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Technical Paper on Successful Implementation of Public Private Partnership Module on Development Premium basis for Construction & Development of D.P. Roads & its Infrastructure within Municipal Corporation limits

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Abstract: *Public-Private Partnership (PPP) describes a government service or private business venture which is funded and operated through a partnership of government and one or more private sector companies. These schemes are sometimes referred to as PPP. The PPP involves a contract between a public sector authority and a private party, in which the private party provides a public service or project and assumes substantial financial, technical and operational risk in the project. In some types of PPP, the cost of using the service is borne exclusively by the users of the service and not by the taxpayer. In other types (notably the private finance initiative), capital investment is made by the private sector on the weakness of a contract with government to provide agreed services and the cost of providing the service is borne wholly or in part by the government. Government contributions to a PPP may also be in kind (notably the transfer of existing assets). In projects that are aimed at creating public goods like in the infrastructure sector, the government may provide a capital subsidy in the form of a one-time grant, so as to make it more attractive to the private investors. Public Private Partnerships recognize that both the public sector and the private sector have certain advantages relative to the other in the performance of specific tasks. By allowing each sector to do what it does best, public services and infrastructure can be provided in the most economically efficient manner. Public Private Partnerships are increasingly being seen as an attractive approach to the provision of infrastructure projects and services across Europe and the rest of the world. An ever increasing number of countries are embarking upon Public Private Partnership programs that will lead to a significant redefinition in the role of the public sector in the financing and provision of public services. This section of the Guidance Note introduces the main forms of Public Private Partnership and describes the extent to which they are evident in international markets. "Here in this case this Module has been operated in terms of "unique" use of Development Premium Credit to the Builder/Developer/Contractor issued by Building Permission Deptt of Municipal Corporation; as generated against development of roads & infrastructure done by the Builder/Developer/Contractor for Public purpose in Municipal Corporation limits of that much amounting w.r.t. Development Control Rule "DCR". This Credit could be used by the Builder/Developer/Contractor for their building construction various premium payable to the PMC building Permission Deptt.; which also they can transfer to the other builder/developers."It's a unique kind of alternate financial arrangement in paucity of fund with various Govt./Semi Govt. authorities; which has been first time very successfully implemented by Pune Municipal Corporation in India for four DP Road projects. The author of the paper is a key part of this work & has been worked as Team Leader for these projects since 2008.*

Keywords

I. INTRODUCTION

Public-Private Partnership (PPP) describes a government service or private business venture which is funded and operated through a partnership of government and one or more private sector companies. These schemes are sometimes referred to as PPP. The PPP involves a contract between a public sector authority and a private party, in which the private party provides a public service or project and assumes substantial financial, technical and operational risk in the project. In some types of PPP, the cost of using the service is borne exclusively by the users of the service and not by the taxpayer. In other types (notably the private finance initiative), capital investment is made by the private sector on the weakness of a contract with government to provide agreed services and the

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"It's a unique kind of alternate financial arrangement in paucity of fund with various Govt./Semi Govt. authorities; which has been first time very successfully implemented by Pune Municipal Corporation in India for four DP Road projects. The main author of the paper is a key part of this work & has been worked as Team Leader for such projects since 2008.

II. INTERNATIONAL INTEREST IN PPP

International interest in Public Private Partnerships is attributable generally to three main drivers:

- 1) *Investment in Infrastructure:* Economic growth is highly dependent on the development and enhancement of infrastructure, particularly in utilities (such as power, water and telecommunications) and transport systems. Furthermore, in many countries there is an urgent need for new social infrastructure such as hospitals and healthcare equipment, prisons, education facilities and housing. For many governments this is seen as the most pressing area for private sector involvement.
- 2) *Greater Efficiency in the use of Resources:* the experience of privatization has shown that many activities, even those traditionally undertaken by the public sector, can be undertaken more cost effectively with the application of private sector management disciplines and competencies.
- 3) *Generating Commercial value from Public Sector Assets:* Significant amounts of public resources are invested in the development of assets such as defense technology and leading edge information systems that are then often used for a narrow range of applications within the public sector. Engaging private sector expertise to exploit these assets in a wider range of applications can lead to the realization of substantial incremental value for the public sector. The experience of privatization has shown that the freedom to invest combined with private sector management skills are key drivers behind improved efficiency, either in terms of reduced cost or improved service quality. At the same time, privatization can in certain cases lead to a perceived lack of public accountability and the development of monopolies.

III. FORMS OF PUBLIC PRIVATE PARTNERSHIP

Public Private Partnerships are not well defined within international markets, and in their widest sense Public Private Partnerships embrace a variety of relationships. A simple definition is that they exist wherever the public sector and private sector work closely together with a common purpose. In terms of international experience to date, this commonly breaks down into the following areas:

- 1) Contracts to supply services to the public sector;
- 2) Contracts to sell services or assets from the public sector; and
- 3) Joint ventures to do either of these activities.

IV. CONTRACTUAL FORM AND ITS DIFFERENT TYPES

- A. Contractual Forms A wide range of contractual forms may be adopted by the public sector in establishing partnerships with the private sector, ranging from those where there is a great deal of public sector involvement to those where there is very little involvement. Generally, the spectrum of contractual options ranges from input based service and outsourcing contracts to output based Design, Build, Operate and Finance contracts or Concession contracts. The broad spectrum of contractual options is illustrated in the diagram below and discussed in the paragraphs that follow.

Figure 1: Contractual Forms of Public Private Partnerships

- 1) *Outsourcing and Service Contracts* are contractual relationships between public sector bodies and private sector contractors for the provision of one or more functions or services. Traditional service contracts involve the contracting out of activities such as catering and cleaning to achieve cost savings. More complex outsourcing contracts are associated with complex business functions or processes such as accounting and information systems. Outsourcing is characterised by the transfer of assets (facilities, staff and equipment) and a level of risk to the private sector contractor and in recent years outsourcing contracts have increasingly included the provision of capital assets. In the Irish context, these types of contract would be considered as a form of Public Private Partnership where they have a term of at least five years.
- 2) *Design and Build* contracts are contractual relationships between public sector bodies and private sector contractors for the design and construction of public facilities or infrastructure. The private sector contractor designs and builds the facility to meet the performance requirements specified by the public sector. The work is usually carried out for a fixed price so that the risk of construction cost overruns is transferred to the contractor. In return, the private sector contractor is able to utilise the construction techniques it wishes provided that it meets the specified performance standards. The public sector retains all of the risks associated with financing, operating and owning the facility.
- 3) *Design, Build and Operate* contracts are contractual relationships between public sector bodies and private sector contractors for the design, construction and operation of public facilities or infrastructure. The private sector contractor designs and builds the facility to meet public sector performance requirements (as in a Design and Build contract) and is also then responsible for operating and maintaining the facility for a predefined period, at the end of which it is transferred back to the public sector. The construction of the facility is financed by the public sector and it remains in public ownership throughout the term of the contract.
- 4) *Design, Build, Operate and Finance* contracts are contractual relationships between the public sector and private sector contractors for the design, construction, operation and financing of public facilities or infrastructure. The private sector contractor is responsible for designing, building, operating and financing the facility and recovers its costs solely out of payments from the public sector. At the end of the term of the contract, ownership of the facility commonly transfers to the public sector. This type of Public Private Partnership arrangement is well established in France, Italy, Spain, Portugal and the United Kingdom. Concession contracts are similar to Design, Build, Operate and Finance arrangements, except that the private sector contractor recovers its costs either through direct user charges or through a mixture of user charging and public subventions.

B. A number of other approaches to the allocation of risk between the public sector and the private sector have also emerged in recent years and these approaches have given rise to a wide range of other contractual forms within the Public Private Partnership spectrum. Some of the other contractual forms include:

- 1) *Build, Operate and Transfer schemes:* A private sector contractor builds a facility in accordance with a design prepared by the public sector. The private sector contractor finances the construction of the facility, but the facility is owned by the public sector. The private sector contractor operates the facility for a predetermined period and at the end of that period the facility is handed back to the public sector.
- 2) *Build, Own, Operate and Transfer Schemes:* The private sector contractor builds a facility in accordance with a design prepared by the public sector. The private sector contractor finances the construction of the facility and legal ownership of the facility rests with the contractor until the end of the contract term. The private sector contractor is responsible for operating the facility for the contract term and at the end of that period the facility is handed back to the public sector.
- 3) *Build, Own and Operate Schemes:* A private sector contractor builds a facility in accordance with a design prepared by the public sector. The private sector contractor finances the construction of the facility and is responsible for the operation of the facility in perpetuity. Ownership of the facility also rests with the private sector contractor in perpetuity.

Fig2. PPP model of Balewadi High Street, an example of Build, Own and Operate schemes

V. BACKGRUND OF PIMPRI – CHINCHWAD MUNICIPAL CORPORATION

Pimpri-Chinchwad is a city in the Pune district in the state of Maharashtra, India. It consists of the twin towns of Pimpri and Chinchwad which are governed by a common municipal body (the Pimpri-Chinchwad Municipal Corporation or PCMC). It is located to the North-West of Pune and is well connected to the center of Pune city via the Old Pune-Mumbai Highway. As of 2011 India census Pimpri Chinchwad had a population of 1,729,320. Male population has (9.45 lakh) and female population (7.83 lakh). Pimpri Chinchwad has an average literacy rate of 87.19, higher than the national average of 74.04%. In Pimpri Chinchwad, 14% of the population is under 6 years of age.

Pimpri-Chinchwad is a major industrial hub and hosts one of the biggest industrial zones in Asia. Industrialization dates back to 1954 with starting of Hindustan Antibiotics Limited considering this opportunity MIDC took initiative and bought huge scale land in this area. This town is home to the Indian operations of major automobile companies like Premier Limited, Mahindra Navistar, Bajaj Auto, BEL Optronics Devices Limited, TATA Motors (formerly TELCO), Kinetic Engineering, Force Motors (formerly Bajaj Tempo) DaimlerChrysler, Thermax and Autoline Industries.

Due to rapid development in economic, industrial & commercial activities, there is enormous increase in traffic causes congestion, pollution & other related problems.

A. PPP Model for a Corporation Limit

As we have seen in article 2.1 'FORMS OF PPP MODEL' mostly for revenue generation these types are not applicable in corporation limit for major works like road development, the reason are listed below as,

- 1) As the cost of construction of New DP roads is too high that corporation can't bear to give it on annuity basis also,
- 2) It is not possible to generate the revenue from toll basis as it is not acceptable & possible in corporation limit.
- 3) Contractor can't sell the road to someone to make profit.

So to overcome this problem corporation introduced new concept of PPP module, it called as PPP on Premium basis.

B. Concept of PPP Module of Premium Based Tender

There is working classification based on corresponding mode of reimbursement against proposed development of DP Road. Land will be under PMC / others / developers possession, the development Premium would be credited:-

- 1) The developer/contractor would quote the B1 Tender; after complete detail study he will quote the percentage above/below/equal in terms of cost but not cash.
- 2) Example:- If Cost of work is INR "X" then he has to quote above or below or equal in terms of percentage, which would be added/subtracted/equal respectively to the cost of work done as the case may be.
- 3) In this classification the price escalation/ extra items if any would also be reimbursed in terms of development premium only
- 4) This "PPP" Module Premium Credit is w.r.t. to DC Rules.

C. Further Detailing Of "Ppp" Tender On Premium Basis-

Any developer/contractor can enter in bid by submitting registered consent in the name of developer/contractor as the case may be. This would be treated as Joint Alliance; where the appropriate registered contractor's technical qualifications would be used & developer's financial capability would be used for bid qualification. However the Premium would be credited on the name of main contractor/developer.

If technically qualified alliance contractor will be changed by the developer in any case, then the subject contract would be treated as cancelled & SD would be forfeited without assigning any reason by PMC.

If there is a problem in getting land or its registered consent (in the prescribed format attached) from the landowners/lessee under such DP road development work; then land would be acquired including any such encroachments etc by Pune Municipal Corporation and Premium would be credited to developer/contractor against such land development in terms of premium cost, wherein The Bill of Quantities is used to calculate the Contract Price.

These project work as B1 Tender could be participated either by Developer/contractor or jointly as the case may be; subject to the technical & financial qualification criteria should be satisfied (Joint Alliance is permitted with registered contractor as stated in NIT).

Joint Alliance means it's an alliance between developer & registered contractor to satisfy the technical criterion required for developer in bidding of this work (as he doesn't have requisite technical experience), but the development premium would be credited only on the name of principal Developer not in favor of alliance contractor. The bid would be submitted on the name principal developer. If principal developer will change the alliance registered contractor after bidding at any time, then contract would be terminated & SD would be forfeited.

This premium the contractor/ builder/ developer will encash by getting the rebate in following items from the corporation. The items included in the premium are as follows

- 1) Balcony
- 2) Staircase
- 3) Lift
- 4) Lift Machine Rooms
- 5) AHU (Air Handling Unit)
- 6) Passage
- 7) Coverage

The items which will not be included in the premium are as follows:

- a) Fire Premium
- b) Development Charges as levied by the corporation.
- c) RADA RODA

The concept of PPP module is like a DBFOT project in roads & its allied infrastructure development. In this case a builder/ a developer will construct the road passing through his property and in turn he will get a credit note in the form of premium from the corporation. He will utilize this premium against the charges to be paid by the contractor to the corporation as listed above and get rebate in the items listed above.

Fig 3. D.P Road made under PPP model under

Fig 4. Real Aerial view taken of D.P Road

VI. CONCLUSION

In the current study under the topic ‘Study of Public Private Partnership (PPP) in Pimpri Chinchwad Municipal Corporation’ various alternative approaches or the basis of the private partnership are explored. As a part of this one completed project in infrastructure in Pune city through the well discussed and understood channel of Public Private Partnership or PPP mode are handled with their issues and perspective.

Budgetary constraints of PMC to develop the physical and social infrastructure at much needed pace has made PMC authorities to look for revenue sources beyond the conventional resources. On these grounds the initiatives taken by the PMC to implement and run the projects on PPP mode helped to bridge the funding gap for the projects. However rigid policies & lack of political will are hampering such scheme.

In case of the road development, through City Corporation had made efforts to participate realty developers, the information collected from municipal source, consultants and contractor had put some points to think upon as:

- A. Quality of work was even above from the satisfactory level. This has benefited to PMC in terms of less efforts in supervision and monitoring the work. This is because of the parameter in PPP design regarding the PPP operator’s liability of the operation and maintenance of the roads for concession periods.
- B. As the PPP model is based on the premium charges for land development. Hence it was prerequisite to have high potential of the land in PMC area, due to which small real estate investors couldn’t participate. Hence it seems that if PMC would have floated the work in parts, the more private players could have been able to participate.
- C. Other than road it can also be used to other public development usage like Hospital, Park, School etc.

REFERENCES

- [1] <https://www.pmc.gov.in/en/road-projects-ppp>
- [2] <https://www.pcmcindia.gov.in/sutp/enhancement.html>
- [3] http://www.infraking.in/projects/completed_projects.html

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