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Model Concession Agreement (MCA) for Highway PPP Projects in India: Evolution and its Various Forms

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Abstract - Lack of standard framework for PPP projects in India necessitated introduction of Model Concession Agreement (MCA) for PPP Highway projects in mid-nineties, which outlines the policies and regulations for implementation of PPP projects. This paper covers the journey of development of the MCA since its inception. The core idea of development of MCA was to keep the balance of risk allocation and thereby making the bid attractive for bidders. Various forms of the MCA based contracts, depending upon the degree of project viability have been discussed and a comparative statement of the analysis is presented. Further, the criteria for adopting more appropriate form of MCA based contract is presented.

Keywords – Annuity, Build Operate Transfer (BOT), Contracts, Highways, Model Concession Agreement (MCA), Public Private Partnership (PPP), Toll .

I. WHAT IS MODEL CONCESSION AGREEMENT?

Model Concession Agreement (MCA) forms the principal of public private partnership (PPP) projects in India. It outlines the policies and regulations for implementation of a PPP project. It provides for issues related to PPP framework like risk mitigation and allocation, allocation of returns and obligations between the parties entering into agreement.

The MCA for Highways projects provides a framework for execution of highways projects on PPP form by clearly defining roles and obligations of the two parties namely, the Concessionaire and the Road Authority. It goes on to provide details of the desired asset (Highway) including process control during construction (quality control tests) to finished product quality (tests for acceptance criteria) and the performance indicators during operation. It comprehensively offers risk and revenue sharing and project risk mitigation measure.

MCA addresses the following major issues which are vital for limited financing of highway projects on PPP model.

- Mitigation and unbundling of risks
- Allocation of risks and rewards
- Symmetry of obligations between the principal parties
- Precision and predictability of costs and obligations
- Reduction of transaction costs
- Force majeure
- Termination

MCA also deals with important concerns like, user protection, transparent and fair procedures and financial support from the Government.

II. BACKDROP AND BIRTH OF MODEL CONCESSION AGREEMENT IN INDIA

The amendment of National Highways Act 1956 in 1992 enabled Government of India (GoI) to impose fee in the form of Toll for the usage of developed part of National Highways. The basic idea of such amendment was to involve the private sector in development and maintenance of roads in India. Some other initiatives by GoI in 1994-95 to attract private investment in road sector were, declaration of road sector as an 'Industry' to make borrowing easy, reduction in custom duties on construction equipment, easing out restrictive trade practices etc. [1].

The estimates by the Ministry of State Transport, MoST (now, Ministry of Road Transport and Highways, MoRT&H)[2] and other groups established that budgetary provision alone would not be sufficient for road development programme and the idea of Public Private Partnership (PPP) came into picture for execution of highway projects. However, PPP in highway sector did not receive proper response in mid-nineties and one of the major reasons was lack of standard framework for a PPP or a BOT (Built-Operate-Transfer) mode of project execution.

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The first draft of Concession Agreement for BOT projects for Highways was published in 2000 by Haldea[3] , prepared for the Planning Commission (PC), Government of India. In the meantime, National Highways Authority of India (NHAI) developed two separate Model Concession Agreements (MCA), one for projects with Total Project Cost (TPC) less than Rupees 100 Crore and the other for projects with TPC more than Rupees 100 Crore. The high power committee chose Jaipur-Kishangarh section of NH-8 as a test project for MCA prepared by NHAI. This project went into rebidding and with several changes in MCA of NHAI, this project was awarded in 2002 on MCA[4].

Committee on Infrastructure (CoI), constituted in 2004, made an inter-ministerial group (IMG), in January 2005 to review and develop the MCA for BOT (Toll), BOT (Annuity), Operation, Maintenance & Tolling (OMT). IMG recommended MCA with few revisions to Committee on Infrastructure (CoI) and CoI approved[7] draft MCA of Planning Commission as a model framework for road projects. The committee titled 'Public Private Partnership Approval Committee (PPPAC)' was set up which decided response based procurement based on MCA. The project would be first called on BOT (Toll) and in case of unfitting response, BOT (Annuity) would be used. And if the BOT models did not receive response, the projects were awarded on Cash Contracts. Finally the Planning Commission published three MCAs for PPP projects for National Highways, State Highways and Maintenance of Highways in Sep-2005, Sep-2006 and Oct-2006 respectively.[5]

The interaction between Planning Commission and the National Highways Authority of India (NHAI) between 2006 and 2009, further shaped these MCAs. The modified versions of following MCAs for National Highways and State Highways and Operation and Maintenance of Highways were published in 2009[6]. These documents, referred to as 'amended MCAs' are in use in basic form of Model Concession Agreement.

III. MCA Based Contract Forms in Current Practice

Keeping the basic framework of 'Model Concession Agreement' at its core, there are several forms of Contract Documents in use on different highway development projects in India. Interestingly, though the MCA was drafted basically for PPP form of the projects, it is also being used in one of cash contract forms namely 'Engineer, Procure and Construct (EPC)' projects. Broadly, following form of MCA based contracts are in current practice.

i. BOT (Toll), *both Grant and Premium projects*
ii. BOT (Annuity)
iii. OMT
iv. BOT (HAM), *hybrid annuity model*
v. EPC

In all above forms of the contracts, except OMT (which is for operation, maintenance and tolling), the road alignment, location of structures, land acquisition, environmental and forest clearances comes under the responsibilities of the road Authorities. The obligation of the engineering and structural designs for these modes of contracts lies with the Concessionaire (Contractor in case of EPC mode).

What distinguishes these different modes of MCA based contracts is the project financing and return on investment for PPP projects.

1) BOT (Toll) mode of PPP Contracting[8][9]: In this form of the Contract of BOT (Toll) including its variants like DBFOT (Design, Build, Operate and Transfer), the concessionaire is fully financing the construction and Operation & Maintenance of the project highway and collects the toll for the duration of concession period on the basis of Government of India's tolling policy as a return on investment. The concession period depends of the road capacity, subjected to a maximum of 30 years.

Depending upon the project's viability, the prospective bidders (potential concessionaires) could either seek 'grant' from road authorities (to support project financing in case of inadequate project viability) or offer 'premium' to road authorities (to be competitive in case of strong likely 'return on investment's scenario).

2) BOT (Annuity) mode of PPP Contracting[8][9]: BOT (Annuity) mode of Contracts provides the concessionaire to fully finance the construction and Operation & Maintenance of the project highway for the duration of Concession period which is generally up to 20 years. The road Authority pays the Concessionaire a fixed semi-annual annuity for the entire concession period.

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The project highways under this form of contract could be either tolled or toll free. The tolling, if any, is done by the road authority separately.

3) OMT mode of PPP Contracting: In case of Operation, Maintenance and Tolling (OMT) form of PPP Contracts, the Concessionaire receives the developed highway for Operation and Maintenance of the road asset by its own financing. Tolling is done by the Concessionaire and it pays annual fee for the duration of concession period, to the Authority, as agreed in the contract agreement.

The risk of traffic variation (variation in tolling) lies with the Concessionaire. However, this form of the Contract does not put the Concessionaire responsible for widening of highways under capacity augmentation.

4) BOT (HAM) mode of PPP Contracting: BOT (HAM) or hybrid annuity model is principally a selective combination of BOT (Toll) and BOT (Annuity) form of Contracts. The projects which may not have potential for viable return on investment through tolling alone are generally bid on this form of the Contract.

Under this contract, financing of the construction and maintenance of the project highway is either entirely by the Concessionaire or could receive grant from the road Authority to support Concessionaire's own financing arrangements. The returns are through tolling or annuity payments or both combined. Therefore the BOT (HAM) mode's three patterns could be summarised as below;

- Toll plus Annuity
- Grant plus Annuity
- Grant plus Toll plus Annuity

In India, currently 'grant plus annuity' is largely in use.

5) EPC Mode of Contracting for Cash Contracts[10]: Model Concession Agreement's basic framework has been adopted even for the Engineer, Procure and Construct (EPC) form of Contracts though it is not a PPP Contract. EPC contracts in a way are selective combination of item rate contracts, Design Build contracts and MCA (in regard to form of contract). In this form, the EPC contractor, designs and Constructs the road and maintenance it for a period of 2 to 5 years.

The contractor is paid the fixed lump sum project cost in parts (on achieving certain stage of construction during construction). The contractor also receives quarterly payments for maintenance of the roads post construction.

The project highways under this form of contract could be either tolled or toll free. The tolling, if any, is done by the road authority separately.

Comparison of different forms of MCA based contracts is presented in Table 1, below.

Table 1: Comparison of Various Forms of MCA Based Contracts

	BOT (Toll)	BOT (Annuity)	OMT	BOT (HAM)	EPC
Land Acquisition	Authority	Authority	Not Applicable	Authority	Authority
Environment and Forest Clearance	Authority	Authority	Not Applicable	Authority	Authority
Design	Concessionaire	Concessionaire	Not Applicable	Concessionaire	Contractor
Financing Construction	Concessionaire	Concessionaire	Not Applicable	Concessionaire + Authority	Authority
Financing, Operation and Maintenance	Concessionaire	Concessionaire	Concessionaire	Concessionaire	Authority
Tolling by	Concessionaire	Authority (if a toll road)	Concessionaire	Concessionaire	Authority (if a toll road)
Source of Return on Investment for Concessionaire	Tolling	Annuity payments by Authority	Tolling	Tolling	Not Applicable

IV. CHOOSING THE APPROPRIATE FORMS OF THE CONTRACT

During the initial period of introduction of MCA by PC (2005/2006), the Public Private Partnership Approval Committee (PPPAC) was set up, which decided response based procurement. The projects were first called on BOT (Toll), then rebidding with BOT (Annuity) form in case of poor response to BOT (Toll) and then finally cash contracts (Item rate Contracts) in case both the BOT forms of bid did

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not attract bidders. However, it involved more time for procurement of Concessionaires or Contractors. Subsequently, with time, the selection of type of contract experienced changes.

Presently, the selection of type of form of contract is decided right at the time of pre-feasibility study and preliminary project preparation stage itself. The sole criterion is economic viability of the project. The outcome of economic and financial analysis of the project during the pre-feasibility / feasibility study, leads to the appropriate choice of contract. The economic and financial analysis takes into consideration the economic scenario of the project in general and caters for traffic growth projections, construction cost, financing cost, etc. and comes out with the figures of EIRR (economic internal rate of return) and FIRR (financial internal rate of return). Internal rate of return (EIRR) is a metric used in capital budgeting, measuring the profitability of potential investments. In general, considering the lending rates in India, following is a trend.

- The project is considered not viable if the EIRR is less than 12%, hence the projects with EIRR less than 12% do not go for implementation.
- The projects with FIRR between 12% and 15% are considered not attractive enough to be tendered on BOT form. These projects are executed on cash contract forms; either EPC Agreement or Item rate Contracts are followed.
- For project with FIRR 15% or more, BOT forms are considered feasible. The projects with FIRR more than 15% but with only slight margin will suit more for the BOT (HAM) form of Contract. FIRRs centrally placed between 15% and 18% are more appropriate for BOT (Annuity). FIRR close to 18% indicates that BOT (Toll) is feasible. Projects with FIRR quite in excess of 18% are the BOT (Toll) projects with premium.

V. CONCLUSION

Model Concession Agreement (MCA) is the backbone of PPP projects in India. MCA for Highway PPP projects has rapidly evolved since its inception which is just over a decade old. Road Authorities in India have been quite responsive to the PPP market dynamics and taking all the measures to keep the MCA relevant and attractive for bidders. As a result, we have various forms of MCA based forms for varying degree of project viability. Evolution is a continuous process and MCA is expected to develop further based on the experiences gained by the PPP stakeholders in the industry.

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