

# Public-Private Partnerships

## Case Study #3

### Mobilizing Private Funding: the Case of the National Highways of India

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*This case study reviews the development of highways in India and shows the possible shift in infrastructure financing from traditional public procurement to a Public-Private Partnership (PPP) model within a relatively short period, as well as the challenges encountered.*

#### PRIVATE FINANCING

There is massive demand for infrastructure investment in the transport sector. Most countries are, however, constrained by limited budgets and borrowing capacity. Against this backdrop, private sector involvement has been considered by policy makers as a promising option for overcoming resource constraints.

In particular, India has made intensive use of Public-Private Partnerships (PPPs), with over 750 PPP projects approved since the late 1990s (as of 2011), most of which in the transport sector.<sup>1</sup> While private funds represented only 5 per cent of total investment in roads and highways in the 10th Five-Year Plan (2002-2007) of India, private sector contribution reached an impressive 34 per cent in the 11th Plan (2007-2012), an increase of more than US\$20 billion.<sup>2</sup>

More specifically, the National Highways Authority of India (NHAI) has been intensively using PPPs to develop its network and has awarded more than 239 PPP projects as of April 2013.<sup>3</sup> This case study will review how this development has been made possible and will highlight issues encountered and the key success factors.

#### NATIONAL HIGHWAY DEVELOPMENT PROGRAMME (NHDP)

In 1998, the government launched an ambitious programme to upgrade, rehabilitate and widen the country's national highways: the "National Highway Development Programme" (NHDP). This programme, comprising of seven phases, is still under implementation and is managed by NHAI.

#### Implementation Strategy

To implement the first two phases of the programme, NHAI has mainly used traditional EPC (Engineering, Procurement and Construction) contracts. In the EPC model, the contractor carries out the project design, procures the equipment and materials, and then executes the work according to the terms and conditions agreed in the contract.<sup>4</sup> Up until 2013, 316 EPC contracts have been awarded under the NHDP programme.<sup>5</sup>

For Phase III, launched in 2005, the government decided to prioritize PPPs for highway development.<sup>5</sup> This prioritization has led to the creation of different PPP models:

##### **BOT - Toll**

Under the Build-Operate-Transfer (BOT) Toll model, the private investor is granted the right to collect tolls. As such, the government's fiscal burden is limited and traffic risk is allocated to the private partner (i.e. revenue for the private investor depends on the number of road users). This has been the preferred model so far due to its limited impact on public finance.<sup>6</sup>

##### **BOT - Annuity**

The BOT Annuity model was developed for projects that were not viable financially (i.e. where the revenue flow expected from tolls is insufficient to repay the investment made by the private partner). In this case, the private partner's revenues come directly from the government through "availability" payments: the government checks at regular time intervals whether the asset is available (if the road can be used) and whether the asset meets the quality standard defined in the contract. If the availability criteria defined in the PPP contract are met, then the government pays a fixed fee to the private operator.



*ESCAP supports governments in Asia-Pacific in implementing measures to efficiently involve the private sector in infrastructure development. This case study is part of this effort and promotes exchange of experience among the countries of the region*

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## Operate-Maintain-Transfer (OMT)

A third model was introduced in 2009 for the operation and maintenance of existing national highways (“brownfield” projects). The OMT model allows the private partner to avoid the construction risk as the infrastructure is already built. Traffic risk remains, however, with the private operator. About 19 projects (approx. 2860 km and US\$239 million) have been awarded by NHAI under OMT before 2013 (most in the last two years).<sup>7</sup>

## Trends

As shown in Figure 1, major PPP activities started after 2005, following the beginning of NHDP Phase III. After a dip resulting from the financial crisis in 2008, PPP activity reached its peak in 2010 with more than 50 projects awarded for a total value exceeding US\$8 billion and approximately 5400 km of road.

The prevalence of PPPs, however, has declined since then, with only 1,115 km of projects awarded by the NHAI from April 2012 to March 2013 compared to an initial target of around 8000 km.<sup>8</sup> Additionally, many of the awarded projects did not achieve financial close within the following contractual 6-month period. Several projects proposed even failed to attract any bidders as the projects were found not to be commercially viable.<sup>9</sup> As a result, EPC procurement has been reintroduced more widely and the NHAI has planned to award more than 50 per cent of the total target amount, which corresponds to 4000 km for FY14 under EPC mode.<sup>10</sup> Meanwhile, NHAI is trying to salvage some distressed PPP projects by allowing the deferment of premium payments to enable developers to pay their debt obligation (9 projects have recently benefited from this relief measure).<sup>11</sup>

## SUCCESSFUL COMPONENTS

Despite recent difficulties, there have been useful innovations in the way PPPs are tendered and structured in India for National Highway development:

### Contract Streamlining

Model Concession Agreement (MCA) is one of the most important features of Indian PPPs. The MCA is a ready-to-use contract that facilitates the process of negotiation while ensuring uniformity in different PPP project agreements.<sup>12</sup> The MCA addresses issues such as the parties’ obligations, allocation of risk, financial support from the government, force majeure, transparency and termination.<sup>13</sup>

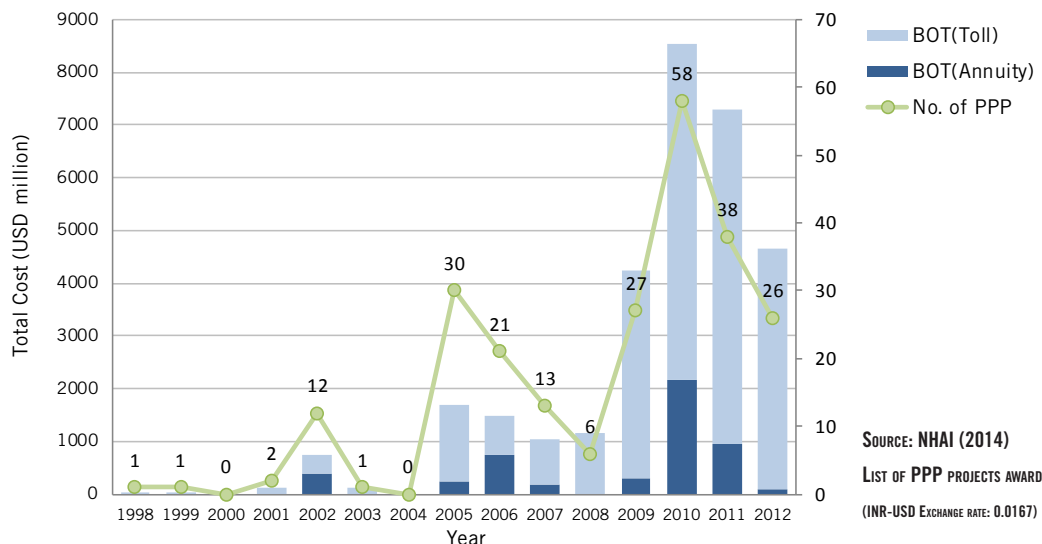
With standardized contractual provisions, less time is required for reviewing the PPP contracts as private partners and financial institutions are familiar with the templates. Standardized contracts can also make internal approval within government easier as these terms and conditions have already been approved. Other standardized bidding documents have been developed such as a Model Request for Proposal (RFP) and a Model Request for Qualification (RFQ).<sup>14</sup>

### Viability Gap Funding

To make a project commercially viable, the Government of India has also been providing financial support through Viability Gap Funding (VGF). VGF is provided in the form of a capital grant at the stage of project construction. VGF provides a maximum of 20 per cent of the total estimated project cost. An additional 20 per cent could be provided by the sponsoring Ministry or agency. The primary objective of India’s VGF programme is to fill the gap between the expected revenue stream and the project’s cost. As such, a project can attract

*While PPP projects have contributed to NHDP for up to \$8 billion on a yearly basis, recent activity has been very limited*

**FIGURE 1: NUMBER OF BOT PPP PROJECTS AWARDED AND TOTAL PROJECT COST**



SOURCE: NHAI (2014)

LIST OF PPP PROJECTS AWARDED BY NHAI

(INR-US\$ EXCHANGE RATE: 0.0167)

private investments even if the projected revenue stream is below the overall cost. VGF might have contributed to the initially high competition in the Indian PPP market. As the amount of VGF is the key selection criteria in the bidding process, there is a strong incentive for the private partner to limit the VGF to the minimum amount required. According to available data, 131 road PPP projects with a total cost of US\$9.8 billion have been approved with VGF support of US\$2 billion (almost 20 per cent of the total cost).<sup>15</sup>

## MAIN ISSUES

In 2013, the daily targeted construction of National Highway was 20 km. However, the construction rate was only 10-12 km per day, lower than the 16 km per day construction rate in 2012.<sup>16</sup> Different factors can explain the slowdown:

### Land acquisition

Significant project delays have arisen from land acquisition and related environment and forest clearance issues. According to an industry survey, 80 to 90 per cent of road projects suffer delays from land acquisition. These delays constitute 15 to 20 per cent of the total project time.<sup>17</sup> These problems often arise because land acquisition is typically not fully secured prior to bidding (according to the procurement document, only 80 per cent of the land has to be secured prior to bidding, though this clause sometimes has been waived by private and public partners to accelerate project approvals).<sup>18</sup> Recently, however, banks seem to require that 100 per cent of the land be acquired prior to financial close (i.e. before the start of construction).

### Dispute resolution

Effective dispute resolution mechanisms are critical for the success of PPP programmes to avoid delays in implementation and the resulting cost consequences. In the highway sector, disputes are commonly related to delays in land acquisition, change in scope, utility shifting, and reluctance to approve price escalation permitted in the contract. Different initiatives have been taken to promote amicable settlements through mediation or conciliation in order to save the time and cost that would result from arbitration or litigation procedures. NHAI has, for example, recently established a dispute settlement committee.<sup>19</sup> Tackling this issue is particularly important as it was estimated in 2013 that more than 200 cases involving NHAI were at different stages of arbitration or were pending in court, representing claims worth between US\$1-2 billion.<sup>20</sup>

## Project preparation

A study from McKinsey indicated that investment in detailed project preparation in India was significantly lower than in other countries, notably the UK and USA. Inadequate project preparation can lead to changes in the project scope during the implementation phase and result in the tendering of unviable PPP projects where the infrastructure capacity planned exceeds what the traffic can justify.<sup>21</sup>

To ensure sufficient resources are allocated to project preparation, the Minister of Finance announced in 2007 the establishment of the India Infrastructure Project Development Fund (IIPDF). IIPDF would provide interest free loans up to 75 per cent of the total project development cost for project identification and preparation such as engaging consultants and transaction advisors.<sup>22</sup> The fund is a revolving fund and has to be replenished by the successful bidders once the bidding process is completed. So far 49 projects have been approved across all sectors with total IIPDF assistance of US\$10 million (around US\$4 million has been disbursed).<sup>23</sup>

## Access to finance

Access to long-term financing is a critical element for infrastructure projects. It seems, however, that both debt and equity financing have become limited in India.

For debt financing, most of the long-term loans are provided by banks, mainly state-owned banks, though non-bank actors play an important role.<sup>24</sup> For example, the Infrastructure Development Finance Company (IDFC) has become over the years an important source of financing for infrastructure projects.<sup>25</sup> In 2006, the government also established the fully-owned India Infrastructure Finance Company Limited (IIFCL) to further stimulate long term financing. IIFCL provides financial support up to 20 per cent of the project cost through direct lending.<sup>26</sup> Up to March 2013, gross sanction under direct lending has accumulated to \$4 billion for road sector projects.<sup>27</sup>

Despite these measures, it seems that long-term debt financing is becoming more and more difficult to obtain recently with bank balance sheets reaching their exposure limit in terms of sector (roads) or group (infrastructure companies). To address this issue, the government has appointed IIFCL in 2010 as the agency to manage a Take-out Finance Scheme, under which it can take over bank loans to free up capital for new projects. The Take-Out Finance Scheme has

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*Different factors can explain the slowdown in PPP activity among which land acquisition delays, ineffective dispute resolution mechanisms and limited access to finance*

had limited results so far (only 44 projects in the infrastructure sector benefited from this mechanism for a total amount of US\$1.3 billion of refinanced debt).<sup>28</sup> In the same vein, Infrastructure Debt Funds (IDFs) are being established to refinance the existing debt of infrastructure companies. According to the national regulation, these funds can refinance up to 85 per cent of the project debt from senior lenders for PPP projects that have completed at least one year of operation.

With funding from the banking sector becoming more difficult, initiatives have been made to tap into the capital market and investors like pension funds and insurance. In this respect, IIFCL recently piloted a Credit Enhancement Scheme with the Asian Development Bank (ADB).<sup>29</sup> The Scheme is providing partial credit guarantees to enhance the credit rating of project bonds issued by infrastructure project companies. The objective is to enhance the credit rating of these bonds to a minimum of AA in order to attract institutional investors like insurance companies and pension funds that are barred from investing in assets rated lower than AA.<sup>30</sup>

Another issue is the limited availability of equity that has been traditionally provided by the construction companies themselves. This limitation could be an obstacle for future PPP development as the amount of equity available determines the volume of debt that can be channeled to the infrastructure sector, especially as banks are now requiring more equity to be provided upfront as part of their tightening credit policies. Banks are now requiring that at least 50 per cent of equity be disbursed upfront (sometimes even 100 per cent), compared to 25% to 30% previously.<sup>31</sup> This change obviously creates additional financial pressure on construction companies.

## CONCLUSION AND OUTLOOK

As more than 15,000 km of road are yet to be awarded under the existing phases of the NHDP, there is great potential for PPP projects under this programme in the years to come (so far about 34,000 km of National Highways have been awarded, about 22,000 km of which have been awarded under PPP).<sup>32</sup>

The current PPP model might, however, need some adjustments in view of the recent difficulties it has encountered. Risk allocation has proven difficult in past PPP projects so future awards should consider how innovative allocation mechanisms could increase project efficiency. For example, most experts argue that construction risks beyond the control of private companies should be supported

by the government (risk related to land acquisition, utilities diversion or government approvals). Questions are also raised about which party should be supporting demand risk as forecasting traffic is an inexact science. At the same time, it must be recognized that PPPs only make sense if some risks are transferred to the private partner. Therefore finding the right balance will be critical to the future of private sector involvement in the road sector. In this respect, it will be interesting to see whether the recently announced regulatory body for the highway sector will offer new solutions.

Facilitating access to finance will also be a key factor for the future of private involvement in infrastructure development. To make more resources available, some studies recommend going beyond domestic bank loans by increasing the reliance on the bond market, by further involving insurance and pension funds in infrastructure financing, and by providing a more attractive environment for foreign investors.<sup>33</sup>

## End Notes

<sup>1</sup> **PPP in India (2011)**. PPP Project Status Report as on July 31, 2011

<sup>2</sup> **PwC (2011)**. The road ahead: Highways PPP in India.

<sup>3,5</sup> **NHAI (2013)**. List of Projects awarded under PPP. Available from <http://www.nhai.org>

<sup>4</sup> **Ernst & Young (2011)**. Engineering, Procurement and Construction (EPC). Driving growth efficiently.

<sup>6</sup> **Haldea, G. (2013)**. Public-Private Partnerships in National Highways: Indian Perspective. OECD

<sup>7</sup> A Model Concession Agreement (MCA) of OMT was approved only in 2012

<sup>8</sup> **NHAI (2013)**. Work Plan 2012-2013 [http://www.nhai.org/doc/02May13/Work%20Plan%202012-13%20\(Award\).pdf](http://www.nhai.org/doc/02May13/Work%20Plan%202012-13%20(Award).pdf)

<sup>9,16,25,31</sup> **IDFC (2013)**. Annual Report 2012-2013. Available from [http://www.idfc.com/pdf/IDFC\\_16AR\\_Shareholder\\_2012\\_13.pdf](http://www.idfc.com/pdf/IDFC_16AR_Shareholder_2012_13.pdf)

<sup>10</sup> **Emkay Global Financial Services (2013)**. Construction Sector Update Strengthening the Weak Links. Available from [http://www.emkayglobal.com/Uploads/EmkayResearch/Construction%20Sector%20Update\\_141013.pdf](http://www.emkayglobal.com/Uploads/EmkayResearch/Construction%20Sector%20Update_141013.pdf)

<sup>11</sup> **The Economic Times (2014)**. NHAI to allow 9 projects to defer premium payment, 22 May 2014

<sup>12</sup> **IFC (2012)**. Handshake Issue 7: Road & Rail PPPs.

<sup>13</sup> **Planning Commission (2005)**. Overview of the framework. Available from <http://planningcommission.gov.in/reports/genrep/OverviewMCA.pdf>

<sup>14,26</sup> **Gol (2010)**. Private Participation in Infrastructure. Available from <http://www.infrastructure.gov.in/pdf/Infrastructure.pdf>

<sup>15,23</sup> **MoF (2013)**. Annual Report 2012-2013. Available from <http://finmin.nic.in/reports/AnnualReport2012-13.pdf>

<sup>17,21</sup> **McKinsey&Company (2009)**. Building India - Accelerating Infrastructure Projects

<sup>18</sup> Clause 10.3.4 of MCA (2006) provided for 80% site on or before the appointed date and procurement of permits related to environmental protection and conservation of the site.

<sup>19</sup> **The Economic Times (2014)**. NHAI dispute settlement panel resolves 124 claims at 10 per cent of the original cost, 15 May 2014

<sup>20</sup> **The Economic Times (2013)**. Road Ministry asks NHAI to resolve row with road developers. 25 April 2013.

<sup>22</sup> **Gol (2007)**: Scheme and Guidelines for IIPDF

<sup>24</sup> **PwC (2007)**. Infrastructure Public-Private Partnership in India. Available from <http://toolkit.pppinindia.com/pdf/infrastructure-financing-india.pdf>

<sup>27, 28</sup> **IIFCL (2013)**. Annual Report 2012-2013

<sup>29</sup> The first pilot transaction to facilitate bond issuance of maximum amount of \$54 million by a PPP NHAI Toll Road Project was signed in January 2013

<sup>30</sup> **IIFCL (2013)**: IIFCL Infra Newsletter Available from [http://iifcl.org/WriteReadData/userfiles/file/IIFCL%20Newsletter\\_Jan%20-%20Mar\\_2013.pdf](http://iifcl.org/WriteReadData/userfiles/file/IIFCL%20Newsletter_Jan%20-%20Mar_2013.pdf)

<sup>32</sup> **NHAI (2014)** <http://www.nhai.org/WHATITIS.asp>

<sup>33</sup> **Deloitte (2014)**. Indian Infrastructure: A trillion dollar opportunity.

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