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Case Study of Joint Venture in Infrastructure Projects in Construction

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Abstract - Infrastructure is a key enabler and empowers the economy to grow. The Government, both at the Centre & State level, has realized this and there is a conscious thrust by them to build the infrastructure of the Nation in a big way. Government has put a step forward by announcing the concept of smart cities. Instead of being "intelligent", a Smart City simply tried to create a more pleasant city innovative technologies that aim to build the city of tomorrow with one major objective: to simplify, optimize and streamline cities and the services they offer, for the benefit of all citizens. Infrastructure development has limitations due to scarcity of funds and scare budgetary resources. Hence, government has allowed the participation of private firms, in public beneficial programme. Government is trying to attract private sector investments to this sector by taking appropriate steps to issue the clearances and by simplifying the procedure in this regard. Joint ventures (JVs) facilitate the combination of economic resources, skills and knowledge required for projects. The use of the JV set-up in the construction industry has become necessary in order to secure a large scale project or one that is beyond an individual firm"s capability. This paper deals with the concept of Joint Venture. Much of the discussion in this paper relates to the smart city development and role of PPP along with advantages, disadvantages and risks related to JV .

Keywords:-Infrastructure, Smart Cities, Joint Venture,

Risk, SWOT analysis

1. INTRODUCTION

The idea of smart city came into formulation owing

to the need to accommodate rapid urbanization. Interest in smart cities continues to grow, driven by a range of

socioeconomic and technological developments across the globe. It is due to the increasing number of smart cities that established suppliers from energy, transport, buildings, and government sectors are moving into the smart city market, while start-ups are addressing a range of emerging opportunities in the same field. India is drawing on the development of smart cities at the global level. Prime Minister Narendra Modi"s vision„Digital India" has a plan to build 100 smart cities across the country. Smart Cities would be developed as satellite towns of larger cities and by modernizing the existing mid-sized cities. Government of India (GoI) has recently pledged to create 100 new Smart Cities in the country. It has a sense of urgency , the first 20 cities will be selected for funding with development beginning in 2015-16. The smart city project in India is part of a $1.5tn global market opportunity. The business opportunities that come along the smart cities mission in India can be seen as a source of great potential for Flemish businesses who are involved in products and solutions within the smart technology, sustainable solutions and hi-tech space. A smart city can contribute towards improved governance and efficient management of infrastructure such as water, energy, transportation and housing and to a higher quality of life.

The Government of India released the list of the first 20 smart cities first week of February 2016. Tenders for the shortlisted 20 cities will be floated over a span of next few months. 1. Bhubaneswar 2. Pune (Maharashtra) 3. Jaipur 4. Surat 5. Kochi 6. Ahmedabad 7. Jabalpur 8. Visakhapatnam 9. Solapur (Maharashtra) 10. Davangere 11. Indore 12. New Delhi (NDMC) 13. Coimbatore 14. Kakinada 15. Belgaum 16. Udaipur 17. Guwahati 18. Chennai 19. Ludhiana 20. Bhopal Smart City is not a destination but a series of steps in that direction. Given that the urbanization level in India is still at just around 31 per cent, far lower than China"s 54 per cent, Brazil"s 90 per cent and well over 80 per cent in most developed economies. The short list of 20 cities is a decisive step in this direction, considering that these cities have already furnished plans to cumulatively mobilise resources over the next five years .These include an integrated urban

planning effort with a sharper focus on infrastructure, land use planning, transport, design and architecture.

Aim:

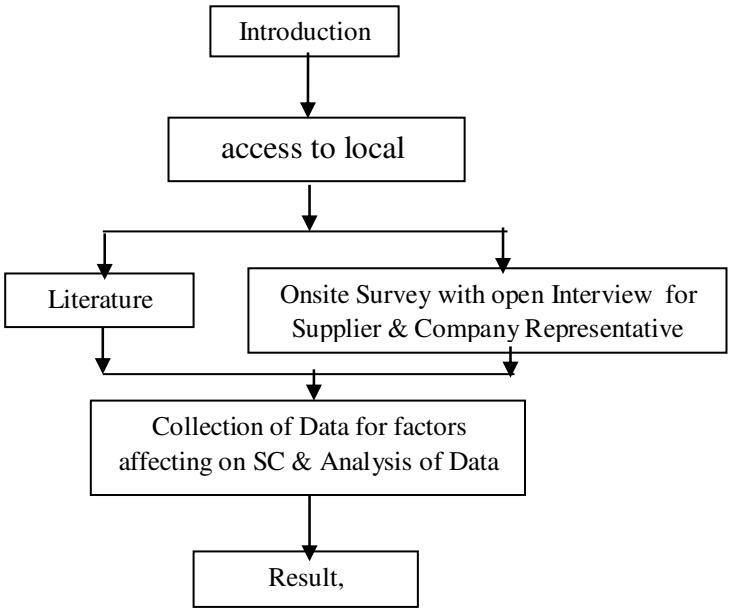
JVs are envisaged as alliances that yield benefits for the JV partners by offering a platform to attain their business goals which would be difficult or uneconomical to attain independently. Establishing a JV with an ideal partner provides a fast way to leverage complementary resources available with the other partner, share each others' capabilities, access new markets, strengthen position in the current markets, or diversify into new businesses. India Inc. has come of age and is not just an investment destination but also an aggressive investor. Indian companies have exhibited, in the recent past, their ambition to venture into the quest for overseas expansion. The main stumbling blocks for Indian companies in achieving expected levels of global presence are deficiencies in terms of product quality,technology, infrastructure and even management

processes. These deficiencies can be negated by way of an alliance with a foreign counterpart who is a strategic fit. Alliances between those possessing varying expertise and capabilities in technology, marketing and distribution, etc. are necessary to meet the growing needs of modern business.

Objectives:

- Equity participation by local and foreign investors and agreement to future issue of capital
- Financial arrangements
- Composition of the board and management arrangements
- Specific obligations
- Provisions for distribution of profits
- Transferability of shares in different circumstances
- Remedying a deadlock

2. METHODOLOGY:



3. CASE STUDY:

3.1 HCC & ITALY

A classic example of that can be cited is the JV between HCC and Impreglio of Italy. The main reason for the formation of the Joint Venture with the foreign partner was the prime condition put forth by the Client as it was a World Bank aided Project. HCC has experience in executing such projects in the past; may be not of the same magnitude. The formation of the Joint Venture has helped to reduce the burden of financing the project solely i.e. the initial inputs like Bank Guarantees in stipulated time frame and the mobilization of manpower and equipment, etc. Initially, HCC added to the value chain by helping in the matters with respect to site surveys, rates of materials and local and legal matters whereas the foreign partner carried out the analysis of rates, procurement of men and machinery from the foreign market. The formation of the Joint Venture helped in the procuring machinery of advanced technology from the European Market thus adding to its Infrastructure and technology advancement. The foreign partner also gained knowledge about the Indian market and was provided an entry to the Indian markets. With high investment costs and time as a constraint, the Indian partner alone would have had difficulty in completing the job if awarded. The formation of the

Joint Venture has helped inthe learning of new technologies and methods by HCC, like:

1. The expertise on the handling of machinery like the Jumbos, the Ventilation Systems the tunneling equipment used to tackle the shear zone.

2. The Codification systems (Profit-Cost Center) Site management and handling of claims

As there is a lot of potential in the construction industry and a lot more areas to be explored, global bigwigs see this as an opportunity to enter India's growing and potential markets. Formation of Joint Ventures is one of the easiest way to do so. The market structure, the areas of business development, local market behavior and legal aspects are some of the aspects the foreign partner can study once he ventures into a Indian markets. In this way the foreign company can mould its policies and other required structure to the Indian environment.

3.2 MUMBAI-PUNE EXPRESSWAY AND COIMBATORE BYPASS

The case of MSRDC and Coimbatore Bypass shows that the present policy of attracting private participants has many limitations. Most important among them is the financing schemes of the projects where the government has gone for a BOT contract and has allowed the private participant to recover their investment through toll collection. At present toll collection in India is not a viable proposition due to various socio economic problems.

Private companies are unwilling to invest due to the greater risk due to problems in estimating traffic density and willingness to pay. This study has looked into the various alternate financing schemes for road sector projects and has recommended the use of both BOT and the Central Road Fund in India. The government should go for BOT projects with private players where the private participants feel the project is financially viable and their investment could be recovered through tolling. The Central Road Fund should be used in projects which government feels is important for uniform dispersal of development but there are no takers from the private sector. Government should not bundle these projects, which have no takers along with other financially viable projects and complicate the project structure. The identification of feasible projects should be left to the private sector rather than government going with a set of projects and asking private sector to choose one among them.

The report also suggests certain procedures regarding the managing of the central road fund, which could be followed for efficient utilization of the fund

3.2.1 Mumbai Pune expressway Introduction

The need for the Mumbai-Pune expressway was established by a study conducted by the ministry of surface transport (MOST) during the seventh five-year plan (1985-90) which identified this corridor as amongst the three most congested national highway corridors and proposed it to be developed, as a part of the "National Expressway System". Accordingly, it was decided to explore the possibility of providing a new expressway between Pune and Mumbai. The need for constructing the Mumbai Pune express highway was by the fact that

Mumbai was commercial capital of India and pune was developing into a major industrial and commercial center. The vehicular traffic in the Mumbai thane pune belt was 60755 PCU in the year 1996 and is expected to reach 100000 PCU by the year 2004 requiring a ten-lane corridor between Mumbai and pune. This belt also contains 72 per cent of factories, provides 77 per cent of industrial employment, control 88 per cent of working capital, and yielded 86 per cent of total state industrial output. More recently this link between Pune and Mumbai has become crucial for the development of the computer and information sector that is perceived to be a key element in facilitating globalization and international business linkages.

The distance between the two cities is some 180 km and it takes about four and a half to five hours to cover it under good traffic conditions.

3.2.2 FEASIBILITY STUDY

In 1990, the Government of Maharashtra appointed RITES and Scott Wilson Kirkpatrick of UK to carry out feasibility studies for the new Expressway to be operated on toll basis. Important findings of the feasibility study are as given below

 RITES recommended the construction of a dual three-lane expressway taking of from the NH4 at Kon near Panvel and ending at Dehu Road on the westerly bypass outside Pune — a total length of 84 km.

 Project cost, as estimated by RITES at 1994 prices, was Rs 11,464 million. ,

 RITES estimated that the diversion of traffic to the new expressway would be in the order of 40-45 percent of the total corridor traffic.

 The EIRR for the project was 17.81 percent, which is above the planning commission's cut-off rate of 12 percent. Hence, the expressway project, as envisaged by RITES, was economically viable. ,

 RITES recommended that subsidy might come from income through property development on the land in the vicinity of the expressway.

3.2.3 MSRDC

After the recommendations were accepted; tender documents for the expressway were prepared and bids invited by the Maharashtra public works department (PWD). Six corporations purchased the tender documents but only one, the Reliance Corporation, submitted a bid. The Reliance bid was for Rs 3,600 crore, a sum more than twice the currently anticipated cost of the expressway and the government did not accept it. It is difficult to pinpoint why the Reliance bid was so high. Factors that could have driven up the bid price can be speculated. The unexpected decline in real estate demand leading to reduction of real estate values throughout the Mumbai-Pune belt, the cost of raising capital needed to acquire high end construction equipment, non-availability of government subsidies, the overall size and cost of the project and uncertainty that tolls would provide sufficient pay back in the stipulated time frame, could be other factors that deterred private companies. Finally the government entrusted the work of constructing the road to MSRDC. The MSRDC was set up in Maharashtra to expedite work related to road sector development in the state on a BOT scheme. After that a committee was set up to look into the geometric

standards and technical provisions to de adopted for the construction of the highway. The committee finally recommended the construction of a rigid pavement, which would have an incremental sot of 6% over the flexible pavement but was more economical. MSRDC started a series of meetings with the concerned authorities and departments so that work could be completed expeditiously and in time. Maharashtra State Electricity Board (MSEB) was persuaded to complete the shifting of the electrical and transmission lines. The revenue department was requested to expedite the work of land acquisition; forest and other departments were urged to expedite forest and environment clearances. The project required 646 ha of land for right of way, 455 ha of land for quarry and dumping area and 1338 ha for

real estate development. Appropriate reservations were also required for real estate land so that the land could generate surplus revenue. Land acquisition and forest clearance was initiated and accordingly forest and environment clearances were received in October 1997

and November 1997, respectively.

3.2.4 PROJECT MANAGEMENT CONSULTANTS

It was decided to employ a panel of PMCs to carry out detailed engineering design and estimate and supervise the construction work. The PMCs were selected on the basis of marks allotted with weight age of 80 percent on the technical and 20 percent on the financial offer. A condition was put that a PMC will not be allowed to undertake work of more than one section. The minimum technical supervisory staff was also insisted upon. Based on the detailed designs and estimates prepared by the PMCs, MSRDC invited bids from contractors for the construction of the expressway.

Award of contract

The PMCs evaluated the bids from the contractors and an exhaustive technical evaluation was carried out. Marks were distributed on various aspects like for

example, experience on similar works; record of early completions/delays; availability of machinery and qualified personnel; quality of works executed; proposed work plan, etc. Bids were ranked by assigning 25 percent weightage to technical scores and 75 percent weightage to the financial bid. Work orders to the contractors were issued in January 1998. The work of tunneling was awarded to Konkan Railway Corporation Ltd, on a turnkey and cost plus basis.

Facilities to contractor

MSRDC provided a number of facilities to contractors such as providing land for labour camps, quarries, electric supply for construction activities; locating petrol pumps adjacent to the alignment; removal/diversion of utility services such as telephone/water/sewer lines coming on the alignment; obtaining permission for tree cutting; ensuring availability of survey/laboratory equipment at site; and ensuring requisite site communication facilities. A number of facilities were also given to PMCs.

Financing of the project

In October 1997, preliminary estimate of the project was prepared. It was assessed that the total cost of the expressway would be about Rs 1630 crore. Almost all tenders were received within the estimated cost of Rs 1488 crores. As this is a BOT project, cost of land acquisition and shifting of certain utilities was borne directly by the government. In order to subsidize the project, the government has given 1,030 hectares of land, which is to be used to generate surplus income and make the project financially viable. The cost of the work is to be recovered from the toll being levied on vehicles using the road. A request was made to the government to give guarantee for the finances to be obtained from financial institutions. This was essential since MSRDC is a newly formed company with an equity output of only Rs 5 crore. It was therefore thought that with government guarantee and project strength, MSRDC would be in a position to get funds from financial institutions through private placement financing. Through private placements, Rs 2120.81 crores was obtained which was also meant for the flyover projects in Mumbai.

3.2.5 CRITICAL REVIEW OF MUMBAI PUNE EXPRESSWAY:

The Mumbai pune express highway is considered to be a success story and hence other state governments are closely watching the activities of MSRDC. It is considered to be the finest example of public private partnership in road sector development. But the very aim of attracting aim of involving a full private participant failed in these case as not even a single international infrastructure company bid for the project and only one Indian company, reliance, bid for the project inspite of many incentives provided by the government like the

guaranteed 20% return on investment, a promise of rapid and single window approval, tax incentives and reduced duties on imported equipment for all investments in industry, and, allowing up to 40 per cent government support to the project, not a single international infrastructure company bid for the project. Private sector entrepreneurs are allowed to recover their investments first, followed by the government. The government finally did not accept any of the competitive bids and the

responsibility for constructing the road and its subsequent management was entrusted to the MSRDC 1997. A number of reasons may be cited for the failure to attract private participants. Foremost among them is the uncertainty related with toll-based system where

the developers are themselves responsible for recovering their investment. Private participants are unsure as to if they would be able to recover their investment due to

uncertainty in traffic density and attendant risk. And also due to the fluctuations in real estate cost the valuation of subsidy through free allotment of land by the government is difficult. The later part of this paper would try to look at various alternatives to BOT scheme, which may help in attracting more private participants to road sector development.

3.2.6 COIMBATORE BYPASS PROJECT

INTRODUCTION:

Coimbatore is a prosperous and industrial city of Tamil Nadu, is well connected by National and State highways. The National Highway No.47 connecting Salem with Kanyakumari via Trissur, Ernakulam, and Thiruvananthapuram in Kerala, passes through the city.

Congestion within the city was causing traffic delays and so there was a need for a bypass. The alignment traversing a length of 27.67 kms was finalized and land for a width of 40-45 m was acquired for this purpose in 1974. However construction was delayed due to lack of funds.Later in September 1995 the Ministry of Surface Transport in its initiative to invite private

participation in road infrastructure floated a global tender to select a private party for development of this project on BOT basis. L&T Transport Infrastructure was the only party, which responded to the tender and submitted a bid. But the L&T 's bid was a conditional one, which was based on the addition of a bridge over the Attupalam Bridge on NH47 with in the City outskirts and a ROB on NH-209. These according to L&T were included to improve the financial viability of the project. The bid was discussed in detail with the State Government by the MoST and finally the bridge across Noyal River was also included in the project. It is important to note here that the GoTN was involved only in the finalization of bid. The cost of the project including the bridge was estimated to be Rs.90 crores. L&T Transportation Infrastructure Ltd was given a concession period of 21 years for the bridge and 32 years in the case of the bypass to collect toll. The following Toll structure was fixed

initially in the concession agreement. The work on the project was commenced on December 1997 and Attupalam Bridge was opened for transport in December 1998 and the bypass was opened to traffic on 2000.L&T started collecting tolls from the day of commissioning (tolls were collected both on the new as well as old bridge) but faced resistance to payment from public, mainly on the bridge. The state transport corporations together with the local truck and taxi owners have expressed their unwillingness to pay toll on the bridge. They were demanding concession rates for frequent users and opposing the tolling of old bridge. However the compliance on the bypass was better. L&T made several representations to the government regarding their loss due to poor compliance. The state government in an attempt to resolve this issue proposed introduction of concessional rates Rs.50 per day for government and private buses and Rs.300 per month for all non-commercial vehicles in January 1999. However, the suggestions were not accepted by L&T and it insisted on retaining the old rates as agreed in the original agreement. But agreed to the subsidized toll rate of Rs 50 per day per bus of TN Transport Corporation irrespective of the number of trips the buses will do provided the state government compensated the revenue losses sustained by the company. The company is said to have made a loss of 20000 Rs per day on government buses alone during 1999. Financial institutions which had lent 60 crore to L&T started putting pressure on L&T and its financial losses turned out to be 9 crores per year including interest charges . L&T expressed its inability to enforce toll collection and on request the State police was deployed. This didn't improve the toll collection in any significant way and L&T reported a loss of Rs.7.4 crores in June 2000 and requested for compensation. But GoTN was of the opinion that the loss could have been contained to Rs.55 lakhs, if L&T had agreed to the concessional rates suggested by them. L&T tried to enforce toll collection further with the help of police but this resulted in the whole issue being politicized. Local political parties with vested interested organized a city wide making the issue more complex.

3.2.7 LEARNING FROM THE ABOVE TWO CASES:

In both the above two cases we see that only one private party bid for the project inspite of many incentives provided by the government. This problem mainly stems from deficiency in project structuring. In the case of Mumbai pune expressway we see that only Reliance bid for the project and that too they quoted an amount, which was unacceptable to the government. In the case of Coimbatore bypass only L&T bid for the project with the condition that the Attupalam Bridge should also be bundled with the project though the bridge is geometrically not a part of the bypass to make it financially feasible. A number of reasons may be cited for the failure to attract private participants. Foremost among them is the uncertainty related with toll-based system where the developers are themselves responsible for recovering their investment. Private participants are unsure as to if they would be able to recover their

investment due to uncertainty in traffic density and attendant risk. And also due to the fluctuations in real estate cost the valuation of subsidy through free allotment of land by the government is difficult. This shows the need to change the project structuring and to look for alternatives schemes to finance the project. We will be looking at various alternatives to finance road

sector development and involve private participants. But first of all the objectives behind tolling of roads and the issues concerned with it are If the road has been built by a private enterprise or is the result of a public private joint venture then road tolls may be implemented to recover the capital invested and for generation

of additional profits. Road tolls may also be implemented for much needed investment capital for new infrastructure development and hence bridge the gap between demand and supply. Road tolls may be implemented for optimal and proper usage of the road so that the road does not attract excess users. When a commodity is too cheap it will be over consumed and

hence lead to supply side constraints. In many western countries road tolls have been introduced as a mechanism for reducing auto dependence among the people. There are also other targeted pricing mechanism like smog fees to reduce pollution, weight/distance charges to promote lighter vehicles, congestion

pricing, gas taxes and fines to meet a variety of objectives. The efficiency of road tolls depends on its design and its implementation. Road tolls if designed in the wrong way may hurt the poorer section of the society. Moreover if implemented at the wrong place it may divert traffic away from the toll road and cause

congestion at some other road. Moreover it has been observed in many western countries that there are huge congestion near tollbooths, which drive up the stress level leading to accidents, road rage and wastage of gasoline. Therefore much thinking needs to be done while designing the road toll. These are some of the important steps that are needed to be taken. The tolls collected should be income and tax progressive so the poorer sections of the society are not hurt.The toll should be done on a geographically widespread basis so that dislocation of traffic does not take place. They should be part of an overall transportation plan instead of being negotiated on a road-by-road basis. It should be publicly controlled and mandated to direct revenues to alternative modes of transportation.

Issues concerned with toll roads:

Toll fixing and increments: As the future vehicular density and the willingness to pay cannot be estimated accurately there is problem is fixing toll charge on roads. As in the case of Coimbatore Bypass the no consideration was made for people's willingness to pay and demand for the bridge. This resulted in public opposition to toll collection. Access control: Toll roads have to be access controlled. In India due to the prevalent political and social systems access control will be very difficult to maintain. The chances of people

defaulting on their payment are high. This raises problems for the private participant in toll collection and thus the project may ultimately turn out to be unviable for the private player as seen in the case of L&T in the Coimbatore bypass case. There is also the cost of monitoring toll plazas to prevent revenue leakage. Flow of traffic: One of the prime objectives of toll roads is to reduce congestion. In India toll charges, as an instrument to manage the flow of traffic is not viable as there are hardly any other alternative route connecting two places. In such cases the toll charge becomes a user

charge for providing a service. Moreover even in case where alternatives are available people unwilling to pay tolls may be unwilling to take the new road and this will defeat the purpose of reducing congestion in the old road.

Social impacts: In a country like India where a large section of the population leaves below the poverty line, implementing toll collection on roads effectively prevents them from using that service. This necessitates the creation of alternative routes as for example the creation of several underpasses in the case of Mumbai Pune Expressway. There is cost to providing underpass for people not having access to motorized vehicular traffic. Moreover the income and price elasticity for vehicular demand in India is still very high. Hence there is no need to impose toll charges to reduce dependence on traveling by personal vehicles. Political opposition: Political opposition to tolling has been observed in many countries. The opposition has meant that toll rates have not been increased as planned or untolled facilities have been created to provide an alternative. Both this outcomes have affect the financial viability of the project negatively thus driving private participants away.

Alternatives to toll roads:

Criteria for selection:

Any financing plan for the road sector development should be long term, on a legal basis and should fulfill the following criteria:

The financing scheme should take into account the demand potential demand for road traffic and the people's willingness to pay. In a country like India people willingness to pay becomeall the more important since any clash between the service provider and the customer might take a political turn as in the case of Coimbattore bypass. Private participation in India cannot be totally ruled out as the road funds itself may not be able to bridge the gap between the demand and supply for roads. But the present system of involving private participants in road sector development needs to be overhauled as there are many loopholes mainly related to the recovery fund invested by the private participants and the sharing of risk which in itself is related to the traffic density and peoples willingness to

pay.

The road sector development should also take into consideration the varied political, social and economic atmosphere in different parts of the country. As for example if we take the case of the north-eastern region it would be totally foolish to leave the road sector development to the private sector as few would be willing to invest there due to the political and economic atmosphere prevailing there. The MSRDC and the Coimbatore bypass case show that there are lots of loopholes in implementing toll roads. The uncertainty attached with revenue generation is keeping private

participants from investing in road sector development. The government does not provide any traffic density and attendant risk and hence they show less interest for such projects. Moreover the present tolling scheme has got lot of problems attached with it.

Alternatives to tolling:

- □ Shadow tolling
- □ Annuity based
- □ Road fund & BOT base

3.2.8 RECOMMENDATIONS

After evaluating all the options we feel that the best alternative is the financing of road sector is through a two-tier scheme combining both BOT contract with the private sector and the use of the Central Road Fund.

CENTRAL ROAD FUNDS

The government in 1999-2000 imposed a Re 1 cess on petrol in 1998-99 and the same on high-speed diesel. The collection out of this goes into a non-lapsable, non-diversionary Central Road Fund for the ambitious Rs 60,000-crore national highway programme. The fund was formally created last year after Parliament cleared the Central Road Fund Bill, 2000. The government later imposed an additional cess of RS.0.3 on petrol and diesel to generate Rs 2,000 crore per annum which is proposed to be used for the 7,300-km long north-south-east-west corridor project alone.However these alone will not be sufficient to develop an effective road system in India as a large proportion of villages are still without all-weather road connections. Most of the roads comprise of one lane and in a number ofurban areas, there is heavy congestion on roads and lack of adequate mass transport system and the consequent explosion of the personalized modes of transport (mainly two wheelers) has resulted in low speed, high energy consumption, traffic jams as well as high levels of air and noise pollution and alarming rate of accidents. Also it is very obvious that the provision of such a large network will not be feasible with the road fund alone but also the participation of private sector (Ninth five-year plan report (97-02). The two-tier scheme will finance part of the road sector development through the central road fund and the other through BOT contract with the private sector. The private sector will recover their financing schemes by levying tolls on the roads they have built for the concession period. The following guidelines should be followed in the two-tier scheme.

- The private sector should be allowed to invest in all those projects only which they feel are financially viable and will give them an adequate return on investment. The risk of traffic density and willingness to pay should be completely passed on

to the private participant. This means it is the responsibility of the private participant for estimating the demand for the toll by taking into consideration the political, social and economic climate of the region. The private participant will have the full responsibility for selecting, designing and operating the project. All the principal risk like demand side risk should be transferred to the private participant.

- The government may here encourage private participation by bearing the cost of acquisition of land, shifting of utilities and the cost of environmental and legal clearance. The government and the private participant will have to mutually agree upon the return on investment upon the return on investment which will determine the period of concession. Hence the concession period and the technical qualification of the private participants should be the sole criteria for evaluating the bid process. The toll charge will be determined by the private participation based on the demand for the road and the willingness to pay. Other incentives like safeguard from foreign exchange fluctuations and reduction in custom duties on imported equipments may be done on a project-to-project basis.

- The Central Road Fund should be used for all those projects where no private players are willing to invest. Private sector investment in India is still at an infancy state and hence the government still has an important role to play. Such investment may be in projects, which the government feels are strategically important, or projects pertaining to the universal dispersal of road sector development. The investment in such projects may be carried out by the by setting up an independent and commercial firm for managing the central road fund.

3.2.9 CONCLUSION:

We feel that for a resource scarce country like India government alone will not be able to support the huge requirements of infrastructure projects. So government should actively pursue to attract private sector investments to this sector by simplifying the projects with clarity in regulation and clearances and by reducing externalities. We have attempted to come out with certain guidelines based on the learnins from the cases and other sources, which could be used as pointers towards future private-public partnership project.

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