
Johns Hopkins University School of Advanced International Studies

Mapping Public-Private Partnerships across Countries (China and India)

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Executive Summary

Public-Private Partnerships (PPPs) are widely discussed today in both China and India. This stems from top-level policy support for PPPs as well as from a need for additional financing resources to support government operations and infrastructure improvement. From December 2013 to May 2015, a team from Johns Hopkins University School of Advanced International Studies (SAIS) carried out *Mapping PPPs across Countries* to distinguish between the two complex countries' varying needs and mandates and their actual abilities to directly engage in PPPs.

Seeking a clear route to outline the course of PPPs in each country, we surveyed all points of interest for high-level PPP agendas while conducting at least 160 interviews during the 18 months of the Study, but we were not convinced that a definitive roadmap was feasible in the short term. Both countries must consider either decreasing expectations or investing in new ways to increase their readiness to collaborate in the governance and operation of public assets and services.

Each country has separate and distinct legacies that impact the image and perceived public value of PPPs and the credibility of the government as a partner. The private sector, while theoretically intrigued by the long life and stable returns of many PPP assets, is still not ready to trust governments to share risks and opportunities. The readiness of the two countries to engage in large-scale PPP initiatives also depends on the commitment of public sector executives to fairly accept the private sector as a legitimate partner rather than merely seeking its money in return for an elegant form of outsourcing.

Associated with this issue is one of three critical problems we identified: the Execution Gap. Essentially, the Execution Gap concerns the readiness of public sector executives to collaborate with the private sector relative to the number and scale of potential PPP projects. This Gap can be closed only with advanced skill development, especially critical thinking and negotiation skills. Unless addressed, this gap will limit the potential of PPPs in each country. Notably, these major PPP skills are also transferable to multi-sectorial work and should be of interest to both the public and private sectors.

We also highlighted two other gaps: Financing and Innovation. The Financing Gap refers to the deficit between what the public sector wants to finance and what it has the ability to finance. Investors are ready to finance infrastructure, but too few projects offer credibly stable cash flows. The condition of assets, such as water and healthcare, may also require huge capital investments to supplement market rates to keep prices politically acceptable. Human behavior, such as lifestyle and the public use of the assets, is another major factor that affects bankability of projects.

The Innovation Gap is of growing concern, especially in healthcare. The private sector has abundant technology available to address productivity and improve outcomes, but the public sector is hesitant and ill-equipped to involve the private sector, particularly in China. This may be a function of the public distrust of private sector profit motives in healthcare and resistance to moving doctors to work in other hospitals.

This Study is organized to help practitioners understand PPPs through a framework-based definition, not just a contract-based definition. PPP discourse today focuses too heavily on honing transaction-level procedures with little attention paid to achieving optimal PPP configurations. We sought to highlight sustainable PPP configurations that align the values, resources and interests of the public and private sector to address complex public policy problems.

The Study

M*apping PPPs* is built on 12 years of professional commitment to PPP analysis and research. This comparative Study comes after a series of independent research projects involving India and China, beginning with Principal Investigator Alan Trager's work studying a philanthropic PPP to fight multidrug-resistant tuberculosis in China, India, Russia and South Africa. The goal of our Study was to gain a better understanding of how the PPP needs of China and India line up with their current capacity to fulfill PPP projects by examining the broader context that affects PPP environments in both countries. We wanted to look into what legal, cultural, political and functional issues affect India and China's PPP landscape, with a special focus on the potential for healthcare projects.

Compared to previous studies of each country's individual PPP environments, this Study's approach, access and methods have been unique. To begin with, no comprehensive comparative study of these two vast PPP markets has previously been completed. The differences and similarities of the two countries were of equal importance to our Study. While the differences in political systems, time of entry into the PPP arena and infrastructure needs between the two countries is fairly obvious, we believe there are many similarities in the challenges they face over the coming years as well as the possible solutions.

Methodology

The Principal Investigator (PI) and three researchers devoted 18 months to conducting and completing the *Mapping PPPs across Countries (China and India)* Study. The PI made a total of nine trips to China and India, while the Research Team spent 60 weeks in the two countries. More than 160 interviews were conducted based on obtaining Oral Consent and guaranteeing absolute confidentiality and anonymity, providing the Study Team unprecedented access.

Secondly, our Study came at a critical time in the evolution of PPP methods and philosophies in both countries. From 2013 to 2015, the Chinese and Indian governments experienced a transformative change in their belief in the practical and strategic benefits of utilizing PPPs: Beijing announced policies encouraging the use of private capital to improve public services through PPPs, and New Delhi faced the prospect a new Prime Minister vocally in favor of private sector solutions to public policy problems. As a result, both have commenced a new, steep learning curve as they develop

the resources and understanding for a new era of PPP use. We have utilized our up-close observations and analysis of the mixed results of their efforts over these two years as well as those of our in-country networks to provide a high-level framework to guide policy making.

The goal of *Mapping PPPs* is to compare how PPPs actually work in these two countries with many similarities as well as differences. For both nations, as PPP processes become more formalized through an increasingly standardized top-down approach, 2015 is the year when their preliminary actions and policies with regards to PPPs will bear fruit—or disappoint.

Conceptual Framework

Creating a framework was an essential part of our Study. We sought to define PPP practice as a framework to tackle policy issues, rather than as a standardized set of transaction procedures and associated agreements. This high-level conceptual framework allowed us to later distinguish between the government mandates for PPPs and their actual abilities to engage in PPPs. It also created a benchmark to measure what has already been accomplished and what still needs to be done.

Definition: What is a PPP?

A PPP is a collaborative structure in which the public and private sector share risks, resources and decision-making responsibilities to develop and implement projects. Its utility lies in finding solutions to complex infrastructure, transportation, healthcare or other problems, which neither the government nor the private sector can complete on its own. This is not an instance of the government outsourcing projects to a selected vendor and maintaining full control. In a PPP, the government recognizes that its balance sheet contains assets that can perform better with private sector involvement and gives private sector partners room to make important operational decisions. By way of an example, the above-mentioned Central Park Conservancy not only determines how much money is spent on the park, but also is responsible for raising that money—without intervention by the municipal government.

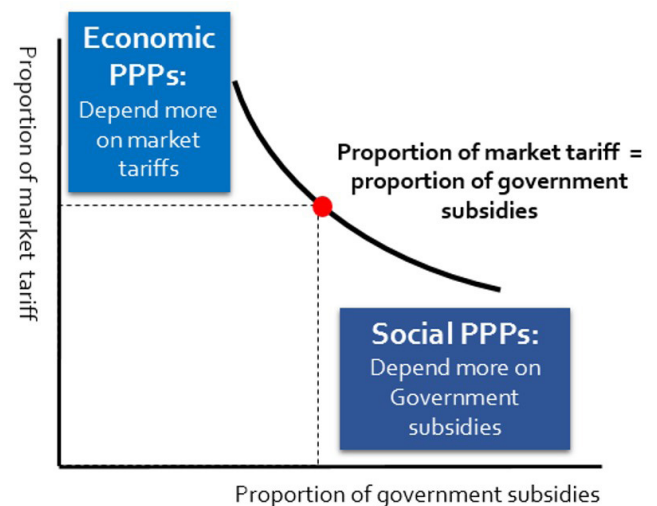
There are two distinctions we made in this Study that were essential in our analysis of PPPs in China and India. First, the distinction between **Economic** and **Social PPPs** – and the different treatments that they necessitate – has implications for our understanding of why some PPPs have been successful and others have not. Second, the distinction between **conventional** and **optimal PPPs** – the conventional configurations we have witnessed and the optimal PPPs we envision – helps to explain what can be done to ensure success in future PPPs. The following sections more fully explain these distinctions.

Economic vs. Social PPPs

PPPs have previously been categorized in many ways—by industry, by management model—but we choose to look at PPPs through the lens of financial viability to mirror the thinking of potential private sector PPP partners.

Both Economic and Social PPPs rely on a combination of revenue streams (market tariffs and government subsidies), but Economic PPPs depend on market tariffs to a greater degree. Economic PPPs are typically used in assets such as toll roads, which can generate clear, positive cash flows by setting an appropriate market tariff for use of the assets. This allows them to be more easily understood and makes them more attractive to investors.

Social PPPs, on the other hand, depend more



on government subsidies. They are typically used in assets such as hospitals and water projects, where market tariffs are too low to cover costs. Government subsidies are needed to a greater extent compared to Economic PPPs to fill the gap because those from lower economic strata may be regular users of public assets or services although they cannot afford to pay market price without government support. Because of this less clear-cut method of generating revenue and reliance on government subsidies, Social PPPs often seem too risky to investors. After all, government support can waiver based on politics during projects that may last over 30 years.

A PPP that seeks to fill the water needs of local citizens is a good example. Water is a public asset needed by everyone in society, but the market price for the delivery of clean running water is often prohibitively expensive for the poor. If costs rise, the public sector could potentially push to renegotiate terms to avoid becoming a government that raises the price of drinking water.

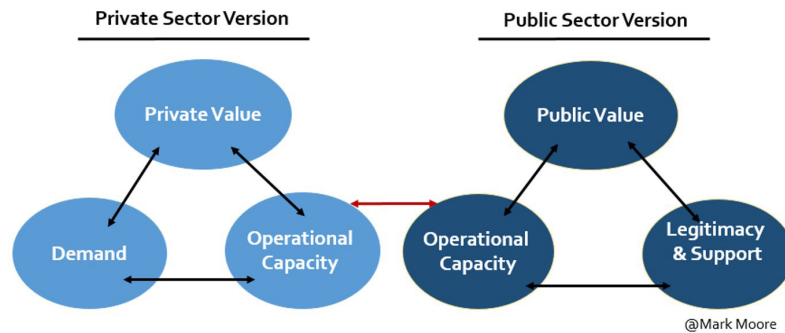
Conventional vs. Optimal Configurations

Conventional PPP configurations (both Economic and Social) focus on aligning operational capacity, including financing, skills and authorizations. Though this configuration requires ongoing adjustments and management of varying stakeholders to align resources and interests, it is missing an alignment of public and private value.

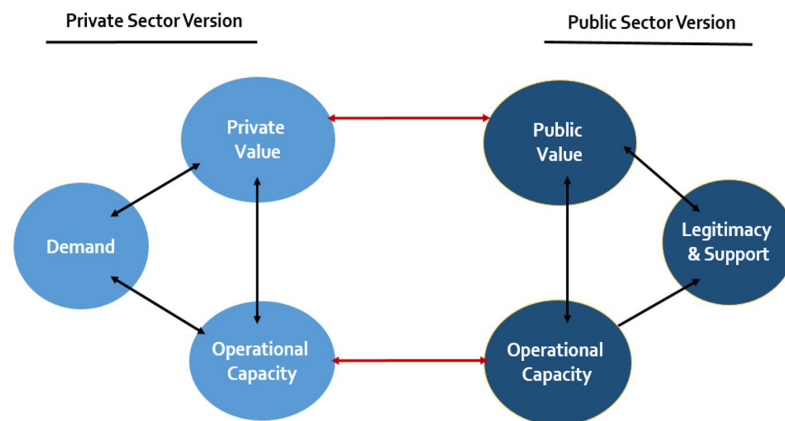
As an example, when FedEx partnered with Eaton Corporation and US-based Environmental Defense Fund and began integrating hybrid-electric delivery trucks in the early 2000s, the project stalled and ultimately failed because, while low emission vehicles are of obvious public health benefit, the lowered fuel costs to the company did not make up for a 20% premium it paid buying hybrid trucks. Values were not aligned, and the project proved unsustainable.

To achieve optimal configuration both operational capacity and values need to be aligned. PPP practitioners in government and the private sector should therefore look for flexible organizational models, methods of generating multiple revenue streams for public assets and ways to leverage existing technologies to improve outcomes. This will generate both public and private value.

Conventional Configuration



Optimal Configuration



Prototyping an Optimal PPP: Organizational, Financial and Technological Examples

Organizational Configuration

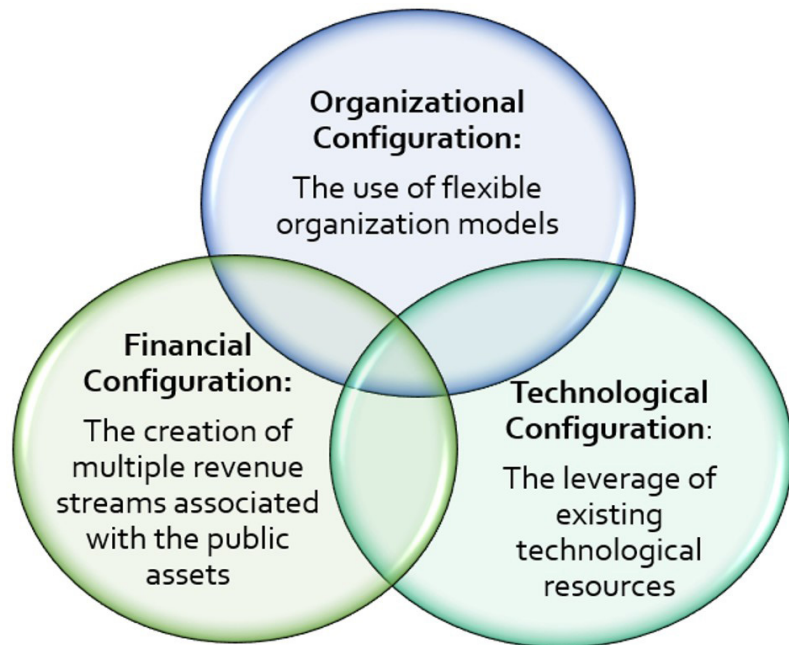
The Central Park Conservancy is an example of optimizing organizational configuration in a PPP. New York retains ownership of Central Park, while the Conservancy oversees operations and procures funding for the park with a largely free hand, allowing them to react and change faster than the municipal government could. Public value comes from building a safe community and providing free, open park access for rich or poor, and private value is created through increased economic activity.

Financial Configuration

1111 Lincoln Road in Miami Beach, Florida is an example of an innovative financial configuration. The space, which opened in 2010, is both a parking garage and an upscale event space with world-renowned architectural design. Converting a conventional parking lot into a commercial and tourist attraction created an economically sustainable community asset that attracts business and develops local culture.

Technological Configuration

In our Study, we saw a chance to use existing technologies to improve elderly care for China's rapidly increasing elderly population. At first glance, the solution to this problem would seem simple: build more care facilities. But the costs associated with this solution—building hospitals and nursing homes, hiring and training new staff, providing food services and transportation—may not be economical without major government subsidies. Instead, leveraging smart home monitoring, homecare specialists and mobile communications with family and friends of the elderly could facilitate assisted living for the elderly in their own homes. That is not only a cheaper option for the public sector but also a much preferable scenario for the elderly, especially given the Chinese cultural preference for homecare over institutionalized care. Improved outcomes do not necessarily require new “breakthroughs” in technology, just thoughtful implementation of currently available technology and solutions.



Key Questions: Why, What, How?

In *Mapping PPPs* we set out to distinguish between the needs and mandates of each country and their actual abilities to successfully implement PPP projects. To address this multi-faceted inquiry, we broke the investigation down into three component questions:

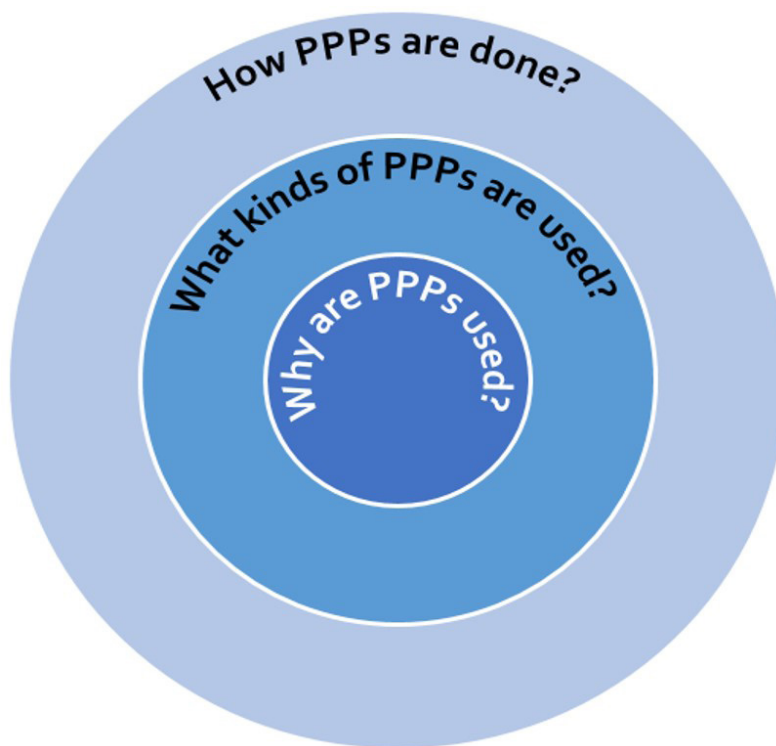
- Why are PPPs being used in China and India?
- What kinds of PPPs are being used?
- How are PPPs done?

Using these questions we examined the differences between China and India's PPP landscapes and explored the logical relationship between the "why" (motivations) and the "how" (actions) of their entry into the PPP sphere. The following sections break down each question.

Why are China and India eager to pursue PPPs at this time?

China and India are pursuing PPPs for both practical and strategic reasons. On a practical level, PPPs are being used as a source of operational capacity to address fiscal risk (especially in China) and the infrastructure gap (especially in India). Strategically PPPs are also being used as an instrument to facilitate economic development and reform.

There have been individual uses of PPP models, including Build-Operate-Transfer (BOT), in China in the past, but institutionalizing PPPs is relatively new. Despite this more recent entry into the institutionalized PPP arena, PPP has quickly gone from a foreign concept in China to a buzzword. Premier Li Keqiang has been proactively promoting the use of PPPs with total proposed investments by local governments exceeding one trillion RMB. This political mandate stems from a concern over mounting local government debts. In the past, local governments could get credit relatively easily from banks or other local vehicles to finance public facilities. But the Central Government is now trying to limit their debts, and banks are taking a harder look at provincial proposals, constrained by Central Government policy. With a fast-growing middle class and concomitant demand for improved healthcare, transportation, sanitation and other services, both local and central governments see PPPs as an increasingly important source of infrastructure financing in light of limited budgets and the difficulties of securing financing.



While local governments focus on practical needs, the Central Government also sees PPPs as a strategic mechanism to implement change. PPPs have the potential to improve the outcomes of public services and change government's role from operator to regulator.

In India, Prime Minister Modi's administration actively supports PPPs as a means of infrastructure development and subsequently economic development. The government claims that India accounts for 43% of all PPP investment in the developing world. India's focus on PPPs is driven more by a vast infrastructure gap and lack of expertise in infrastructure delivery, but, as in China, there is also a lack of capital. The Indian government expects private companies to contribute half of their \$1 trillion infrastructure investment target over five years (2012 to 2017) to alleviate the country's infrastructure gap. Similarly to China, the Modi administration, which promises a "New India," is looking for a way to meet the increasing demands for improved public services from a growing middle class.

With India's longer track record—they are coming off an era of increasing PPP use—legacy issues are causing a more cautious approach. Hundreds of previous PPPs have been started and left unfinished with the prospect of renegotiated terms. But PPPs are still seen as a way of improving infrastructure, attracting outside financing and improving transparency in a country with a history of corruption problems. (China, for its part, is involved in a much-touted anti-corruption push of its own.)

What kinds of PPPs are being used?

Economic PPPs

Both India and China have broadly incorporated Economic PPPs as a result of the relative clarity of their perceived market potentials in the eyes of both governments. For example, the PPP mandate issued by China's Ministry of Finance (MOF) lists "marketization" as a key criterion in identifying potential PPP projects. At the same time, giving the private sector a role in building operational capacity for infrastructure projects is gaining public acceptance.

But the perceived market potentials may not be accurate. Many of the "Economic PPPs" developed in India over the last several years may not actually meet today's tests of economic viability and will need to undergo renegotiations. At the same time, the Chinese use of PPPs has been based more on concessions primarily with State Owned Enterprises (SOE) than

Economic PPP Examples

China

When the Hangzhou Bay Bridge PPP opened in 2008, it was so popular that 17 private companies together owned 55% of equity in the projects. However, by 2015, the majority of the original private investors had withdrawn their investments. Only 15% of equity was owned by private companies and the rest by State-Owned Enterprises (SOEs). The expected return on investment (ROI) had fallen from 12%-15% to just 4%. So what happened? The expected traffic volume of over 18 million cars fell by one third, mainly due to unforeseen competition from alternative routes made available later by the government. Such competition not only changed traffic patterns, but also compromised the credibility of the government in managing regulatory risk.

India

The original concept for an MRI/CT scan unit PPP at the Public Sawai Man Singh Hospital in Jaipur was clear cut: space would be provided by the government, and 20% of services would be provided to those below the poverty line. In practice, however, patients below the poverty line cannot be guaranteed treatment. They complain of long wait times and onerous administrative requirements. Healthcare outcomes also vary. With prices as low as \$11.00 for a CT scan and \$40.00 for a MRI, affordability rates are still at 25%-35%. Acceptance of the PPP by the population was lower than expected because the private provider and its pricing scheme were not trusted.

on long-term sustainable partnerships that seek to align the values, interests and resources of the public and private sectors.

Social PPPs

In both countries the policy focus is on Economic PPPs while Social PPPs remain a major under-addressed challenge. The economic theory of market failure in delivering public goods is used by the public sector to justify the dominance of government subsidies in Social PPPs, which leads to an uneven playing field between the public and private sector, further perpetuating the demand for government intervention.

Social PPP Examples

China

In 2007 Veolia partnered with the Lanzhou Water Supply Company for a city-wide water project. With lower demand from a key client, costs quickly rose. By the time the Study was finished, the price had increased from 1.75 yuan/ton to 2.25 yuan/ton over eight years. Prices proved too sticky to cover the cost because raising prices dramatically was not politically acceptable. In addition, the condition of the pipes required huge capital investment in maintenance, which was not considered financially viable by the private sector. The lack of maintenance ultimately caused water pollution, and Veolia is currently being sued by local citizens.

India

At Primary Health Centers in Rajasthan 100% of revenue comes from the government based on a per-patient fee to private providers. Chronically late payments by the government have led to a significant financial strain on providers who are the ones responsible for upgrading buildings and providing equipment, drugs and personnel. Both late payments and a troublesome approval process limit any prospects for scalability, unless greater efficiency can be achieved on the part of the public sector.

Giving a role to the private sector in Social PPPs, particularly in healthcare, often meets skepticism or even demoralized criticism from the public. The private sector's profit-driven nature is perceived to endanger the access and/or quality of public goods, especially for the poor.

However, the need for the kind of improvements PPPs can provide is there. In China, healthcare costs are becoming overbearing for the public sector, with a rapid increase in the aging population and in non-communicable diseases. The use of PPPs in healthcare is clearly a policy goal, but it may be too complicated for the Ministry of Finance (MOF) to lead alone at this time. In India, insufficient healthcare infrastructure and current high out-of-pocket expenses require substantial investments. The Indian government, facing huge demand and limited or low quality supply, has been forced into a position of being more receptive toward healthcare PPPs. However, though there may be a greater receptivity to healthcare PPPs on the part of the government and a greater perceived credibility of the private sector in healthcare, the country is not necessarily better prepared to implement healthcare PPPs with the much-needed outcome and efficiency improvements required or desired.

How are PPPs done?

Currently, China has the relative advantage of a clear-cut, top-down system, supported by the central government's State Council and by two leading ministry-level authorities, the MOF (their designated PPP Division and The PPP Center) and the National Development & Reform Commission

(NDRC). These three major units of the Chinese government are leading the formulation of general PPP rules, policies and manuals, which are then being passed down to local governments. In healthcare, the State Council has also begun to issue policies to encourage the role of social capital (private capital and SOEs)—though how best to implement necessary changes is still under debate.

Without much prior experience in institutionalized PPPs, China is learning by doing. The Central Government is utilizing Chinese academic institutions and consultancies for policymaking and training support while actively seeking institutional experiences and PPP prototypes from Western governments like the UK and Australia. Multilaterals, including the Asia Development Bank and World Bank, also play an important role by providing the MOF and local governments with technical expertise and project financing.

In India, there is a top-down approach at the federal level, but a bottom-up approach at the state level. Prior to the election there was a high level of involvement by multilaterals and consultancies with high hopes in scaling PPPs through “standardization” to increase the ease of doing business and use infrastructure development to spur economic growth. Around election time in 2014, planning and implementation of PPPs became more complicated as the private and public sectors simply did not know which institutions would be in charge. Now in 2015, PPP policy leadership appears to be shifting from the MOF to the Prime Minister’s office, changing the playing field and creating the prospect of renegotiating existing projects. As financing and negotiation risks in the PPP model rise, there is a risk of India’s current PPP model failing, which could come at the expense of the entire PPP franchise and tarnish the image of PPPs in India.

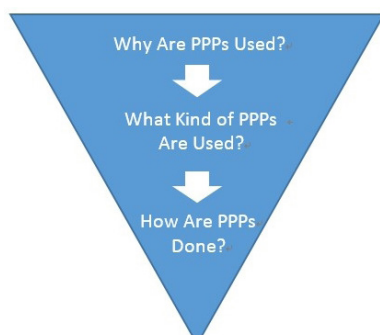
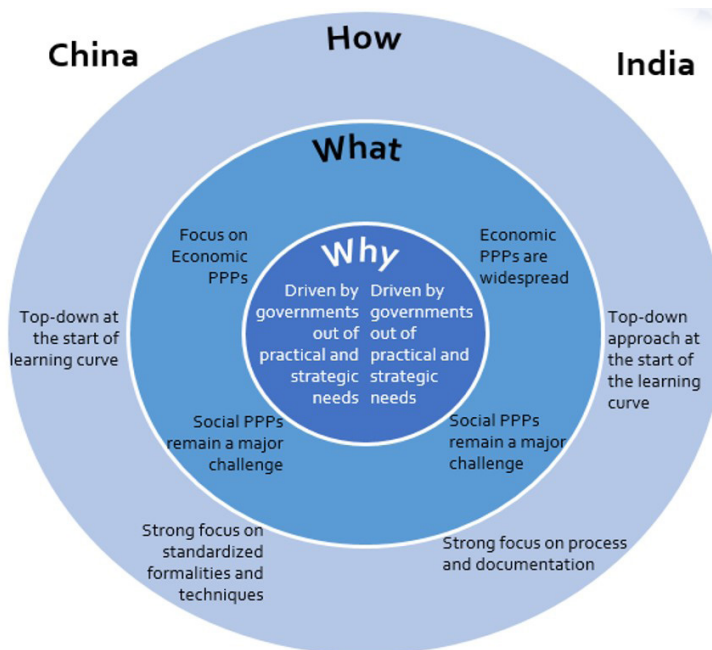
Both countries have a strong focus on standardizing the process of PPP decisions and implementation, aware of the impediments associated with potential abuses of government power and private misuse of opportunities to the detriment of the public. However, such strong focus on standardization may constrain the role of innovation and distract from the need for advanced PPP skill development in the public and private sector. Political will for the use of PPPs is there, but exactly how to implement them needs to be better understood and followed through on at an institutional level.

Key Findings: Three Gaps Stand in the Way of Successful PPPs

PPPs are an important subject in both China and India right now. Driven by a combination of reform agendas, financing needs and the development of public facilities and services, the two central governments want to use PPPs as a strategic mechanism to implement change and as a source of additional financing. To meet the governments' strategic and practical needs, both Economic PPPs and Social PPPs need to be broadly incorporated. In particular, Social PPPs in healthcare would provide significant opportunities to even out rising healthcare costs and improve healthcare outcomes.

Unfortunately, in reality, despite the strategic value of PPPs perceived by the top level of government policymakers, PPP implementation has been met with short-term or even opportunistic behaviors by local-level governments who are running out of easy financing solutions against an increasingly complex development agenda. The short-term political cycle at the local level compromises its ability to manage its own regulatory risk, hence weakening its credibility and trust. Therefore, the private sector, while theoretically attracted by PPP assets' long life, stable cash flows and opportunities to demonstrate efficiencies, is hesitant to partner with governments.

Another potential source of disillusionment is the limited use of Social PPPs. Though a stated public policy goal, the use of Social PPPs, particularly in healthcare and water, remains a major execution challenge. With weaker public hospitals than China, India is more receptive to using healthcare PPPs to meet growing demand. However, it is not necessarily better prepared to implement healthcare PPPs, which may lead to unmet expectations.



At the start of a learning curve in institutionalized PPP practice, both countries now focus on process standardization and documentation. Yet both seem somewhat unmindful of the importance of having a strong framework and developing greater skills, both crucial in aligning the values, interests and resources of the public and private sectors. The lack of framework and advanced skill development make Social PPPs even more difficult. Standardization may aid PPP implementation initially, but it could also inhibit PPP innovation long term.

Through examining the logical relations among the three questions “Why are PPPs used?”, “What kinds of PPPs are used?” and “How are PPPs done?”, *Mapping PPPs* has found that the actual usages of PPPs are inadequate to meet the governments’ practical and strategic needs. It’s as if we have a reverse pyramid (see illustration) where the base cannot support the top.

To further understand why, the Study outlines three gaps:

The Execution Gap

The Execution Gap is the easiest of the three gaps to appreciate. It stems from the inadequate preparedness of the public and private sectors in partnering with each other relative to the number and scale of potential PPP projects. Both countries still hope for an easy fix and currently invest too little in PPP skill development, leading to a general shortage of PPP talents capable of executing the types of large, complex projects the countries’ goals require.

Existing PPP trainings also focus heavily on explaining PPP procedures, models and documentation, failing to address the sheer variety of PPP projects across different sectors. PPP case summaries, while already popular as a training tool, often omit material details, including the incentives of the public and social capital sectors, the role of the media and community involvement, environmental consequences, negotiation issues and decisions and the PPP’s impact on the overall community. The use of PPP training techniques is also limited to standard definitions instead of frameworks. Open, constructive discussion of cases, is rarely used especially in large classroom lectures, even though it is essential to stimulate critical thinking and help both private and public sector managers think through real-world project risks and opportunities.

A critical issue that was regularly raised during our interviews was the need for significant improvement in the public sector’s ability to negotiate with their private sector counterparts. This skill will be necessary, particularly in India, to re-negotiate hundreds of incomplete PPP projects, including many roads.

The Innovation Gap

By leveraging innovation and creativity, governments could accomplish more with fewer resources, but there is currently a limited role for innovation in PPPs in China and India. Local governments see PPPs as a financing vehicle rather than an innovation tool. The lack of policy emphasis on PPP frameworks means that the majority of PPP discourse today focuses on honing transaction-level procedures with limited attention paid to achieving optimal configurations. There is an inherent tradeoff between the consistency of standardization and the benefits of innovation, which requires greater flexibility.

This Innovation Gap is currently growing, especially in healthcare. The private sector has abundant technology available to address productivity and outcome issues, but the public sector is hesitant or unequipped to involve the private sector, particularly in China. This may be a function of distrust of private sector profit motives in healthcare and resistance to human resources consequences associated with technology.

The Financing Gap

The Financing Gap refers to the gap between what the public sector needs to finance and what it has the ability to finance. This gap is influenced by two significant factors. First is the small number of

“bankable” projects in each country. Investors are ready to finance infrastructure, but few projects offer credibly stable cash flows. Second, the condition of assets, such as water projects, may require huge capital investments to maintain politically acceptable prices. Consultants may also play an unhelpful role by producing studies that are too optimistic, possibly designed to satisfy their public sector client’s desire to justify a project. The private sector is increasingly skeptical of these projections. As such, both countries still have large unmet financing needs for the provision of public goods.

The general public is another major stakeholder whose participation is essential to closing the financing gap. As users of government services, especially water, sanitation and healthcare, the public appears to be an indifferent or unreliable partner. It has not assumed responsibility for its actions and has too often shown an unwillingness to pay adequately for the use of services. Throughout the Study, we found that the “behavior” factor was raised repeatedly, especially in India. Public sector executives are sensitive to project risks that depend on changing behavior.

Recommendations: How to Close the Gaps

To meet strategic and practical needs in the two countries, the three above-mentioned gaps need to be adequately addressed. If they are not, top leadership in both governments may face disappointments and growing problems for their PPP plans. The rapid pursuit of PPPs in China may only create more problems and damage the potential PPP franchise, while the slow pace of action to address past PPP failures in India may discourage innovative uses of PPPs in the future. The following sections include our recommendations to avoid these outcomes.

Developing PPP Skills to Close the Execution Gap

Practitioners need to know how to manage and align the values, interests and resources of the public and private sectors. This will require managers with multifaceted skill sets.

We have pinpointed four of the most essential skills. First, innovation is becoming increasingly important as a skill, especially in defining problems. Projects need “fresh eyes” looking beyond the existing boundaries and models. This can provide the kind of thinking that transformed 1111 Lincoln Road from a simple parking garage into an upscale event space and tourist attraction. Second, political management skills are needed to help governments decide whether the resulting political risk of involving the private sector is worth the investment. Does the government really need to transfer its liabilities? The ability to understand financial structuring will also be critical – less for building financial models than for understanding the financial assumptions behind projects. Think, for example, of the case of the Hangzhou Bay Bridge project, in which the deal design proved to be financially unviable because the user assumptions were unrealistic. Lastly, negotiation skills will be needed to set a flexible yet realistic framework. The governments (municipal, provincial and ministerial) in China especially need to learn how to negotiate with the private sector as a valued and relevant civil partner. As the public sector improves and aims to be more innovative, the private sector will also need to adapt and respond.

These four major PPP skills are closely linked. Take “human behavior” as an example. Governments, not bankers or investors, are tasked with dealing with the behavioral issues associated with the public use of assets, but bankers and investors are often wary of behavioral issues that affect the bankability of a PPP. To mitigate those concerns, political management skills and innovative uses of technology are needed to affect change in user behavior, as are negotiations between the public and private sectors.

Adopting a Multi-asset Approach to Close the Innovation Gap

Imagine an elderly care PPP pilot project in China that focuses on people in their 50s rather than their 60s, the group defined as elderly. The underlying reason for this choice of target is the prevalence of non-communicable diseases in the 50s age group, something that will dramatically increase the medical expenses for their elderly care. The partners of such a PPP would include patients, health regulators, community health centers and the private sector, and the key to the project’s success would be a multi-asset approach that incorporates the use of screening and monitoring technology, the provision of drugs and elderly housing. This would align the values, interests and resources of the partners, as the private sector would be incentivized to provide multiple assets to gain market access.

Such a PPP would also serve as an innovation tool. It would provide the government with data and analysis needed to correct elderly care policies by disaggregating and reconfiguring the components of elderly care, when this age group reaches their 60s. This would allow investors to reduce medical costs and hence improve return on investment.

Using a Comprehensive Approach to Close the Financing Gap

The behavior of the public as stakeholders in a PPP can have a lot of influence on its potential bankability because changing citizens' behavior and attitudes can steepen or bend the cost curve. For example, educating the population on the actual value of water may change the public's perceived value of water and actual usage of the resource, allowing for greater conservation or increased pricing flexibility. This would allow more optimal, realistic configurations of water PPPs, but with politically marketable expectations from the public.

Closing the Financing Gap will build the foundation for closing the other two gaps, but there is still a steep learning curve to be surmounted. In the short term, China and India need to consider either decreasing expectations or increasing investment. While they could temper expectations for current PPP projects to prevent disillusionment with PPPs in general, a better alternative is to invest more in building PPP skills in both sectors and in empowering cross-asset senior leadership and institutions. Both countries should also emphasize trust and credibility to foster collaboration, so that the public and private sectors can fully trust one another to successfully hold up their side of the PPP contract.

The goal of this Study was to provide both an in-depth, comparative assessment of the PPP environments of two important emerging PPP markets and a meaningful framework for moving improving PPP performance in the future. Based on our extended in-country presence, a diverse body of interviews with high-level PPP practitioners and a rigorous academic methodology, we focused on providing framework-based, long-term solutions to improve countries' readiness to deliver improved infrastructure and services through PPPs. We believe this Study will help overcome shortcomings in both governments' long-term planning and training, close the identified gaps that often impede successful PPPs and ultimately contribute to improving infrastructure service delivery through PPPs in China and India.

Appendix

The Researchers

Our Study Team is made up of four Johns Hopkins University School of Advanced International Studies (SAIS) researchers from the US, China and India. The Principal Investigator, Professor Alan M. Trager, made a combined nine trips to China and India to conduct interviews and keep up with important PPP policy developments in both countries during the study period. Professor Trager designed, researched and taught Harvard Kennedy School's PPP course before transitioning to SAIS. He also serves as Economic Advisor to the Beijing Municipal Government's Xicheng District and is an Instructor at the Leadership Academy for Development (LAD).

Our researchers are also located in China and India—Rupinder Kaur Rai, a Johns Hopkins SAIS MA in International Relations and Economics, in Jaipur, India; Selena An, a joint degree holder from the Johns Hopkins School of Public Health and SAIS, in Shanghai; and Principal Researcher Huazhen “Molly” Guan, with multi-cultural, multi-sector professional experience and a Harvard Kennedy School MPP degree, in Beijing. All share a deep and longstanding commitment to public-private partnership analysis and practice.

The Methodology

Over 60 weeks of in-country investigation, the Study Team focused on interviewing policymakers of different levels and PPP practitioners to obtain firsthand data and gained additional contacts from independently developed networks spanning public, private and non-governmental sectors in both countries. Our interviews within our Harvard and Johns Hopkins networks provided straightforward, honest appraisals of the obstacles to creating effective PPPs in China and India.

We wanted to assess three major questions: Why are PPP being used in China and India? What kinds of PPPs are being used? And how are they being implemented on an institutional and project level? We developed a framework through 12 years of past experience in this area, which we used to assess PPP development. In China close analysis of predicted political and economic developments impacting PPPs involved looking at policy momentum and at China's slowing economic development. In India, analysis revolved around the election outcome and the country's increased growth and needs.

Finally, we compared in-country observations and analysis to determine each country's needs and mandates vs. its actual abilities to engage in PPPs. This allowed us to look at what steps they can take to move forward. Though the countries have many obvious differences, in interviewing over 160 stakeholders, we found many similarities in the cultural, political and functional practices and obstacles that affect their PPP development.

Disclosure

Professor Trager has extensive experience in teaching PPPs in executive education programs in many countries for Harvard, Johns Hopkins and LAD. Both he and Huazhen “Molly” Guan have participated in numerous PPP executive education programs, seminars and conferences in China.

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