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Review Article

Achieving Universal Health Coverage through Public Private Partnerships: A Study of Trends in the Public Private Partnerships in India

Dr Utkarsh Shah[1], Dr Harshad Thakur[2]

[1]Pursuing PhD in Health System Studies at Tata Institute of Social Sciences, Mumbai
[2]Professor, School of Health System Studies, Tata Institute of Social Sciences, Mumbai

Corresponding Author: Dr Utkarsh Shah

ABSTRACT

Background: Universal health coverage is very vital to propel and power a country's economic and social development. The National Health Policy, 2017 has reiterated the need to increase public spending on healthcare, to achieve UHC. However, financial constraints and limited capabilities have led governments to engage the private sector, through the module of Public Private Partnership.
Aim: The paper aims to understand the preferred models of partnerships, thematic areas of interest and procurement patterns, based on historic trends across five states, with an objective to guide future strategies and decisions for Healthcare PPPs.
Methods: The information about the healthcare PPP projects was compiled from different publically available databases, as on 15th December 2017. These projects were reviewed, and tabulated based on the project type, segment and status, for further analysis.
Results: The result demonstrated that Healthcare PPP projects were smaller in terms of project value, compared to other infrastructure projects. A majority of the projects (more than 65%) were aimed at providing primary care, diagnostics and outreach services, with very few large scale medical college projects. More than 70% of the projects conceptualized by the governments were infrastructural projects, though about two thirds (65%) of the currently operational projects were non-infrastructural Operate and Manage (O&M) projects. The procurement principles used for the selection of private partners was vastly different across the 5 states for an enterprise of a similar type and design.
Conclusion: Low risk O&M projects are easily rolled out compared to large scale 'risky' infrastructural projects. In most cases, this reluctance can be attributed to poor pre-contracting transparency, post contract red tapism and no contract flexibility or scope of re-negotiations, based on business changes. There is a strong need for policy modifications and a necessity to reconsider our procurement strategies, to help boost private sector confidence and expand their participation in healthcare PPPs, thereby contributing to the achievement of the Universal Health dream.

Keywords: Public Health, Public Private Partnerships, Universal Health Coverage, Health Management

INTRODUCTION

Universal access to health and education is a prerequisite to ensuring social and economic development of a nation. Various efforts are underway to reduce out-of-pocket expenditure; however the Indian healthcare infrastructure is grossly inadequate, skewed in distribution, [1] and in most cases has a very poor asset quality. [2] There is an obvious need to create additional and newer infrastructure as well as to upgrade and improve medical access

and coverage; on the other hand, limited financial resources have constrained the ability of public agencies to invest in infrastructure creation. Engaging the private sector is decidedly beneficial, given that it will build and strengthen the existing healthcare infrastructure and will also deliver better quality of services, and thus reduce the burden on the public treasury. Consequently, public agencies are exploring Public Private Partnerships (PPP) modules as a way to achieve Universal Health Coverage (UHC), through collaboration with the private sector.

Public Private Partnerships (PPP) may mean formal or non-formal arrangements ranging from - simple grants to complex contractual arrangements. There are a variety of PPP formats and their use is dependent on the objectives and purpose of the partnership. [3] The key PPP formats include,

- Service contracts - [4] they engage private sector to bring in better experience and management skills, which can help minimize wastages and are most suited for the operational requirements.
- Operate and Manage (O&M) contracts - they entail the management of the entire public assets by the private partner with the ownership of the assets retained with the public sector.
- Lease contracts [3] - are those where in the private partner purchases an income stream of a public asset in exchange of a fixed lease payment, with the obligation to operate and manage the asset.
- Infrastructural PPP - these comprise of various operating models, viz. Build Operate Transfer (BOT), Build- Own- Operate- Transfer (BOOT), Design- Build- Operate- Transfer (DBOT) and Joint ventures. These are the more complex arrangements, given that, they incorporate the responsibility of construction, financing, development and management of the public asset.
- DBFO (Design- Build- Finance- Operate), Concessions or PFI (Public Funded Institutions) - are the most complex arrangements. [5] Readily used in the mature markets, especially the United Kingdom, these contracts involve funding of the design and building, along with provision of non-core services such a cleaning, catering, pottering, etc.

PPPs have been extensively used in transportation, communication, and utilities sectors, but have seen limited application in healthcare. [6] Evidence from India indicates that 94% of all the investments in PPPs are in the transportation and power sectors, with a very miniscule contribution to healthcare projects.

The aim of this paper is to understand the preferred models of partnerships and the thematic areas of interest and procurement patterns, based upon historic trends across five states, in health sector PPPs. The selected states are considered to be the frontrunners in PPP projects for most other sectors; and consequently, a perspective from these states, may be used to guide future strategies and PPP engagement decisions in healthcare.

MATERIALS AND METHODS

In order to compile the information of various healthcare PPPs projects from across India, a secondary web research was undertaken. The web research led to a compilation of PPP projects from across the five states of Andhra Pradesh, [7] Karnataka, [8] Maharashtra, Rajasthan and Uttarakhand. [9] The web sources included State PPP portals and Government of India PPP portal. [10] In states where no web portals were available (i.e. Maharashtra and Rajasthan), the information was compiled through publically available news, articles and via formal communications to the Department of Health, Procurement cell, in the respective states. All data was collected as on 15thDecember 2017.

A list of 87 planned (or operational) healthcare projects was compiled. All projects were tabulated and broadly

categorized based on three parameters, which included -

1. Project type i.e. infrastructural or operate and manage projects.
2. Project Segment i.e. Primary care segment or Secondary and Tertiary care Segment or Technology Service Segment. Primary care segment includes - primary care services, diagnostic services, mobile medical services, emergency response services and dialysis services. Secondary and Tertiary care segment includes - specialty services like cardiac, trauma, women and child care, medical college and education services. Technology segment comprises- of HMIS, E Health and Tele-triaging services.
3. Project status i.e. operational stage or awarded, but awaiting operationalization stage or Pipeline/ bidding stage.

This tabulated information was analyzed to understand the pattern as well as the highlighting trends of the various healthcare PPP projects of the five states. Data regarding the project value and the contracting methodology was also collated, either through web sources or published news articles.

RESULTS

On 15th December 2017, [10] as per the Government of India portal, the number of infrastructural PPP projects, across all sectors was 1396, with a cumulative value of INR. 9, 83,584.5 Crores. The distribution of infrastructural PPP projects (above the value of INR 500 Mn) across different sectors has been displayed in the **Figure.1,** below

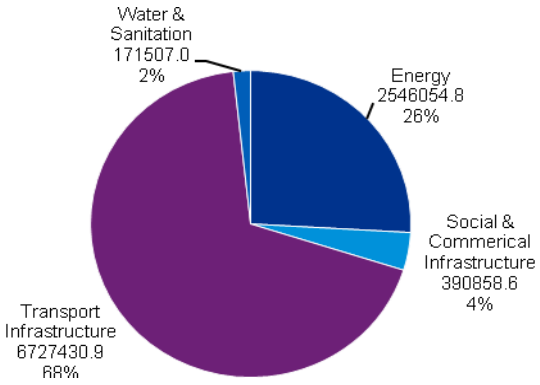

Figure.1. Distribution of Infrastructure PPP Projects (Value above INR 50 Crores)
(As on 15th Dec 2017)

Social and Commercial infrastructure is a broader category which includes healthcare projects along with tourism, commercial projects, Business Park, etc. Of the 144 projects in this category, there are only 12 healthcare projects. This implies that very few PPP healthcare projects in India are of value equal to or more than INR 50 Crores (INR 500 Million).

The data compiled from the selected States on their PPP healthcare projects was tabulated and has been depicted in Table 1 below. The depiction provides a categorization based on the total number of projects across the states (column 1), distribution based on Project Segment (column 2), Project Type (column 3) and Value (column 4). The Table 1 includes all projects, irrespective of their current status.

Table.1. Summary of Health PPP Projects across Key States

States	Total Projects (1)	Project Segment Classification (2)			Project Type Classification (3)		Project Value (INR Crores) (4)	
	Statewide (All)	*Primary Care Segment*	*Secondary & Tertiary Care Segment*	*Technology Segment*	*Infra Projects*	*Operate & Manage*	Cumulative	Average
Andhra Pradesh	10	*9*	*2*	*1*	*7*	*3*	996	99.6
Karnataka	24	*21*	*3*	*0*	*17*	*7*	136	5.7
Maharashtra	20	*9*	*10*	*1*	*17*	*3*	1335	66.8
Rajasthan	9	*7*	*1*	*1*	*4*	*5*	495	55
Uttarkhand	24	*15*	*9*	*0*	*16*	*8*	1173	48.9
Total	**87**	**59**	**25**	**3**	**61**	**26**	**4135**	**47.5**

Analysis on project type, showed that infrastructural projects are generally preferred, contributing to more than two thirds (61 projects) of the total list of health PPP projects (87 projects). This indicates a consistent focus of the state governments on leveraging PPPs to create new infrastructure or to strengthen the existing infrastructure, through PPP.

On analyzing the information regarding project value, it was observed that the average project value of healthcare PPPs is about INR. 47.5 Crores (ranging from averages of 99.6 Crores in Andhra Pradesh to INR 5.7 Crores in Karnataka).

On a more detailed analysis, it was observed that the averages were skewed due to the presence of a few high value projects. These included four projects of state wide operations of 108 Emergency Medical Services and 104 Mobile Medical services in Maharashtra, Rajasthan and Andhra Pradesh, which were pegged at about INR 1200 Crores.

Similarly, three medical college projects, one in Maharashtra and two in Uttarakhand were estimated at INR 925 Crores. If these seven projects were not considered, the average project size of healthcare PPP projects across these five states would be about INR 25 Crores. These projects are significantly smaller than transportation, power and social and commercial sector projects.

There are a few examples of successful mega sized PPP projects like the Shillong Medical College PPP project, [11] which was awarded an estimated investment of about INR 150 Crores. A majority of the projects are typically small in size and tend to focus on improving access, availability or coverage. Some examples of the latter include provisioning of MRI (Medical Resonance Imaging) services in Sawai Man Singh Hospital, Jaipur, [12] which was focused on improving access and availability of imaging services in public facilities, and establishment of Cardiac Centre Facility in Deen Dayal Upadhyaya Hospital, Dehradun, [13] which was focused at improving the coverage of specialized cardiac services, which were not available in public health system.

On reviewing the project segmentation, it was observed that more than 65% (59 projects) of the healthcare PPP projects were designed in the primary care segment. This indicates that governments would prefer to use PPP to improve provisioning of primary care and diagnostic services, rather than other highly specialized services. The configuration of services however, in the primary care segment, tends to vary. For example, 108 Mobile Medical Units in Andhra Pradesh provides basic outreach services for the management of diabetes, hypertension and neurological disorders, while a similar service in Bihar provides a more comprehensive set of services including HIV-AIDS counselling, X ray, minor procedures management and eye screening. [14]

The above analysis points towards the government's preference in establishing infrastructural PPP projects and preferring to operate on development projects in the primary care segment. However, on introducing the dimension of project status, it helps in developing a point of view on which projects are more likely to get off ground. This can act as a proxy index to understand the preference of the private sector.

The **Table 2,** below provides a summary view of the current procurement status across healthcare PPP projects, across the five states. The depiction assigns categorization of operational projects into Infrastructural and O&M projects (column 1) and other non-operational projects including either ongoing or under-construction projects or projects in the pipeline (column 2).

Table.2. Summary of Healthcare PPP Projects based on Procurement Status

States	Operational Projects (1)			Non-Operational Projects (2)	
	Total (All)	*Infra Projects*	*O&M projects*	Ongoing/ Construction	Pipeline/ Bidding
Andhra Pradesh	5	*3*	*2*	1	4
Karnataka	4	*0*	*4*	3	17
Maharashtra	5	*2*	*3*	9	6
Rajasthan	8	*2*	*6*	0	1
Uttarkhand	7	*2*	*5*	0	17
Total	29	*9*	*20*	13	45

On review of the current status of the projects, only about one third (29 projects) are operational. Even among those operational, less than one third (9 projects) were infrastructural, while the rest of the projects were O&M projects. The operational infrastructural projects included projects on diagnostic centre (3 projects), dialysis centre (2 projects), dispensaries (3 projects) and one cardiac centre project. Among projects awaiting operationalization, about half (7 projects) were infrastructural and included establishment of Regional diagnostic centres in District Hospital in Karnataka and Radiology Diagnostic Centers in three Clusters of Maharashtra.

The analysis indicates that despite the government's inherent focus on infrastructural PPPs, management and operations contracts (O&M) are more likely to get operational or off the ground.

On appraising the procurement methodologies for the projects under consideration, two contrasting procurement frameworks emerge. The first approach is the individual project approach, wherein, separate projects are conceptualized for setting-up similar facilities at different locations E.g. in Karnataka; six separate projects have been conceptualized for the establishment of regional diagnostic centers on BOT basis in six district hospitals. The second approach is the bundled project approach, in which, similar nature of projects are bundled or grouped together in some logical manner. E.g. in Maharashtra, Development of Radio diagnostic centers across 35 hospitals was bundled up into three clusters (of Marathwada, Vidharba and Rest of Maharashtra). Another example of a successfully implemented bundled project is the establishment of 10 dialysis centers across Andhra Pradesh by B Braun. [15] The project resulted in operationalization of 111 hemodialysis units, across 11 sites in undivided Andhra Pradesh and has been estimated to benefit more than 10,000 terminally kidney failure patients across the state.

DISCUSSION

Ensuring Universal Health Coverage is a developmental imperative for India; and the governments are working on various risk pooling and health financing mechanisms to enhance its affordability. Issues of - access, coverage and availability of health services, for the underserved or the unserved markets, continue to pose a huge challenge and hinder our attaining of UHC. PPP have become a good alternative to help in achieving better access and coverage, especially when the governments are facing financial constraints.

There are obvious advantages of partnerships for both the parties involved. Governments are benefited by lowering of financial burden and an ability to leverage managerial capabilities of the private sector. The private sector is benefited by getting an opportunity to expand and scale up operations in newer geographies. [16]

The analysis of the PPP project data from the five states has given an intelligible and unambiguous indication that governments are keen on engaging the private sector for creation of infrastructural assets. The focus of the government has been in the area of primary care, outreach and provisioning of diagnostic services, which are core pillars to a successful healthcare delivery system. Most governments have been exploring PPPs with the intention of achieving Universal Health Coverage, either by way of expanding the coverage of services, which have conventionally not been available (or are in short supply) in the public sector (e.g.

dialysis services); or by providing a better access to certain services in specific under-served geographies (e.g. diagnostic services).

On examining the projects that have been successfully rolled out, it appears as though the private sector is very selective in the way it engages with the government. The private sector prefers to engage on O&M projects, while infrastructural projects are less likely to roll out. Firstly, for most O&M contracts, the government pays a fixed fee, against services provided for pre agreed SLAs (Service Level Agreement) with the private partner on period. This de-risks, the private partner from financial uncertainty, to a certain extent, in comparison with the infrastructural projects. What's more, O&M projects do not require significant capital investments. A successful example of an accomplished O&M project is the Outsourcing of PHCs in Karnataka, where primary centers were outsourced to NGOs/ Trusts, in exchange of fixed fees. This has significantly improved the availability as well as access to services for the local population. [17] Low risk and limited capital investments make O&M projects more appealing to the private sector. Secondly, in addition to the obvious financial risks, infrastructural projects also fall prey to inadequate information which can lead to miscalculations or wrong estimations, consequently resulting in a higher risk of failures. [18] Moreover, unlike the O&M projects, in infrastructural projects, the private partners are required to generate revenue to manage the operations through introduction of user charges. However, limited ability to pay for health services, among the beneficiaries, makes huge investment in healthcare infrastructural projects completely unviable for private partners. Various governments have tried to improve participation either by assuring revenue streams, by payment of fixed charges for BPL patients (e.g. Cardiac Centre at Deen Dayal Updadhya Hospital, Dehradun) or by providing Viability Gap Funding (e.g. Shillong Medical College, Shillong). In addition to these obvious risks, a lopsided risk sharing/ risk transfer mechanisms, weak contract frameworks and poor or limited support in providing requisite clearances and approvals e.g. allotment of land or providing occupancy certificate, are other obvious reasons for the private sector to distance itself from Infrastructural PPP projects.

On examining the procurement strategies, there are two unique methodologies that have been used by states, for very similar type of PPP projects. These procurement strategies determine the 'desired' financial and technical capabilities of the private partner to be engaged for the PPP project. The "single project approach", which allows projects to be viewed as independent projects and breaks down a larger project into small discrete segments. As a result, this approach, improves the chances of attracting more bids (improves competitiveness) and also encourages local private organizations to participate. On the other hand, this is associated with a risk of the commercially less viable parts receiving fewer or no bids at all. Furthermore, it also increases the efforts required by the State to coordinate and manage the execution and discharging of the contract with multiple private partners. The "bundled approach", on the other hand, ensures that the commercially less viable sites are not left out and coordination efforts of the state are greatly reduced too. Then again, this approach eliminates small and local indigenous players, with technical capacity, from participating, given the higher financial capability requirement.

The absence of robust frameworks to determine an appropriate selection of a particular approach promotes corruption and often results in failures. Healthcare PPP projects should be designed with due consideration of the capabilities and capacities of the local private sector. Engaging the local private sector to support in delivering the health services, will not only enhance sustainability, but will improve competitiveness. Only strategically

unique PPP projects, where the local private sector does not have the necessary capabilities, should consider the involvement of international MNCs (Multinational Companies). Strategies that limit the engagement of local private sector can be detrimental for the long term sustainability of healthcare PPP projects.

The Kelkar Committee constituted by the Department of Economic Affairs, to relook at the framework of PPPs, made some specific suggestions. These suggestions have a strong implication on the future of healthcare PPPs in India. The committee suggested that the building capacity within public health institutions and provision of the framework for guidance is vital to bolster private sector participation. In spite of the fact that guidelines are available, practitioners of PPP in the government, need to be sensitized and trained to use them appropriately. Further, there are several examples of successful PPP healthcare projects throughout the country and there is a dire need to develop a compendium to capture these experiences. Regular updating and disseminating the compendium to different states, through formal communication channels, will greatly contribute to building capacities of the public machinery. The committee also suggested creation of a formal framework for post-contract re-negotiation which would allow flexibility for the private sector, to reconfigure their projects and bring in efficiencies using latest and innovative technologies.

By working towards promoting transparency, allowing flexibility and pliancy and reinforcing the capacities within public institutions, the quality of engagement between the government and the private sector is bound to improve, and this will favorably influence the uptake of PPP projects.

CONCLUSION: THE WAY FORWARD

Achieving Universal Health Coverage is not just the responsibility of the government, but an active cooperation from the private sector is very imperative. The Indian private healthcare sector has grown rapidly in the recent past and continues to contribute significantly to provisioning of health services. However, when it comes to partnering with the government, the private sector has been fairly selective.

Governments can improve participation by improving transparency, reducing red tapism and allowing flexibility in post-contract negotiations. Preferring the local private sector, over international MNCs, would also help enhance confidence. In order to mobilize support from the private sector, it is pertinent for the government body to view the partner sector as a ‘partner’ rather than a ‘service contractor’. A cultural change with a strong focus on transparency, work ability and commitment to support is exceedingly vital.

There are some examples of successful healthcare PPPs that have contributed to improving the coverage and access to health services. However, the implementation of some of the recommendations of the Kelkar Committee Report, will be critical to not only to improve the trust and sustainability, but also to increase the level of private sector engagement in healthcare.

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