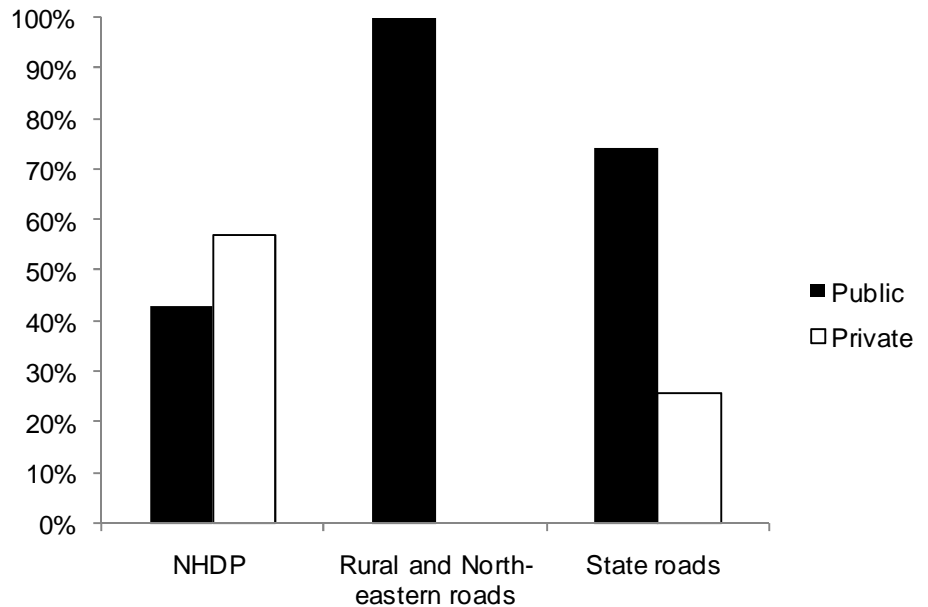


**Share of private and public sector in investment in roads, (per cent)**

*The private sector is expected to dominate spending under the NHDP*



Source: Planning Commission.

**The PPP model: Does it work?**

*The government is seeking to increase private participation in highways to direct its resources towards the development of rural roads*

The Ministry of Shipping, Road Transport and Highways is seeking to increase private sector participation in the development of highways so that it can augment its own resources and concentrate resources on the development of roads in remote and rural areas. Various PPP concession models have been framed to facilitate such private involvement in road building.

The different variants of PPPs in road projects are:

- **BOT (toll):** The concessionaire bears the traffic risk and charges a toll to recover operation and maintenance costs.
- **Design-Build-Finance-Operate (DBFO):** The concessionaire meets the construction and maintenance costs up front and recovers costs by charging tolls.
- **BOT (annuity):** The government makes annual or semi-annual payments to the company for the construction and maintenance of roads for the entire concession period.

- **Grants:** The government offers grants up to a maximum of 25 per cent of project costs to cover shortfalls between expected returns from tolls and project costs.

*An MCA for roads was formulated in 2001; in 2006 a new MCA with a framework more suitable for BOT contracts was introduced*

**MCA.** An MCA for national highway development under a BOT (toll) framework was agreed to as early as 2001, but its implementation was delayed because the Ministry of Shipping, Road Transport and Highways and the NHAI were unhappy with terms that had been drawn up by the Planning Commission. In 2006 a new revised MCA was finalised with a framework more suitable for BOT contracts. Under the new MCA the awarding authority has to complete 80 per cent of land acquisition before handing over the project to the concessionaire.

*The concession period, user charges and traffic volumes are specified in the MCA*

The basic approach of the MCA is to emphasise the phased development of highways in line with traffic growth, going in most cases from two to four to six lanes over time, rather than providing expensive roads to cater to expected long-run demand. Three of the four determinants of profitability – traffic volumes, user fees and the concession period – are determined prior to bidding via detailed project reports. With these variables defined, the MCA gives investors the liberty to decide what level of capital costs – the fourth determinant – is consistent with the desired internal rate of return and to bid for projects accordingly. Under this system the project is awarded to the qualified bidder who asks for the lowest capital subsidy or offers the highest revenue share to the government. This incentivises bidders to avoid padding their capital costs.

*Certain projects have been awarded on the basis of negative subsidy where the concessionaire pays the government*

The system has in many cases resulted in projects being awarded to those asking for a negative subsidy. In July 2006 a consortium led by IDAA Infrastructure that paid the government Rs50.4 million (US\$1.2 billion) as a negative subsidy won the BOT contract to widen from four lanes to six a 65-km stretch of National Highway or NH-8, connecting Bharuch and Surat in Gujarat. Increasingly, the government is awarding projects on a revenue-sharing basis; for example, the February 2008 award of five projects worth Rs109 billion (US\$2.6 billion) to widen 882 km of Golden Quadrilateral highways to six lanes under NHDP Phase V.