

# Toll Tax System on Highways in India

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## Executive Summary

This work is an effort to understand the Road and Highways Infrastructure scenario across the country, with special emphasis on methodologies being adopted for financing the projects and the revenue recovery mechanisms i.e. tolling. The old and conventional mode is EPC wherein the projects are funded by budgetary supports but as this method is inadequate to cater to the large scale requirements alternative modes like BOT (Toll), BOT(Annuity) and Hybrid Annuity Model(HAM), mainly with a view to promote private participation in infrastructure projects, are being adopted predominantly.

### Objectives:

1. Understand the underlying policy rationale behind fixation of toll rates at various stretches of the national highways being constructed by NHAI and state highways by state governments.
2. Evaluate the implementation process of some of the popular highways in India with a comparative study of highways constructed by NHAI/ state governments.
3. Understand the international toll framework scenario
4. Suggest recommendations and exploration of alternate methodology to make the highways either toll free or less cumbersome to enable free flow of vehicles at toll plazas.

### Methodology:

This research work is fundamentally an exploratory study. The policy and legislative framework has been analysed by interacting with ministry/department officials at Centre and State levels to understand the policy rationale behind the present system of toll collection and future strategy. The sources of data are both primary and secondary

The Primary Data is collected from the policy document and record books of governments/PSUs offices and through field visits of toll plazas of following three identified roads.

- 1) **Ahmedabad- Vadodara Mahatma Gandhi Expressway-** This expressway is the first in the country awarded by NHAI with sweetener<sup>1</sup> concept. The new expressway work is clubbed along with improvement work of existing National Highway-8. Also the expressway is fully access controlled and has introduced ETC at the time of commissioning. This project was selected for study to compare with the other two projects undertaken by respective states.

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<sup>1</sup> Elaborated in Chapter three section 3.1

2) **Mumbai- Pune Expressway:** This being the first expressway with complicated topography having large number of tunnels and bridges is considered one of the best managed expressways with 17.5 % toll collection growth in the current financial year, mainly on account of increase of traffic<sup>2</sup>.

3) **Ahmedabad-Viramgam-Maliya State Highway-** This highway has been constructed by Gujarat State Road Corporation on BOT (Toll) basis. The highway is considered critical from the view point of transportation of heavy goods from two very important port trusts in India, Kandla and Mundra. This highway has the distinction of generating more revenues from MAVs (multi-Axle Vehicles) as compared to the Cars/Jeep and Van category. Highway was chosen for comparing with the performance of one national highway being operated by NHAI and other state expressway being operated by Maharashtra state government.

Besides, the information has been collected from various stakeholders, viz. officers from Centre/states, and representatives of the Concessionaire and users, with the help of interviews/semi structured questionnaire.

**Secondary Data:** Secondary data and information has been collected from News Paper articles, books, journals, annual reports of the concerned ministries/organizations, internet.

## **Findings:**

### **1. Toll Policy:**

(i) **National Toll Policy:** As against the general impression that toll rates are decided on one on one basis for different projects, the per km toll fee is common for all National Highways irrespective of the project cost, location and the length of the highway. The key parameter for assessing the revenue generation on a particular highway stretch is the traffic density projections. Higher the traffic density more is the revenue generation even for a relatively smaller section of the highway. And accordingly VGF or premium, as the case may be, is decided. The toll rates are decided based on the considerations as discussed in chapter 2.

(ii) **State Toll Policy:** The National Highway (Rate of Fee) Rules 2008 with latest amendments are mandatorily applicable to all national highways irrespective of construction agency viz NHAI, PWD or NHIDCL but the state governments are not bound to follow these rules and have the option either to follow the national rules or can have their own policy for framing rules for toll collection. For example Government of Gujrat has decided to follow the rates as per national policy whereas the Maharashtra Government notifies their own rates for each project independently.

### **2. Implementation of Toll Policy:**

(i) **Toll Collection Process:** Toll collection system is a complicated process and the issues are specific to a particular highway or particular segment of a highway or even a particular toll plaza on a particular segment of highway. For example the main controversial issue on Ahmedabad-Viramgam-Maliya highway toll plaza located at Sanad is related with denial of toll payment by the local vehicle owners whereas on the same stretch on next toll plaza located at Malvan is more of safety and security issues where even two security guards were murdered by local miscreants.

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<sup>2</sup> As reported in The Financial Express(Mumbai Edition,September26, 2016)

**(ii) Socio-Economic Impact:** It has been observed that the Toll Plazas operating near the urban centers and catering exclusively to urban population are less likely to have operational issues. Examples are Mumbai-Pune Expressway and Ahmedabad- Vadodara Expressway whereas the Plazas having mix users involving users from rural areas also are vulnerable to law and order issues. Examples are Delhi- Gurgaon Expressway and Ahmedabad-Viramgam-Maliya Highway in Gujrat.

**(iii) Slow growth of ETC System:** The government has emphasized to implement the ETC for avoiding traffic congestions and to prevent toll fee leakages. Pursuant to government decision NHAI has installed all infrastructure of ETC at all the 372 toll plazas but the user penetration for ETC is far from satisfaction as there is reluctance on the part of users to install RFID tags, particularly on CJV category vehicles and as result the purpose of huge investment on ETC infrastructure seems defeated.

1. The concessionaires operating predominantly in urban centers are suspected of under-reporting of revenue or extending the concession period unethically. Examples are DND and Mumbai-Pune Expressway.
2. Almost hundred percent toll plazas are having facilities of Electronic Toll Collection but the user penetration is negligible.
3. The time consumed in collection of cash and returning changes etc. is in few seconds generally in the range of 3 to 6 seconds but the time starting from the moment vehicle enters a particular lane and exits the same runs into several minutes and typically in the range of 5 minutes. However it depends on the traffic situation at the toll gate.
4. Generally the users are satisfied with the toll rates but show concern about stopping the vehicle at every plaza even if the toll has been paid for the entire length of the highway.
5. The concept of BOT is largely appreciated by the users as the quality and upkeep of the roads is much superior to the earlier system.

### **3. International Practice:**

The five countries, namely, USA, Canada, China, Malaysia and Singapore selected for study have either started upgradation of tolling system from existing to Open Road Tolling (ORT) (USA, Canada, Singapore) or considering the same in future (China and Malaysia).

### **4. Recommendations:**

In order to make the use of new and improved highways hassle free and a pleasant experience, the study has recommended two-fold improvements viz. Policy Intervention and Technology Leveraging.

#### **I. Policy Intervention:**

1. A stringent enforcement policy is the need of the hour whereby the use of paid assets would be ensured uniformly in an equitable and effective way.
2. No provisions in MCA should be kept for compensation whatsoever for shortfall of revenue collection as the same has potential of misuse by stakeholders causing loss to the government exchequer.
3. The traffic forecast should be as realistic as possible and the prospective concessionaires should be told upfront to seek whatever handholding is required from government side before entering into the process of bidding.
4. The process of selecting the concessionaires must be absolutely fair, transparent and equitable.
5. No concessions to be extended to any section of the society on political considerations. 6. In order to avoid skirmishes with local population, parallel running service lanes can be

provided to cater to the need of such population and in no case any exemption is extended to them.

7. If possible a physical presence of government representatives should be ensured on all toll plazas to monitor the functioning on day to day basis.

8. A robust mechanism of social audit by independent agencies should be instituted by making use of technology to the extent possible.

## **II. Technology Leveraging:**

**(i) Radio Frequency Identification (RFID) Based Electronic Toll Collection:** Enforcement Policy needs to be strengthened for implementation of ETC so as to make it mandatory to install the RFID units in the vehicles. As far as possible the toll plazas having ETC system should cease to accept cash thereby forcing the users to switch to the ETC mode.

**(ii) Introducing Close Tolling:** In this system the monitoring mechanism can be installed at every exit point on the tolled section so as to measure the actual length of the tolled road used and should accordingly be billed to the users by advance technology leveraging. This concept is quite popular in USA and will go a long way in India as well and will encourage toll compliance among the commuters.

**(iii) Open Road Tolling (ORT):** ORT or free flow tolling is the collection of tolls on toll roads without use of toll booths. This is the latest technology. The major advantage is that users are able to drive at the highway speeds without having to slowdown to pay the toll.