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Legal Analysis of Build Operate and Transfer (BOT) Projects in Indian Public Infrastructure

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Abstract:- **These days Public-Private-Partnership (PPP) and Build Operate and Transfer (BOT) model is attracting the interest of growing thrust towards privatization and private sector participation in the development of public infrastructure projects in India. Since, 1990's economic liberalization the Government of India (GOI) has adopted the BOT project contractual arrangement for developing infrastructure projects like sewage, highways, ports, and railways. For successful implementation of PPP and BOT schemes, the process amidst many variables and unknown complex issues arises in the long-term. This paper discusses the past and undergoing BOT projects with their legal practices in Indian infrastructure development. In addition, the United Nations Industrial Development Organization (UNIDO), BOT guidelines are tried to be examined. The purpose of this paper is to understand the legal policy framework in Indian public infrastructure development through the BOT model. This paper explores questions related to the BOT guidelines of UNIDO in the implication of the BOT technical way of infrastructure development. It concludes that the BOT model could be used as a mechanism to provide an opportunity to finance in Indian infrastructure projects. It also suggests some necessary preparatory measures firstly, on BOT legal and regulatory framework and policies. Further, it discusses the complexity and the risks in the way of successful implementation of the BOT model in Indian infrastructure projects.**

Keywords: Public Infrastructure, Public-Private-Partnership, Build Operate and Transfer, Policy Framework, Legal Framework, India

1. INTRODUCTION

The expression of Public-Private-Partnership (PPP) and Build Operate and Transfer (BOT) model is a widely used concept on the development of public infrastructure projects, such as project procurement, development, operation and management of transportation, energy, telecommunication, roads, and water supply systems, etc. Since1980s these types of private participation in public infrastructure have started to attract considerable discourse in western countries (Tsenkova, 2002). After that, the institutional design of private participation has become a popular approach in both developed and developing countries. Further, these types of private-sector approaches have started to be a part of the solution to overcome public budget constraints while allowing for the use of the private sector expertise and know-how to deliver and manage public infrastructure services (Cruz and Marques, 2013 p.21).

In recent years PPP has emerged as the most important policy instrument for attracting investment into the country's public infrastructure sector in India. Gradually, it has started to use the BOT model as a mainstream policy to utilize the proper project financing methods, in the development of public infrastructure and to meet the demands for large infrastructure and utilities to attract foreign investors and lenders in the Indian infrastructure market. Keeping in mind that India is still starved of adequate infrastructure required for high-level development, the opportunities for the growth of joint ventures between the public and private sectors are hugely desirable in the current conditions and for future economic development.

The research will be a case study based one. Various BOT case studies depending on the availability of data and their relevance to the topic the lessons from the case studies will be presented in the last section. Due to the lack of related information, it is often difficult to connect data to the principle's discussion. Overall, the main objective of the paper is to understand how the legal and policy framework is institutionalized in procuring BOT projects in Indian public infrastructure. Analysis of private sector participation and legal activities is based on the UNIDO BOT guidelines. This paper is based on empirical data collected presents a summary of a study performed to assess the BOT concept for identifying possible issues that may require special consideration during adopting the BOT model in India. Further, this research tries to make it easier to understand the BOT characteristics and their literature while it aims to answer two main questions:

a) What are the policy and legal frameworks in procuring PPP in Indian Public Infrastructure?
b) Do the BOT infrastructure projects fall under the UNIDO BOT guidelines?

2. LITERATURE REVIEW

These days there is a huge demand for public infrastructure and services around the world. The government of any country budget is always limited, but on another side, the citizens are always demanding a better and affordable public service (Zhang and Chen, 2013). Facing the problems on enough budget, operation, and management, know-how skills on infrastructure projects, the governments around the world are exploring innovative means for improving infrastructure development, and consequently, various types of PPP have been practiced.

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The definition of PPP can be encapsulated as a contractual relationship between the private and the government entity for a long-term public sector acquisition and private sector provision of public works and services (Iossa and Saussier, 2018). These modes are sometimes referred to as PPP, P3 or P^3 (Shastry, 2014a). Where it refers to a long-term contractual partnership between the public and private sector agencies and specially targeted towards financing, designing, implementing and operating infrastructure facilities to the state. According to the literature of several researchers, there are several definitions of PPP, but there is not any single accepted international definition of what a PPP is. Whether PPP does not have a single definition, it has a wide range of initiatives for e.g. Build Operate and Transfer (BOT), Build-Own-Management (BOM), Build-Own-Operate (BOO), Design-Build-Finance-Operate (DBFO), etc. (World Bank, 2014).

Since the 1990s economic liberalization these types of private participation are becoming popular and the state and central government are showing the importance of legality and the practical involvement in the development of India's public infrastructure. Day by day the number of initiatives is being taken by the government to encourage the private sector participation in the various infrastructure projects. On the importance of the private sector participation in the development of Indian public infrastructure, the 17the Prime Minister Mr. Manmohan Singh quoted *"Expanding investment in infrastructure can play an important counter - cyclical role. Hence the Projects and programs are to be reviewed in infrastructure development, including pure PPP, to ensure that their implementation is expedited and does not suffer from the fund crunch"* (PWC, 2018). Later, the Indian government started to introduce several legal and non-legal strategies to manage the infrastructure situation through PPP and BOT models (S.K, Palukuri, and Mahalingam, 2010).

Sudhansu, (2015) on his research stress that the procurement of PPP policy is the most recent addition in the world economic development and growth across the country. Also, he mentioned that it has become the mainstream policy to make involvement in the public infrastructure of India. Respectively, for the fair involvement of public and private sectors in Indian public infrastructure market Lakshmanan, found that the importance of legal framework, stable macroeconomic framework, sound regulatory structure, investor-friendly policies, sustainable project revenues, transparency and consistency of policies, effective regulation and liberalization of labor laws, and good corporate governance are the basic requirements, for the success of PPP and BOT infrastructure projects for India (Lakshmanan, 2008). Similarly, for the effectiveness of PPP procurement, Shastry, (2014b) on his research, he focused on the Indian government and its citizens with respect to enhancement in time efficiency, greater convenience, increased reliability and saving costs along with easy availability of information. Additionally, Chaitali, Jain, and Patil, (2015) proposed the risk management in infrastructure projects in India and tried to examine in detail on its legal framework and the risk factors.

On the importance of BOT contracts in the development of infrastructure projects Zahedi et al. (2014), examined the problems and barriers contained in these contracts, and introduced UNIDO BOT guidelines for legal framework to solve these problems they paid for the successful BOT projects. Where, UNIDO BOT guidelines (1996) revealed the definition as, "*The BOT approach is not a panacea for the host government, but sometimes BOT projects are complex from both financial and legal points of view"*. For the successful BOT implementation basically, the process requires a stable political and economic climate. Political stability with a stable legal and regulatory environment and freely convertible currency, as well as other elements are supportive for successful BOT projects. In a broader sense, a supportive legal framework will reduce the project risk or "country risk", which are the key element in sponsors and donor's appraisal of the BOT project in developing countries (UNIDO, 1996a).

3. BUILD-OPERATE AND TRANSFER CONCEPT

BOT is not a new concept yet relatively an innovative approach by enabling direct private sector investment in large-scale infrastructure projects (Khan et al., 2008). The BOT model is defined as the cooperation between government and private entities to provide public infrastructure products and services (Cheng and Wang, 2009). Further, it is defined as a private sector participation model in which a project company is established to finance, design, construct and operate a facility for a concession period before it is transferred to the government (Özdoganm and Birgönül, 2000). Where the project sponsors start to arrange necessary financing for the realization of the project through equity contributions and loans. Financing in BOT projects is different from traditional system of financing because they are financed in a project finance basis with no or limited resources, it means that the parent companies of project company members do not incur liabilities on their balance sheets, and only the revenue generation capacity of the project, serves as a guarantee for the lenders (Akbiyikli and Eaton, 2003).

In recent years, the BOT approach became an option for the GOI to outsource public projects to the private sector. This trend of BOT emerged among governments in many countries to solicit investments for public projects from the private sectors. The reasons for this trend are a shortage of public funds and a hands-off approach to government agencies (Bashiri et al., 2011). The concept of BOT was introduced as a method to finance the construction of major infrastructure projects without the need for direct sovereign guarantee of loans and has been widely used by the developed and developing countries for many years (Liguang and Xueqing, 2017). Inside the BOT model, the model itself is the terminology for a model or structure that uses private investment to undertake the infrastructure development that has historically been the preserve of the public sector (Ebner, Huppman, et al., 2013). There is extensive literature explaining the connection between infrastructure development and private investment through the BOT model

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(Fan and Li, 2010). The acronym of the BOT model stands for *"build, operate and transfer"* or *"build, own and transfer"*. The objectives and expectations of the BOT practices are the key factors that help to shape and leads to the progress of the project.

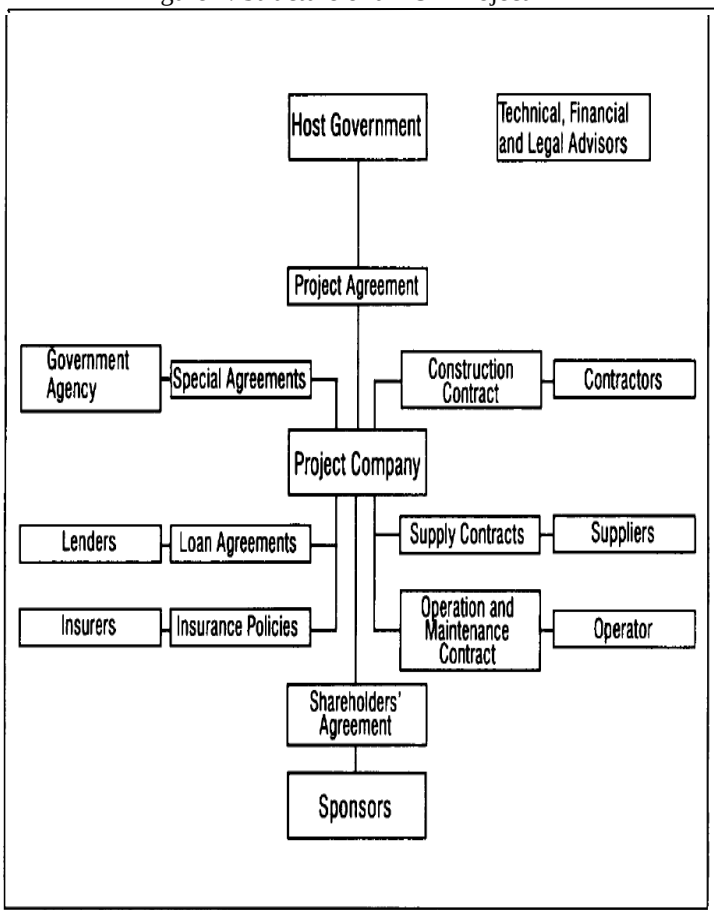
The United Nations Industrial Development (UNIDO), BOT guidelines 1996, says, BOT is a relatively new model in infrastructure development, which helps private sector investment in large scale projects such as roads, irrigation, telecommunication, bridges, and power plants, etc. while searching for the practice of BOT projects, historically, the first official private facility developed under the name of BOT model was practiced in Turkey in 1984, by Prime Minister Targut Ozal, as part of an enormous privatization program to develop new public infrastructure (Jefferies, Cook & Rowlinson, 2001).

Analyzing the UNIDO BOT guidelines the following fig 1, reveals the factors of a legal framework, and an inadequate legal framework can undermine the strength and effectiveness of the various types of contracts that constitute the structure of the BOT project. In the process of procuring the BOT model in infrastructure projects, the host country or private sector grants the investment rights to finance, develop, and operate a revenue-producing infrastructure for a defined period, after which the infrastructure is transferred back to the government (Walker and Smith, 1995). Where the BOT approach requires varying degrees of government support depending on the type, size and complexity of the project and host country's economic and regulatory conditions. The government needs various types of special legislative support, in areas of taxation, labor law, immigration, custom, currency convertibility, etc. On the way, the host government addresses fundamental legal issues such as the enforcement of contracts, private ownership, security arrangements, taxes, remittance of foreign exchange and profits (Markom, 2012). Then the host country authorizes the project in question. In the next level to authorize a project, it selects the administration procurement process, and the feasibility study, with the economic viability, is measured for the prospective bidders. According to the experiences some researchers, state that the essential necessity factors for the successful BOT project are as 1) Developed economic- Finance-Legal framework, 2) Avoiding delays, 3) Comprehensive Feasibility, 4) Project management skills and the use of experts, 5) healthy partnership between local and national partner, 6) stability and political support, 7) facilities and sponsors, 8) acceptable rate of inflation, currency exchange, and interest, etc.

However, there is no perfect BOT model for all infrastructure projects, and the host countries themselves must shape the appropriate approach to suit the national requirements. Those countries that have had the most success in implementing BOT projects generally attribute it to creating a Win-Win situation. In this way, GOI has used BOT as a legal technique in developing public infrastructure projects. Till the date, there has been no research on the legal framework of BOT projects in the Indian infrastructure sector. For project sponsors, the road to winning and successfully managing a BOT project is not easy. The process of project development is complex, time-consuming and the expected service may be expensive to the locals. The financial risk in BOT projects is remarkably high, bidding competition also seems lengthy, negotiations are extensive and opportunity costs are inconsiderable. Thus, BOT sponsors must take the calculated risks and adopt flexible attitudes by comparing and learning the previous successful projects and their legal issues. However, considering the success and failures of BOT projects, India must conduct a detailed feasibility study on the BOT model before its application.

This paper tries to make a critical assessment of the BOT models with a major focus on identifying possible issues that need special consideration and attention while adopting the BOT model in India. For this purpose, specific numbers of the BOT project case studies are tried to analyze.

Figure 1. Structure of a BOT Project



Source: (UNIDO, 1996b)

4. POLICY AND LEGAL ISSUES ON INDIAN PUBLIC INFRASTRUCTURE

4.1 Policy Framework

After India's independence in 1947, a socialistic pattern of society was included in the constitution and directive principles of the state policy. It was under socialist-based policies for an entire generation from the until the 1980s. The economy was characterized by extensive regulation,

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protectionism, and public ownership leading to pervasive corruption and slow growth (Gunnigan and Rajput, 2010). The industrial policy resolution of 1948 and 1956 stressed the need for a mixed economy, under which the public sector was playing a vital role in the mainstream economic activities (Seth, 2018). As a result, a large public sector with the big private sector has transformed into a mixed economy. Such Policies led the Indian government to start coexistence with the private sector and started the industries to run under the public sector. Whilst, many researchers argued that the public sector was affected by inefficiencies and incompetence in a non-suitable manner by 1991 (Indian Economy, 2018). Thereafter due to these inefficiencies and incompetence India's ninth Prime Minister P.V Narasimha Rao and his cabinet tried to change the economic policy and started to privatize government companies. The main objective of privatization and partnership policy was to lessen the burden on Indian government, and strengthen the competition in private sectors with improving skills and production, accelerate economic growth, reducing the size and involvement of the public sector in the economy and to assist in achieving the country's economic policy goal (Civil Service India, 2018). Hence the economic liberalization was introduced in 1991 with the goal of making the economy more market and service oriented. The private sector started to uphold the commercial and economic activities, while the public sector was engaged in drawing up major policies, identifying the direction and providing specialized supporting services necessary for the success of the business. Later, in 2009 the Government of India (GOI) introduced a guideline on Formulation, Appraisal and Approval of PPP Projects which detailed the objectives of the policy, as well as the process of implementation mechanism of private sector participation in public infrastructure.

4.2 Laws Relating to BOT

Since 1947 India has continuously amended several laws for the successful procurement of infrastructure projects (Hoda, 2018). Special public legislation, suitable framework in fostering private sector participation are activated to foster competition in public infrastructure sectors which are previously under the exclusive control of the government monopoly. Such enabling legislation helped in instance to abolish the state monopolies and subsidies as to make non-subsidized private sector participation in the development of infrastructure projects to make it feasible. For e.g. The law of Land Acquisition, Rehabilitation and Resettlement (LARR) Act 2013 was passed to enable the private developers to construct, operate and maintain new infrastructure systems and to collect tolls and to recover the investment of cost. Similarly, the National Highway Development Program (NHDP) was launched in 1997 to develop a large road network in a relatively short period of time. This act enabled the private sectors to construct, operate and maintain new road systems and thereafter recover the costs of doing through the collection of tolls (Nallathiga and Shah, 2014).

4.3 Legal acts on Major Infrastructure

Independent regulation on public infrastructure projects has emerged in the last two decades as a fourth branch of the Indian government. This type of movement has been propelled by the sharing of authority to private companies and giving full and partial authority to private companies to own the state-owned resources. This type of movement started to make a pace after the 1990s economic liberalization (Rao and Gupta, 2006). The table 1. discusses major legal policy changes in major public infrastructure sectors.

In the road sector, the National Highway Act 1956 and the National Highways Authority of India (NHAI) Act, 1988 was enacted to allow the government to grant private developers the right to participate to collect tolls on public roads. The functions relating to the development, maintenance and management of National Highways are carried out by the National Highways Authority of India (Dubey, 2004).

The power sector started to approach private participation since 1991, which started the privatization of the electricity generation and supply industry. In 1995 State Reform Acts were enacted, unbundling, corporatization, independent regulation, financial restructuring institutional development, etc. Onwards, the main features of activity shifted to the unbundling of State Electricity Boards (SEBs) with the broad sims of private participation. Subsequently Electricity Act 2003 started the participation of private sectors in open access in the generation and distribution of electricity (Hook and Bhamidipati, 2008).

Similarly, the policy on airport infrastructure in 1997 contemplates detailed master plans for the development and up gradation of all selected airports by the operating agency in conformation with the standards and recommended practices of the International Civil Aviation Organization (ICAO). The policy recognizes the importance of private participation for the sustained development of airport infrastructure. And the airports could be owned by the central/state governments and the public sector units, urban local bodies, private companies, and individuals through Joint Ventures (JV). The management system of airports or the parts of the airport service could be a BOT management contract. Airports are managed by the Airports Authority of India under the AAI Act, 1934, the Aircraft Act, 1934 and the Aircraft Rules, Act 1937, these above legislations allow private participation through the issuance of the license.

In port sector, Indian ports are administered and regulated by the central and state governments. It has been classified into two categories: major and non-major ports. The major ports work under the Major Ports Trust Act, 1963, and the Indian Ports Act 1908. Till the 1980s there was a monopoly of the Indian government in the port and shipping sector. It has neglected port expansion through private sector participation, as a result, there were very few ports that have adequate infrastructure and capacity of world-class service at a competitive cost. Therefore, the government of India started to initiate a broader strategy of private sector participation. Hence, a new model of concession agreement was developed with a huge bearing on PPP serving as a guideline and

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template document for drafting concession agreements (Dube and Sarawg, 2010). In recent times India has 12 major ports and more than 200 minor ports running under the government of India and one major port is a private port that is working under the private corporation (Kuntoji and Rao, 2015). In the current context, several international and national private investors are invited under the BOT guidelines to submit their competitive bid for port terminals on a revenue-sharing basis.

In the railway sector, the government of India has actively pursued policies to promote private sector involvement. The Indian railway's act 1989, is describing for the private sector participation. Where it has taken two steps to involve with the private sectors participation in two separate schemes, that are, 1) Own your own wagon scheme (OYWS) and 2) PPP schemes like Build Own Transfer (BOT) Build-Own-Lease-Transfer (BOLT) etc. (Puri, 2003).

Table 1: Legal Acts on Public Infrastructure

Sectors	Nodal Agency	Existing Acts
Roads and Highways	National Highways Authority of India (NHAI)	The National Highways Act, 1956 NHAI Rules, 1957 NHAI Rules, 1964 The National Highways Authority of India Act, 1988
Railways	Indian Railway Stations Development Corporation (IRSDC)	The Railways Act, 1989
Ports	Ministry of Shipping Indian Ports Association (IPA) National Shipping Board	The Indian Ports Act 1908 The MPT Act 1963 Guidelines of PPP Port Sector 1996 Indian Maritime University Act, 2008
Airports	Airports Authority of India (AAI) Airports-Economic-Regulatory Authority of India (AERA)	The Airports Authority of India Act, 1994 Airports-Economic-Regulatory Authority of India Act, 2008

Source: (Singh, 2017 p. 2090)

4.4 Foreign Direct Investment Laws

Foreign Direct Investment (FDI) is defined as "cross-border expenditures to acquire or expand corporate control of productive assets" (Froot, 1993). FDI takes place when a company invests directly in the production or marketing of a product in a foreign country. It is defined as an investment involving a long-term relationship that reflects the profit or revenue in a long-term period (Mittal, 2018). GOI has enacted it's FDI policy to encourage and facilitate foreign investment in Indian PPP and BOT infrastructure projects (SJ, 2013). FDI is a major source of economic growth and it holds an important place in the economies of the developing economies because these economies suffer from a lack of domestic investment in the infrastructure sector (Shodhganga, 2018). The new FDI policy granted a new broad range of incentives and benefits for foreign investors taking into consideration the financial characteristics and long-term nature of BOT projects. Automatic and Government routes are used in the acceptance of investments. Under the Automatic route the Indian government approval is not required, the investors could invest freely, only the investors are required to notify the regional office within 30 days of receipt of inward remittances. Similarly, under the government route, the activities which are not covered under the automatic route require the approval of government which is considered by the Foreign Investment Promotion Board (FIPB). Among the efforts made by the government of India, to improve the business environment for foreign companies there are included a refined arbitration law, improved measures on the listing of foreign companies and reduced corporate tax rates, etc. According to the Department of Industrial Policy and Promotion (DIPP),100% FDI is allowed for the development and constructions of townships, houses, commercial premises, hotels, resorts and infrastructure facilities which have a minimum size of 100 acres or 2000 dwelling units (Florence and Hoi, 2006). From April 2000 to June 2018, the public infrastructure sector has already received US$ 24.87 billion and in construction activities, this stood at US$ 10.70 billion (IBEF, 2018). On the importance of FDI, it is a major source of economic growth and it holds an important place in the economies of the developing countries because these economies suffer from a lack of domestic investment in the infrastructure sector. The increasing investment in India has coincided with the government's ability to change to a market-oriented economy. By opening its economy to international trade, it has seen a rise in the number of multinational corporations that have moved their operations from their home country. In this way, India's public infrastructure development is benefitted from the enormous changes, with various sectors, including telecommunications, ports, and roads are increasing in the number of projects being initiated through the involvement of foreign investors (Mehta, 2012).

4.5 Environment Protection Laws

Environmental issues in BOT projects relate to the role of government and issues of sustainability. The directive principles of state policy focusses that the protecting and improving the environment is the duty of the state as well as citizens of the country. In this way the government has given environmental protection in a major constitutional status. GOI has enacted the six laws related to environmental protection and wildlife preservation. The Environment (Protection) Act, 1986, the Forest (Conservation) Act, 1980, the wildlife protection Act, 1972, Water (Prevention and Control of Pollution) Act, 1974, Air (Prevention and Control of Pollution Act, 1981 and the Indian Forest Act, 1927 (Saini, 2014). This law enables the central government to take necessary measures to protect and to improve the

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environment to prevent and control environmental pollution. A wide range of rules and notifications have been adopted under this regulation. Further Environmental Impact Assessment, EIA 2006 came in process. The EIA enables the decision-makers to assess the impact of a proposed development project on the environment and the mitigating measures to reduce the risk and impact of such a process on the environment. The Indian way the EIA process is intended to influence the decision-maker in deciding a land development project should be permitted based on the information supplied by the project manager seeking to obtain permission for a BOT project.

5. CHARACTERISTICS OF BOT PROJECTS IN INDIA

After the 1990s economic liberalization India has amended several policies to make easy for to private sector's participation in the public infrastructure sector. Gradually, the private sector participation like investment, operation, and technologies have become the mainstay of the infrastructure policy of India. Also, the central and state government have started to take institutional initiatives, in a supportive way in expectations of the success of infrastructure projects. Amending several public policies and institutional initiatives taken by the central and state governments, the PPP and BOT model is now becoming one of the prevailing ways for infrastructure development in India to meet the needs of India's future economic growth and development (Mane and Pimplikar, 2013).

Thereafter, the practice of the BOT model has been extremely spreading out and adopting in infrastructure development of India (Taji et al., 2019). Sound Policy and comprehensive regulatory framework are contributing vastly to the success of a BOT project. Where the BOT model brings the private and public approaches to infrastructure development by exploiting the private sector's novelty and market insight while bestowing main planning, coordination and authoritative supervision of the infrastructure projects upon public entities. These initiatives are often stimulated by the need for investment, an interest in operational risk transfer, by the goal of improving serviceability (Grimsey and Lewis, 2004). In general, the BOT model applied in Indian infrastructure has significantly supportive of the economic development and public services in India. This is evidenced by several applied BOT projects like toll highways, ports, sewerage, and railways. In this way, Indian BOT projects have various characteristics from conventional systems. The ongoing BOT projects are financed on a project finance basis with no or limited resources. It means that the parent companies of project company members do not incur liabilities on their balance sheets, and only the revenue generation capacity of the project serves as a guarantee for the lenders. The project company has the responsibility for all contracts including the construction contract. After the completion of project construction, the project company and services are either bought by the government or sold to the government. The operating time is making long enough to cover the debts, expenses, equity contribution and an agreed profit through the collection of toll or tariffs. At the end of the concession period, the facility transferred to the government free of charge and in good operating condition. Considering the above BOT characteristics, the author has picked up current and completed the BOT model as representative cases in water and sewerage, road, highway, port, rail. The projects analyzed below are adopted from the Department of Economic Affairs Government of India database from the year 2009 to 2019.

5.1 Alandur Underground Sewerage Project

The municipality of Alandur is in the state of Tamil Nadu. It is a part of the Chennai Metropolitan Development Area (CMDA). It was having a population of nearly 150,000, as of 2011 population census. It has estimated the population of 300,000 until 2030. The Alandur Underground Sewerage Project (ASP) project was initiated in the year of 1996 by the chairman of the Alandur municipality. ASP is the first project which is implemented on a BOT model, and a first project in discussing the role of PPP models in the sanitation sector of India (World Bank, 2016). Before implementing the ASP project the situation of Alandur municipality sewerage infrastructure was problematic. There was a need for an integrated sewerage system because residents were building individual septic tanks that often overflowed and resulted in the health hazards of residents. To address these problems, Alandur municipality announced an ambitious proposal to construct an underground sewage system and wastewater treatment facility (Mathur, 2002). For the successful procurement of the ASP project, the municipality implemented through a combination of private sector participation and municipal funding. The total cost of the project was estimated at Indian Rupees (IRs) 340 million (US$8 million) (World Bank, 2007). To shape this project an initial feasibility study estimated the total cost of construction as IRs 453.1 million (approximately US$ 10 million). For the financial sponsoring, from the private sector the Tamil Nadu Urban Infrastructure Development Corporation (TUFIDO), and Tamil Nadu Urban Infrastructure Finance Limited (TNUFSIL) with USAID's Financial Institutions Reform and Expansion (FIRE) Project and citizens of Alandur with the government side of government of Tamil Nadu (GOT), (ACCESSanitation, 2019a).

For the successful procurement of the ASP project, the project was divided into packages. The first package involved the construction of an integrated sewerage network, and financed through user deposits as well as debt, and procured through a traditional engineer-procure-construct (EPC) contract. The second package involved the construction and operation of a Sewerage Treatment Plant (STP) through a BOT model for 14 years lease contract. Finally, the project is succeeded due to good governance and adequate legal framework which has ensured the achievement of both the government and the private sector. The rights and responsibilities of all parties are protected by law. The success in executing an entirely new sewage system based on a package of customer charges, private sector investment, and public loans and subsidies.

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In conclusion, it could be said that, before procuring the ASP project, procurement, the survey of "willingness to pay" was conducted covering over 10% of the city's population. According to the survey the public had strong support for the ASP project and accepted the user's pay system. The estimated paying for one family was IRs 180 (approximately US$ 2.52) for one month. To gain public acceptance the municipality mounted a vigorous public participation campaign using the extensive media coverage to explain the project's benefits, costs, and tariff system, which led the ASP project as a successful BOT project in water and sewerage sector (ACCESSanitation, 2019b).

5.2 Nhava Sheva International Container Terminal

The Nhava Sheva International Container Terminal (NSCIT) is a part of Jawaharlal Nehru Port (JNPT), which is located on the west coast of India. The project deals with the promotion and development of Container Terminal (CT), complementary in nature to the JNPT project. NSICT is one of the Container Terminal out of the 5 ports of JNPT projects. In December 1995 it asked bidding from interested parties for construction, operation, and maintenance of a new 600m quay length container terminal for a concession period of 30 years on the BOT model, with a project value of USD $ 600 million. The project of NSICT began in 1997, following an agreement signed between the JNPT and NSICT on July 3, 1997 (Salhotra, 2007). It has proven a record for the BOT model of NSICT has been a runaway success in recognition of its outstanding performance, the confederation of Indian industry bestowed the CII award for excellence infrastructure to NSICT in February 2003. NSCIT has achieved operational results comparable with global standards, recording gross ship rates of over 100 moves per hour and average vessel turnaround of 75 days. In April 2005, NSICT handled traffic that exceeded twice the capacity estimated by JNPT at the time of bidding. The presence of NSICT also created a competitive environment that spurred the modernization of the neighboring terminal owned by JNPT.

5.3 Tuni Anakapalli Annuity Road

Tuni Anakapalli is a Special Purpose Vehicle (SPV) project and promoted for the BOT model in the extension of the NH-5 (National Highway) part between Tuni and Anakapalli regions. This is one of the first BOT (annuity) projects in India working under the act of NHAI of 1956 (United Nations, 2018). The scope of the project was to strengthen the existing two lanes and widen it to four-lanes dual carriageway of an aggregate 59 Km between Tuni and Anakapalli on National Highway (Chennai to Kolkata) in Andhra Pradesh. The sponsors of the project are NHAI from the government side and with private company GMR partnering with UEM of Malaysia in a ratio of 74% and 26% for project-specific variant of 17.5 years. At 2013 Duration of concession 30 years, to allow governance flexibility for enhancing concession in the Mid-term. This has enabled to receive fixed annuity payments from NHAI on time. On the procurement process selection of awarded bidder based on price and quality of project completion. Two stages of bidding were occurred, first one is the qualification of bidders based on technical experience and financial capability and on second the project is based on annuity amount. The project being an annuity based road project which has no exposure to traffic risk and has low counterparty credit risk with NHAI being the annuity provider. The total cost of the project was Indian Rupees 315 crores approximately USD $70 million. In Fiscal Year 2018, the company reported a net profit of IRs. 13.25 crore on an operating-income (OI) of IRs38.61 crore compared with a net profit of IRs. 20.23 crore on an OI of IRs. 42.94 crore according to the previous year.

5.4 Delhi Gurgaon Expressway (Negative Grant Basis)

The Delhi-Gurgaon Expressway is about 28 km expressway connecting Delhi the capital city of India with Gurgaon city. It is a part of the Golden Quadrilateral project, which itself is a part of the NHDP and emphasizes improving road connectivity between four metropolitan cities by developing 4 to 8 lane divided highways between them (Kurle et al., 2016). In 2001, the Ministry of Road Transport & Highways (Mort &H) invited pre-qualification bids and in April 2002, the project was awarded to the Consortium of Jaiprakash Industries Limited and DS Construction Limited by NHAI for a period of 20 years concession (GOI, 2010). In May 2003, the selected bidders, created a Special Purpose Vehicle Jaypee-DSC Ventures Limited, with 51 percent stake held by Jaiprakash Industries (US$144.7 million).

5.5 Nagpur Metro Rail

The Nagpur Metro Rail is an urban Mass Rapid System (MRTS) which is being built to serve the city of Nagpur in eastern Maharashtra. The construction of Nagpur metro first phase started in 2015 and is expected to be completed in 2023 with a mix of elevated and at grade-level lines. The project Nagpur metro rail was conceived during the year 2012, when the cities having a population of more than 2 million were made eligible for having a metro rail system. To execute the project, the cabinet approved setting of Nagpur Metro Rail Corporation Limited (NMRCL) known as Maharashtra Metro rail Corporation Limited (MAHA-Metro) the total length of 38.215 Km first phase started in 2015 and is expected to be completed in 2023, with a mix of elevated and grade level lines (Raut, Tonpe et al., 2017). The estimated project cost was IRs 8,260 crore (US$1.2 billion). To execute the project the cabinet approved up of Nagpur Metro rail Corporation Limited (NMRCL) now Known as Maharashtra Metro Rail Limited (MAHA-METRO) a joint venture of Government of India and Government of Maharashtra, with 50:50 equity. NMRCL shall be solely responsible for the successful and timely completion of the project and its operations subsequently.

6. NECESSARY MEASURES FOR SUCCESSFUL BOT PROJECTS

The above analyses from section 5.1 to 5.5 have shown that the BOT model is adapted in various Indian public sectors. Most of the projects are being involved with the state

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government and the private sector (domestic and international). For e.g. the ASP became a bankable project through a coordinated effort involving the municipalities of Alandur and Chennai, the state of Tamil Nadu, state asset management and credit facilities, donors, and stakeholders working together to implement a comprehensive package of innovative financial and credit enhancement mechanisms. While others are rest of ongoing projects. For the rest of the projects for the successful procurement, author necessitates the following contributing factors and for improving the efficiency and effectiveness of the BOT legal mechanism.

6.1. Review of Sound Policy and Regulatory Framework

Sound policy and comprehensive regulatory framework contribute vastly to the success of a BOT project (Delmon J, 1999). For instance, in the procurement of BOT projects, as the first step, GOI has amended some legal acts and permissibility on the grant of concession for projects such as road, electricity, railways, etc. This was followed by the amended several legal acts like Land Acquisition, privatization policy in (airports, ports) and Foreign Direct Investment policies, etc. These acts permit the private developers to construct, operate and maintain but still, there is a lack of proper monitoring. Unfortunately, if the project is not successful or it indulges with partnering problems there are not any bridge available laws for renegotiations.

6.2 Government Will

While procuring the BOT projects the government is a client and it has the responsibility to facilitate the whole process. Any emerging problems related to the project cannot simply be handed only to the private/public sector. Therefore, for the success of BOT projects risk-sharing partnerships on both parties must play active roles. For e.g.in the project of Nagpur Metro rail, the government of Nagpur and the government of Maharashtra both parties are in equal entities. For the success of the Nagpur Metro rail project, both governments should work equally. There should not be any political interference for the project completion both governments should work on hand for a long time, which could not be possible in the Indian case. On the side, the case of the Tuni Anakapalli Annuity BOT project, the strategic partnership between the NHAI and GMR (Government and Private) resulted in the completion of the project. In dealing with BOT projects, the government of India has adopted the principle of a real priority project which focused on highly needed public projects. The construction of highway roads is a good example of a real priority project. The Highways provide transportation means which is really needed for the public. Good transportation encourages industrial production and helps to boost up the local economy.

6.3 Clarity of project formulation and documentation

For the successful procurement of BOT projects, the project formulation and documentation must be as clear as possible. The nature of the project formulation process depends upon the host country, sponsors and the nature of the projects. In some cases, this strategy works, but at other times it may cause delays, and headaches due to the variation of projects. A perfect standard document must be adopted for every single project. Whatever be the case, the documents must be clear and transparent. In the case of the government of India, this is essentially monitored by the Economic Planning Unit (EPU) of the Prime Minister department which is responsible for the preparation of the Concession agreement of big infrastructure projects. Every stage of the BOT process must be carried out in a transparent manner. Open tendering, evaluation of project capital, feasibility studies must be transparent to all parties.

6.4 Transparency

In a large infrastructure projects, while having one or more borders national agencies from two or more countries, it is necessary to work together to reconcile and streamline different national regulatory requirements. Therefore, it is important to have a transparent regulatory process. For transparency regulatory legislation in certain cases, regulatory legislation in India has made provisions to guarantee a transparent regulatory process. For example, in the electricity and telecom sectors, it has been mandated that regulators should ensure transparency while exercising their powers and discharging functions.

6.5 Political Risk

Investments in infrastructure are large, long-term, irreversible, and domestic market dependent. Any changes in local and government policies related to these factors may adversely affect the profit of the project. While investing in Indian infrastructure lenders may react to political risks differently, with those more familiar with the setting possibly being less risk averse. While investing in same project multilateral lenders (like the World Bank, ADB, etc.) may have better relationship than the private (national and International sectors) with the relevant government and will therefore view political risk as more manageable. But it would be better that any BOT project should not be mixed with politics and government. Political conflicts and party conflicts may affect the project and it could result in cancellation of the project.

6.6 Fair Deal for all parties

This is the most important factor that contributed to the success of a BOT project. The fair dealing process will benefit all parties to the BOT projects including the end-users. A good example is the highway projects, outsourcing to the private entities. The project of the ASP underground project was the combination of government, private and local entities, finally which lead the project in a successful completion.

6.7 Improve and Strengthen the conditions and Terms of the Contract

The conditions and terms of the contract need improvement especially in relation to the company's responsibility in guaranteeing project completion, building design, and facilities. There should be investment insurance for investors to make them easy to invest in the public infrastructure sector.

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Conditions and terms of the concession contract need further research and renegotiations in protecting the interest of the parties. Need to avoid unnecessary financial burdens like payment level of indebtedness and compensation to the concessionaire if the estimated return, profit, and traffic volume for a certain time.

6.8 Delay in Land acquisition

In Indian context there is a high degree of agreement among all the major BOT project participants regarding the risk allocation preference and the risk management capabilities of various stakeholders with respect delay in land acquisition. Most private participants rated Indian government is best capable party, to reduce the days in land burrowing. Consultants and promoters prefer that Indian government should take the entire responsibility. In most of the BOT road projects responsibility of land acquisition is within the Indian government, but non-availability of land in time is one of the headaches for private investors.

6.9 Selecting of appropriate investors

Selecting the most appropriate investors and sponsors for the projects is one of the key factors in the success of the project that takes place by the tendering process and this process of choosing investors and appropriate shareholders play the role of identifying goals, providing expected conditions for the tender, evaluating suggestions of participants in the tender, and finally negotiating and setting contract and granting the right of operating the project to the winner company (Kumaraswamy and Zhang, 2001).

7. CONCLUSION

Basically, infrastructure projects have main roles in economic growth and development of the country but since the private sector participation, various appropriate policies and legal frameworks are needed. Without having appropriate rules and regulations the public-private partnerships may not be result in success. Therefore, for successful PPP implementation it needs a various consideration, in social, political, and economic perspectives. While procuring infrastructure projects it needs high expense, they cannot be supported only by the government budget. So, the governments use the methods through which they can be financing the project herein by the richest private sectors. Where BOT is one of the most common methods. From the above evidence, it could be said that the government of India is welcoming the private sector participation in domestic public infrastructure development. where the BOT model is one of the favors of both public and private sectors. From the legal perspectives, GOI has amended the rules and regulations for projects deals with priority projects like toll highways, ports, railways, bridges, etc.

To answer the first research question, it could be said that the Government of India has amended several bills to make easy of the private sector participation in the country's public infrastructure sector. In this way the Indian authorities are making conscious efforts in setting up PPP cells at state level to access project development resources, several advisory support on infrastructure legislation and regulatory frameworks and detailed PPP policies along with the methodology to deal with PPP and BOT projects.

To answer the second research question, it could be said that the Indian BOT projects are working under the BOT guidelines but still there is a lack of defined legal framework. The above-analyzed BOT projects most of them are on the way of completion and few of them are posed to administration. The projects which have issues of lack of transparency in the procurement process, inadequate project appraisal, and unclear concession agreement should be improved to be fair and equitable to all parties. The quality assurance and standard clauses should be enhanced in protecting the interest of all parties to the contract. While concluding, it could be said that the Indian government authorities need to pay more attention to subsequent potential renegotiation, risk measurement, selection of projects. Hence, for the successful BOT procurement in Indian public infrastructure sector, lessons should be learned from the developed countries successful BOT projects.

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