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January 2010

## Roads: Leading Indicators Show Ramp-Up in Activity

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### Recommended Citation

SHISHIR MATHUR and Kunal Katara. "Roads: Leading Indicators Show Ramp-Up in Activity" *Faculty Publications, Urban and Regional Planning* (2010).

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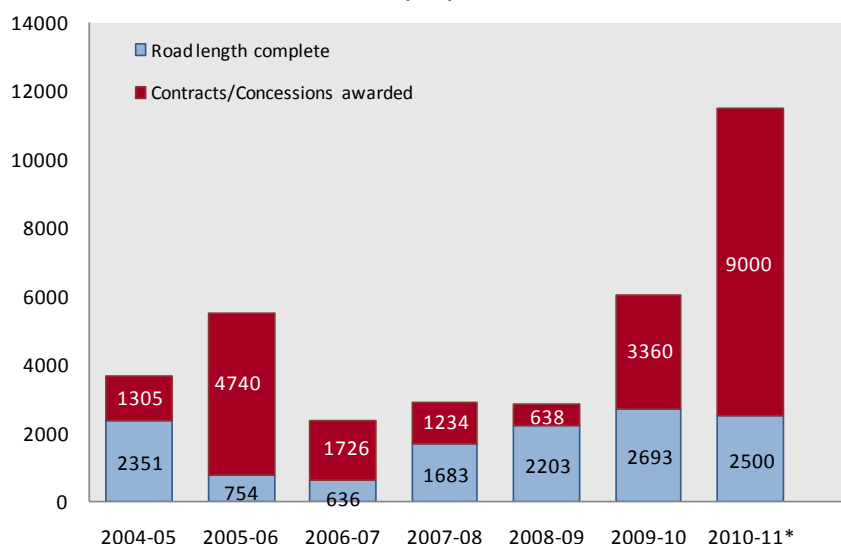
Buoyed by the streamlining of the project award process and increased focus on the resolution of implementation-related problems, the highways sector is ramping up to meet the 2010-11 plan target. Leading indicators show that 90% of this year's project award target could be met at the current rate. As larger projects come up for bidding, as is the case this year, developers could turn to financial investors to meet their equity requirements.

### Upsurge in activity after a long lull

The upgradation of the national highways, which is primarily carried out under the National Highway Development Project (NHDP), is emerging out of challenging times.

After a three-year slowdown, which was marked by the economic downturn in 2008-09, parliamentary elections and impediments to the bidding process, 2009-2010 witnessed an uptick in activity in the highways sector. Road length completed increased by approximately 25%. The project award activity increased more than 5-fold from 638 km to 3,360 km, although it fell well short of the target. Going forward, the project award activity is envisaged to grow more than 2.5 times during 2010-11 to 9,000 km (see Figure 1).

**Figure 1: Significant Increase in Concessions Awarded in 2009-10 (Km)**



\*Projected targets per Ministry of Road Transport and Highways(MORTH)

Source: MORTH, NHA

### Leading indicators look promising

Two leading indicators, project awards and land acquisition rate, show significant improvement.

- **Project awards have grown multi-fold:** In November 2009, the B.K. Chaturvedi Committee (BKCC) proposed changes to the bidding documents and the Model Concession Agreement (MCA). Some of the key changes were relaxing the conflict of interest clause by increasing

the common shareholding limit among consortium partners, allowing developers an early exit after project completion, and allowing concessionaire capacity augmentation, instead of contract termination, should the actual traffic exceed the capacity for three consecutive years. These changes have contributed to a very significant increase in the project award activity. While only 8 projects totaling 643 km were awarded in the entire 2008-09, winning bids have been announced for 28 projects, totaling close to 2,200 km during the 5 months after the implementation of the BKCC (see Table 1).

Winning bids for an additional 19 projects totaling close to 1,900 km have already been announced in the first two months of the current financial year!

**Table 1: Upsurge in Project Award Activity**

Project Description	No of Projects	Length (km)	Project Cost (Cr.)
FY 2008-09: Projects Awarded	8	643	8,591
Pre- BKCC (April - Oct 2009): Projects awarded	10	944	9,606
Post-BKCC (Nov 2009 - March 2010): Projects w/ winning bids	28	2,177	21,830
(April - May 2010): Projects w/ winning bids	19	1,874	22,084

*Source: IDFC Analysis*

- **Land acquisition rate has doubled:** More than 3/4<sup>th</sup> of the completed NHA1 projects were delayed, primarily due to land acquisition problems. Multiple steps are being taken to address the problems. The steps include appointment of senior officials by both the NHA1 and the state governments to resolve the implementation problems, and creation of Special Land Acquisition Units (SLAUs), one for each highway project, to expedite land acquisition process. As a result, more than double the land (8,191 ha) was acquired in 2009-10 (till February, 2010) compared to the annual average (4,000 ha) of the previous three years.
- **Time reduction in the post-RFQ submission stage likely to be reduced even further as RFQ stage is to be done away in the future:** Post-BKCC, it took projects 8 months from the RFQ submission date to the announcement of the winning bids, a little improvement over the pre-BKCC period when some projects languished in this stage for more than a year. However, the time needs to be further shortened. Going forward, acting on a BKCC recommendation, the government is likely to conduct an annual technical qualification assessment of the potential bidders, thereby obviating the need for a separate RFQ for each project. This step should shave off, at the minimum, 3-4 months from the pre-project award time.

### **So where do we stand now?**

The National Highways Authority of India (NHA1), through the seven phases of NHDP, aims to upgrade 54,454 km of national highways (see Table 2). The majority of projects under Phase I and II are complete or under implementation. Currently the bulk of the pre-construction activity is in Phase III and V with a sprinkling of Phase IV and Phase VII projects (5 in Phase IV and 1 in Phase VII) in the pre-award stage. We anticipate both these phases should pick up speed this financial year.

As of March 2010, 25% of the highway development was complete, a little over 10% under implementation and over 60% yet to be awarded. Clearly, the NHDP programme is well behind schedule, and Phases III to VII are likely to be delayed by several years.

**Table 2: Progress of NHDP up to March 2010: Over 60% yet to be Awarded**

NHDP Phases	Project Description	Total Length (km)	Length Completed(%)	Length under Implementation(%)	To be Awarded (%)	Likely Date of Completion
NHDP-I	Golden Quadrilateral (GQ), North South-East West (NS-EW) Corridor, Port Connectivity & Others	7,498	98%	2%	0.1%	-
NHDP-II	4/6-laning NS-EW Corridor, Others	6,647	67%	24%	9%	Substantially by Dec - 2010
NHDP-III	Upgradation, 4/6-Laning	12,109	13%	32%	55%	Dec - 2013
NHDP-IV	2-Laning with Paved Shoulders	20,000 (5,000 km approved under Phase-A)	-	-	100%	Dec - 2015
NHDP-V	6-Laning of GQ and High Density corridor	6,500	3%	19%	78%	Dec - 2014
NHDP-VI	Expressways	1,000	-	-	100%	Dec - 2015
NHDP-VII	Ring Roads, Bypasses and Flyovers and Other Structures	700	-	6%	94%	Dec - 2014
<b>Total</b>		<b>54,454</b>	<b>25%</b>	<b>13%</b>	<b>63%</b>	-

Source: NHAI

### What do the leading indicators tell us?

#### We are gearing up to meet the 2010-11 plan target but the momentum needs to increase

For the year 2010-11 the government has set a target of building 2,500 km of roads and awarding projects totaling 9,000 km.

The current pipeline of projects in RFQ, RFP, and winning bid stages (about 650 km/month - see Table 3) suggest that, at the current rate, approximately 8,000 km of work can be awarded per year, or 90% of the Ministry's 2010-11 target of 9,000 km.

**Table 3: Project Pipeline: A Steady Flow on per Month Basis**

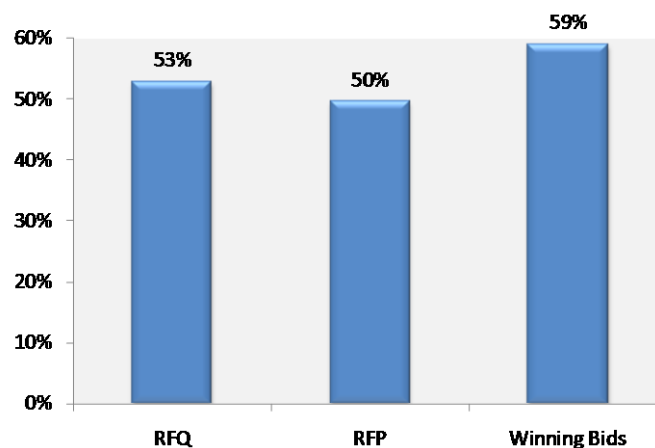
	Length (km)	Cost (Cr.)	Number of Projects	Avg. Project Length (km)	Avg. Project Cost (Cr.)	km/per Month
Projects in RFQ Stage (submission months: Jan-June 2010)	3,686	30,390	35	105	868	614
Projects in RFP Stage (submission months: Feb-June 2010)	3,335	18,616	33	108	564	667
Project w/winning bids (announcement period: November 23, 2009 to May, 2010)	4,052	43,914	47	86	934	648

Source: IDFC Analysis

### Project length by lanes: dominance of 4-Laning projects to decrease

A little over half of the project pipeline comprises 4-laning of highways, with the other half of the pipeline equally divided between 2- and 6-laning projects. In the future, with Phases IV to VII picking momentum, more 2- and 6- laning projects are anticipated. As per the 2010-11 annual plan, of the 9,000 kilometers envisaged to be awarded, 30% each would be 2-laning and 6-laning projects. The beginning of this trend is visible in the slight decrease in the proportion of 4-laning projects from 59% in the winning bid stage to 53% in the RFQ and 51% in the RFP stages (see Figure 2).

**Figure 2: Decreasing Proportion of 4-Lane Projects in Pipeline**



*Source: IDFC Analysis; Based on 113 projects, of which 33 projects are in RFQ, 36 in RFP and 44 in Winning Bid stage.*

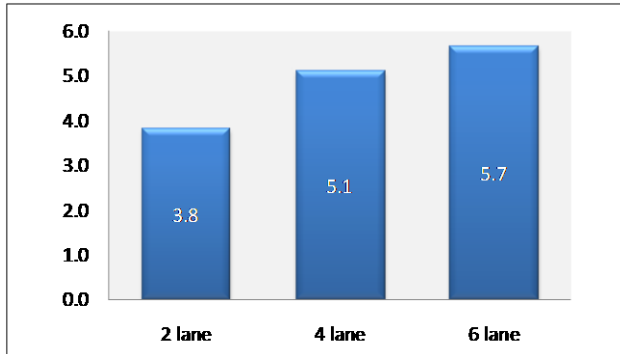
The current project pipeline reveals significant inter-regional differences in project award with almost 40% of projects (by length) in the western states, followed by around one-quarter in the east, followed by one-fifth in the north and the south, respectively. Among the 4-laning projects, approximately three-quarters of the projects are concentrated in the west and the east (almost equal proportions) and the remaining one-quarter equally distributed in the north and the south.

Among the states, Madhya Pradesh, Uttar Pradesh and Bihar lead in 2-laning projects, while West Bengal, Madhya Pradesh, Rajasthan and Gujarat lead in 4-laning projects. Almost half of the 6-laning projects fall in the west, with Rajasthan, Gujarat, and Goa taking the lead.

### Impact of shift in project type

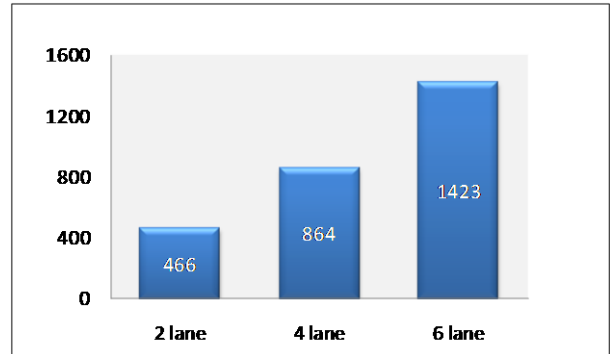
Data on projects in the pre-award stage show that for 4- and 6-laning projects, while the cost per lane-km does not vary much by lane width (see Figure 3), the average project cost varies substantially. A typical 6-laning project costs almost twice as much as a 4-laning project (see Figure 4), primarily due to the longer length (see Figure 5). As the project cost increases, the set of technically and financially qualified bidders reduces. Further, developers are barred from bidding for new projects if they have three or more projects which have not achieved financial closure. Given that more 6-laning and expressways project would be awarded in the future, and the need for equity capital would increase, bidders could explore options such as private equity funds and foreign investors.

**Figure 3: Average Cost Per Lane-Km (Cr.)**



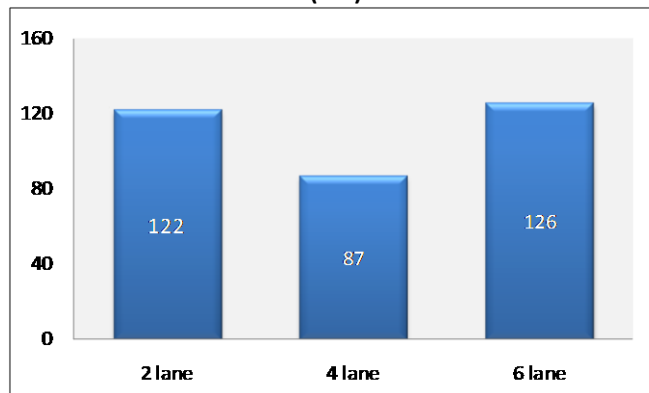
*Source: IDFC Analysis based on NHA cost estimates for 114 projects*

**Figure 4: Average Cost Per Project (Cr.)**



*Source: IDFC Analysis based on NHA cost estimates for 114 projects*  
 Note: The project cost displays significant variation at the project-level. The averages above are only indicative and should not be construed as a norm.

**Figure 5: Average Project Length (Km)**



*Source: IDFC Analysis based on 112 projects*

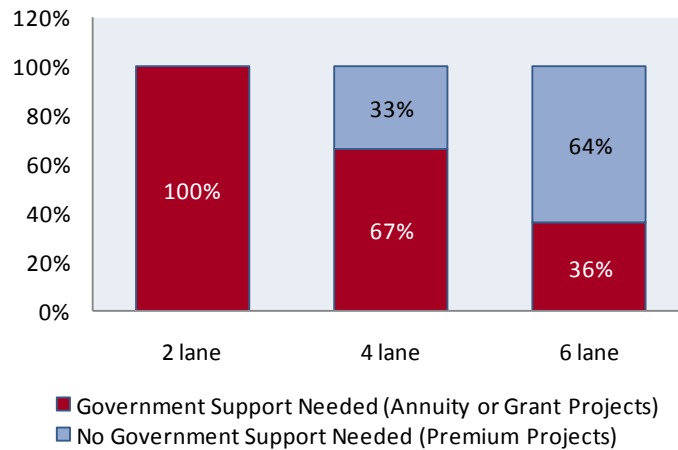
### Continued reliance on government support

The PPP projects still rely on government support, with almost two-thirds of the projects for which winning bids were announced post-BKCC requiring grant or annuity (in 55:45 grant to annuity ratio). The remaining one-third were on premium basis wherein the concessionaires paid a specified sum annually to the government. The total grant amount is approximately Rs. 3,469 crore on total project cost of Rs. 17,006 crore, or 20% of the project cost. Finer grained analysis at the regional- and state-level reveals that projects in the east (led by West Bengal) and the north (led by Jammu and Kashmir and Uttar Pradesh) require much higher government support – 90% and 83%, respectively. High reliance on government support is largely due to 4-laning of highways connecting smaller cities of Uttar Pradesh (such as Bareilly-Sitapur, Moradabad-Bareilly Muzaffarnagar-Haridwar-Dehradun) and West Bengal (such as Farakka-Raiganj, Behrampore-Farakka and Raiganj-Dalkhola in the central part of the state)

The reliance on government support is expected to increase in the future as more Phase IV (2-laning of 20,000 km of highways) projects are offered on stretches with low traffic volumes. Indeed all the 2-laning projects for which winning bids have been announced need government

support (they were all offered on annuity basis). In contrast one-third of the 6-laning projects need government support (see Figure 6).

**Figure 6: Decrease in Government Support with Lane Width Increase**



**Source:** IDFC Analysis based on 44 projects

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