

Third Party Evaluator's Opinion on National Highway-2 Improvement Project

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Criteria-1 Effectiveness

The economic internal rate of return was 31.7% against the initial estimate of 22.9%. This is an excellent outcome. However, the main reason for the increase of the EIRR was the depreciation of rupee against yen. It would be helpful to mention the final rate of return in rupees too, for more meaningful comparison. The road four-laning project has succeeded on several counts. The time saved on traveling the Mathura-Agra section has come down from 80-90 minutes to 45 minutes. The average velocity of vehicles has increased from 35 km/hour to 55 km/hr for all cars and to 60 km/hour for buses and trucks. The length of congested section on the highway has reduced from 22 km before four-laning to 10 km in Agra and to 1 km in Mathura. Travel time in these congested sections has fallen from 90 minutes to 40-55 minutes. This has reduced fuel consumption, as well. The number of registered vehicles rose from 190,209 in 1993/94 to 479,635 in 2005/06 in Agra. This is one reason why congestion was not completely eliminated. The vehicle population is going to rise very rapidly in the coming years, which represents a strong case for highway six-laning or eight-laning ultimately. Indeed, in retrospect, it seems that the project might have considered aiming straightway at six-laning instead of four-laning. The original project report seems have seriously overestimated the traffic growth of motor-cycles, trucks and buses on sections 1 and 3. On the other hand, growth of car traffic was considerable underestimated. A better forecasting model would help, and this should be updated periodically in light of development objective.

Criteria-2 Impact

As mentioned in the above Criteria 1, the project alleviated traffic congestion and reduced travel time. However, the project's aim of reducing accidents was not met. The number of accidents increased. This suggests that poor driving standards and weak training for truck drivers rather than congestion of the road may cause accidents. The highway is not designed exclusively for motor vehicles. Local villagers use bicycles, tractors and animal carts on the national highway, and all these are traffic hazards. Free entry of cattle is also a problem. The project did not provide underpasses every few miles to allow animals and vehicles of local villagers pass the highway, which has led to congestion and accidents. The lack of parking spaces along the highway for heavy vehicles was another problem. In many places, squatters occupied the road by setting up stalls. This cannot be eliminated by policy alone. Clearly, there is a demand for roadside stops and stalls that needs to be met. When the project goes for six-laning in its next phase, it should have service roads to park for those stops and stalls. The impact of the project on the regional economy has been very positive, as expected. The rise in traffic indicates prosperity, and is reflected in increased vehicle ownership. The number of tourists visiting Agra increased from 1.142 million in 1993/94 to 2.685 million to 2003/04, averaging 8.1% growth per year. The annual increase averaged 12.6% in Mathura. Accommodation (beds for tourists) increased at an average annual rate of 11.3% for Agra and 38.9% for Mathura. The number of factories in Agra rose from 472 to 521 but fell in Mathura from 196 to 184, suggesting that the main impact of the project has been on trade and tourism, not manufacturing. Tourism is a big job creator and so are trade/hotels, both of which have prospered rapidly. The environmental impact of heavy traffic by arising from four-laning is not so much pointed out by the executing agency. However, most residents feel that noise, air quality and garbage have become bigger problems. The majority of residents feel that the socio-economic environment has improved a lot, and more than 90% say they are satisfied or very satisfied with the project. This is a welcome endorsement by the beneficiaries themselves.