Monitoring New Infrastructure: Emergence of China's Strategic Stimulus and Implications for Foreign Business

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Executive Briefing

Key Findings

- New infrastructure is central to Beijing's efforts to combat the economic impacts of Covid-19;
- National policy on new infrastructure is fragmented, local governments have led the push so far;
- 14 provinces plan to invest 827 bn CNY in 2020;
- But new infrastructure-oriented stimulus will have only a limited effect on economic growth and employment in the short term;
- However, the initiative plays an important role in accelerating the roll-out of strategic technologies such as 5G, electric vehicles charging and high-speed rail;
- For foreign companies, the initiative presents numerous opportunities, such as investment opportunities, equipment supply and the potential for applications;
- But foreign investment and participation in procurement processes is limited by China's market barriers and distortions

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1. Introduction

New infrastructure has become a hot topic in China's national economic policy agenda to fight the economic impacts of Covid-19. Listed as the top investment priority in the government work report delivered at the National People's Congress i, it links short term stimulus with the long-term objectives to promote technological progress and future economic strength. As national policy on the topic is fragmented and provides only vague guidance, local governments have led the push so far, rushing ahead with ambitious investment plans for new infrastructure. According to incomplete figures, 14 provinces plan to invest 827 bn CNY in 2020. The plans focus mostly on 5G, data centers, satellite, electric vehicle (EV) charging stations, industrial internet, ultra-high voltage transmission (UHV), and high-speed rail (HSR).

Despite the fanfare, however, new infrastructure-oriented stimulus will have only a limited effect on economic growth and employment in the short term, as it accounts for only 10 to 15% of total infrastructure investment. Traditional infrastructure such as traditional rail, streets and airports, still accounts for the vast majority.

Nonetheless, the initiative plays an important role in promoting roll-out of strategic technologies. For instance, 5G and electric vehicle charging will see an exceptional acceleration due to the new infrastructure stimulus. High-speed rail is also set to receive a boost albeit with a delay. We expect that China's technological position will significantly improve and new business models benefitting from this new infrastructure can be introduced earlier.

For foreign companies, the initiative presents numerous opportunities. Investors can buy shares of companies that are to benefit from the new infrastructure stimulus, and securities issued by them. Suppliers of equipment for 5G, UHV and HSR can expect a surge in orders. At the application level, foreign automotive OEMs can take advantage of their increasing participation in charging. And autonomous driving can see faster application due to earlier availability of 5G-based communication. However, foreign participation is also limited by China's investment barriers and market distortions.

2. The agenda for new infrastructure and local implementation

2.1. Concept and definition

The concept of "new infrastructure" (新基建) first emerged at the 2018 Central Economic Work Conference of the Communist Party Central Committee and the State Council, but was never formally defined until late April of this year. The National Development and Reform Commission (NDRC) says new infrastructure includes three components:

- Infrastructure based on next-generation information technology: 5G, industrial internet, satellites, and data centers;
- Integration of infrastructure: applications of the above, including smart city projects, smart power grids;
- Innovation infrastructure: scientific and educational infrastructure, tech parks, and R&D centers.

The NDRC definition differs significantly from an earlier interpretation adopted by investors and local governments, which included ultra-high voltage electric grids, intercity high-speed rail, new energy vehicle charging piles, and other high-tech but less "smart" infrastructure. Zhu Baoliang, chief economist of the State Information Center, said the market understanding was "biased," as these areas had not been described in official language on the term.

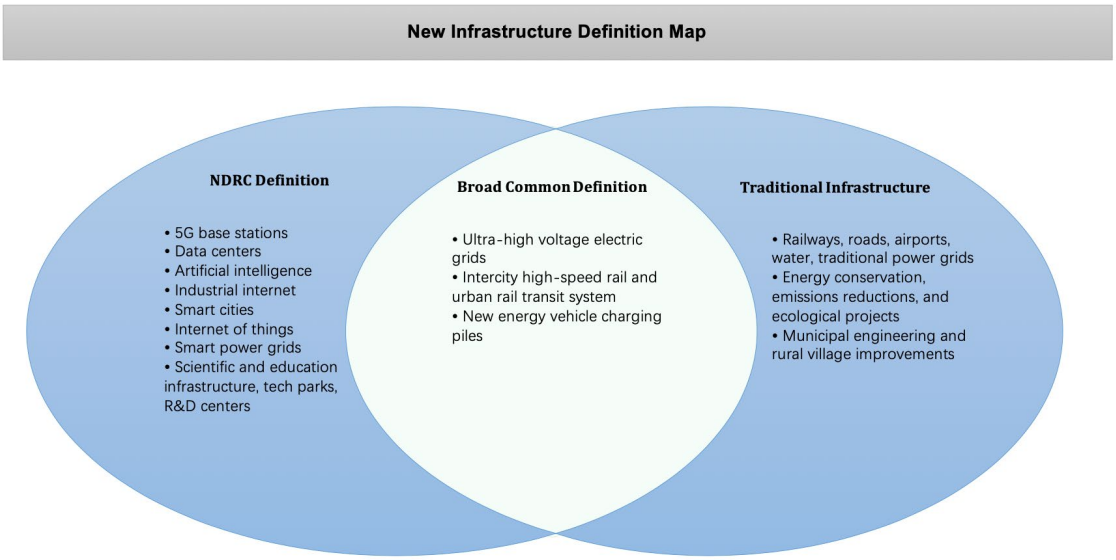
Calls by the Politburo Standing Committee to accelerate construction of new infrastructure have spurred a series of local development plans, with dozens of provincial and municipal governments rolling out policy packages in response. Many such plans employ a much broader definition of new infrastructure, shoehorning all kinds of projects, both new and traditional, under the "new infrastructure" umbrella. For example, Centre for Research on Energy and Clean Air analyst Lauri Myllyvirta points out that long-distance ultra-high voltage energy transmission lines may be billed as smart grid projects, or metals manufacturing could be branded as "new materials for smart transport."

In practice, the broader understanding remains most relevant, and is the one employed in most development plans, many of which were drafted before the term received a formal definition. New infrastructure partly intersects with traditional infrastructure (see figure 1 and table 1). The concept of new infrastructure is not immutable and remains in development, and the official definition may well expand along with technological development. When the NDRC defined the term, the director of its innovation and technology department said the commission will issue further guidelines and continue strengthening the top-level design.

Table 1: Characteristics of traditional and new infrastructure

	Traditional	**New**
Impact on growth	Direct, immediate	Indirect, long-lasting
Characteristics	Physical	Physical & virtual
Major players	Governments	Governments & private entities
Source of fund	Bank loans via LGFVs, PPPs	"Social financing," private equity, interest rate subsidies
Other Characteristics	Capital-intensive, high energy and environmental cost, construction and manufacturing focused	Capital & knowledge based, lower environmental impact, services-oriented

Figure 1: Broader definition of new infrastructure



2.2. Linking short-term stimulus with long-term goals

China's stimulus to combat the economic impacts of Covid-19 still focuses very much on "traditional" infrastructure as a proven element of China's policy toolbox. Investments in rail, highways, bridges and airports can still fuel economic growth to a certain extent, but contribute little to technological progress.

By coining the "new infrastructure" term, China's government adopts a strategic crisis management strategy that closely links short-term infrastructure stimulus with the country's long-term development agenda. The ambition is to generate growth and accelerate the rollout of innovative technologies at the same time.

New infrastructure already plays a central role in China's "Made in China 2025" macro strategy to become a global technological leader at eye level with the likes of the U.S., Germany, and Japan. Equipment for 5G, charging, smart manufacturing and UHV, for instance, are listed as strategic emerging industries.[1] AI also tops the political agenda, with many promotion plans. The initiative for new infrastructure is obviously not entirely new, but it is giving an additional push and bundling processes that have already been in progress for many years.

New infrastructure is essential for China's technological rise, and not because it simply promotes new technologies. Rather, these are fundamental technologies that are meant to serve as the foundation for new technological and industrial revolutions that have the potential to fundamentally shift global economic competition patterns.

China's leadership knows well that building a sound infrastructure basis is key to unlocking new technologies and business models. If they can control these revolutions, China can emerge as a global technology leader. Zheng Jianjiang, NPC representative and CEO of tech company Aux Group, said new infrastructure is an important basis for the next industrial and technological revolution and a basic condition for China's high-quality development.[2]

[1] http://www.stats.gov.cn/tjgz/tzgb/201811/t20181126_1635848.html
[2] http://www.xinhuanet.com/finance/2020-05/25/c_1126029048.htm

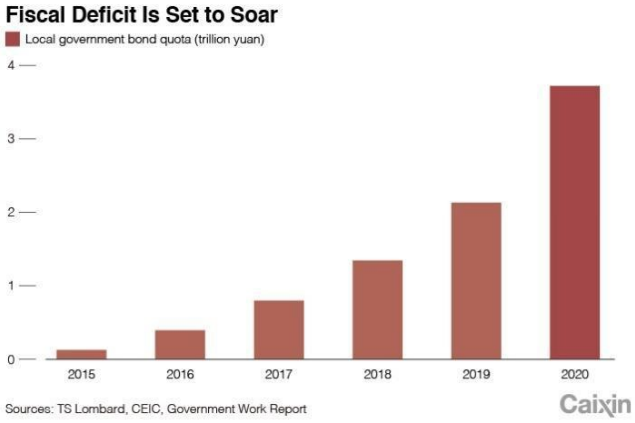
2.3. Policymaking: Fragmented central government policymaking

As the concept of new infrastructure is only just emerging, promotional policies are highly fragmented. With various Politburo and State Council standing committee meetings in February 2020, the central government signaled its prioritisation of new infrastructure. The NDRC also gave it a prominent role in its work report to the National People's Congress and said it is preparing further policy documents on the matter.[3]

However, there is not yet a single strategic outline, ministerial coordination mechanism or central government fund to map out and support development of new infrastructure. To date, implementation of central government priorities is scattered among ministries. For instance, the MIIT released a document in February to accelerate promotion of 5G amid the crisis, but did not cover the other areas.

Rather, the national government supports infrastructure investment by easing borrowing restrictions on local government financing (see figure 2). The increased bond issuance quota, acceleration of credit growth and the political "all clear" signal from the NPC all point to infrastructure investment intensifying further in the coming months.[4]

Figure 2: Local Government Bond Quota (tn CNY). Source: TS Lombard, CEIC, Government Work Report



2.3. Implementation: Local Policies

As there is no unified policy at the national level, the major stimulus for new infrastructure is coming from the local level. Listening carefully to the central government's agenda, many provinces have come out with new plans for new infrastructure investment in 2020. 25 provinces mentioned new infrastructure in their own working reports.[5] At least 18 provinces and cities have since put forward policy and investment plans for new infrastructure or selected technologies (see appendix).

The total investment amount for new infrastructure planned by local governments is difficult to assess. This is due to the fact that many different definitions are used, and many local governments do not explicitly state specific figures for new infrastructure spending. Our research approximates that new infrastructure-related investments in 14 provinces will amount to around 827 bn CNY in

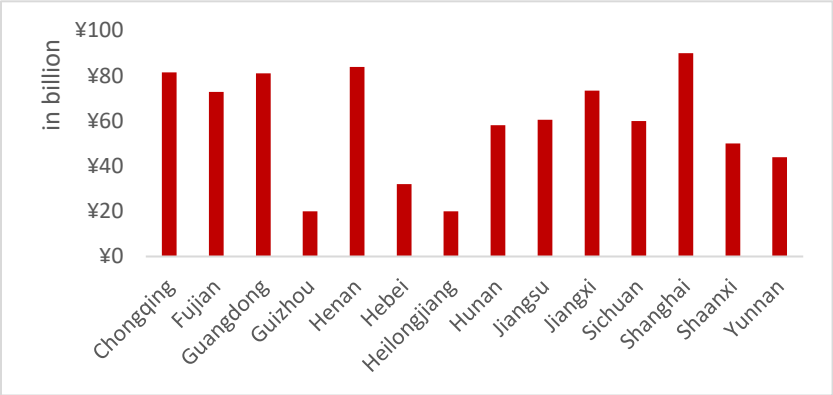
[3] http://www.gov.cn/xinwen/2020-05/30/content_5516227.htm

[4]https://www.caixinglobal.com/2020-05-25/opinion-china-to-increase-infrastructure-spending-but-no-housing-stimulus-for-now-101558546.html

[5] http://news.stcn.com/2020/0325/15759859.shtml

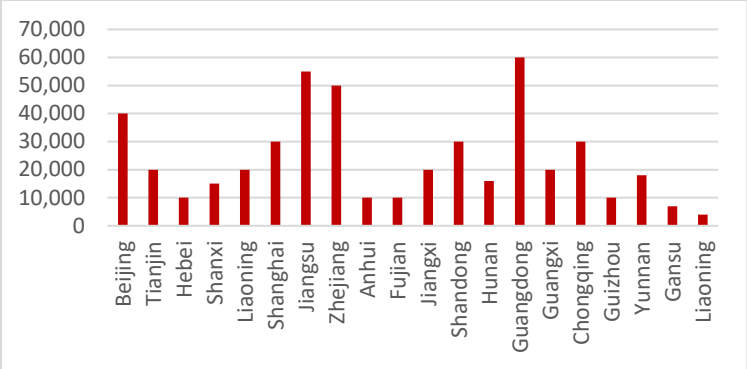
2020 (see figure 3). Other estimates suggest that investment numbers could reach 1.2 tn CNY for the year.[6]

Figure 3: Planned local investments in new infrastructure in 2020. Source: Local investment plans and Sinolytics estimate



In addition to policies specifically relating to new infrastructure, local governments have been issuing policies targeting individual technologies. 20 provinces have published targets for 5G base station construction in 2020 (see figure 4) and local awareness for 5G was already high before the emergence of the new infrastructure initiative. For example, Shanghai published the "Implementation Opinions on Accelerating the Construction and Application of 5G Networks in Shanghai" in 2019, which aimed to construct 20k 5G base stations by 2020. However, the Politburo's prioritization of new infrastructure has led several local governments, including Shanghai, to revise their construction goals upwards.[7]

Figure 4: Local construction targets for 5G base stations in 2020



[6] https://finance.sina.cn/2020-03-26/detail-iimxxsth1801833.d.html

[7] http://www.cac.gov.cn/2020-03/10/c_1585389777002740.htm

Case Study 1: Shanghai

Shanghai was the first local government to publish a comprehensive policy relating to new infrastructure. In its "Action Plan for Promoting the Construction of New Infrastructure (2020-2022)," the Shanghai government devotes 60 bn CNY in fiscal spending and seeks to incentivize 210 bn CNY in private spending over three years, representing planned investments of 7% of Shanghai's 2019 GDP. One of the aims is to construct 34k 5G base stations and 100k electric vehicle charging poles.

Going beyond the construction of physical infrastructure in the form of 5G base stations, underwater cables, and charging stations, the Action Plan seeks to improve Shanghai's innovation capabilities and accelerate the application of new infrastructure in the real economy. The plan also promotes construction of science facilities and research alliances, and seeks to build big data processing platforms in order to apply AI in diverse sectors such as medicine, education, and port operation.

Case Study 2: Guangdong

Guangdong has published a comprehensive investment plan, amounting to 81 bn CNY according to our calculations. The two biggest spending categories for new infrastructure are high-speed rail and - again - 5G base stations, which will receive 53 bn CNY and 17 bn CNY in 2020 respectively.

The example of Guangdong mirrors estimates for the nationwide distribution of funds for new infrastructure: National HSR will receive the most funding at an estimated 500 bn CNY, followed by 5G.

To raise funds for these projects, Guangdong was the first province to issue four new infrastructure-related special purpose bonds (SPBs) worth 8.6 bn CNY. These bonds account for 12% of SPBs issued by Guangdong in 2020 and are linked to intercity rail transit, key laboratories, intelligent transportation facilities, and intelligent parking slots projects. The debt will mostly be repaid from the projects' operating income. Other local governments have followed suit, issuing a total of 1.15 tn CNY of new SPBs for traditional as well as new infrastructure in the first four months of 2020, an increase of 58% year-on-year.