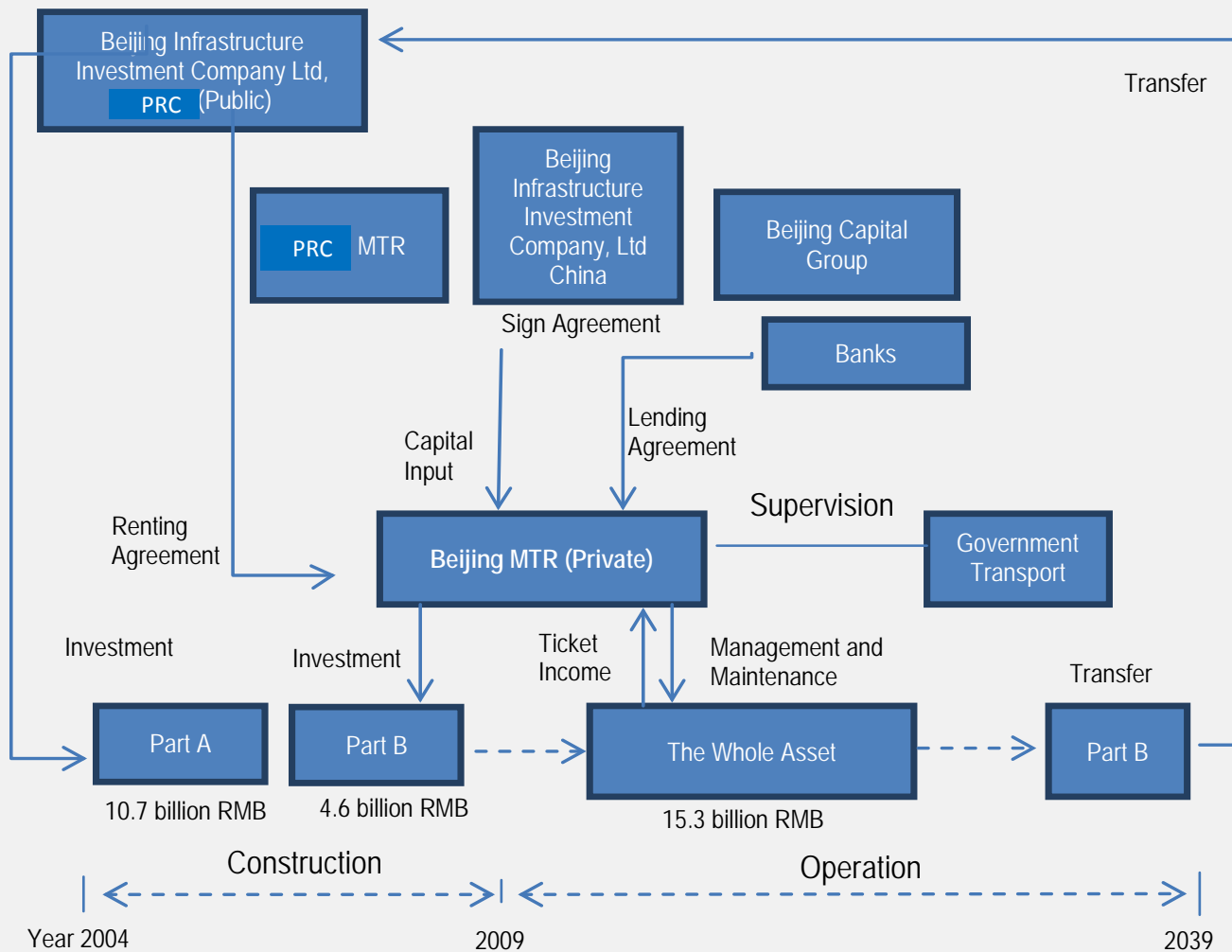
The private partner operates and maintains the line

All fare revenue flows to the government, who makes payments to the private operator based on shadow patronage and pricing

Project was approved in 2004, the concession agreement was signed in 2006, and full operations began in 2009

Expected payback period is 10 years

Project structure



SPV shareholders



Beijing Infrastructure Investment Co. Ltd (BIIC) is an SOE, undertaking investment and financing and capital management in infrastructure industry. At the end of 2012, the total investment in railway reached 479.6 billion, and the length of network BIIC owns will reach 561km by 2015.



Beijing Capital Group Co., Ltd. (BCG) is an SOE of Beijing. It has 3 businesses - infrastructure, real estate, and financial services, owning 6 listed company, 2 of them are listed in HK.



MTR Corporation Limited (MTR) is held by HK Special Administrative Region Government, and listed on the Stock Exchange of HK. MTR operates 9 metro lines, 1 airport line as well as light rail whose total length is 218 and daily patronage is 5.1 million. MTR is famous for its safety, reliability, professional customer service and high cost efficiency.

Established in 1975, and owned by Hong Kong, China government

Listed in Hong Kong, China Stock Exchange in 2000

Hong Kong, China government owned 76.5%

Merger and acquisition with KCRC in 2007

At the end of 2012, MTR's market value was about HKD 163 billion



Many more metro PPPs on the way

Name	Features	Ownership
Beijing Line 4	<ul style="list-style-type: none"> • 29 KM, 24 stations • Total investment is 15.3 billion RMB • Part B which MTR jointly invested, covers 30% of the total investment, costing 4.6 billion RMB • Opened on Sep 28, 2009 • Concession period lasts 30 years 	MTR 49% BCG 49% BIIC 2%
Beijing Line 14	<ul style="list-style-type: none"> • 47.3 KM, 37 stations • Total investment is 50 billion RMB • Part B which MTR jointly invested, covers 30% of the total investment, costing 15 billion RMB • Phase I opened on May 5, 2013, and the rest part will open in 2015 • Concession period lasts 30 years 	MTR 49% BCG 49% BIIC 2%
Hangzhou Line 1	<ul style="list-style-type: none"> • 48KM, 31 stations • Total investment is 22 billion RMB • Part B which MTR jointly invested, covers 37% of the total investment, costing 8.1 billion RMB • Opened on Nov 24, 2012 • Concession period lasts 25 years 	MTR 49% HZMG 51%

A successful project, but not without challenges and lessons

Patronage projections were exceeded

- actual usage was 687,000 passengers per day in 2010 compared to a projection of 564,000 passengers

Revenue sharing arrangements were revised in 2010, with the government wanting a larger share of higher than expected patronage

High consumer satisfaction and satisfactory post-evaluation report

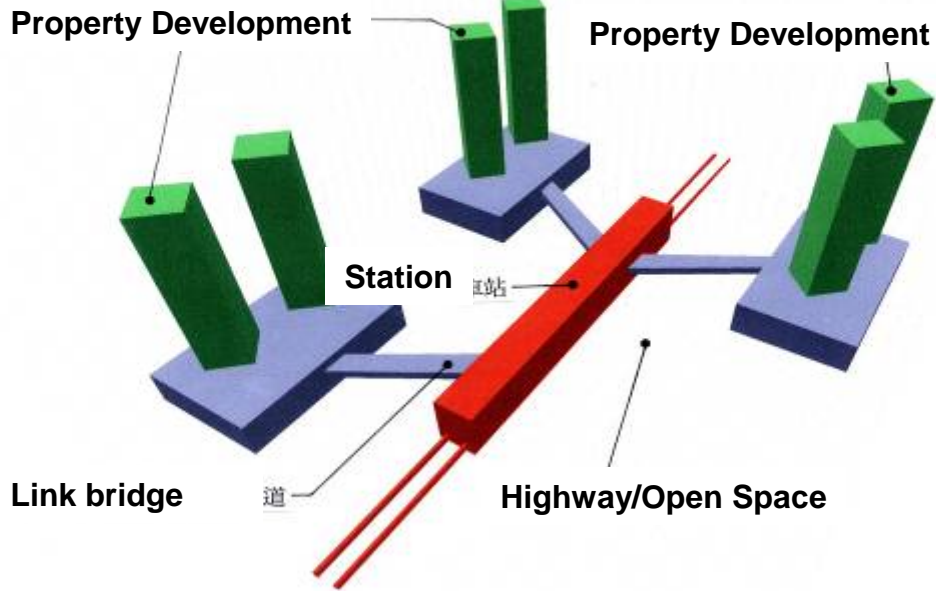
- 99% on-time compared to only 90% on other lines

Too few potential suppliers

Future metro PPPs could capture more commercial opportunities

- the transport oriented development

Horizontal integration



Denver Union Station, US



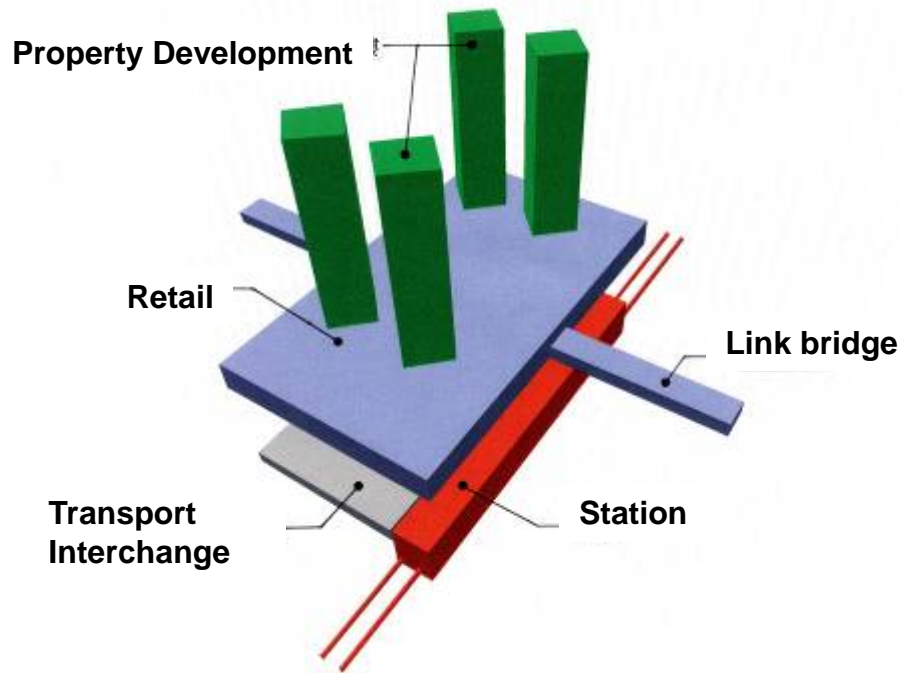
The station and the surrounding 79,000 m² are being redeveloped as a transport, retail, hotel, and office complex costing around \$900 million

- 3 light-rail tracks, 8 heavy-rail tracks for intercity and commuter services, underground bus terminal

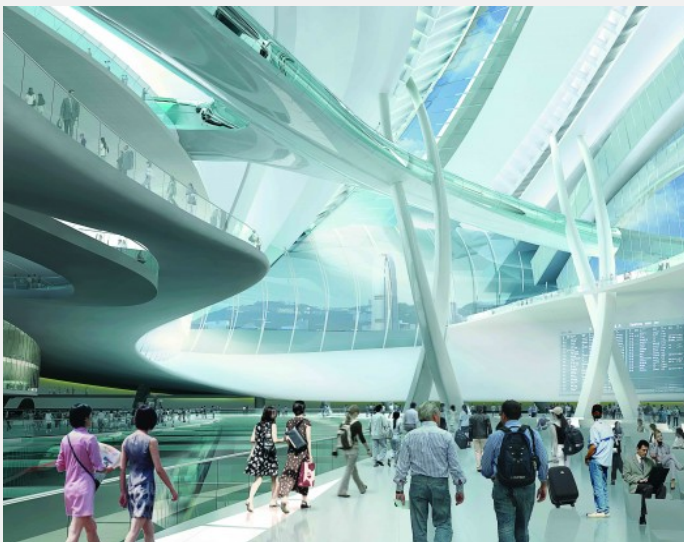
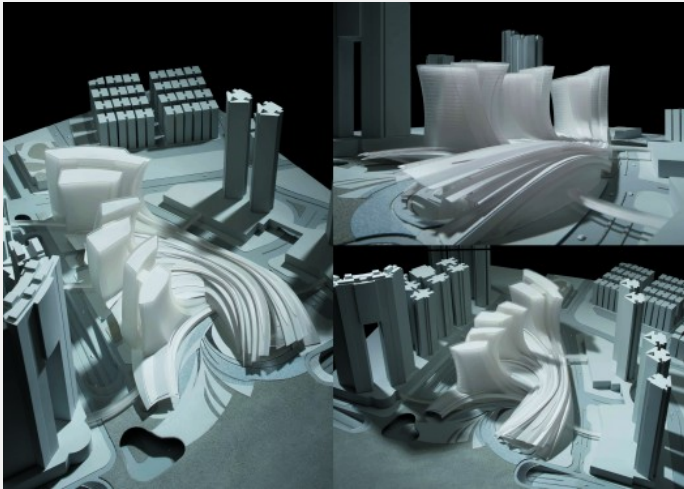


Last land in downtown Denver left to redevelop

Vertical integration



West Kowloon Station, Hong Kong, China



Improvement Project of Southern Main Pipe for Sewage Treatment, Shanghai

	Improvement Project of Southern Main Pipe for Sewage Treatment, Shanghai
Location	Bailonggang Region, Shanghai
Scale	Main Sewerage: 26.1km; Area Covered: 1,255 km ²
Model	BOO–operator constructs, operates, maintains and finances the drainage, flood mitigation, and the main sewerage pipes for central regions of Shanghai
Status	Under construction (capital cost of CNY3,030 million)
Purpose	To upgrade pipes with low capacity while stopping the direct discharge of industrial waste water and sewage into inland rivers
Revenue	Drainage charges are collected by the operator, which are based on water consumption amount
Government contribution	A capital contribution was made by the central and municipal governments (CNY 930 million) plus subsidies are provided to the operator’s parent company
Procurement	No invitation to tender or submission of tender

Role	Participant
Public partner	Shanghai Municipal People's Government
"Private" partner	<p>Shanghai Municipal Sewerage Company.</p> <p>This company is an exclusive state-funded corporation.</p> <p>The parent company of the sewerage company is Shanghai Water Assets Operation and Development CO.LTD, and the controlling shareholder is Shanghai Chengtou Corporation. Thee controlling shareholder is the State-owned Assets Supervision and Administration Commission of the State Council of Shanghai</p>
Lenders	<p>A syndicated loans is provided by China Development Bank, Shanghai Pudong Development Bank, China Construction Bank and Bank of China</p> <p>China Development Bank and Shanghai Pudong Development Bank are leading banks, and others are participating banks</p>

Is this a PPP?

Project complies with regulatory requirements and the policy imperative to promote urban public service under the concession model

Will issuing a concession to a related entity without a tender provide value for money?

Is risk shared when the government is both the public and private partner?

A case of “corporatization by contract”

Could be converted to a lease PPP by leasing out the concession on a competitive basis

Xinxian-Changyuan Section of Jiyuan- Dongming Highway

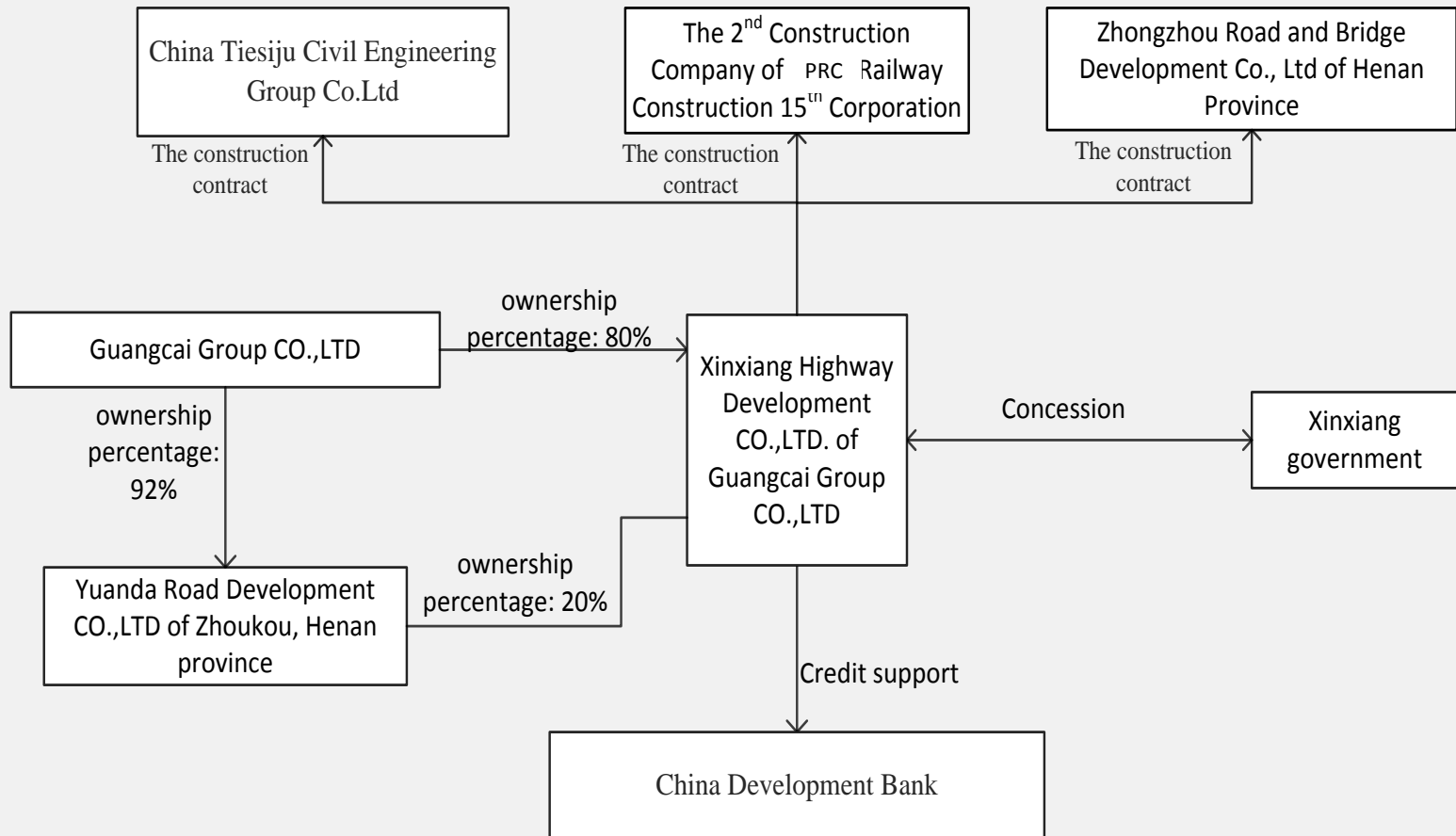
Project location



Source: Google Maps

	Xinxiang-Changyuan Section of Jiyuan-Dongming Highway
Location	Henan Province, Xinxiang and Anyang Municipalities
Scale	73 km
Model	BOT-operator constructs, operates, maintains and finances the tollway
Timing	Project approved by DRC in Jun 2004, financing was secured in Jul 2004, construction commenced in Oct 2004 and was completed in Oct 2007, and full operations commenced in Oct 2009
Revenue	Tolls
Construction cost	CNY2,600 million
Financing	Syndicated loan of CNY1,700 million led by the China Development Bank (CNY850 million)
Term	20 years from Nov 2004
Procurement	Competitive tender

Project structure



An example of a typical PPP for the PRC

SOEs undertake construction and policy banks lead financing

Short preparation and construction period

Budget constraints at the local government level drove the interest in a PPP. The PPP was used as a means of accessing non-government funds

Delay in construction of the Dongming Bridge across the Yellow River reduced usage and toll revenue, and the operation did not achieve expected profitability

- ie demand risk rested with the private operator without adequate protection

Baiyinchagan-Yongtaigong Highway, Inner Mongolia

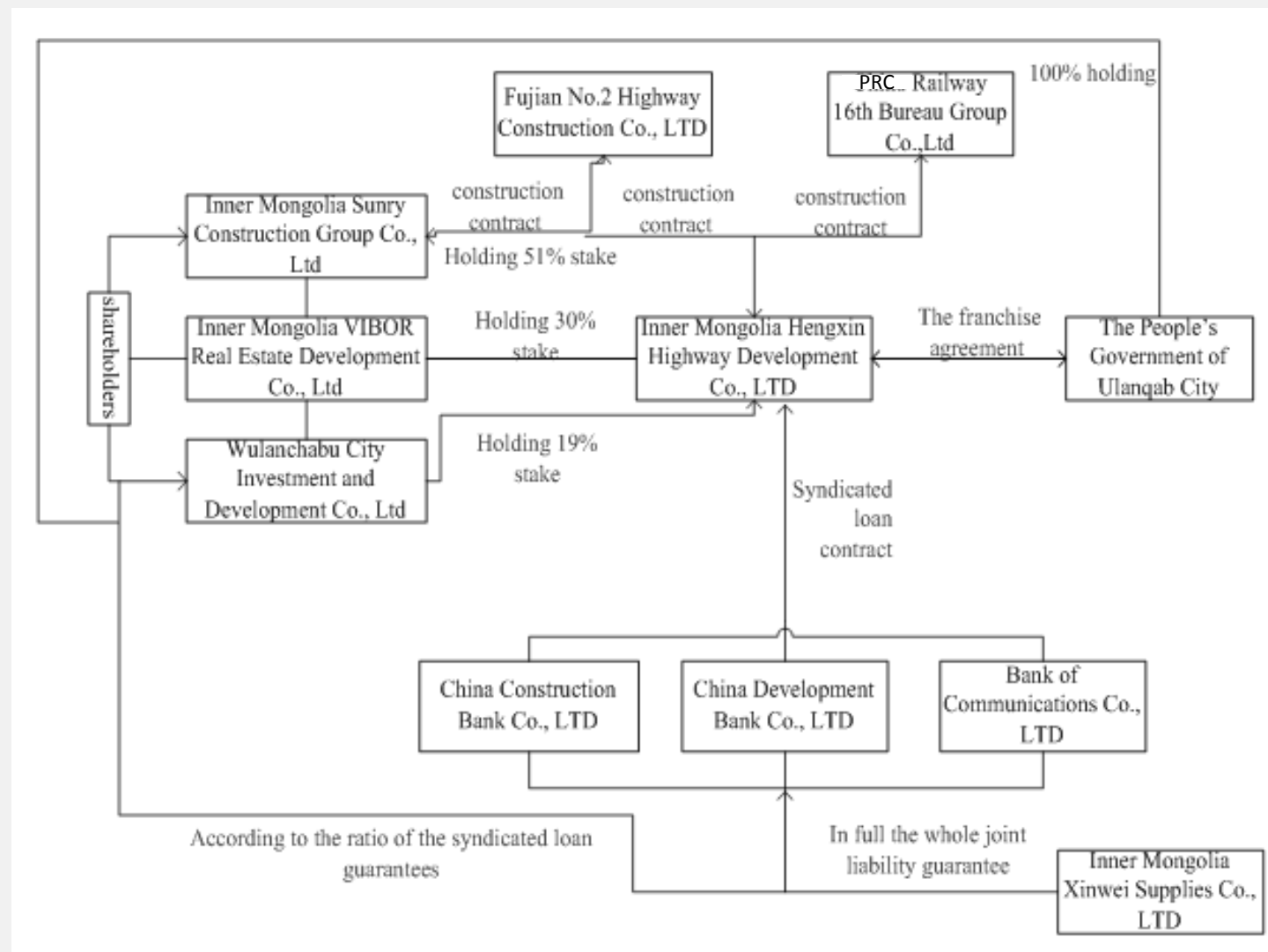
Project location



Source: Google Maps

	Baiinchagan-Yongtaigong Highway
Location	Inner Mongolia Province, Ulanqab
Scale	95 km
Model	BOT–operator constructs, operates, maintains and finances the tollway
Timing	Project approved by DRC in Jun 2011, financing was secured in Apr 2011, and construction commenced in Apr 2011. Operations are to commence at end-2015
Revenue	Tolls
Construction cost	CNY4,558 million
Financing	Equity of CNY1,600 million plus a syndicated loan of CNY2,900 million for 17 years led by the China Development Bank (CNY1,800 million). Loan is guaranteed by shareholders in the SPV.
Government contribution	The local government financing platform acquired 19% of the SPV
Term	Long term
Procurement	Competitive tender based on lowest price
Status	77 km of subgrade engineering of the highway and 1.8 km of tunnels completed by late 2014

Project structure



PPP model pushed forward mixed ownership in a less developed area of the PRC

Again SOEs undertake construction and policy banks lead financing

PPP model allowed access to broader sources of financing, and to long term financing that matched the long term nature of the asset

Overcame the low credit rating of the main partner to the SPV, Sunry Group

Unclear if demand risk and the risk of policy change have been addressed in a sustainable manner

PRC's New Demonstration Projects

MOF's Notice: Demonstration projects

Demonstration projects and learning by doing are a priority in the PRC

MoF will select a batch of “user pays” PPP projects as demonstration projects on the basis of a nationwide comprehensive consideration of project readiness, demonstration value and other factors

Finance departments at all levels shall attach great importance to urban infrastructure and public services projects, such as urban water supply, heating, gas, sewerage and refuse disposal, social housing, underground pipeline corridors, rail transit, medical and pension services

Demonstration projects

Local governments have demonstrated a strong interest in PPPs

Over 300 proposals were submitted to MoF by provinces, covering water and waste water, solid waste, transportation, comprehensive use of underground space, and underground pipe network

30 demonstration projects were selected

Local governments continued to actively screening pilot projects and pushing forward project implementation

More than 5 provinces established PPP centers over 2014 and 2015, following establishment of MOF's PPP center in late 2014

Demonstration projects

PPP activity
is now rising
at a
dramatic
rate

In May 2015, the National Development and Reform Commission released a PPP project library, comprising 1,043 projects, with a total investment of CNY1.97 trillion (around \$320b)

- covering water and waste water, municipal facilities, transportation facilities, public services, resources and environmental services

Local governments have individually announced more than 1,500 PPPs over 2014 and 2015, with a total investment value of more than CNY2.5 trillion (\$400 billion)

Concluding observations

Concluding observations

The ramp-up in PPP activity poses new challenges

The PRC already has a lot of experience with PPPs and a workable enabling environment

Wide-ranging announcements from the central government have set out a new operational framework for PPPs. The releases introduce many good practices.

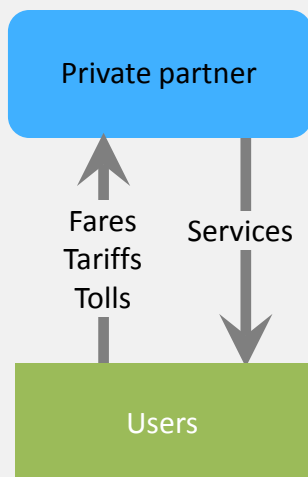
But fiscal pressures are driving the use of PPPs as a new source of local government financing

Shortcuts will be required to deliver so many projects quickly. This may be at the expense of project quality, at least in the short term

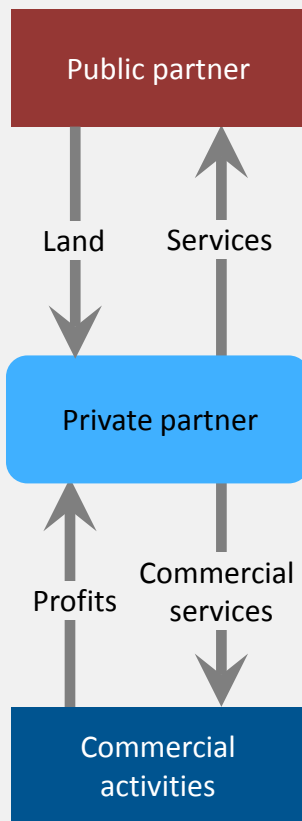
New PPP models are required

PPP types by source of revenue

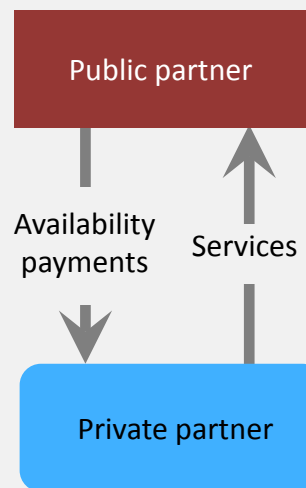
USER PAYS
eg, toll roads and power stations with full cost recover from users



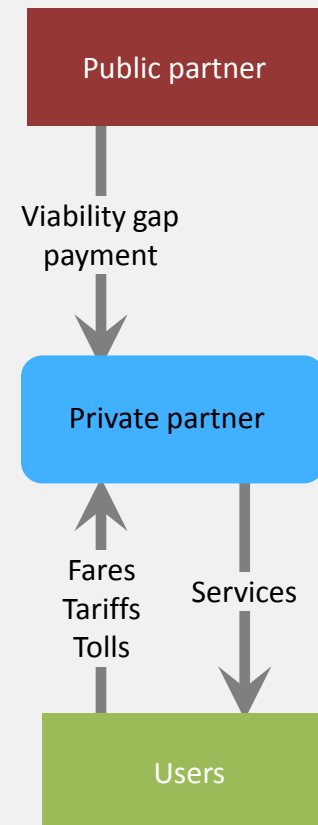
VALUE CAPTURE
eg subways in Hong Kong, China, rail stations in the US



GOVERNMENT PAYS
eg, UK's Public Finance Initiative, social services and urban roads in Australia and Canada



VIABILITY GAP PAYMENTS
eg, viability gap funds in India and Pakistan



Thank you

Republic of
Korea