

# Factors Leading to Revenue Loss in Case of DBFOT Toll Road Project

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**Abstract**— In the recent years a new concept that has got developed across the world for the development of roads called as Public Private Partnership (PPP) which serves as the model for high efficiency and timely delivery along with reduction on burden on the government. Design Built Finance, Operate and Transfer (DBFOT) one of the forms of PPP in which the private player is responsible for the design, built, finance, operate and transfer of the road project. It has been observed in some cases that, when the project enters its operation and maintenance phase the project is likely to go through revenue loss. There are some specific factors which lead towards the revenue loss. In this paper such factors contributing to the revenue loss are identified.

**Key words:** DBFOT, Case of DBFOT Toll Road Project

## I. INTRODUCTION

Today's vision of India is bustling with energy, entrepreneurship and innovation. Many developments took place in modern era of 21st century. Out of those, development in case of roads served for better connectivity to different locations across the nation and transport of men & commodities with ease and speed. Roads proved to be backbone of nation in its overall development. Now a days to overcome the traditional way of constructing roads and to cop up with the modern era of technology to make it easy for government to deal with development in roads a new concept of PPP (Public Private Partnership) has emerged and proved to be beneficial for following purposes.

- Reduce financial burden on government
- Complete project on time.
- Improve service quality and efficiency.
- Better value for money invested.
- Transparent process of inviting private participation.
- Sharing the risk between Government & Contractors.

Though PPP has proved to be beneficial but the other side of the coin is that various risks are generated during the life cycle of the PPP project. The DBFOT project undergoes different phases such as design phase, built phase, finance phase, operation & maintenance phase and transfer phase. During this operation & maintenance it undergoes some risks out of which the 'revenue risk' proved to be vital one. The risks generated have an origin. Here in this paper the factors contributing to the revenue loss in case of DBFOT toll road projects are identified. The factors are identified using by studying a case study of the existing road project.

## II. LITERATURE REVIEW

From the literature collected and studied variety of risk generated in case of DBFOT project are found out. Variety of risks generated in various phases of DBFOT life cycle, out of these 'revenue risk' is mainly generated in its operation phase. When the concessionaire actually starts collecting the toll i.e. users are levied with fee for their use of the project

road. The various factors that lead to the generation of revenue loss in this case are identified.

## III. OBJECTIVE

- To find out different risks associated with the DBFOT (Toll) road project.
- To find out the factors leading to revenue loss in case of DBFOT toll road project from a survey of existing road project.

## IV. CASE STUDY

A particular project of PNG (Pimpalgaon Nashik Gonde) tollways, an SPV responsible for 6 laning of NH-3 from km 380.000 to km 440.000 on DFBOT basis in state of Maharashtra under NHDP phase III is selected. The total cost of the project is 1691 crore. In which L&T IDPL has 48%, L&T 26% and Ashoka Buildcon 26% shares in form of investments.

Sr. No.	Description	Date
1	Date of signing agreement	8 <sup>th</sup> July 2009
2	Commencement of date of concession	4 <sup>th</sup> Jan 2010
3	Scheduled Project Completion Date	1 <sup>st</sup> July 2012
4	Scheduled End of Concession	3 <sup>rd</sup> Jan 2030
5	Date of Partial COD I	18 <sup>th</sup> Aug 2012
6	Date of COD II	10 <sup>th</sup> March 2014
7	Toll Collection started	2 <sup>nd</sup> Oct 2012 00.00 hrs
8	Location of Toll Plaza	Pimpalgaon

Table 1: Important Dates and Specifications of project

Till March 2016 the loss incurred by the concessionaire was about 100 crore and further it lead to termination of agreement between the concessionaire and the authority (NHAI). The reason sighted by the concessionaire was, some of the local people were not paying the toll and the local government was incapable of enforcing the strict action against those local people.



Fig. 1: PNG Toll road project

The project runs between Gonde and Shirvade Vani connecting major location such as Nashik, Ozhar and Pimpalgaon all the destinations are very much important in exporting huge quantity of good to Mumbai and its suburbs along with different parts of the country. From Gonde one can directly reach Mumbai and from Pimpalgaon one can reach Malegaon, Dhule, Indore, Nagpur etc.

Destination	Feature
Gonde	Industrial town.
Nashik	One of the important Cultural, Heritage & Tourist destinations of India. Third largest city on Maharashtra state. Major Educational & Industrial destinations. Wine and Grape capital of India. With leading exporter district, exporting Grapes & Vegetables to financial capital of country i.e. Mumbai and rest of state and country. Indian Army Artillery Headquarters, Note and Currency Press trust of India, Central jail etc.
Ozhar	Agricultural town – Grapes and Vegetables export town. Consisting 90% major cold storages for grapes in Nashik district, HAL (Hindustan Aeronautics Limited) and Air force station etc.
Pimpalgaon	Agricultural town with leading Onion exporter town along with Tomatoes and Vegetables.

Table 2: Destinations & their Features

#### V. SURVEY OF THE PROJECT

The total length of the project highway is 60km from Gonde to Shirvade Vani. Survey of the project area i.e. project's catchment was done visiting the following firms and persons to know the approximate traffic flowing between major destinations on project highway and NH3. Based on questions asked to local people it was clear that the project has some limitations and due to which the project has been facing the revenue loss. The survey was done from the following category of people.

- Local people of Pimpalgaon town.
- Local farmers of Pimpalgaon town and nearby places such as Niphad, Shirvade Vani, Kokangaon etc.
- Farmers of Ozhar, Nashik and Aadgaon.
- Grape exporters from Ozhar and Sakore.
- Nashik district agricultural produce market committee.

Out of the 60km project highway for about 53km of the project usage do not require toll to pay when on travels from 'Gonde till before toll plaza and from before toll plaza till Gonde on the PNG project' and on a high note it is to be noted that 80% of the total project is placed at this 53km and for using this particular section users requires no toll pay. Following table shows the detailed of this.

From-To	Gonde (0 km)	Nashik (26 km)	Ozhar (41 km)	Pimpalgaon (53 km)	Shirvade Vani (60km)
Gonde (0 km)	-	No toll	No toll	Toll	Toll
Nashik (26 km)	No toll	-	No toll	Toll	Toll

Ozhar (41 km)	No toll	No toll	-	Toll	Toll
Pimpalgaon (53 km)	Toll	Toll	Toll	-	No toll
Shirvade Vani (60km)	Toll	Toll	Toll	No toll	-

Table 3: Requirement of paying toll

From the above table it can be observed that for travelling from 'Gonde till before toll plaza' and from 'before toll plaza till Gonde' on the PNG project the user requires 'no toll' to pay and can easily travel for about 53km which consists major portion of project which is about 80%, that includes elevated corridors, major bridges etc. This particular factor the 'bias nature of the project' has landed it revenue loss. This 'bias nature' has created attitude in local people and frequent travelers using the project unwillingness or resistance to pay the toll. Major traffic density is observed before Pimpalgaon towards Mumbai and these people using this major portion of highway do not require the toll to pay.

#### VI. RESULTS AND DISCUSSION

From the literature studied and actual survey of the project which is studied it can be found out that the risks that are generated in the whole life cycle of the project are as follows

- Political Risk
- Regulation, Social and legal risk
- Support from government
- Force majeure
- Construction risk
- Operation and Maintenance (O & M) risk (includes Revenue risk)
- Transfer risk
- Financial risk
- Commercial risk
- Lenders risk etc.

The factors are being identified from the literature and then they are actually observed while the survey of the project's catchment was done. The following factors were collected from the questionnaire that was being designed which contribute to the generation of revenue loss in case of DBFOT Toll Road Project are

- Biased nature of project.
- Unacceptability of high toll rates (in comparison to benefits)
- Faulty project structuring (wrong positioning of toll plaza).
- Politically motivated resistance.
- Government's inaction due to political/social reasons.
- Additional concessions /passes.
- Lack of support from government officials.
- Inadequate government support for the toll enforcement.

#### VII. CONCLUSION

From the present research it can be observed that the variety of risks that are being generated in the complete life cycle of the project under DBFOT toll have a some specific origins and these risks are to be identified and mitigated,. The revenue risk that is being observed while the project is in its

operation and maintenance phase do have some source of origins or factors leading to revenue loss. These factors identified are required to mitigate immediately or the project would lead to termination of agreement between the parties.

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