

What Leads to a Successful Public-Private Partnership: Identifying Critical Success Factors

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Abstract: Public-Private Partnership (PPP) is a buzz word across the globe and countries are adopting it as a favorable mode for infrastructure delivery. India has adopted PPP in the late 1970's but the real strides have been taken only after the Economic Reforms of 1991. A number of PPP projects have been started and many of them have completed as well; the number keeps on increasing since its inception. It makes us wonder about what is so good with PPP as compared to other means and alternatives? In this regard, the present study tries to identify reasons/objectives of entering into a PPP project and the underlying benefits out of it. Further study also attempts to come up with Critical Success Factors for successful implementation and delivery of project. Study is conceptual in nature based on review of extensive literature in the field of PPP and related issues. Reports and case studies on different PPP project in national and international context has also been accessed to gain an understanding of PPP projects, its elements, process and most importantly benefits, success factors and reasons of failure. Websites of government agencies of different countries and other world bodies has also been explored to understand government's view point of PPP projects.

Keywords: Public-Private Partnership, Infrastructure, India, Critical Success Factors, Reasons of Failure.

I. INTRODUCTION

Considering the huge importance of PPP in infrastructure development; it is still in a nascent stage in India (Sharma, 2009). The investment requirement to build a strong infrastructure base and to remove the infrastructure deficiency, huge investment is required and considering the fiscal constraints and increasing liabilities of government (Lakshmanan, 2008), importance of PPP gets doubled. The initiatives towards PPP have been started only after the initiation of economic reforms in the country that put forward the policy environment towards Public-Private Partnership for infrastructure development (Lakshmanan, 2008).

Before the launch of economic reforms, the responsibility for infrastructure development was assumed by the government but infrastructure development through PPP mode was initiated after the sectoral reforms of 1991 (Iqbal, 2012). A number of initiatives were taken by Government of India to promote private participation in infrastructure like:

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- **Viability Gap Funding (VGF) scheme** (Tasukada, 2013; Iqbal, 2012)
- Setting up **institutional mechanism** like **Indian Infrastructure Finance Company Ltd. (IIFCL)** and **India Infrastructure Project Development Fund (IIPDF)** (Harishankar and Sreeparvathy, 2013)
- Constitution of **Committee on Investment (CoI)** (Mishra et al., 2013; Planning Commission, 2013)
- Setting up **Public-Private Partnership Appraisal Committee (PPPAC)** (Mishra et al., 2013; Planning Commission, 2013)
- Establishing **Empowered Committee/ Institutions (EC/EI)** (Planning Commission, 2013)

The number of PPP projects is continuously increasing and as at February, 2018 there are 1,065 PPP projects involving a total investment of INR2,55,116 crore (The World Bank, 2019) at central level. If we consider transport sub-sector, there are a total of 496 projects with total investment of 1,03,545.37 crores (The World Bank, 2019); projects are majorly concentrated towards National Highway Projects accounting for 87.70 per cent of projects in transport sub-sector. Ports account for around 8.50 percent of projects while railways and airports have attracted a merge 2.2 per cent and 1.61 per cent projects respectively (The World Bank, 2019) At State level urban infrastructure sector has maximum share with 30.48 per cent of projects followed by Roads and Power sector with a share of 28.84 per cent and 10.12 per cent respectively. Non-major ports, airports and railway have attracted 4.04 per cent, 0.89 per cent and 0.34 per cent of projects respectively.

A. Public-Private Partnership: Indian Scenario

India has embraced PPP with both hands and is evident in India's representation in world PPP numbers. In 2010, among developing countries India has accounted for 43 per cent of total investments in infrastructure projects and has implemented 94 new projects with an investment of US\$ 71.9 billion recording a record increase of 85 per cent over 2009 which was highest growth rate for any developing nation for any given year in the last two decades (Mishra et al., 2013). Further, in the first semester of 2011, India has attracted around 98 per cent of regional investments having 43 projects implementations out of 44 projects in the region (Planning Commission, 2013).

B. Evolution Public-Private Partnership in India

The concept of PPP is not very old and it gained importance only in late 1970's when the pressure increased on changing the standard model of public procurement because of the concerns about the level of public debt which grew rapidly at the times of macro-economic dislocation. The



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concept itself is of recent origin in international arena and in India it attracted the eyes of government only after the sectoral reforms of 1991 that put forward the policy environment towards Public-Private Partnership for infrastructure development (Lakshmanan, 2008; Iqbal, 2012). The economic growth and development of any nation is linked to its infrastructure and developed infrastructure can be considered as the wheels for economic growth (Mishra et al., 2013). Before the launch of economic reforms, the responsibility for infrastructure development was assumed by the government (Iqbal, 2012) and it has recognized the link between the infrastructural facilities and economic development in the very first five-year plan and continuously laid emphasis on the development of required public infrastructure (Pillai, 2008). Though few notable PPP projects had been undertaken in early 19th century (Khan, 2014) but the real momentum took place only after the launch of economic reforms of 1991 and the formation of new Industrial Policy Resolution of 1991 (Iqbal, 2012).

C. Growth of Public-Private Partnership in India

Efforts to promote PPP in infrastructure development are being taken up at both central and state level. A number of policy initiatives have been undertaken by the Government of India to strengthen the PPP policy framework in the country like the initiation of Viability Gap Funding (VGF) scheme which was designed to reduce the initial capital expenditure that private sector is assumed to borne (Tasukada, 2013; Iqbal, 2012) and setting up institutional mechanism like Indian Infrastructure Finance Company Ltd. (IIFCL) and India Infrastructure Project Development Fund ((IIPDF) to provide financial support for undertaking infrastructure projects (Harishankar and Sreeparvathy, 2013). Government of India has also constituted various committees to promote PPP projects in the nation. A Committee on Investment (CoI) has been constituted by Government of India in August, 2004 under the chairmanship of Prime Minister having the objective to initiate policies for ensuring provision of world-class infrastructure facilities on PPP basis. Public-Private Partnership Appraisal Committee (PPPAC) has been constituted in January 2006 under the chairmanship of Secretary, Department of Economic Affairs and having Secretary, Planning Commission as one of its members to appraise the PPP projects by conducting due diligence and a complete scrutiny and since its constitution till March 31, 2012 it has granted approval to 285 projects with estimated investment of INR 247,300 crores (Mishra et al., 2013; PPP and Infrastructure Division, Planning Commission, Govt. of India, 2013). An Empowered Committee (EC) has been set up as an institutional framework for approving and appraising the projects availing VGF. In the state sector the committee has approved 105 projects with total capital investment of 57, 710 crores till March 31, 2012 (PPP and Infrastructure Division, Planning Commission, Govt. of India, 2013). These initiatives have given huge momentum to PPP's in India and a large number of PPP projects have been implemented. As of now there are 2,409 PPP projects at central and state level involving a total investment of INR 12,81,960 crores, out of which 569 projects having investment of INR 1, 34,205 crore have been completed,

738 projects with an investment of INR 5, 11,753 crore are under implementation and around 1,102 projects with investment of INR 6, 36,002 crores are in the pipeline as per Government of India database (PPP and Infrastructure Division, Planning Commission, Govt. of India, 2018).

Figure 1 below shows PPP projects taken up in India since the economic reforms of 1991 till 2018.

It is evident that number of PPP projects has increased over the years till 2012, barring years 2007 & 2008 when it has dropped considerably. Possible reason for this drop in PPP projects is this period could be the fact that period from 2007 to 2009 was characterized by period of Great Economic Depression. After 2012 it has dropped in 2013 and thereafter remain stable till 2018.

In the developing world, India is considered as the largest market for private participation in infrastructure, credits to the policies and programmes implemented by national and state governments to attract private participation in infrastructure (Mishra et al., 2013). India has been the top recipient of Private Participation in Infrastructure (PPI) since 2006 as per World Bank Report on Private Participation in Infrastructure. In 2010, among developing countries India has accounted for 43per cent of total investments in infrastructure projects having private participation and it has implemented 94 new projects with an investment of US\$71.9 billion recording a record increase of 85 per cent over 2009 which is highest growth rate for any developing nation for any given year in the last two decades (Mishra et al., 2013). In first semester of 2011 India has attracted 43 new projects and accounted for almost half of the projects in developing countries and around 98 per cent of regional investments with 43 projects implementations out of 44 projects in the region.

Considering the growth of PPP as primary mode of infrastructure development, it is pertinent to assess what promotes PPP over other modes and what are the striking benefits of PPP that has given it a winning edge over others. In this regard, the present study is an attempt to find out reasons of entering into a PPP project and the benefits out of it. Present study also tries to unearth the critical success factors of PPP projects so as to get an idea of the prominent aspects behind this popularity of PPP projects in the world and specifically in India.

II. OBJECTIVE OF THE STUDY

Primary objective of this study is to find out possible reasons that encourage public and private sector to go for PPP mode; study also embarks upon identifying underlying benefits/advantages arising out of PPP mode over other alternative modes delivering infrastructure projects. At the end, study tries to figure out strategies that should be adopted/adopted by different entities to guarantee success for a PPP project.

III. RESEARCH METHODOLOGY

The study is conceptual in nature based on literature survey and review of reports of national and international government agencies and world bodies.



For the sake of quality and maintaining reliability of the findings of this study, only authenticated websites of government of various countries has been explored and websites of world body like World Bank, Asian Development Bank have been accessed. Quality journals have been reviewed as part of literature review for building solid background of the study.

A. Public-Private Partnership Defined

A Public Private Partnership (PPP) is a partnership contract between the public and private sector so as to deliver a project or service, which would traditionally be provided by the public sector. As per Das (2012, p. 19) "a PPP project involves a partnership between (at least) one Government/public entity and a private sector entity, where both the parties contribute resources and take on significant responsibilities and risks related to the project in order to deliver pre-determined project outcomes". While Koppenjan (2005, p. 137) have defined PPP "as a form of structured cooperation between public and private partners in the planning/construction and/or exploitation of infrastructural facilities in which they share or reallocate risks, costs, benefits, resources and responsibilities". Brinkerhoff and Brinkerhoff (2011, p. 4) defines it as "PPPs, in practical terms, can be defined as a matter of degree. The ideal type would maximize organization identity and mutuality, including equality of decision making".

Talking about definitions by government agencies, Ministry of Finance, Government of India defines PPP as "an arrangement between a government/statutory entity/government owned entity on one side and a private sector entity on the other, for the provision of public assets and/or public services, through investments being made and/or management being undertaken by the private sector entity, for a specified period of time, where there is well defined allocation of risk between the private sector and the public entity and the private entity receives performance linked payments that conform (or are benchmarked) to specified and pre-determined performance standards, measurable by the public entity or its representative". OCED (2008) defines as "an agreement between the government and one or more private partners (which may include the operators and the financiers) according to which the private partners deliver the service in such a manner that the service delivery objectives of the government are aligned with the profit objectives of the private partners and where the effectiveness of the alignment depends on a sufficient transfer of risk to the private partners". Various researchers have defined PPP in different manner, while many national and international agencies have also defined PPP in their terms and manner but everywhere the crux remains the same that a PPP contract is entered between one or more private and public entities for mutual cooperation and for achieving joint goals. Table 1 below summarizes different definitions of PPP by national and international authors as well various national and international agency.

It is hence evident that all the definitions have the crux intact and the core remains the same. Taking all the definitions into consideration, the study defines PPP as a relationship between public and private sector based on

contractual agreement to share risk and reward, with the view to provide necessary infrastructure for economic growth and development

Further researchers have argued that PPP can provide additional finance and also improve the allocation of resources and asset utilization (Public-Private Partnerships Reference Guide, 2012). As defined by Das (2012) there are numerous benefits of entering into PPP like cost saving, excellence in quality and system performance (Das and Nandy, 2008), increased efficiency (Public-Private Partnership Handbook) (Brinkerhoff and Brinkerhoff, 2011), improvement of services and productivity (Gupta and Roy, 2008), enabling the delivery of new technology (Das and Nandy, 2008), and so on, which can be capitalized by public sector for providing suitable infrastructure for economic growth and development. But, in order to build a strong PPP model there must be a sense of partnership among private and public sector so as to achieve the desired objectives of economic development. Prabuddha K. Das, 2012 has also mentioned that it is the term 'partnership' in PPP that is important. So, only joining hands with private sector will not solve the problem, issue is there should be mutual cooperation. Public-private partnership ensures benefits for all stakeholders' viz. government, private partners and amongst all public at large (Sharma, 2009).

B. Public-Private Partnership: An Overview

Public-private partnership is presently the buzz word for infrastructure development in the world (Swain, 2009). Infrastructure provision is one of the biggest challenges in India as public sector is unable to develop the required infrastructure on its own due to lack of financial resources and capacity on the part of public sector (Mahalingam, 2010). Hence, role of private sector becomes eminently important for bridging the infrastructure gap in India (Mahalingam, 2010; World Bank Institute, 2012). Considering the resource constraint on part of public sector, Public-Private Partnership (here after referred to as PPP) seems to be most viable option for infrastructure provision (Mahalingam, 2010; World Bank Institute, 2012). In fact, many countries in lieu of economic development have promoted PPP as a means of economic progress (Das and Nandy, 2008). High population growth coupled with migration to urban areas has put lot of burden on existing infrastructure, posing a serious need for infrastructure provision to tackle the continuously growing demand. Proper modes of transport in the form of road, rail and airways is of utmost importance because the demand is increasing at very rapid pace than ever before. In this regard, provision of transport facility and adequate infrastructure is inevitable and PPP is the only way out.

C. Features of Public-Private Partnership

Conducting extensive literature review, it is inferred that there are certain elements/features which are necessary to be present to call any partnership a Public-Private Partnership. As per the evidences from literature by eminent researchers and academicians,

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the study characterizes a Public-Private Partnership contract as a voluntary (Das and Nandy, 2008) long term (Xu et al., 2012; Appuhami et al., 2011; Kwak et al., 2009; Sachs et al., 2007; Zhang, 2005; Hanss, 2001) relationship between two or more public and private entity involving a contractual relationship (Das, 2012; Iqbal, 2012; Das and Nandy, 2008; Asian Development Bank, 2008; Estache et al., 2007) for risk sharing (Iqbal, 2012; World Bank Institute, 2012; Kwak et al., 2009; Ke et al., 2009, as cited by Xu et al., 2012; Lakshmanan, 2008; Asian Development Bank, 2008; Kumar, 2008; Estache et al., 2007; Ahmed and Aziz, 2007; Zhang, 2005) and shared accountability & responsibility (Iqbal, 2012, World Bank Institute, 2012; Brinkerhoff and Brinkerhoff, 2011; Kwak et al., 2009; Zhang, 2005). The partnership should be based on the principles of partnership & co-operation (Das, 2012; Iqbal, 2012; Kwak et al., 2009; Jamali, 2004), collaborative & consensus-based decision making (Brinkerhoff and Brinkerhoff, 2011), mutual trust (Brinkerhoff and Brinkerhoff, 2011; Jamali, 2004) and synergistic interactions (Brinkerhoff and Brinkerhoff, 2011; Lakshmanan, 2008; Jamali, 2004).

Further, the partnership should ensure benefits for both the parties; both have to work towards jointly determined goals (Brinkerhoff and Brinkerhoff, 2011; Kwak et al., 2009; Das and Nandy, 2008). Provisions should be made to link returns with performance and achievement (Das, 2012); the partnership should be entered into for service Provision (Lakshmanan, 2008) involving investment from private sector (Iqbal, 2012; Appuhami et al., 2011; Brinkerhoff and Brinkerhoff, 2011; Delmon, 2011; Mahalingam, 2010; Swain, 2009; Asian Development Bank, 2008; Gupta and Roy, 2008; Lakshmanan, 2008; Hanss, 2001). The partnership should be flexible in nature (Iqbal, 2012; Delmon, 2011, Lakshmanan, 2008) and should provide adequate financial reward to private sector (Asian Development Bank, 2008). If present, these features and elements will provide immense benefits to both public as well as private partner into a PPP contract.

D. Reasons for Entering into Public-Private Partnership

Various reasons have been identified by researchers, academicians, government agencies and world bodies for entering into a PPP contract. Present study tries to explore into vast literature to find out major reasons that have been considered by different PPP partners before entering into any such contract. Literature review has led to a conclusion that most important reasons for entering into a PPP contract are risk Sharing (Zhang, 2005; Ahmed and Aziz, 2007; Estache et al., 2007; Lakshmanan, 2008; Asian Development Bank, 2008; Kumar, 2008; Kwak et al., 2009; Ke et al., 2009, as cited by Xu et al., 2012; Iqbal, 2012; World Bank Institute, 2012; Ministry of Finance, Singapore, 2012) and increased efficiency (Trailer et al., 2004; Zhang, 2005; Ahmed and Aziz, 2007; Gupta and Roy, 2008; Asian Development Bank, 2008; Swain, 2009; Brinkerhoff and Brinkerhoff, 2011; Infrastructure Development Department, Government of Karnataka, 2013; Asian development Bank, 2013) because public sector in India is suffered from resource constraint and is not in a position to fulfill huge infrastructural requirements on its own (Mahalingum, 2010).

Further, to attract private capital involvement and investment (Hanss, 2001; Zhang, 2005; Ahmed and Aziz, 2007; Asian Development Bank, 2008; Gupta and Roy, 2008; Swain, 2009; Iqbal, 2012; Ministry of Finance, Singapore, 2012; Asian development Bank, 2013), achieving value for money (Zhang, 2005; Kwak et al., 2009, 2009; Appuhami et al., 2011; Ministry of Finance, Singapore, 2012), compromise and potential win-win situation (Trailer et al., 2004; Zhang, 2005; Brinkerhoff and Brinkerhoff, 2011; Swain, 2009) and integrated resources and solutions (Hanss, 2001; Zhang, 2005; Ahmed and Aziz, 2007; Brinkerhoff and Brinkerhoff, 2011) have also been identified as eminent reasons for entering into a PPP contract.

Other significant reasons are to encourage innovation (Zhang, 2005; Iqbal, 2012; Ministry of Finance, Singapore, 2012), enabling delivery of modern technology (Hanss, 2001; Das and Nandy, 2008; Iqbal, 2012), effective & efficient utilization of resources (Trailer et al., 2004; Lakshmanan, 2008; Asian development Bank, 2013), reduction in government subsidy & better response to market needs (Gupta and Roy, 2008), substitution of private resources & personnel and faster implementation of infrastructure projects (Das and Nandy, 2008) and facilitating open decision-making process (Brinkerhoff and Brinkerhoff, 2011).

It is hence evident that public sector is approaching towards PPP to deal with their inherent drawbacks like resource constraint, lack of efficiency, lack of technology and so on; while private sector is encouraged to gain benefits from huge infrastructure projects by utilizing their expertise and technological superiority.

E. Benefits arising out of Public-Private Partnership

There are tremendous benefits for both private as well as public sector out of PPP contract; major beneficiary is dependent upon the nature of contract as well as on the ground that who is the major partner into that. Literature review has allowed present study to extract different benefits arising out of PPP contract.

One of the major benefit that PPP provides to public sector is that it allows private investment for financing infrastructure projects seeking huge funding requirements (Hanss, 2001; Herpen, 2002; Jamali, 2004; Katz, 2006; Sachs et al., 2007; Kwak et al., 2009; Uttarakhand Public Private Partnership Cell (UPPPC), Department of Planning, Govt. of Uttarakhand, 2009; Swain, 2009; Mahalingam, 2010; Delmon, 2011; Cheung and Chan, 2011; Brinkerhoff and Brinkerhoff, 2011; Appuhami et al., 2011; Iqbal, 2012; Ministry of Finance, Singapore, 2012); it also provide public sector with enhanced level of operational and managerial efficiency (Hanss, 2001; Herpen, 2002; Jamali, 2004; Sachs et al., 2007; Lakshmanan, 2008; Kumar, 2008; Kwak et al., 2009; Swain, 2009; Uttarakhand Public Private Partnership Cell (UPPPC), Department of Planning, Govt. of Uttarakhand, 2009; Sharma, 2009; Mahalingam, 2010; Delmon, 2011; Iqbal, 2012; Xu et al., 2012;

Tan et al., 2012) by bringing together superior skills, capabilities and technicalities of private sector. This way PPP allows public sector to focus on its core activities (Sharma, 2009), while non-core activities are contracted out to private sector.

Public sector also gets benefited in terms of excellence in quality and system performance (Jamali, 2004; Das and Nandy, 2008; Infrastructure Australia, Australian Government, 2008; Lakshmanan, 2008; Kwak et al., 2009; Sharma, 2009; Tan et al., 2012); at the same time it allows accelerated and reliable delivery of projects (Herpen, 2002; Lakshmanan, 2008, Das and Nandy, 2008; Kwak et al., 2009; Uttarakhand Public Private Partnership Cell (UPPPC), Department of Planning, Govt. of Uttarakhand, 2009; Cheung and Chan, 2011). Further, considering the problems of outdated technology on the part of public sector, PPP provides access of modern technology (Herpen, 2002; Jamali, 2004; Sachs et al., 2007; Sharma, 2009; Delmon, 2011; Xu et al., 2012) and creative & Innovative approaches for project delivery (Herpen, 2002; Katz, 2006; Cheung and Chan, 2011; Tan et al., 2012; Ministry of Finance, Singapore, 2012) to public sector.

Public-Private Partnership also leads to cost effectiveness (Hanss, 2001; Herpen, 2002; Jamali, 2004; Estache et al., 2007; Kumar, 2008; Das and Nandy, 2008; Infrastructure Australia, Australian Government, 2008; Lakshmanan, 2008; Kwak et al., 2009; Uttarakhand Public Private Partnership Cell (UPPPC), Department of Planning, Govt. of Uttarakhand, 2009; Delmon, 2011; Cheung and Chan, 2011; Iqbal, 2012; Tan et al., 2012; Ministry of Finance, Singapore, 2012) and allows for substitution of private resources and personnel (Das and Nandy, 2008; Xu et al., 2012; Tan et al., 2012; Ministry of Finance, Singapore, 2012), better whole-of-life project costing & evaluation (Herpen, 2002; Katz, 2006; Ministry of Finance, Singapore, 2012).

Private and public sector both gets benefited from PPP in the way it allows for contractual specification of roles, risks and rewards assumed by both parties (Hanss, 2001; Herpen, 2002; Jamali, 2004; Das and Nandy, 2008; Infrastructure Australia, Australian Government, 2008; Swain, 2009; Kwak et al., 2009; Brinkerhoff and Brinkerhoff, 2011; Cheung and Chan, 2011; Tan et al., 2012; Ministry of Finance, Singapore, 2012). It also provides advantages of optimum allocation of resources and responsibilities (Jamali, 2004; Das and Nandy, 2008; Infrastructure Australia, Australian Government, 2008; Uttarakhand Public Private Partnership Cell (UPPPC), Department of Planning, Govt of Uttarakhand, 2009; Iqbal, 2012). Further, PPP helps in due performance measurement and incentive decisions (Herpen, 2002; Ministry of Finance, Singapore, 2012); it also assures of proper maintenance and management of project (Katz, 2006). Public-Private Partnership has certain economic benefits as well. It leads to improved economic development, while at the same time it also provides integrated Solution for public infrastructure (Cheung and Chan, 2011).

F. Critical Success Factors for Public-Private Partnership Projects

The benefits are huge for both public and private sectors; it is essential to adopt proven strategies to make PPP contract a success. Here, the question arises that what strategies need to be followed in order to reap benefits of PPP? In this regard, cases on PPP projects, previous work by eminent researchers and academicians, reports on PPP projects by State & Central Government agencies, governments of other countries and other national & international agencies and world bodies have been reviewed to gain an understanding of what leads a PPP project to success.

One of the major strategy/success factor for successful implementation, execution and completion of PPP project is proper mechanism and system for cost and risk sharing (Zhang, 2005; Sun, 2006, as cited by Xu et. al., 2012; Ahmed and Aziz, 2007; Estache et al., 2007; Lakshmanan, 2008; Hann, 2010; Iqbal, 2012) as researchers and government agencies have argued that many a time private sector has to assume major financial risk in a PPP project (Cheung and Chan, 2011) which leads conflict between parties. Further it is must to have a clear political & administrative commitment and environment (Sachs et al., 2007; Zhang, 2005; Koppenjan, 2005; Tiong and Wang, 2007; Delmon, 2011; Iqbal, 2012; Khan, 2014); a strong PPP legislation should be enacted for better project implementation and control. Research shows that lack of enabling PPP legislation/regulatory environment poses big challenge in front of PPP projects (Khan, 2014; Xu et. al., 2012; Hann, 2010; Mahalingam, 2010; Ahmed and Aziz, 2007; Estache et al., 2007; Sachs et al., 2007; Zhang, 2005). Process transparency and flexibility (Zhang, 2005; Ahmed and Aziz, 2007; Lakshmanan, 2008; Mahalingam, 2010; Brinkerhoff and Brinkerhoff, 2011; Iqbal, 2012) and joint image building & creation of mutual trust (Jamali, 2004; Koppenjan, 2005; Hann, 2010; Brinkerhoff and Brinkerhoff, 2011; Appuhami et al., 2011) are also very important for success of any PPP projects. Many PPP projects fail because of distrust between public and private sector (Herpen, 2002; Koppenjan, 2005; Hann, 2010; Mahalingam, 2010; Brinkerhoff and Brinkerhoff, 2011; Iqbal, 2012), others often fail because there is lack of coordination and transparency between parties (Khan, 2014). Further, it is necessary to develop finance focused programs (Ahmed and Aziz, 2007; Kwak et al., 2009; Mahalingam, 2010; Delmon, 2011; Khan, 2014) to keep both parties interested; institutional reforms and cordial environment need to be created for its successful control (Zhang, 2005; Lakshmanan, 2008; Mahalingam, 2010; Iqbal, 2012; Iqbal, 2012). There should be motivating and clear guiding plans (Koppenjan, 2005; Iqbal, 2012) for both the parties in order to make them work in focused and synchronized manner. Other strategies for success of PPP project as suggested by academicians, government agencies and world bodies are display of good corporate governance from both the parties (Lakshmanan, 2008; Brinkerhoff and Brinkerhoff, 2011;

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Iqbal, 2012), documenting PPP case studies for future reference and guidance (Kwak et al., 2009; Mahalingam, 2010; Hann, 2010), selection of right private partner by public entity (Zhang, 2005; Ahmed and Aziz, 2007; Kwak et al., 2009) as it may lead to mismatch between the parties and provision of systematic forms of process management (Koppenjan, 2005; Delmon, 2011). Further, there should be provision of capacity strengthening initiatives (Mahalingam, 2010; Iqbal, 2012), community involvement (Mahalingam, 2010; Hann, 2010), programmatic approach (Mahalingam, 2010) and regulatory independence (Lakshmanan, 2008; Iqbal, 2012) for success of PPP project.

Another significant strategy for the success of PPP projects is that every country should focus on development of Public-Private interaction forums (Mahalingam, 2010; Hann, 2010) which will improve communication channel for discussions and deliberations on issues related to adoption, creation, implementation, control, evaluation and management of PPP projects. While it is also said by academicians that disciplined attitude of stakeholders (Kumar, 2008; Swain, 2009), centralized decision-making & responsibility (Hanss, 2001), contract enforceability (Kumar, 2008) and renegotiation through hierarchical contracts (Mahalingam, 2010) also plays important role in success of any PPP project.

IV. CONCLUSIONS AND RECOMMENDATIONS

Study concludes that India has adopted PPP mode for its infrastructure requirement; it is still in a nascent stage. A lot of policy initiatives has been undertaken following the economic reforms of 1991 to strengthen the policy framework for PPP and its related matters. Considering the success factors resulted as the outcome of extensive literature review, India has worked very well to follow those strategies by implementing policies associated with management and control of PPP projects. Table 2 below shows various policy initiatives by Government of India for strengthening policy framework for PPP in India.

It is evident from table 2 that India has taken giant steps towards adopting PPP as primary mode for infrastructure provision; it has worked well to make conducive environment for the same. As suggested by academicians, government agencies and world bodies, India has initiated actions to set up institutional bodies for monitoring and control of PPP projects; it has also acted upon to build policy framework and legislative environment around for any kind of dispute settlement.

A number of benefits has been emanated from literature review, and if implemented and controlled well, PPP projects will reap tremendous benefits to all stakeholders, namely; public sector, private sector, government, economy and for the society as a whole. It has been concluded that initiatives undertaken by India has made life easy for public sector and private sector has been encouraged for joining hands with public sector in order deliver huge infrastructure requirements. Study showed that PPP projects in India has been concentrated majorly towards energy sector and in case of transport sub sector, it is concentrated towards highways. Efforts need to be put in to bring PPP projects in other sectors as well like, airports, railways, sea ports, station

infrastructure and so on. It is hence recommended that Government of India should consider the PPP projects and encourage private players to combine with public entities in neglected sectors as well. There is need to develop policy framework for these sectors and the policy should be user friendly and conducive to work upon. It is hereby recommended to put forward initiatives concerning PPP related issues in such neglected sectors specifically for airports, railways and port development. In the end, it has been concluded that a lot has already been done but still it's a long way ahead for India to embrace PPP as major mode of infrastructure delivery.

V. LIMITATIONS OF THE STUDY AND SCOPE OF FUTURE RESEARCH

The study is conceptual in nature and any empirical analysis may add value to the existing body of literature. Further, study considers PPP initiatives in the context of India; deeper insights about, reasons, benefits, strategies, and so on can be gained if more countries are included in the study.

REFERENCES

1. Ahmed, M. and Aziz, A. (2007). Successful delivery of public-private partnerships for infrastructure development. *Journal of Construction Engineering and Management*, 133(12), 918-931.
2. Appuhami, R., Perera, S., and Perera, H. (2011). Management Controls in Public-Private Partnerships: An Analytical Framework. *Australian Accounting Review*, 21(1), 64-79.
3. Brinkerhoff D. W. and Brinkerhoff J. M. (2011), Public-Private Partnerships: Perspectives on Purposes, Publicness, and Good Governance, *Public Administration and Development*, 31(2-14), 2-14.
4. Carroll, P and Steane, P. (2005), Public-private partnerships: sectoral perspectives, *Public-Private Partnerships: Theory and practice in international perspective*, 36-56, Antony Rowe Ltd., Eastbourne
5. Cheung, E. and Chan, A. P. C. (2011). Evaluation model for assessing the suitability of Public-Private Partnership projects. *Journal of Management in Engineering*, 27(2), 80-89.
6. Das, S. C. and Nandy, M. (2008), Public Private Partnership: an emerging issue, *The ICFAI Journal of Infrastructure*, VI(1), 18-23.
7. Delmon J. (2011), Introduction, *Public-Private Partnership Projects in Infrastructure: An Essential Guide for Policy Makers*, Cambridge University Press, New York, USA
8. Draft Compendium of PPP Projects in Infrastructure, (2012), PPP Infrastructure Division, retrieved 20th December, 2018, from www.infrastructure.gov.in, http://www.infrastructure.gov.in/pdf/Draft_Compndium_of_PPP_Projects_in_infrastructure.pdf
9. Estache, A., Juan, E., and Trujillo, L. (2007). Public-private partnerships in transport (Policy Research Working Paper No. 4436), Retrieved from World Bank Website, <https://openknowledge.worldbank.org/bitstream/handle/10986/7602/wps4436.pdf?sequence=1>, doi: 28/03/2014
10. Grimsey, D and Lewis, M. K. (2007), Public Private Partnerships: The Worldwide Revolution in Infrastructure Provision and Project Finance. Edward Elgar Publishing Limited: Northampton, MA
11. Gupta A. K. and Roy S. (2008), Public-Private Partnership in railways: a new approach, *IIMB Management Review*, 1-21
12. Hahn, D. (2010). How to create a public-private partnership: A replicable project associated with business continuity. *Journal of business continuity & emergency planning*, 4(3), 274-285.
13. Hanss, W. G. (2001). Overcoming competitive disadvantages of public enterprises by Public-Private Partnerships and their financing models. *Annals of Public and Cooperative Economics*, 72(3), 393-411.
14. Harishankar, K. S. and Sreeparvathy, G. (2013). Rethinking dispute resolution in public-private partnerships for infrastructure development in India. *Journal of Infrastructure Development*, 5(1), 21-32.

15. Herpen, G. W. E. B. V (2002). Public private partnerships, the advantages and disadvantages examined. *Association of European Transport*, The Netherlands.
16. Jamali, D. (2004). Success and failure mechanisms of public private partnerships (PPPs) in developing countries: Insights from the Lebanese context. *International Journal of Public Sector Management*, 17(5), 414-430.
17. Khan, M. S. (2014). A study of environmental constraints faced by public private partnership (PPP) in India and the road to a framework for successful implementation of PPP project. *Business Review*, 9(1), 14-32.
18. Koppenjan J. 2005. The formation of public-private partnerships: lessons from nine transport infrastructure projects in the Netherlands. *Public Administration*, 83(1)
19. Kumar, K. (2008). Public-Private Partnership in Indian Railways (working paper no. 182), Retrieved from Centre for civil society website, http://ccs.in/internship_papers/2007/Public-Private-Partnership-in-Indian-Railways-182.pdf, doa: 30/03/2014
20. Kwak, Y. H., Chih, Y., and Ibbs, C. W. (2009). Towards a comprehensive understanding of public private partnerships for infrastructure development. *California Management Review*, 51(2), 51-78.
21. Lakshmanan, L. (Summer, 2008), Public-private partnership in Indian infrastructure development: issues and options, *Reserve Bank of India Occasional Papers*, 29(1), 37-74.
22. Mahalingam, A. (2010). PPP experiences in Indian cities: barriers, enablers, and the way forward. *Journal of Construction Engineering and Management*, 136(4), 419-429.
23. Mishra A. K., Narendra K. and Kar B. P. (2013). Growth and infrastructure investment in India: Achievements challenges, and opportunities. *Economic Analysis*, LVIII (196), 51-70.
24. Pillai, M. (2008). Infrastructure development and economic growth : The Public-Private Partnership (PPP) perspective. *The Icfai Journal of Infrastructure*, 6(1), 24-31.
25. Sachs, T., Tiong, R., and Wang, S. Q. (2007). Analysis of political risks and opportunities in public private partnerships (PPP) in China and selected Asian countries: survey results. *Chinese Management Studies*, 1(2), 126-148.
26. Sharma, A. K. (2009), Modernization of railway stations in India: a case for public-private partnership with special reference to New Delhi railway station, *South Asian Journal of Management*, 16 (1), 102-116.
27. Swain, S. C. (2009). Channelization of Potential Private Investment for Infrastructure Development in Orissa: A Public Private Partnership Approach. *IUP Journal of Infrastructure*, 7, 32-55
28. Tasukada, S. (2013). Potential pitfalls in PPP application: lessons learned from National Highway Development Programmes in India. *Journal of Infrastructure Development*, 5(1), 87-102.
29. Trailer, J. W., Rechner, P. L., and Hill, R. C. (2004). A compound agency problem: an empirical examination of public-private partnerships. *Journal of American Academy of Business*, Cambridge, 5(1/2), 308-315.
30. Waring, J., Currie, G. and Bishop, S. (2013). A contingent approach to the organization and management of public-private partnerships: an empirical study of English health care. *Public Administration Review*, 73(2), 313-326.
31. Xu, Y., Skibniewski, M. J., Zhang, Y., Chan, A. P., and Yeung, J. F. (2012). Developing a concession pricing model for PPP highway projects. *International Journal of Strategic Property Management*, 16(2), 201-217.
32. Zhang, X. (2005). Criteria for selecting the private-sector partner in public-private partnerships. *Journal of construction engineering and management*, 131(6), 631-644.
33. Zhang, X. (2005). Critical success factors for public-private partnerships in infrastructure development. *Journal of Construction Engineering and Management*, 131(1), 3-14.
34. **Web Resources**
35. A Guidebook on Public-Private Partnership in Infrastructure (2011, January). Retrieved on 12th December, 2018 from <http://www.unescap.org/>
http://www.unescap.org/sites/default/files/ppp_guidebook.pdf
36. Asian Development Bank (2008). Public-Private Partnership (PPP) Handbook (2008, September). Retrieved 9th April, 2019, from <http://www.adb.org/>
<http://www.adb.org/sites/default/files/pub/2008/Public-Private-Partnership.pdf>
37. Draft Compendium of PPP Projects in Infrastructure, (2012), PPP Infrastructure Division, retrieved 20th December, 2018, from www.infrastructure.gov.in,
http://www.infrastructure.gov.in/pdf/Draft_Compndium_of_PPP_Prjects_in_infrastructure.pdf
39. Francoz, E. (2010, June). Advantages & Limitations of the Different Public Private Partnership Risks. Retrieved on 20th December, 2018, from <http://www.afd.fr/>
<http://www.afd.fr/webdav/shared/PORTAILS/PAYS/MEDITERRANEE/PPP-Amman/AFD-Francoz.pdf>
40. Katz, D. (2006, March). Financing Infrastructure Projects: Public Private Partnerships (PPPs). Retrieved on 20th December, 2018, from <http://www.treasury.govt.nz/>
<http://www.treasury.govt.nz/publications/research-policy/ppp/2006/06-02/tpp06-02.pdf>
41. CAG, New Zealand (2011). Managing the implications of public private partnerships (2011, November). Retrieved on 9th April, 2019 from <http://www.oag.govt.nz/> <http://www.oag.govt.nz/2011/public-private-partnerships/docs/public-private-partnerships.pdf>
42. National Public Private Partnership Guidelines Volume 1: Procurement Options Analysis (2008, December). Retrieved 20th December, 2018, from <http://www.infrastructureaustralia.gov.au/>
http://www.infrastructureaustralia.gov.au/public_private/files/National_PPP_Guidelines_Volume_1_Procurement_Options_Analysis_Dec_08.pdf
43. PPP Public Private Partnership Handbook (2013, October). Retrieved 12th December, 2014, from <http://www.iddkarnataka.gov.in/>
http://www.iddkarnataka.gov.in/docs/PPP_Handbook.pdf
44. Public Private Partnership Handbook for Uttarakhand A Working Guide (2010, November). Retrieved 12th December, 2018, from <http://cell.upppc.org/>
http://cell.upppc.org/index.php?option=com_content&view=article&id=32:ppp-handbook&catid=12:upppc&Itemid=20
45. Ministry of Finance (2012). Public Private Partnership Handbook Version 2 (2012, March). Government of Singapore, Retrieved 20th December, 2018, from <http://app.mof.gov.sg/>
<http://app.mof.gov.sg/data/cmsresource/ppp/PPPHandbook2012.pdf>
46. The Institute of Public-Private Partnership. (2009). Public-Private Partnerships in E-Government: Handbook (2009, June). Retrieved 9th April, 2019, from <http://www.infodev.org/>
http://www.infodev.org/infodev-files/resource/InfodevDocuments_822.pdf
47. World Bank Institute (2012). Public-Private partnership: Reference Guide (Version 1), Retrieved 12th December, 2018, from <http://www.ppiaf.org/>
<http://www.ppiaf.org/sites/ppiaf.org/files/publication/Public-Private-Partnerships-Reference-Guide.pdf>
48. Resource Book on PPP Case Studies (2004, June). Retrieved 20th December, 2018, from <http://ec.europa.eu/>
http://ec.europa.eu/regional_policy/sources/docgener/guidespppresourcebook.pdf
49. Tan, V. Allen and Overy (2012, June). Public-Private Partnership (PPP). Retrieved 20th December, 2018, from <http://a4id.org/>
<http://a4id.org/sites/default/files/files/%5BA4ID%5D%20Public-Private%20Partnership.pdf>
50. Understanding Options for Public-Private Partnerships in Infrastructure (2010, January). Retrieved 20th December, 2014, from <http://www-wds.worldbank.org/>
http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2010/01/11/000158349_20100111150559/Rendered/PDF/WPS5173.pdf

Websites

- <http://www.imf.org/external/np/fad/2004/pifp/eng/031204.pdf>,
<http://ppp.worldbank.org/public-private-partnership/>,
<http://www.mfcr.cz/en/themes/public-private-partnership/other-countries>,
- <http://www.ncppp.org/ppp-basics/7-keys/>,
- <http://www.pppinindia.com/Defining-PPP.php>,
http://www.unescap.org/ttdw/common/TPT/PPP/text/ppp_guidebook.pdf,
- <http://www.ibtta.org/files/PDFs/PPP%20Credit%20Survey%20S%26P.pdf>,
- <http://www.pppcouncil.ca/resources/about-ppp/definitions.html>,
- <http://www.oecd.org/mena/governance/41767985.pdf>,
- Private_Partnerships.pdf,
- <http://planningcommission.gov.in/>,
- <http://www.pib.nic.in/newsite/erelease.aspx?relid=87017>,

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http://books.google.co.in/books?hl=en&lr=&id=y_ySD3JABt0C&oi=fnd&pg=PR1&dq=Public-Private+Partnership+Handbook,+Asian+Development+Bank,+2008&ots=nZLvDYoNs3&sig=HpJkX6kFpZ6TRTk241P7itjITyM#v=onepage&q=Public-Private%20Partnership%20Handbook%2C%20Asian%20Development%20Bank%2C%202008&f=false

- <http://books.google.co.in/books?hl=en&lr=&id=Qek4AgAAQBAJ&oi=fnd&pg=PR1&dq=Benefits+of+Public-Private+Participation+in+infrastructure+development&ots=09bTenlT13&sig=XZdZrN3bWDZk8YPEVjpa0IK1awk#v=onepage&q=Benefits%20of%20Public-Private%20Participation%20in%20infrastructure%20development&f=false>
- http://books.google.co.in/books?hl=en&lr=&id=XmouK6-_k40C&oi=fnd&pg=PR5&dq=Benefits+of+Public-Private+Participation+in+infrastructure+development&ots=YhLEZcRdjW&sig=c-_FQINLPVMjfp9_mCR9Bjv9OYU#v=onepage&q=Benefits%20of%20Public-Private%20Participation%20in%20infrastructure%20development&f=false
- http://books.google.co.in/books?hl=en&lr=&id=MxVf-6FA9JAC&oi=fnd&pg=PR9&dq=Challenges+and+Barriers+for+public+private+partnership&ots=B6wQ_vQNLr&sig=iIM3khVH_9PQfuVgicufT3YrgJc#v=onepage&q=Challenges%20and%20Barriers%20for%20public%20private%20partnership&f=false
- http://books.google.co.in/books?hl=en&lr=&id=_0epYa1LF8MC&oi=fnd&pg=PA347&dq=Challenges+and+Barriers+for+public+private+partnership&ots=yiz-whqYyh&sig=fOPlxxOrLRlqgJ23oxdS1MfMkA#v=onepage&q=Challenges%20and%20Barriers%20for%20public%20private%20partnership&f=false