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Analysis of Hybrid Annuity Model in Construction

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Abstract

The road projects in India were not being completed on the time due to certain problems like toll collection risk , traffic risk which had to be borne by the concessionaire. Also , there was a problem of rising bad loans of banks because of which banks were not willing to lend. These all factors led to delay in completion of road construction projects. So , in order to give a boost to the construction sector , government launched hybrid annuity model which is an improvement over the existing models. It will eliminate the problems being faced under the existing models and will ensure that the projects are completed on time.

Key words: EPC , BOT , HAM , PBC, mobilization advance

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INTRODUCTION

Hybrid annuity model is a model used in construction of roads. It is a combination of engineering , procurement and construction (EPC) and Build , operate and transfer model. In EPC model , private player is being paid by the government for laying roads and private player has no role in toll collection , maintenance and road's ownership. It is being done actively by the government. Under BOT model , private player builds , operates and maintains the road for a specified period say 10 – 15 years. After that , it is being transferred back to the government. The private player needs to arrange all the finances for the project. The private player collects toll revenue or annuity fee from the government. The private player is being compensated for construction and maintenance of roads through annuity payment.

Hybrid annuity model is a combination of EPC (40 %) and BOT – Annuity (60%). In HAM , 40 % of the project costs will be borne by the NHAI during the construction period while the remaining 60 % of the project cost is being paid in annuity installments during the operation period along with the interest.

IMPORTANT CLAUSES OF CONCESSION AGREEMENT

1. NHAI shall pay 40% of the bid project cost in 5 equal annual installments and they are adjusted in accordance with the price index and also depend upon the physical progress.
2. The remaining 60% of the bid project cost shall be paid in 30 bi – annual installments as specified in the concession agreement after every 6 months of completion date.
3. NHAI shall also pay interest on outstanding cost along with the annuity payment. The interest rate shall be bank rate plus 3% p.a. Current bank rate is 6.75%.
4. NHAI shall pay operation and maintenance cost which is quoted by the bidder adjusted on the price index during the operation period in two installments along with the semi annuity payment.
5. Performance security is to be provided within 30 days of the concession agreement. Performance security must be refunded within completion of the project or 1 year from appointed date whichever is earlier.
6. In case of early completion by the concessionaire , NHAI shall pay bonus @0.5% of 60% of BPC , if completion date is achieved on or before 30 days prior to the scheduled completion date along with 1st annuity payment.
7. NHAI shall provide mobilization advance @ 10% of bid project cost in two equal installments. The first installment shall be payable at any time after the appointed date and second installment 60 days after the appointed date.
8. NHAI has the sole authority to levy , demand or collect toll or fee.
9. The provision of termination even during construction period by NHAI gives some comfort to lenders in case of termination.

10. Atleast 80% of length for undertaking construction activities shall be made available by the NHAI free from any charge on or before the appointed date.
11. Provision for change of scope, force majeure has been provided for adequately in the concession agreement.

LITERATURE REVIEW

Meduri and Annamalai,(2016) State on Unit Costs of Public and PPP Road Projects found out that during the past decade , there has been an increase in the overall private sector investment in the road sector in developed countries. Not much researches have been conducted on such private sector participation in road sector. There are significant differences between public & private sector project according to the data collected from 521 public and private road projects in India.

The concessionaire as a supplementary source of returns was received over 30.5 acres of prime urban land in Noida , in principal approval for development rights. In contrast to increased unit costs for private sector investment as per regression analysis , public private partnership road project incur low costs because of the benefit of economies of scale available to them. The major contributors for increased unit costs are corruption and use of foreign sponsors in private association. As per the regression analysis , private sector investment was successfully tapped by those who were developed and had low levels of corruption.

Verougstraeteand Kang, (2014) on Mobilizing Private Funding concluded that this program has great potential for PPP projects . The current PPP has been facing certain problems and there is a need to introduce some changes. There has been an argument that construction risks should not be shared by the government. Also , there are concerns over traffic risk as to which party should bear the traffic risk . Also , it should be kept in mind that as it is a public private partnership project , certain risks need to be borne by the private sector also , otherwise PPP model would not make sense. There is a need for striking the right balance.

Public Partnership era started in early 90's. There has been a tremendous growth in PPP since last 10 years. For many years , government of India was the sole responsible for infrastructure projects. The government's five year plans started focusing on road development on account of growing traffic. The problems encountered were inappropriate allocation of funds , capacity constraint , congestion , fuel wastage and time overrun , also technical aspect wasn't strengthened. Thus , it led to the government to introduce private sector investment in infrastructure projects.

Various changes were being made by the government in the 12th five year plan as compared to the 11th five year plan that highlighted the importance of private sector investment. The total outlay in 12th five year plan was twice that of 11th five year plan and also percentage of share of private sector investment in 12th five year plan was expected to grow to 50% as compared to 30% in the 11th five year plan.

Gomez ,Osius and Lorrain , (2004), However , the confidence and high expectations from PPP were not being met. Various problems were being faced in developing countries like macro economic fluctuations in currency , purchasing power , inadequate regulatory and institutional environment , political renegeing were some of the reasons for the failure of PPP.

Pargal, (2007) on Concession for the Delhi Noida Bridge concluded that good practice in contract design and the process of awarding contracts must be followed and also the review of concession for the Delhi Noida Toll Bridge Project awarded in 1997 show potential pitfalls of not doing so.

The right to role in assessing the fairness of capital and operational costs reported by the holder is not granted to the contractor. Project cost increases due to increase in expected returns for previous years and which results in increase in payables. The contract can be modified till the commercial project recovers the total cost of the project and returns.

The contracts awarded under the HAM were steady in 2017-2018 and were half the number of contracts awarded in 2016-2017. Till June 2017, 44 projects have been awarded , out of which only 26 have achieved the financial closure. 10 projects have crossed the limit of 150 days within which project closure is required. Also , three projects were terminated due to the failure to secure the funds. As promoter's equity is only 12-15% , bankers are reluctant to provide funds to less known developers. However , developers with sound track record must not face challenges in raising fund.

According to India Rating &Research , more than half of the hybrid annuity model projects awarded contract have not yet achieved financial closure. Until July 2018 , only 580 billion contracts have achieved the financial closure out of 1.18 trillion. The rating agency further said that the number of contracts awarded in the current fiscal year may slow down because of the high order book to revenue ratio of the top players.

According to Crisil , only strong developers backed by strong fundamentals bid for HAM projects as banks don't provide funding to less known developers. The bank's exposure in HAM is limited to 35% , which is much lower as compared to 70% in BOT projects. Due to large backlogs created by the players over the last two years , the competitive spirit has reduced in HAM. Also , very few players are willing to bid for the project.

GAP ANALYSIS

Very few researches have been carried out on hybrid annuity model . All the researches carried out aim at identifying what are the challenges in hybrid annuity model , what lead to the the development of the hybrid annuity model. The aim of my paper is to find out the how hybrid annuity model is different from build , operate and transfer model and engineering , procurement and construction model. It also aims to find out the pros and cons of the hybrid annuity model and also the risk allocation under the ham.

RESEARCH METHODS & PROCEDURES

Objectives

- To analyze the hybrid annuity model used in construction with regard to differences from the existing model.
- To study the pros and cons of the hybrid annuity model.
- To study the risk allocation under the hybrid annuity model.

Methodology

This is a descriptive research study. Time period of the model is from 2018 to 2037.

Analysis of the Study

After studying several articles on hybrid annuity model , the following are the key features :

1. In the previous build , operate and transfer model , the concessionaire had to manage the financing risk , revenue risk , operation and maintenance risk in addition to the construction risk and the government was only responsible for managing right of ways and granting toll collection rights to the concessionaire. Under HAM , the revenue risk is being borne by the government , part of financial and operating risk is being borne by the government.
2. As the infrastructure development has slowed down , hybrid annuity model has been implemented. Within 3 – 4 years , government financing through short term budgets and long term annuity will get stressed . This is evident from the fact of selling of stressed project assets. However , it will take time of 3 – 4 years.
3. Also , all the nationalized banks lending to infrastructure is restricted due to imposition of sectoral caps and due to rising non performing assets. Hence , these banks will not be able to lend for infrastructure for coming two to three years.
4. Under the new hybrid annuity model , the responsibility of the contractor is only to arrange 60 % of the project cost. However also for this 60% , promoter will only bring 25 – 30 % of own equity and rest would be financed by debt.
5. Infrastructure group's balance sheet is stressed and over leveraged. Banks are not willing to lend because of their rising non performing asset due to poor financial position of the infra groups. Also , these groups don't have the ability to bring further equity.
6. The above issue of equity can be solved if banks and financial institution agree to finance whole 60% of the project costs as the bank guarantees the annuity payment.
7. Another issue with HAM is over pricing. The contractor takes into consideration the promoter's equity , loan , project duration and profit on promoter's equity and operation and maintenance cost. It is observable that projects under HAM are priced 25 to 30 % more than under EPC. Ultimately , it will result into high annuity payouts and government will be forced to charge higher toll.

8. However , collecting higher toll revenue is not easy for the government. Recently , the government in Mumbai had to close many small projects because of the political pressure and government is now struggling to compensate the concessionaire .
9. The rates provided for operation and maintenance costs are although sufficient for maintenance of good quality roads for long term. But , the problem of axle overloading is a commonly observed phenomena. Contractor' s believe it to be the root cause of road damage and ultimately it results in higher operation and maintenance cost.
10. The problem of operation and maintenance costs can become a serious issue. Sometimes , a contract might not out carry out the repair of damaged roads or may claim heavy costs . However , the operation and maintenance costs are delinked with annuity payments . But , due to the inability of the contractor for maintenance of road , it may attract penalty.
11. The problem of toll collection is severe in India. Build , operate and transfer model reported 15 – 20 % leakages due to demands by various groups. The concept of paying fully for the public utilities is not accepted in India till yet. There are certain weaker sections of the society. Under HAM , government is responsible for toll revenue collection and government is well equipped to deal with it.

With respect to second objective of the study , the following are the pros and cons of the model

PROS OF HAM :

1. Reduces Capital outflow for authority as compared to EPC Model : Under the EPC model the government needs to pay for the entire investment during the construction period , whereas under HAM , the NHAI has to bear only 40 % of the cost initially during the construction period.
2. Reduce equity investments by the developer : Under HAM , NHAI bears the 40 % of the project costs during the construction period whereas rest 60% of the cost has to be borne by the developer, although the authority later pays the compensation to the developer. The developer generally invests not more than 20 – 25 % of the project costs , whereas remaining is raised as debt.
3. Private sector not required to bear the traffic risk : Under BOT model , the private player needs to study the traffic flow in a particular region before construction of the road in order to study the feasibility of the project. So, developer under BOT has to bear the risk of low passenger traffic. Whereas , under HAM , developer is being relieved of bearing the passenger traffic risk.

CONS OF HAM :

1. Banks are finding it difficult to lend to infra groups because of non performing loans. There has been a rise in non performing assets and banks are forced to follow strict lending norms under prompt corrective action.
2. Another issue with banks is that banks are not able to lend because of the group exposure limit. It means that a particular group has already availed the loan from banks upto maximum limit.
3. Although the bid project cost is calculated under HAM. But still under HAM , there is no transparency as there are various cartels who are the major bidders.
4. Also , there is a chance of default by the NHAI , as NHAI has to finance various projects . If NHAI is not able to recover the toll collection .Then , it will ultimately lead to burden on the government.

RISK ALLOCATION UNDER HYBRID ANNUITY MODEL

1. Revenue Risk : The revenue risk is borne by the government. This helps in overcoming the problems of both the lenders as well as concessionaire. The government is responsible for the toll revenue collection.
2. Commodity Price Risk : Commodity price risk is being shared between the project authority and the concessionaire. The bid project cost is adjusted by taking into account price indexes.
3. Permission Risk : Permission risk is being shared between the project authority and the concessionaire. The project authority is responsible only for the land acquisition as well as environmental clearance , all other permissions have to be obtained by the concessionaire.
4. Operation and maintenance risk : Operation and maintenance risk is being shared by the project authority as well as the concessionaire. The operation and maintenance expense is inflation adjusted and any increase in expense on account of inflation is being partly shared by the government.
5. Construction risk : Under BOT / BBFOT , only on completion upto 75 % of the project cost , toll collection starts. In HAM , 80 % of the land is being made available by NHAI. After completion of 75 % of the work , half year annuity payments are paid by the government to the concessionaire in proportion to the work completed.

CONCLUSION

Hence from the above description It can be said that Hybrid annuity mode will help in reviving the various road construction projects. Earlier , only big developers were only able to take the contracts. With the launch of hybrid annuity model , it will enable small developers to execute the contracts as government will provide 40% of the project cost initially. It will also help in improving the credit rating of various developers as they would be able to execute the contract on time. This model would

overcome the bank's problem of rising bad loans as banks were not willing to lend under the existing models .It would also solve the problem of the toll collection , land acquisition etc. This model essentially the future of construction in order to boost the pace of implementation of construction projects.

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