UNIVERSITY OF LJUBLJANA
FACULTY OF ECONOMICS

MASTER'S THESIS

ANALYSIS OF PUBLIC PRIVATE PARTNERSHIP INITIATIVES IN CONTAINERIZED RAIL TRANSPORT IN INDIA

Ljubljana, June 2015 Koppurath Ulahannan THANKACHEN

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INTRODUCTION

1.1 Context and nature of Public Private Partnerships

The progress of any nation depends on how associations can be built for a common cause of growth of the overall economy, between various clusters. A healthy growth is only possible if participation is seen from Government at Central as well as State level along with involvement from both public and private sector players.

There are various ways in which such associations can be chalked out, one of them being Public Private Partnerships (hereinafter: PPPs). According to Robinson, H., Carillo, P., Anumba, J. C., & Patel, M. (2010) in the PPP concept, public sector know-how is synergized by the capabilities of the private sector such as technical information, greater understanding of business and management principles. The ability of the private sector to have enhanced risk management practices and being able to organize additional investment with its innovation and understanding of working respectable business models with great level of competence proves beneficial. PPP facilitates the interchange of skills between the public and private sector and increases the competence of resource allocation and the quality of public services. Thus, the PPP initiatives are perceived as an efficient mechanism to bring about long-lasting and sustainable measures to develop public services through investment and fitting distribution of risks and rewards.

PPPs provide a mould for procurement for infrastructure by the public institutions and public services derived from it through an agreement that is bound by contractual obligations, amid the two entities i.e. public and private sectors. Yescombe (2007) states that over the last decade or so, private sector financing through public-private partnerships has emerged as a well-accepted way of acquiring and sustaining the infrastructure of the public-sector. The PPP/PFI procurement, according to the Government, can impart diverse advantages for the society such as improved government capability; decrease in the financial implications in terms of input cost and the total time of project implementation; new ways of providing public services; and reassigning of major risks to the private sector so that taxpayers get value for money (Li, B., Akintoye, A., Edwards, P.J., & Hardcastle, C. 2005).

The 'New Public Management' (NPM) concept inherent to the Public Private Partnership model should be viewed in the context of public sector reform movement which encourages delegation of authority by having a decentralized management. NPM concept also distinguishes between duties and responsibilities for the acquisition of public facilities from that of their provision. The concept also promotes productivity or performance-based assessment for public facilities and contracting out of public facilities to the private sector with the purpose of privatization of public facilities (Yescombe, 2007).

For sustained economic growth of any country it is imperative for the government to focus on developing quality infrastructure. Thus Government initiatives are aimed at developing the best policy agenda that provides the private sector enough assurance to come forward and pool in their resources for infrastructure development. At the same time, the governments also need to achieve other objectives of ensuring transparency, competition and regulation through adequate checks and balances. PPPs usher in the benefits of private sector expertise along with the scope of leveraging public capital and inviting private capital thus undertaking a large number of infrastructural projects by working towards a reduced cost by advanced technologies and more efficient operation and maintenance.

Thus, the prime objective of this master's thesis is to establish that PPP is the only way forward for a developing economy facing budgetary constraints, to develop its own growing transportation and infrastructural needs. However, successful partnerships require greater cohesion of interests, goals and pursuit of commitments with a facilitating framework. The study intends to make a holistic assessment of the achievements of the past two decades in evolution of PPP model in India and thereafter, narrow its focus on the containerized transportation sector which has witnessed mushrooming of several operators and consequent growth following liberalization of this sector. The progress made so far, pitfalls in policy and implementation and the way forward will be analysed and recommendations made for the future.

The objectives of the master's thesis are the following:

1. to present the concept and characteristics of Public Private Partnership and its positive and negative imperatives for developed and developing countries;
2. to analyse the evolution, applicability, challenges and perspectives of PPP in the global and Indian context;
3. to analyse international experiences in PPP in the rail sector;
4. to analyse contribution of railways in infrastructure development in India and the role of PPP in the railway sector;
5. to analyse the evolution of PPP in the containerized rail transportation sector in India-achievements and pitfalls in policy formulation and implementation;
6. to formulate lessons learned so far and the way forward and to provide recommendations for the future.

Master's thesis will be of practical value in policy formulation and execution for the Ministry of Railways as well as the Government of India (Hereinafter: GOI) on a broader perspective. The thesis will help the industry to reformulate its strategies based on the evaluation of the current model and interface with the GOI to seek review of current policies and execution framework. It will also help GOI to attract further investment options in this growing sector.

The research method followed will be an inductive approach. This will involve collection and critical analysis of secondary data from literature research, internet sources, government agencies supplemented by in-depth interviews with experts and practitioners in the industry (a combination of desktop and empirical research).

The theoretical building block of the master thesis is based on literature review (e.g. the articles in academic and professional journals, publications and monographs published for PPPs. Periodicals related to public policy, transportation, infrastructure etc. have been scanned for identifying past research reports on the subject which will give an idea about the ground already covered. The global trends in public private partnership predominantly towards infrastructure development have been scanned and reviewed. Reports of global institutions which promote PPP like World Bank and IMF have been used for authentic reference.

A case study approach of the Indian railway sector has been adopted to analyse how well these public private partnerships are working forcontainerized rail transportation against the theoretical framework. This will provide a comprehensive view of the sector since its emergence, various stages in its growth and a review of its current status. Based on indepth interviews held with the major operators, some critical factors concerning the industry have been identified through the questionnaire distributed to 10 out of 17 operators who were granted the licenses. The responses obtained from these agencies against each area of their concern will be graphically represented. Based on the above approach, conclusions and recommendations are given in the final chapter.

1.2 Historical Background

The origin of the term public private partnership (PPP) may be stated to have arisen in United States of America (USA) first concerning the combined public- and private- sector funding for educational initiatives during 1950s, where comparable financial backing for utilities was provided for. In the 1960s, the terminology came in wider usage to refer to public-private ventures for urban renewal (Yescombe, 2007). A kind of PPP called the 'concession' or in other words the 'user pays' model wherein a private sector party can levy service fee from the general public for utilizing the services became common in most of the countries such as UK in the 19th century as well as early part of the 20th century to establish amenities like water supply, railways and waste water management systems. As the role of the state expanded in many countries, where already constructed facilities were operated by private entities, franchises started gaining prominence. Interest in concessions and other forms of PPP started to grow as an alternate funding model at the end of 20th century.

The term PPP gained prominence in the European Union since the 1990s when a precise form of privatization was formulated to counter the shortcomings on public debt. This was inclusive of practices of private companies to borrow money, construct health centers such as

hospitals, educational centers such as schools, infrastructure such as road etc. and then operate and maintain it for a long time in the coming years, recovering the investment and the profit from cash inflows throughout the life of the project (Hall, 2008).

The Power Purchase Agreement (PPA) which was introduced by the USAduring 1980s may be deemed as the precursor to contemporary PPP contracts. Europe witnessed PPPs during the early 1990s.British Government initiated Private Finance Initiative (PFI) in the year 1992 with the motive to get inflows of private finance to move forward and boost infrastructure. The first wave of these projects including activities such as building and operation of infrastructure such as roads commenced in 1994, with the public authority funding a fixed schedule of payments. The concept has since gained prominence and been adopted by various governments across the world with differing degrees of success.

1.3 Concepts, definitions and characteristics of Public Private Partnerships

As per Akintoye and Beck, (2009, p. 27) there is a wide variation in the definition of the term PPP , which covers several models of operation including design, build, finance and operate (hereinafter: DBFO); build, own, operate and transfer (hereinafter: BOOT); build, operate and transfer (hereinafter: BOT); the private finance initiative (hereinafter: PFI); concessions, sale and lease back provisions, franchises and joint ventures between the public and private sectors to name but a few variants.

According to the World Bank (2006, p. 13) "PPP programs are projects that are for services traditionally provided by the public sector, combine investment and service provision, see significant risks being borne by the private sector and also see a major role for the public sector in either purchasing services or bearing substantial risks under the project."

Other institutions have also used various definitions for the term:
"Public-private partnerships (PPPs) refer to arrangements where the private sector supplies infrastructure assets and services that traditionally have been provided by the government." (International Monetary Fund, 2004, p. 4)

"PPPs broadly refer to long-term, contractual partnerships between the public and private sector agencies, specifically targeted towards financing, designing, implementing, and operating infrastructure facilities and services that were traditionally provided by the public sector." (Asian Development Bank, 2006, p. 15)

"A PPP is the transfer to the private sector of investment projects that traditionally have been executed or financed by the public sector." (European Commission, 2003, p. 96)

The GOI, Ministry of Finance (2014, p. 4) defines PPP as follows:

"Public Private Partnership means 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 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."

According to Grasman (2009), the PPPs may be seen as contractual agreements formulatedamongst a public and private entity. Such an arrangement permits for a more substantial private sector contribution in the operation and has conventionally been limited tojust planning, construction or design contracts. With increased participation from private sector, the public agenciesare able to derive the advantage of the private sector managerial skills, technical knowhow and financial expertise. This, in turn leads to quality program performance, newer technology applications, larger pool of private capital and specialized expertise. Also the most significant aspect is that PPPs provide for a chance to bring forth a well-organized project management team with improved technological innovation and more efficient risk mitigation.

PPPs also enhance cooperation between the private sector and the government body wherein both entities involved perform as partners. The very long term nature of PPPs helps cement productive, synergistic and lasting relationships among the private and public entities. The collaborative ventures are firmed up through an agreement in contract that makes certain appropriate and mutually decided allotment of risks, returns and resources. The public body and the private agency share the responsibilities with the government being ultimately accountable and responsible to the public. PPPs work as tools for government organizations to bring results to the public sector, by utilizing capital of private sector to finance the necessary asset building. One of the main benefits of PPPs is their potential to deliver public projects and services in a more economically efficient manner by reducing overall risk to the public sector and transferring such risks to the private sector. Ownership arrangements are flexible between the public and private bodies in a PPP model (Research Republic LLP, 2008).

PPPs are used as a means of levering private sector funding to address public budget constraints in infrastructure procurement (Winch and Onishi, 2012). Arguably the private sector is believed to possess higher skills, expertise and innovation capabilities than the public sector and therefore, can promote cost savings and efficiency strategies in the delivery of public services (Andersen, 2000). PPPs are also perceived as vehicles for maximizing value for money (VfM) of infrastructure provision (HM treasury, 2006).

According to Schwartz, et al. (2008, p. 4) three prime reasons for utilizing PPPs are:

- Private sector is assumed to be more efficient due to its superior skills at managing the projects.
- Due to the public- good nature of most of the infrastructure services, PPPs are

preferred over outright privatisation.

- The private financing recourse enables governments to carry out infrastructure projects without having to finance the total amount of investment at once.

Along with the benefits, PPPs also suffer certain disadvantages and drawbacks (Research Republic LLP, 2008). There is always scope for public sector losing administrative control over its services. The process of PPP procurement can be time consuming and expensive. Very often the cost of finance for the private sector also tends to be expensive. PPPs thus sometimes work out as a rigid apparatus – which gets even more highlighted during long tenure of such PPP contracts. Demand for accountability as well as fast and responsive public mechanism is two points that sometimes go lacking in PPPs and thus it becomes a point of public criticism or hostility. Thus wherever a greater public and government intervention may be required to ensure compliance and responsiveness to public concerns PPP has failed to come upto the expectations.

Importance of macroeconomic stability and its importance for PPPs have been highlighted by the International Monetary Fund (IMF, 2006). PPPs are commonly seen to be having higher success in countries where the governments have a heavy debt burden riding on their shoulders and where collective demand and market size is large. Institutional quality is important for attracting PPPs. Well defined legislation, effective bureaucracy, thriving democracy and less corruption are corollary to development of larger number of PPP projects. Historical prevalence and success of PPPs also lend credibility and acceptance for new projects following similar principles. The International Bank for Reconstruction and Development (IBRD) preparation guide (IBRD, 2009), stresses the need for governments to think and behave in new ways that need better and more contemporary skills. This may be a tool for reforming procurement and public service delivery and not merely a means of leveraging private sector resources.

Akintoye and Beck (2009) discuss the ever changing socio- economic and political environment in the ambit of globalisation and budgetary constraints. Thus, in their view, PPPs have become unavoidable and undeniably are considered essential for adoption by many countries. PPPs have emerged as a potent sole solution that can limit public sector borrowing in many developing countries which face acute shortages in infrastructure sector. The vital role of modern infrastructure in economic growth and poverty alleviation has been realized by the public sector which is grappling with resource constraints and therefore, clamour for PPP in developing countries has increased. It has been realized that the existing level of public sector income generation alone cannot support this need. Thus in brief, PPPs have gained recognition as Prime Avenue for financing majority of public sector infrastructure projects.

In today's times, PPPs are viewed by many governments as a win-win option to help meet their investment needs and there are a lot of reasons in support of this theory (Akintoye and Beck, 2009).Firstly, it is believed that budgetary room can be provided by PPPs without

compromising on the sustainability of the government's financial interests. Secondly, there is a belief that PPPs can lead to creation of a fiscal space that in turn can boost medium-term growth and thus generate fiscal revenue for times to come. Thirdly, government risk exposure is often believed to be reduced by PPPs by transferring those risks to the private sector, which are better capable of tackling them. Lastly, the increased accountability and transparency that comes with the participation of the private sector in the financing of infrastructure and services is expected to reduce corruption and incentivize judicious management of public expenditure.

In PPPs while both partners become interdependent in the partnership, the government needs to play a more dominant role to ensure accountability on part of the public. Hastily drawn and flawed partnerships can result due to enthusiasm of PPPs which may trigger public opposition and unclear expectations of the partners. This leads to decrease in the potential for the effective exercise of public accountability. These pitfalls can be avoided by partnerships formed with clear demarcation of the expected roles thus leading to a more collaborative environment that can prove win-win for both partners (Forrer, J., Kee, J.E., Newcomer, K.E., & Boyer, E. 2010).

1.4 Categories of Public-Private Partnerships

In the traditional method of planning, building, operating and maintaining basic infrastructure, the role of government used to be predominant. The public sector / government conceived the need for developing a new facility based on community / societal requirements and planned its development with inputs from the local community. Financing was primarily from tax revenues and contracts were firmed up for design and construction of the facility. Final ownership also rested with the public sector who also operated and maintained the facility. As opposed to this, private sector has higher involvement and participation in most of the phases of infrastructure development and operation.

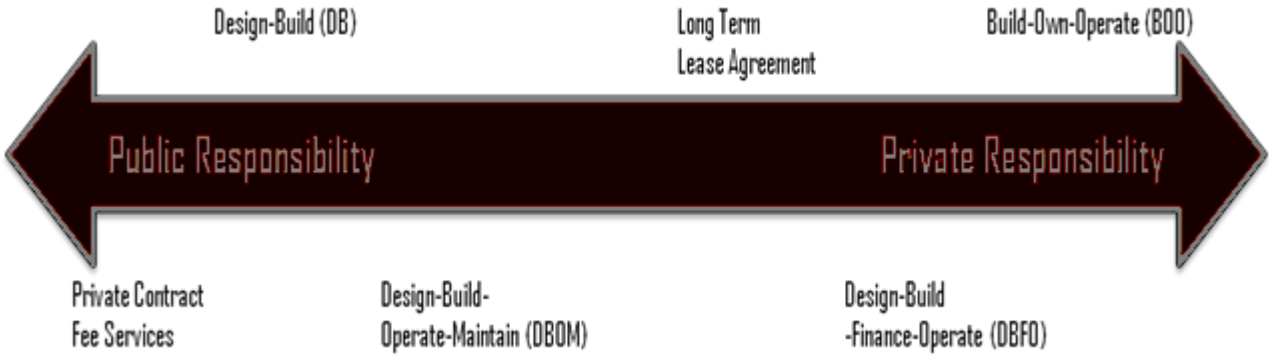
Although there can be multiple variations in types of PPPs, they can be broadly categorized into six types (Perl, 2010) ranging from least to most private responsibility:

- **Private Contract Fee Services:** More than routine responsibility is assigned to the private sector for providing services under this PPP mode. This can comprise contracting for operations and maintenance (O&M) services and other programs such as financial management services.
- **Design-Build (DB):** Two services that are traditionally separate get combined in this. The design and construction is covered in one fixed-fee contract. The public sector thus retains ownership of the assets along with accountability for development financing and O&M etc.
- **Design-Build-Operate-Maintain (DBOM):** Here public sector is answerable for arrangement of the finances as well as the risk mitigation associated with the operations. These kind of partnerships go even a step further than design-build

PPPs as additional private sector responsibility is taken up for O&M once a facility goes into service.

- **Long Term Lease Agreement:** This arrangement involves lease of an old facility to a private player for a fixed amount of gain.It involves payment of an amount from the private entity called concession fee with a promise to operate and maintain the facility.
- **Design-Build-Finance-Operate (DBFO):** In this kind of partnership most of the financing burden along with other responsibilities such as designing, building, and operation for infrastructure projects is with the private sector. The most common mechanism in this type of PPP is debt financing leveraged with a revenue stream, such as tolls. However, public sector grants and/or in-kind assistance such as right-of-way can be granted by the government to supplement the revenues.
- **Build-Own-Operate (BOO):** Herein the private sector is having the authority to design, build, operate, maintain and own a facility in perpetuity. Thus the private sector is entrusted with complete responsibility for the project with strategic role in the planning process.

Figure 1. Types of PPP



Source: Adapted from *National Council for PPP* and*U.S. Department of Transportation.*

IMF (2004) has identified various types of PPP schemes with their modalities presented in Table 1:

Table 1: Various schemes and modalities of PPP

SCHEMES	MODALITIES
Build-own-operate (BOO) **Build-develop-operate (BDO)** **Design-construct-manage-finance (DCMF)**	The private sector designs, builds, owns, develops, operates and manages an asset with no obligation to transfer ownership to the government. These are variants of design-build-finance-operate (DBFO) schemes.
Buy-build-operate (BBO) **Lease-develop-operate (LDO)** **Wrap-around addition (WAA)**	The private sector buys or leases an existing asset from the Government, renovates, modernizes, and/ or expands it, and then operates the asset, again with no obligation to transfer ownership back to the Government.
Build-operate-transfer (BOT) **Build-own-operate-transfer (BOOT)** **Build-rent-own-transfer (BROT)** **Build-lease-operate-transfer (BLOT)** **Build-transfer-operate (BTO)**	The private sector designs and builds an asset, operates it, and then transfers it to the Government when the operating contract ends, or at some other pre-specified time. The private partner may subsequently rent or lease the asset from the Government.

Source: *Approved by Teresa Ter-Minassian, Public Private Partnerships. Prepared by Fiscal Affairs Department and IMF,* 2004*, p. 8*

1.5 Benefits and Obstacles of PPPs

PPPs in most of the countries around the world, have displayed the capability of the government to harvest the benefits of involvement of the private entity in the infrastructure development alongwith meeting obligations towards the community and also exercising control over key public assets (Telliford, 2009). Thus, many such potential benefits of PPPs in this sense are described below.

- **Stronger working relations:** Long term, high trust relationships between government agencies and private sector partners can be cultivated in PPP projects, in comparison to short period procurement procedures. Both the partners understand goals based on long term objectives and willingly share information leading to developement of healthier and more durable solutions. Moreover, the prospect of fabricating a more robust and durable relationship provides an improved forum where problem resolution can be smoother and faster. The public entity also has an important role in selecting the options which may help in minimizing damage to the association and at the same time work towards maximization of community benefits.

- **Reduction of Financial Constraints:** PPPs offer an advantage in respect to traditional ways where projects offered by public sector sometimes get postponed or do not proceed due to limited financial resources, especially the provision of upfront capital. But with PPP projects garnering private finance coming into play, a form of off-balance sheet financing is made possible for public agencies. Thus, projects which otherwise would not have seen the light due to lack of adequate amount of capital to support them benefit from financial commitments from private sector.
- **Faster Delivery:** In an age where time is money, these PPPs help expedite arrangement of capital and thus delivery of projects by getting the private sector engaged in a phased manner into these projects. Inflationary cost increases are minimised thus attaining overall lower project costs, with use of better and latest technology andmitigation of risks pertaining to technology to the private sector. Construction delays are minimized by the private sector who are motivated to bring down the costs and bring forward their revenue stream. Timely completion is one of the contract terms where early accomplishment is rewarded with a bonus . Specifying target period of construction within the concession timeline facilitates better incentivization and thus successful delivery of the project.
- **Innovation and Expertise:** It is well known that private sector is capable to bring in new and creative approaches to not only project execution but financing as well. Expertise in risk mitigation as well as operations is lent by the private sector. In particular, financial markets have gained knowledge of new methods to structure finance which are more suitable to such infrastructure projects .
- **Greater Cost Efficiency and Productivity:** Cost efficient operations is a key priority for any private sector player. Especially when it comes to third party usage, the private sector is found to have better expertise.
- **Integration of Project Development and Delivery:** The private sector adopts an integrated view of the project through a life-cycle approach achieving greater level of cost efficiency over the life of the asset, rather than focussing on a single stage of construction of the project. Optimisation of expenditure and maximization of innovation is achieved through efficient integration at all stages.
- **Greater Choices:** An option is created for the sponsors who now can match explicit types of PPPs to individual projects depending upon their characteristics and capabilities. The needs of the participating public and private partners get voiced in the process and are dealt with with due consideration.
- **Increased Competition:** A healthy competition is always considered to be good for any sector and PPPs are no different. They help in enhancing competition in quality and delivery of facilities and services. Various heads such as organizational,functional, technological and process perspective are key areas where these PPPs help infuse competition by engaging the private sector through properly transparent contracting procedures.

- **Risk Management:** Evey project has some risks associated with them and risk mitigation is one prime focus of any agency undertaking them.By involving the private sector, public sponsors are able to share project risks under PPP mode. In this risk sharing process, risks of the public sponsors get passed to the private player who are in a better position to manage them or deal with their consequences. For instance, the variances in construction, operating, and maintenance costs are better managed by the private sector while public liability, environmental clearance and permitting risks can be more effectively dealt with by the public sector.

Even though there are broad benefits of PPPs and an increasing usage of them in infrastructure development, still they have faced criticizim in various aspects (Kwak, Chih & Ibbs, 2009) such as under:

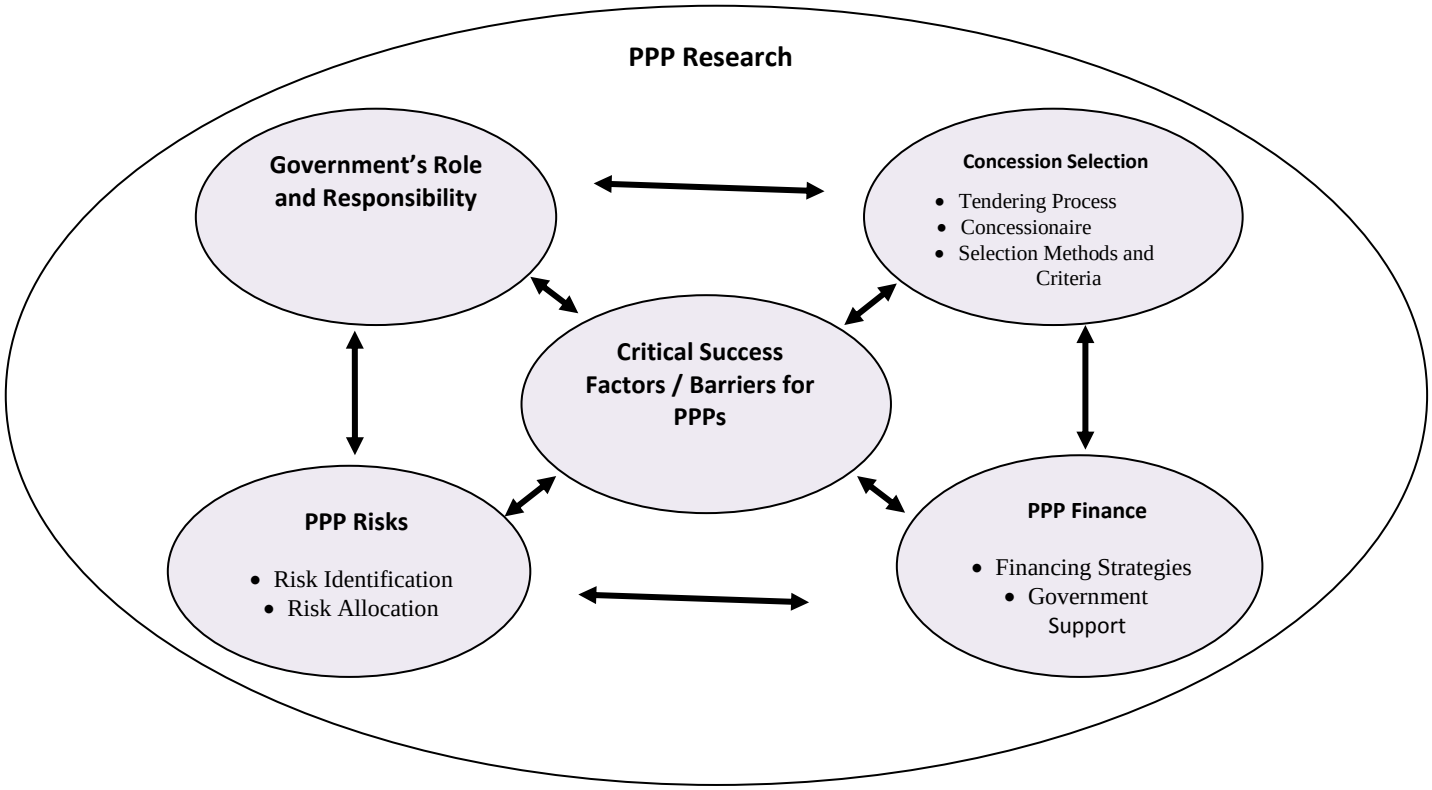
- The concept of PPPs being relatively new, is not well understood in some countries.
- There still exists a lack of knowledge and skills in both the public and private sectors to properly implement such long term PPP projects.
- The high tendering costs of projects, limits competition in PPP projects.
- PPP projects often get delayed due to public opposition, political debates and complex negotiation processes.
- PPP projects wherein the private entity is arranging major finances turn out to be bit expensive due to failureof the private players to arrange capital at economical rates as done by their public counterparts.
- There can be a risk of decreased project accountability in PPPs as most of the information is considered to be confident business related secrets; and
- Higher costs charged by PPPs from public users for using the infrastructure services may lead to a monopolistic situation.

1.6 Conceptual classification, framework and dimensions of Public Private Partnerships

A conceptual classification framework of PPP research is illustrated in figure 2:

The five main aspects of PPPs which have been widely debated and researched are: role and responsibilities of the government; the selection of suitable concessions; risks related to PPP; financing in PPP; and the discussion on critical success factors along with the barriers of such PPP projects (Kwak et al., 2009).

Figure 2. Critical Success Factors/ Barriers for PPP



1.6.1. Government Roles and Responsibilities

A vital role is played by the government in the development as well as management of a PPP project. The complete project may fail if the Governments fail to get involved in an appropriate manner. Prime roles identified for the government are: to establish enabling legal systems, to create favourable investment environment, have a regulatory framework, act and facilitate as a coordinating and supportive authority, to select a suitable concessionaire and active participation in project life-cycle phases.

According to Aziz (2007), several points still need to be looked into by the government and be addressed in order to deliver a successful PPP program, which are: (i) to recognise the advantages of utilizing finance from a private entity while funding a PPP arrangement, (ii) risk allocation in favour of the private entity, (iii) establishment of an all-inclusive legal framework that is able to account for the contractual obligations, (iv) a foolproof assessment of the value for money while selecting a delivery system, (v) to formulate a centre for policy development and implementation of the PPP, (vi) maintaining a transparent selection process, (vii) to normalise the process and contracts and (viii) to utilize performance specifications.

Durchslag, Puri, & Rao (1994) state that for the long term success of PPPs, a set of conditions must be met: complete commitment and support from the highest political authorities to push the program as fast as possible; to safeguard the integrity of the process. It is utmost

important that value be given to transparency and scope for discretionary decision making is minimized. Guarantees, incentives and credit provided by government should be minimized. Privatization process across all sectors should be overseen by an empowered committee of carefully selected individuals. The legal and regulatory framework for the sector should be developed and enacted before embarking on such projects. There is a need to ensure integrity of the restructuring process and maximise competition through the use of public tenders.

For the BOT system to work efficiently, governments need to deal with many issues as identified by Kumaraswamy & Zhang (2001), which include the following: have a stable political environment, establish adequate legal and regulatory framework, developing digenous capital market, ensure fair and transparent bidding process, provide requisite assistance and guarantees from government, conduct project feasibility study, selection of eligible concessionaire and thereafter rigorous assessment of project progress and performance.

1.6.2 Selection of a suitable concessionaire

Selection of a suitable concessionaire has a critical role in the success of PPP projects. The process of attaining this has many steps such as a well-structured tendering process, an appropriate concessionaire evaluation method and a set of evaluation criteria (Zhang, 2004).

In comparison to the traditional infrastructure projects, the tendering processes of PPP are more complicated and more costly. Multistage tendering is adopted by many governments which comprises of stages like inviting expression of interests, prequalifying tenders, evaluating tenders and subsequently negotiating with the preferred tenderers to select the most suitable concessionaire. Step by step guidelines are also developed by the Governments to standardize tendering documents and contracts to facilitate the tendering process.

A tender should only be selected as the favoured tender and subsequently awarded the contract when it qualifies on various criteria, as per the HM Treasury (1999). These criteria include and are not limited to qualifying on output specifications, life value for money for whole tenure, approval of important contract terms and required transfer of risks, affirmation of right to use of finance, unitary charge affordable to the public client and a cohesive consortium. Various methods for tender evaluation have been formulated with criteria being developed to help public entity in selecting the right concessionaire. The evaluation criteria may be classified under four major heads i.e. financial; technical; safety, health, environmental and managerial.

1.6.3 Risks of PPPs

Thomas, Kaidindi & Ananthanarayanan (2003) suggest that because of long concession periods, PPP projects involve elevated risk levels and this gets further escalated due to non -

uniformity of participants involved in the partnership. Division on the risk factors between the public and private entity is facilitated from such an arrangement. The public entity manages political risks (e.g., insecurity due to government policy and instability of government), financial risk (e.g., inflation risk and interest related risks) and legal (e.g., alterations in law and regulation and incompetent legal process) risks. On the other hand, the private player/s individually or jointly share risks related to operations (e.g., technical and management risks). For this purpose, it is necessary to identify and classify risks and also develop risk allocation strategies.

One of the major challenges is that in case of PPP projects, risks vary with varying projects and there is no standard approach or classified approach which may be used as a universal solution. Factors such as size and scale of projects affect the risks in a PPP project. Also risks are affected by the type of PPP project and the country where the project is operating. Importance of a specific risk factor also varies from project to project.

All potential risks associated with a PPP are firstly required to be understood by the participants. This in turn can assist to ensure that risks are properly allocated. Risk allocation should be such that the operator with the best financial and technical capabilities shares the major chunk of the management of these risks. Both the public and private sectors should come forward and share risks that are beyond the control of both of them. Of course implementation of these principles look good on paper but becomes very diffcult to attain practically in the real world as these are disputed at every stage by both the concerned agencies.

1.6.4 Public Finance

Financial plan forms an integral part of a PPP project and it is important that a foolproof plan is in place, as then only a long term successful PPP project can sustain. Zhang (2005a) found that the concessionaire's financial capability can be measured by four dimensions: strong financial engineering techniques; valuable financialassets and service costs , sound capital structure and requirement of low level return to investments and robust risk management competence.

Engineering techniques are required for acquiring necessary capital for the PPP projects because of their large, complex and capital-intensive innovative financial nature. When financing a PPP project, an appropriate mix of equity and debt should be maintained. Choosing a suitable financing strategy would involve evaluation of the project risks, conditions in which these projects perform and sources of financing.

The financial viability of a project is affected by a number of factors such as tariff structure, market need, concession period, credibility of the project and force majeure events . Often, government support in the form of minimum guaranteed revenue, flexibility in tariff

structure, direct and indirect financial supports such as grants, loans, tax incentives etc., force majeure of protection, foreign exchange rate protection and early completion bonuses are required to improve the financial viability and enhance the attractiveness of a PPP project. Since with PPPs there are always risks of allegations that the private partner is making substantial profit at the cost of public money, it becomes even more important that the government body makes sure to adjust the level and type of funding depending on the viability of PPP project.

1.6.5 Critical Success Factors

As per Rockart (1982) critical success factors (CSFs) are defined as those few key areas of activity in which favourable results are absolutely necessary for a particular manager to reach his or her goals. Some important critical success factors recognized for PPP projects include detailed risk analysis, appropriate risk allocation drive for faster project completion, reduction in project cost appreciation, and inspiration of innovation and control of maintenance costs (Akintoye et al., 2003). Li et al. (2005) lists some of the important CSFs as per their importance as follows–a well planned public agency and good governance, feasibility of project on technical grounds, in detail cost-benefit analysis with a realistic approach, responsibility /commitment of private/public entities, available financial market, suitable risk allocation, robust private consortium. CSFs have been classified into five principal factor groupings: more effective procurement procedures, stronger project implementation techniques, guarantees from public entity, economic conditions that are more favourable and available financial markets.

There is a requirement for improvement in delivery of service quaity and a need to bring in socio-economic development for a PPP project to succeed. According to Telliford (2009), the critical success factors have been identified as: support and consultation of stakeholders, involvement of public sector, political leadership, limited complexity, protected public governance, suitable risk sharing and rewards and effective working relationships among partners during/after contract negotiation.

Zhang (2005b) instead of classifying success factors, recognised six categories of barriers for PPP projects which are as follows: political, social and legal risks; conditions of economic and commercial nature that are not favourable; incompetent public procurement frameworks; lack of mature financing engineering techniques; public sector related problems and private sector related problems.

1.7 Conclusions

From aforesaid discussions, it is evident that adopting a PPP scheme, particulary in infrastructure projects is a difficult proposition. PPP infrastructure development, to a large extent, is dependent on the credibility and competence of the government. Very often, the

success of the PPP project depends on a technically competent, financially strong and managerially outstanding concessionaire. The governments should identify all potential risks of the project and secure appropriate risk allocation,instead of transferring all risks to the private sector. Private investments can be attracted by ensuring reasonable financial incentives and a stable revenue stream .

PPPs are not a one-stop solution for all infrastructure projects and governments cannot shirk from the role of providing basic infrastructure, irrespective of the returns. The government should conduct feasibility study to identify and thus prioritize pilot PPP projects so that a data base may be developed for PPP projects undertaken in the past. A standardizedPPP procurement process with specific contract documentation should be in place.Better training toall levels of government staff is required to establish a two-way commmunication channel withthe private sector.

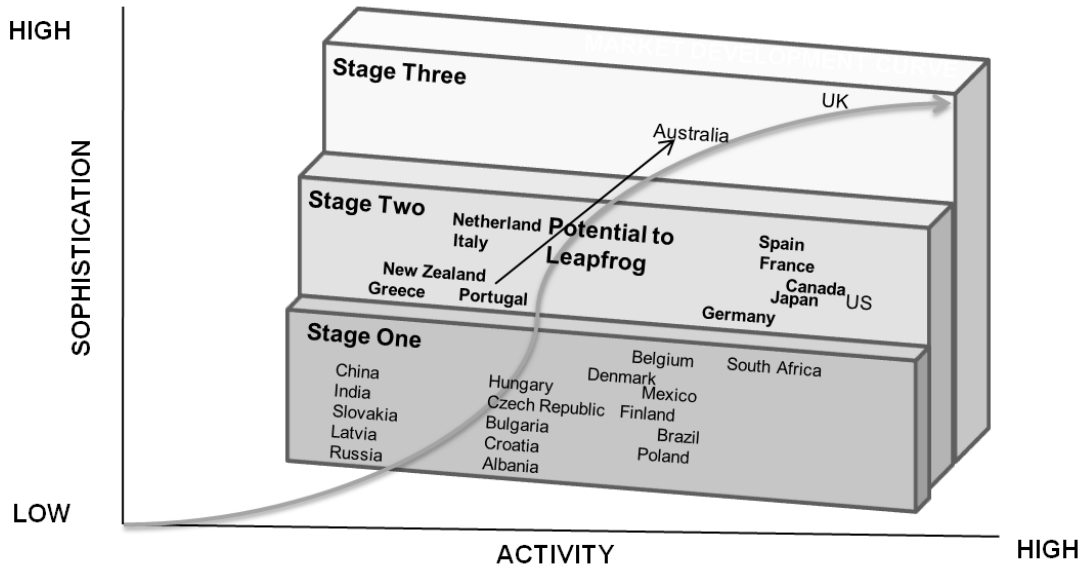
Knowledge and expertise should be shared and not owned by the private sector thus helping the government entity in creating policies suitable to PPP and thus a favorable environment with various options for investments. As per Kwak et al., (2009) an early involvement of financial institutions can actually help the private entity in understanding the feasibilty of the project better at an early stage. This in turn can help develop a better and more successful bidding process. In today's age of liasoning, it is also important to nurture long term relationships with potential partners from the industry so as to work jointly for effective functioning.

2 GLOBAL PERSPECTIVES ON PUBLIC PRIVATE PARTNERSHIPS

2.1 Development of Global PPP market

The growth of Public Private Partnerships in the last few decades in countries across the world has shown varying degrees of innovation and sophistication. PPPs do not have a standard structure and globally various practices are followed, differing from each country to even individual states and localities for developing infrastructure. Native geography and political scenario of the location are some of the many factors which play an important role in development of PPPs. There are many other factors also such as the degree of development of the capital market, the power behind these partnerships and the reasons facilitating their formation. However, three different stages of PPP maturity can be witnessed across the world as illustrated herein below:

Figure 3. PPP maturity Curve



Source: *9. William D. Eggers and Tiffany Dovey, Deloitte Research: Closing America's Infrastructure Gap: The Role of Public Private Partnership, (2007), pp. 09*

It would be seen from the above figure that the PPP market is well established in developed countries like Australia and UK. The developed countries in the EU such as Netherlands, France, Germany, Italy, Spain etc., US, Japan and Canada are at the second stage of maturity and are categorized as having the potential to leapfrog. Countries like India, China, and Brazil are still low on activity and sophistication. Based on this curve it would be useful to study the various economies appearing in the different stages of the maturity curve. Some of the selected countries across these three categories such as UK, Australia, Japan, Brazil and India are discussed upon to understand the PPP models being followed in these regions.

2.1.1 United Kingdom

UK witnessed a growth in the PPP activities during the 1980s, with a motive to decrease economy's dependency merely on public sector funding. However, the Private Finance Initiative (PFI) was launched by the UK government in the year 1992, making it as one of the initial concerted push for utilizing private sector financing for such projects. The PPP model has evolved over the years with the support of various initiatives. The perception of PPP has changed over the years from its initial acceptance as just a channel to offset the constraints on public sector expenditure to now slowly becoming a preferred model to deliver superior quality services.

Over the last two decades, United Kingdom (UK) has shown leadership in steering public infrastructure and services and finding new and innovative ways of delivering the same by working closely with the private sector players. The key success factors in PPP model adopted in UK have been the high level of political commitment leading to timely reforms, strong policy framework including a structured legal framework at national, regional and municipal levels and creating Partnerships UK (PUK) and the Treasury Task Force (TTF),etc. as specialized bodies for proper utilization of tax payer's money.

UK accounted for almost one-half of the European Union (EU) market, which was steadily growing until 2007 when the markets were strongly affected by the global financial crisis. According to Svigelj & Hrovatin (2014), one of the largest declines in the number and value of projects on account of financial crisis was observed in the UK, where the number of projects fell from 59% in 2007 to 33% in 2011 and total value declined from 43% to 18% in the same period. The crisis has led to limited access to finance and high interest rates. The decreased revenues of PPP projects have reduced their feasibility or have impacted on their overall profitability.

Recognising the need for intervention in the times of crisis, the UK government introduced the Treasury Infrastructure Finance Unit (TIFU) in March, 2009, with the objective of providing a measure of liquidity for all PFI projects facing finance-related delays. In addition, UK government replaced the PFI framework with Private Finance 2 (PF 2) in December 2012. PF 2 reaffirms the government's commitment to private sector involvement in infrastructure and services, while recognising recent changes in the economic context. The main features of PF 2 are: government equity participation, exclusion of soft services, minor changes to risk allocation and encouragement for capital markets financing.

2.1.2 Australia

In Australia, the Victorian State Government was viewed as the leading advocate for partnership approach to the delivery of infrastructure services and other states replicated the principles contained in their policy document (DTF, 2000).

The Australian PPP market can be taken as one of the most developed markets where PPP is practiced. Initially most of the PPP projects just catered to infrastructure projects which more than often were based on the BOT and BOOT types. But eventually the focus of PPP shifted in 2000s to more of social infrastructure. Thus more diverse projects which related to works such as that of hospitals and schools started coming up. Australia's future sustainability depends on water and energy infrastructure and hence the market for social infrastructure is expected to continue to develop (Ernst& Young Report, (n.d.) Accelerating PPP in India, 2012, p. 18).

With estimated investments close to US$ 101 billion by 2016, Australia is poised for momentous growth in infrastructure. The key national entities for PPP in Australia are:

- Infrastructure Australia-an independent statutory advisory council with 12 members from government and private sector.
- National PPP forum- enables a better collaboration across Australian regional jurisdiction for such projects by PPP mode.
- Australian PPP unit -setup by Department of Finance and Administration for providing guidance to public agencies on its uses.

PPPs in Australia can be categorized under two primary heads: Firstly, there is the main revenue stream or funding source which works to payback the private sector finance. This is for capacity building and takes the form of a service (or availability) payment from government. This is called the "social infrastructure PPP" under Australian policy guidance. One major reason for such a classification is that this model is mostly used for non-revenue based infrastructure such as schools, hospitals, prisons and other "social" projects. Under the second category, termed as 'economic infrastructure PPP', charges are paid by the users of the infrastructure, such as tolls which become the primary source of funding. Most of its usage is seen in projects relating to roads, railways and other "economic" (i.e. income producing) infrastructure (Infrastructure Australia, 2014).

2.1.3 Japan

PFI Promotion Law was introduced in Japan in 1999, wherein a variant of the UK's PFI model was introduced to the Japanese infrastructure market. The projects initiated are typically small, targeting the social infrastructure sectors (e.g. government buildings, schools and hospitals) which are delivered mainly on a BTO basis. Private sector participation in Japan is mostly limited to construction and finance. Thus the degree of risk mitigation in the Japanese model also gets limited. The model has its own limitations, although it has proved to be simple and effective in smoothening and expediting the processes. Both indigenous and international financiers and operators have shown limited interest in current form of Japanese PFI market. This leaves the Japanese public sector from getting the prime benefits of a true PPP model and access to key benefits such as risk transfer, improved quality of services (JETRO, 2010).

On analysis of the key features of the Japanese PFI market, it is noted that there is inadequate support for the use of PFI by the public sector and the coordination and assistance for PFI delivery at the national level is low. Large amounts of small capital value projects dominate the Japanese markets, and most of them are being tendered on a BTO basis which limits the scope of services that are largely input based and does not extend beyond the construction phase. Most of these projects have low capital value, with limited scope of services and locally based tendering processes. Hence, there is low level of interest, awareness and participation from domestic and international market participants in Japanese PFI projects. Further, private sector participation in some of the major economic infrastructure sectors such as rail, roads and ports is restricted under legislative provisions. Institutional equity investors are unaware or shy away from participation in PFI projects. The accounting and tax structure also does not facilitate long term institutional equity investment in projects. All these are adverse factors going against the sustenance of PPP model in this region (JETRO, 2010).

2.1.4 Brazil

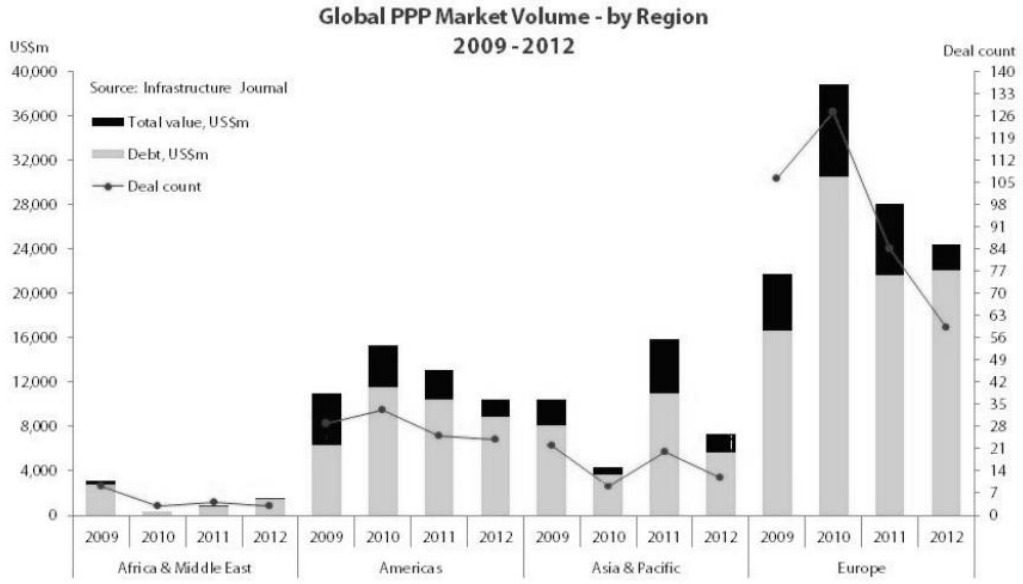
Majority of Brazil's original infrastructure was developed with private investments and the concept has been prevalent for a long time. One such example can be taken as the first rail roads of the country which were built under state licenses by private players. One of the longest highway networks in the world exists in Brazil which is under private concessions. This is in itself a big indicator of co-operation between public and private entities.

The PPP law adopted in Brazil has two components -the public-private partnership law(2004) which allows the payment to be funded partly or totally by the government and the concessions law(1995) wherein the investment is recovered from the revenues collected from the users in terms of concession. A fund has also been established by the government to warranty its obligations under the agreement. Use of alternative mechanisms for dispute resolution, including arbitration also forms part of the legislation.

As per Ernst & Young Report (2012), although certain advantages of PPPs have been witnessed, only a handful of such PPP projects have been contracted in the country. One major reason cited is that most of the government officials do not find the idea of paying tax payers money to private investors very comforting. There are hesitations in delivering such contracts due to major loop holes in policy formulation, regulation and supervision of contracts that is required once they are in place. According to the law, payment cannot be made by the government until services are provided by the private partner to the users. Since huge investment burden has to be borne by the private entity without any fixed source of revenues, financing the project poses a problem. Phase-II of the growth acceleration programme launched by Brazil provides for an estimated expenditure of US$ 526 billion to upgrade the country's infrastructure which may be incurred by public and private investments for the period 2011 to 2014.

2.2 Overall Global Review – Regional and Sectoral Study

Figure 4. Global Trend of PPP by Regions.



Source: *Overview of Global Markets, (n.d.), OECD 2013 annual meeting of senior PPP officials, p. 6*

Global PPP market has witnessed a decline in the recent years according to OECD report, (2013) with the European market registering the lowest volume and lowest number of transactions for a decade. Many countries with established PPP programmes continue to face difficult economic conditions. In general, the policy response does not appear to be adequate to arrest the decline in PPP. But the fundamental conditions for PPP to thrive remain and there is optimism about medium term growth in emerging markets.

According to Global Private Participation in Infrastructure (PPI) update of World Bank (2013), the investment in PPP projects in emerging markets fell by 24 percent in comparison with 2012, with significant decreases in Brazil and India. In the case of India, the decline in PPP volume was 68% below its five year average. Investments in telecom and energy were the highest, each accounting for 38 percent of global PPI. Nearly half of PPI (46% share) was accounted for by Latin America & Caribbean Region while Europe and Central Asia Region was a distant second at 19%. Africa witnessed an increase of 8.4 percent, the highest level since 2008. Top six countries in terms of investment were Brazil, Turkey, India, Mexico, Russia and China.

2.3 Public Private Partnerships in the Railway Sector

It is widely accepted that efficient rail transport can be an important catalyst for economic growth and development. Rail transport can help generate employment through business and trade, connect manufacturing sites to local and global markets, endorse the countrywide and

cross-border integration of regions and make right of entry to the labor market, education and health services possible.

According to Gangwar and Raghuram (2010), railways conventionally have been seen to be under the control of the federal government, world over. Most of the developed countries such as US, UK, Japan and the European Union, have taken up several reforms including restructuring of their railway systems in the past few decades. State owned monopolies have been encouraged to enter into public private partnerships that in turn will help in breeding a competitive environment. Multiple operators are providing freight and passenger services in these countries, leading to open competition. On the contrary, some other developing countries such as China, Russia, Malaysia and India have all freight and passenger operations under the direct control and management of their government owned railways. The potential of container based movement is well recognized by these countries leading to creation of separate holding companies which work as sole providers of container rail haulage.

A wheel-rail split model has been adopted successfully by the British government wherein the rail is owned by Network Rail, a 'not for profit' body. Franchised train operators are authorized to operate trains in particular areas/routes and are also responsible, inter-alia, for managing and maintaining certain railway stations. Open access is also granted to fully independent companies working as freight operators, which invest in their own assets, develop their own business strategy and negotiate access to the track directly with network rail. Government departments such as Department of Transport provide strategic direction and funding to the railways and procure rail franchises and projects. A high level operating statement (HLOS) sets out the deliverables on the part of the operators. In addition, Office of Rail Regulator (ORR) established in 1993, looks after the interests of the users and works to promote development of the network and enhanced efficiency and competition (Office of Rail Regulation, 2014).

Another major successful example of privatization is that of Japanese National Railways which introduced privatization by organizing operations into six passenger companies and a nationwide freight operator in the year 1987. The model of horizontal separation in which the passenger sector is vertically integrated and the freight sector accesses the passenger company's infrastructure was adopted in Japan. Although the reform has been largely successful, there are concerns about financial difficulties of unprofitable lines. (Kurosaki & Kawata, 2013)

On the other hand privatization efforts in Argentina turned out to be a failure due to un-organized and piecemeal approach. The privatization started in 1990 with the plan to break up the network into segments and to grant concessions to private companies for their operation through competitive bidding. Six companies were granted long term concessions (30 years) with optional 10 year extension for the operation of freight services. The capital assets continued to be the property of the state and the operators were required to pay as per utilization and to rent the rolling stock. But this in turn left Argentina's passenger and the public sector in turmoil. Government appointed a regulator who lacked discretion to modify

concession contracts. With growing competition, freight traffic fell short of contracted levels and tariffs had to be reduced. Concessionaires ended up paying and investing less resulting in subsidies and ineffective contracts. After a decade the private management railway services through concessions turned out to be a fiasco. (IBRD, 2011)

Examples of PPP exist in economies world over. The Channel Tunnel Rail Link (CTRL) is one such highly complex and costly cross border PPP project linking France and United Kingdom. The British side of the Channel Tunnel was envisioned as a PPP concession, with a 90 year span of control for the private sector to design, finance and operates. The concession agreement between the Secretary of State for Transport, UK and High Speed 1 Limited (HS 1 Limited) pertains to the design, construction, financing, operation, repair and maintenance of the high-speed railway link from St. Pancras Station in London to the Channel Tunnel that connects with the international high-speed routes between London and Paris and London and Brussels. Although the weak estimates on passenger use and lack of financing for development of links affected the project to some extent, private engineering and building companies were able to deliver results on time and within the budget. Also, the Perpignan-Figueiras Rail Concession for providing cross border rail link between France and Spain as part of Trans European Network is a flagship example for a successful PPP project in a highly complex trans-border environment (Geest and Nunez-Ferrer, 2011).

An open access competition based model is followed in the railways throughout European Union. This means that rail operator of each country have rights to access any and all other railways in other countries subject to payment of access charge and available capacity. From the 1980s, an increasing trend has been witnessed particularly in Europe to divide companies that currently own the rolling stock and the ones having an ownership of the infrastructure such as railway tracks, signals, tunnels, etc. As envisaged such a separation may allow for open access to the tracks which meet safety requirements by any train operator. However, the unbundling benefit was not fully utilized due to the lower levels of traffic, smaller sizes of companies and the high coordination costs involved.

In terms of energy efficiency, rail transport is considered to be more environment friendly than road or air transport. Therefore, a low carbon transport strategy necessarily involves rail transport as a primary component. The two success stories of Japan and Great Britain studied in contrast with the failure of the privatization effort in Argentina allow for some very critical lessons that can be taught (Department of Economic Affairs, 2009):

a) ‘Value for money for the consumer’ philosophy should be the driving force while implementing PPPs. Where it is seen merely as resource augmenting strategy by the public sector, prospects for failure are much greater.
b) It is essential that a holistic view of the entire sector and its benefits at the national level is taken into account while undertaking privatization of the railways. A piecemeal approach, as in the case of Argentina Rail, is to be avoided at all costs.
c) Social objectives associated with the railways need not be neglected even after the privatization of railways. Thus governments can continue to achieve their social

objective through a regulatory mechanism, as in the case of Great Britain, at the same time, subsidize certain routes which are un-remunerative.

d) Exceptional freight and fare increases should be avoided by all means if privatization of railways has to be done successfully. With proper regulation and increased competition, costs can in fact decrease. Also it paves a way for greater operational efficiencies as has been witnessed in Japan.

e) One aspect that needs to be avoided is political interference with the structure of the railways which tends to drive up costs and results in deterioration in quality of the service provided. The developing countries are particularly affected by this malaise and cannot afford to be arm twisted in the process, which will only derail the efforts to streamline rail services.

f) Infrastructure management and train services should be separated under two distinct heads which in turn can give greater focus on each of the activities and delivering better value and service to the customer.

3. PPP PERSPECTIVES IN INDIAN CONTEXT

3.1 Origin and Development

Public policy in India, after its gaining independence in 1947 from British colonial rule, was dictated by the perceived need to provide social justice, equality and equity to the impoverished millions in the country. Thereafter, the country embarked on a socialist path paving the foundation for development of public sector as the pillars of growth. However, this led to stifling of private enterprise and 'license raj' leading to limited growth in economy. Recognizing the need for radical reforms, economic liberalization was initiated in the early 1990s, which has since continued, albeit at a slow pace, leading India to the growth path as one of the fast growing economies, even in times of global recessionary trends.

India has witnessed a high growth rate in the last decade (2000-2010) averaging 7%, although it has tapered to about 5% currently. The Indian PPP story has been a mixed bag so far. Despite many challenges in meeting targets, National Highway Development Program has been successful in attracting huge private sector investment. However, huge potential exists in sectors like railways, power transmission and distribution, education, health and urban infrastructure.

Both the central government as well as most of the state governments has taken up some determined programmes for developing infrastructure through PPPs. This has resulted in India having the largest number of PPP projects amongst all emerging market countries. (Planning Commission, 2013) During the period from 1991 to 2006, just 86 PPP projects worth US$ 157.1 billion were awarded. Investments have picked up thereafter, and the government of India (hereinafter: GOI) has been able to attract considerable investment in PPP projects in India particularly in the field of roads, ports, airports, power, telecom, etc. According to the PPI database of the World Bank (2014), about 775 infrastructure projects in India have attracted private sector investment to the tune of US $ 321 billion and reached financial closure between 1990 and 2013. Of this, energy sector has a major share at 43 per cent followed by telecom and transport sectors during the period. India ranks second only to China in terms of number of PPP projects and second to Brazil, in terms of investments. 15 projects have been cancelled or terminated due to various reasons.

According to the Planning Commission, roughly one trillion dollars is required to be ploughed in towards investment in infrastructure sectors in the Twelfth Plan period (2012-2017). The percentage of private finance in the total investment allocated to infrastructure rose from 22 % in the Tenth (10^{th}) Plan to 36.61 % in the Eleventh (11^{th}) Plan. The Planning Commission (2013) estimates that private investment to the tune of 48 per cent will be required if the infrastructure investment targets are to be met. The GOI aims to enhance infrastructure investment from 7% of GDP to 9% of GDP, with increasing reliance on private capital.

3.2 Institutional Framework and Governmental Support

PPP is a major thrust area for GOI which has established several institutional initiatives to promote the growth of such partnerships in the country, with the objective of achieving additional capacity and ensuring delivery of quality public services at reasonable costs. With a view to promote private investment in infrastructure sector, the steps taken include: appraisal and approval of PPP projects through robust institutional structures, formulation of standard procedures including development of documents such as model concession agreements common to all infrastructure sectors and creation of dedicated institutions to enhance availability of finance and provide viability gap funding.(Planning Commission, 2013).

The priority accorded to PPP in nation building can be gauged from the fact that a Committee on Infrastructure (CoI), set up in August 2004, under the chairmanship of the Prime Minister, oversees policies and programmes in PPP model. The prime objectives of CoI were of coming up with policy framework to support timely creation of world class infrastructure, by supplying services that can cater to international standards, developing structures that accentuate the role of PPPs and monitoring the development of important infrastructure projects so as to ensure that set goals are achieved. The erstwhile committee was upgraded to a Cabinet Committee on Infrastructure (CCI) in July 2009, again chaired by the prime minister. Across the infrastructure sectors, CCI reviews and approves policies and projects (Planning Commission, 2013).

1. PPP Appraisal Committee and Empowered Institution

A Public-Private Partnership Appraisal Committee (PPPAC) chaired by Secretary, Department of Economic Affairs is in place with various key members having prime objective to expedite PPP projects under scrutiny process by giving necessary approvals. Planning Commission appraises the project proposals that are subsequently approved by the PPPAC. The projects approved by the Empowered Institution (EI) are then sent for further Viability Gap Funding (Planning Commission, 2013).

2. Regulatory Framework

Independent regulatory authorities have been set up in the power, telecom, and civil aviation sectors to oversee regulatory issues. An independent authority also looks after fixation of tariffs in the port sector. Numerous responsibilities are discharged by these authorities, which used to be once under the domain of the Government. Regulatory Reforms Bill is also under consideration by the Government for initiating further improvements in the regulatory structures and practices.

3. Advisory Services

Since most of the PPP projects that are taken up for infrastructure development are based on long-term contracts, it requires work to be delegated leading to delegation of governmental authority. Carrying out of PPP projects requires proper advisory services in terms of groundwork for formulation of project agreements, structuring of projects and so on. Consultants are assigned for projects under a scheme for technical assistance to project authorities formulated by Planning Commission. The India Infrastructure Projects Development Fund (IIPDF) created by the Ministry of Finance has the objective of providing loans for meeting development expenses and includes the cost of engaging consultants for PPP projects (Planning Commission, 2013).

4. Viability Gap Funding

In 2006, viability gap funding (VGF) schemes were notified by the GOI. These were done keeping in mind the financial viability of the competitively bid infrastructure projects which may not be commercially justified but fetch economic returns in the long run. Up to 20% of capital costs were to be borne by the Central Government under the scheme for such PPP projects which were begun by any Central Ministry, State Government, statutory entity or local body. In fact an extra grant of up to 20% of projects costs could be provided by the supporting Ministry, State Government or projects authority (Planning Commission, 2013).

5. India Infrastructure Finance Company Limited (IIFCL)

Planning Commission laid down the foundation of the IIFCL which was incorporated by the Ministry of Finance (2006) for arranging long-term loan for financing infrastructure projects that would typically involve along gestation period. IIFCL provides for financial aid of up to 20 per cent of the project cost both through direct lending to project companies and by refinancing banks and financial institutions. Funds are raised from both national and overseas markets on the strength of government guarantees by IIFCL.

6. High Level Committee on Financial Infrastructure

A High Level Committee on Financial Infrastructure has been constituted for appraisal of the framework that is already in place for financing of infrastructure and thus make recommendations based on their review.

7. Standardised Document and Processes

Adoption of a standardized framework has been keenly taken up by the government which has decided to formulate standard documents for bidding and award of PPP concessions. It is seen and felt that such standardizations bring in transparency in the processes such as risks allocations, costs and obligations thus minimizing the potential for disputes and malfeasance.

The model concession agreements (MCAs) have been published by Secretariat for PPP and infrastructure at the Planning Commission for various sectors such as highways, operation of container trains, airports, port terminals, metro rail etc. Standardized guidelines have been developed along with model documents which incorporate key principles relating to the bid

process for PPP projects. The government has identified several areas for reform of policies and processes. Various Guidelines &other print materials have been published to facilitate these initiatives.

8. Engineering, Procurement, Construction (EPC) Contract

The national highway sector witnesses a challenge that most of the conventional item-rate contracts generally get prone to time and cost overruns. This in turn results in humongous costs for the exchequer, bundled with significant delays in the completion of projects. Many developed countries have started moving to or have already completely moved to Engineering, Procurement and Construction (EPC) contract. In EPC the contractor is responsible for design and construction on a turnkey basis and for a fixed price. A model EPC contract for highways in India has been published by the Planning Commission. It is expected that about 20,000 km of two-lane national highways would be developed under this model.

9. PPPs in Infrastructure

An environment which ensures competition and transparency is being encouraged for promoting private investment in infrastructure. The necessary framework is in place for protection of public interest and requisite processes for due diligence with checks and balances is being followed. However, it is inevitable that unless governance issues such as the ones about competition in service provision, collection of user charges, institutional capacity, regulation and dispute resolution are addressed and looked into, the deployment of requisite resources for the necessary infrastructure investment may not get mobilized.

Economic Intelligence Unit of the Economist (2011), in one of their studies, classifies UK and Australia as mature economies, whereas India in the studies is placed in the league of developed economies finding its place among others such as Republic of Korea and Japan. This classification is based on implementation of PPP projects for infrastructure development in these countries. India ranks second on PPP projects performance among the Asian nations outscoring China and Japan. It also stands fourth in the list of Asia-Pacific nations. As per the report, strong political will and advances in public capacity and processes characterizes development of PPP in India.

The Report states that PPP projects have enjoyed high level of acceptability in India. It states that government agencies have gained adequate experience and expertise in developing PPP projects and the risk allocation has been improving with introduction of Model Concession Agreement. Viability Gap Funding and other new initiatives such as the India Infrastructure Finance Company Limited have brought in enhanced contribution of private finance in infrastructure.

Broadly speaking, nurturing and executing PPP projects is far more challenging than constructing and implementing traditional projects (Bagal, 2008). Further, there is an urgent need to make serious efforts to enhance the capabilities to take up the challenges of execution

at the level of governments, especially at the state and local level, without which the investments being envisaged by the Planning Commission may not happen at all.

In the current day scenario, the Indian Government realizes the requirement and importance of a Public Private Partnership and this point is clearly visible with the 12th Five Year Plan document (2012-2017). An estimated one trillion dollars investment into the infrastructure sector, with major share in transport sector will be required in the Twelfth Plan. Private investments will need to be stepped up, given the resource constraints faced by the governments. Indian road sector already has witnessed a fair degree of success in adopting the Public–Private Partnership (PPP) model. Efforts are ongoing to attract private investments towards Ports, Airports, Railways and Inland Waterways in varying degrees. Investment in the railways, particularly in areas of safety, modernization and expansion, needs to be stepped up as the same gets sidelined due to socio - economic factors, political environment and sentiments of the country. Planning Commission has stressed the need to increase the share of private investments of the total infrastructure investments in the economy to 48 percent in the Twelfth Plan as against 36.6 per cent by the end of the Eleventh Plan (Planning Commission, 2013).

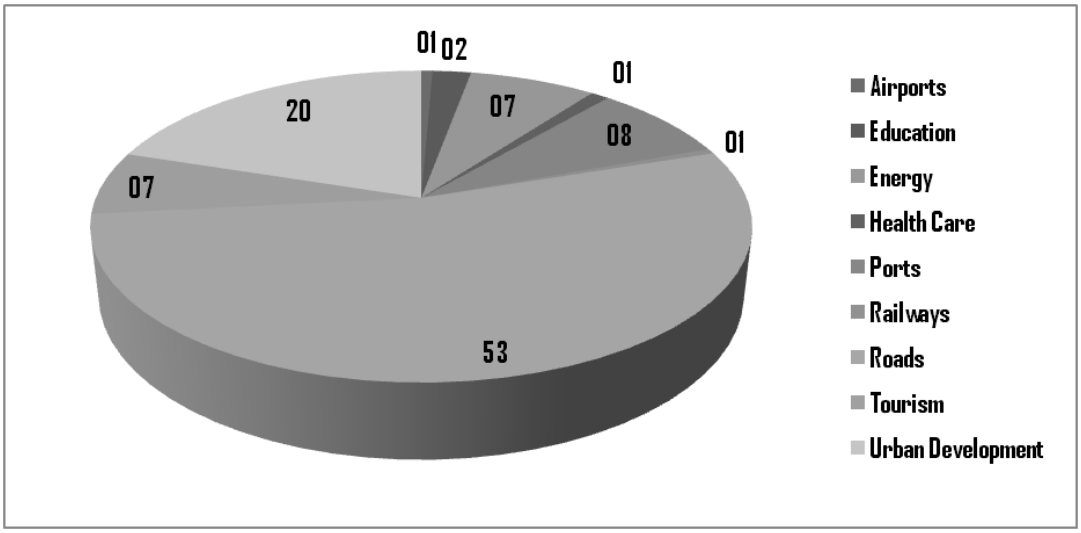
3.3 Status and Progress Report

Liberalization of the Indian economy in the 1990s ushered in reforms in the transport policy. It is now recognized that transport is an activity with economic benefits facilitating growth and helping in reduction of poverty. The government's role has undergone a change gradually to become a facilitator vis-à-vis a direct provider. The government has initiated innovative public-private partnership (PPP) models, giving flexibility to charge users and availing of tax concessions by the private sector. The government is also taking measures to streamline customs and excise procedures. These measures have resulted in higher private/foreign participation in the Indian transport and logistics sector. However, the government continues to be a major investor in this sector, especially in transport infrastructure (Mukherjee and Miglani, 2010).

The PPP India database (Department of Economic Affairs, Ministry of Finance) as on 31 July, 2011 indicates that 758 PPP projects costing US $ 64 billion is awarded/underway status (i.e., in operational, or in other stages). E-governance, health and education sectors are areas with high potential for adoption of PPP model. Number and value of PPP projects are highest in states such as Karnataka, Andhra Pradesh and Madhya Pradesh. The National Highway Authority of India (NHAI) extensively uses the PPP model at the central level.

Out of the total of 758 projects as listed in the PPP India database (2011), the sector wise breakup as indicated in the figure below suggests that maximum PPP projects have been taken in the roadways sector followed by the urban development and port related projects. Railways sector has a very minute presence in this.

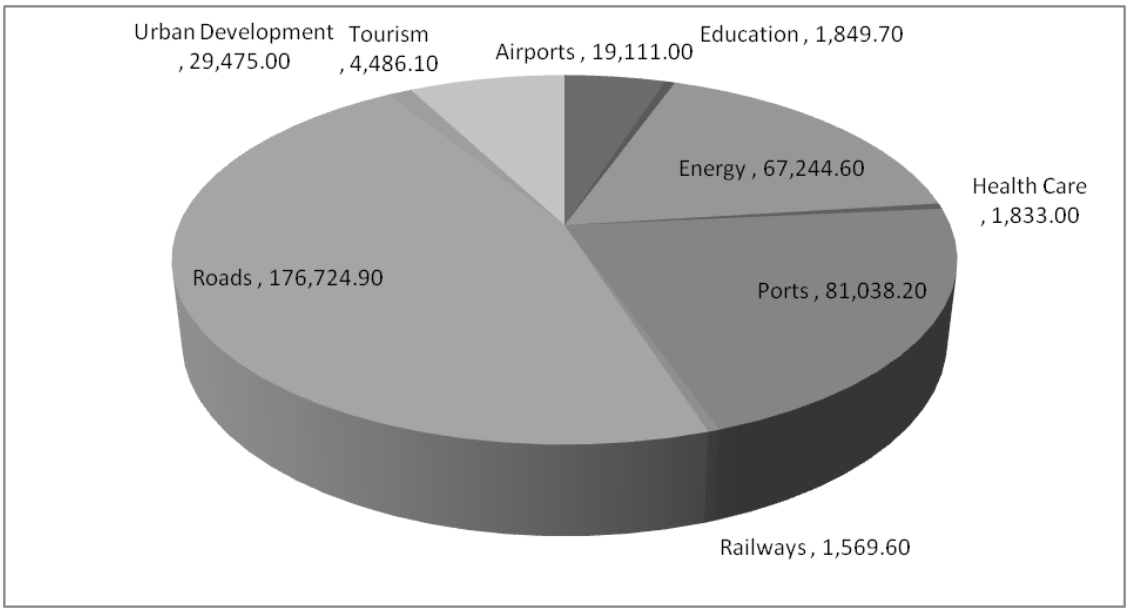
Figure 5. Sector wise break-up of number of PPP projects in India in July 2011 (in % age)



Source: Adapted from PPP India database,(n.d.) as of July 2011

Data furnished in PPP India database relating to the value of contracts, presented in figure 6, clearly indicates that roadways projects attract the maximum investment followed by the ports and the energy sector respectively. Here again, the Railways sector is seen to be lagging behind in investment, although the capital requirement is quite huge.

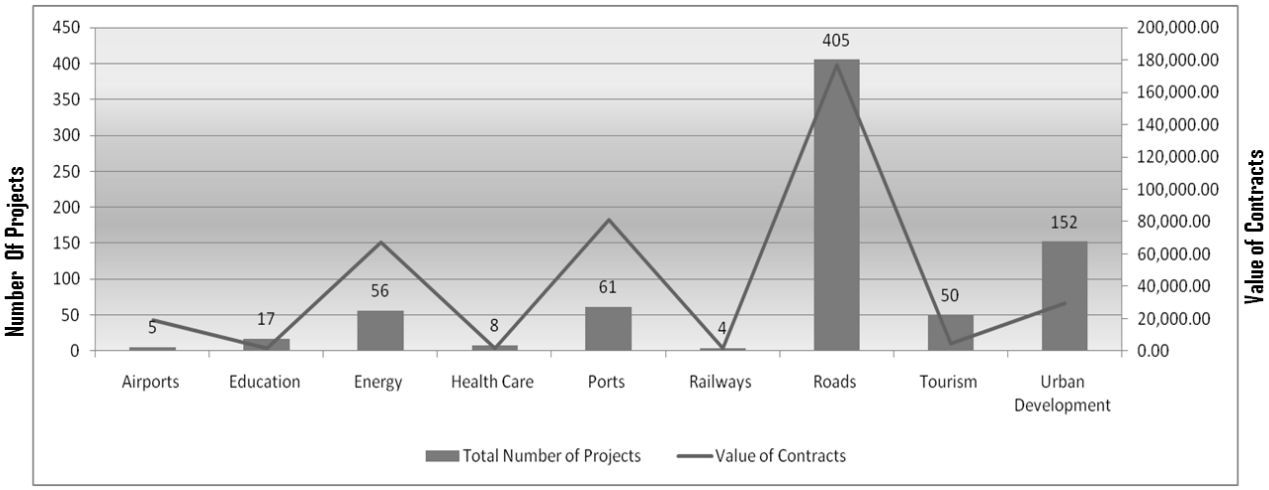
Figure 6. Value of contracts of PPP projects in India by sectors in July 2011



Source: Adapted from PPP India database,(n.d.) as of July 2011

In fact for a better understanding, if the number of projects and the value of these contracts is plotted on the same graph, then it is seen from the figure 7 that airports, ports and energy sector come to be the most capital intensive.

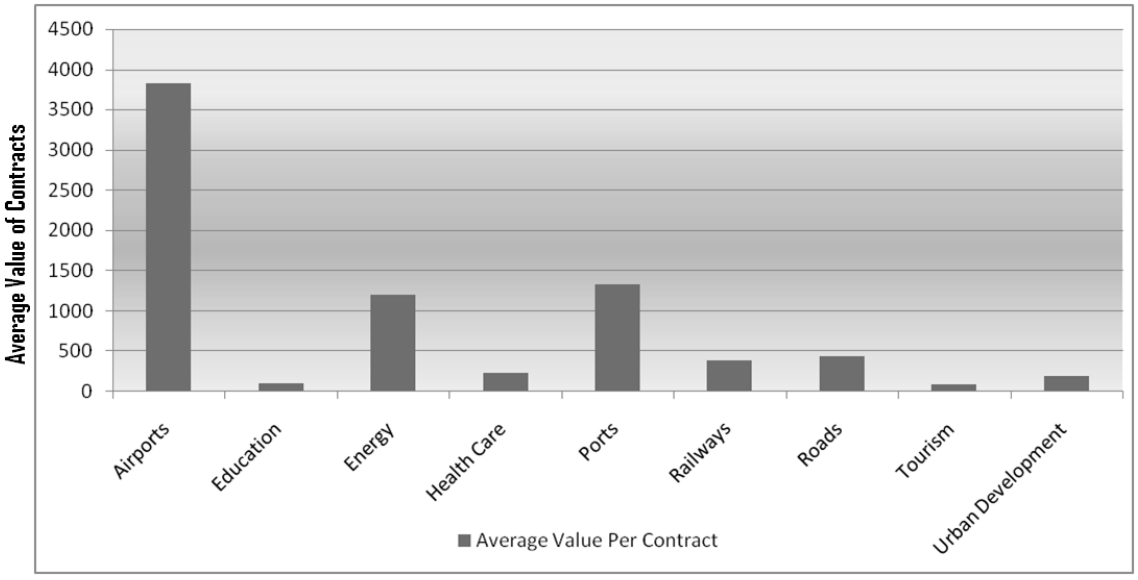
Figure 7. Number and the value of PPP projects in India in July 2011



Source: Adapted from PPP India database, (n.d.) as of July 2011

The important point to note here is that although a larger number of PPP projects have come up in the Roadways sector, the average value per contract for both Roadways and Railways sectors is low and almost identical. This is an encouraging indicator for the government, which has a social obligation of providing the citizens with a well connected Road and Rail infrastructure, as well as for the private sector.

Figure 8. Sector wise average value per PPP Contract in India in July 2011



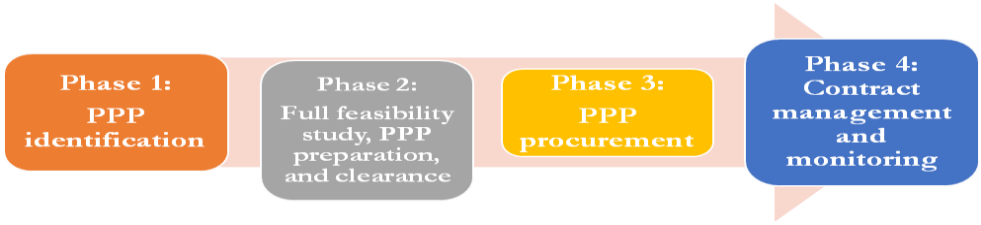
Source: Adapted from PPP India database,(n.d.) as of July 2011

3.4 The PPP Process

The PPP Cell, Department of Economic Affairs, Ministry of Finance, GoI (2010), has identified that developing and implementing a project as a PPP involves a series of steps that should be undertaken with a clearly defined process. The first phase involves identification of

a set of potential projects and preparation of a pre-feasibility report. In the second phase, detailed studies are carried out and an application is made for in-principle authorization to continue to the procurement Phase. The third phase involves the procurement process wherein an application is made for final approval, the preferred bidder is selected and the project is taken to technical close. In the fourth phase the contract is closely monitored and the performance of the private partner is assessed by the sponsoring authority.

Figure 9. PPP Process flowchart



Source: *Adapted from Developing Toolkits for Improving Public Private Partnership Decision Making Processes User Guide. (2010, pg 04*

3.5 General financing structures for PPP in India

For developing infrastructure projects in India, individual project companies known as Special Purpose Vehicles (SPVs) are often created. A Group of SPVs then go on to formulate a single company (Holding Company) which is a separate entity from the main company of the developer. This holding company is created for better protection of the parent company from various possible threats and risks in the concession business. Under RBI guidelines such holding companies are classified as non banking finance companies (NBFC). Since rules do not permit FDI under the automatic approval route, accessing foreign direct investment in a holding company is a difficult proposition. Since these holding companies are categorized under NBFCs, they come under the ambit of extra regulatory compliances .

3.6 Challenges for PPP in India

PPP implementation in India faces various challenges such as lack of independent PPP regulator, lack of information, inadequate project evaluation and development, lack of institutional capacity and financing availability. There is no single window clearance for speedy approval of projects (Reddy, et al. 2014). A more robust regulatory environment, with an independent regulator is essential in order to attract higher investment by domestic and international private funds. There is lack of proper authentic information and online easy access to vital information. Detailed and up to date database on PPP projects consisting of feasibility reports, concession agreements, status of various clearances and land acquisitions are found to be wanting. The project development activities such as detailed feasibility study, environmental/ forest clearances, land acquisition, etc are not given the requisite focus by the concessioning authorities. Conversion of targets into projects is often hindered by limited institutional capacity to undertake large and complex projects, at the central, state and local

levels. There is limited institutional capacity at ministerial level, at both centre& state level to manage large scale, complex projects which follow a totally different form and structure from the traditional projects. For raising debt for PPP projects, the private sector has to depend heavily on commercial banks. In current times the funding for PPP projects is getting difficult as most commercial banks are close to reaching their sectoral exposure limits and it is also seen that huge number of large infrastructure companies are being highly leveraged. Although most of these issues are being addressed by the Government of India, the limited availability of funding sources continues to be a major challenge.

3.7 Conclusion

With the new government in place since June 2014, momentum on the PPP front has again picked up with various policy pronouncements and budget proposals favoring participation of private sector in public projects. The country is targeting for a higher growth trajectory through strong infrastructure investments. Setting up an independent institutional structure for PPP handling, sector-specific regulatory mechanisms and higher level of transparency of information for PPP are some of the critical measures required to be taken at the policy level to attract private investment into this sector. Capacity building in project development needs to be stepped up at the centre, state and local body level. Assistance of experienced technical and transaction advisors is a critical aspect in project development. Responsibility, costs and risks need to be effectively distributed between the public and private sector. Selection of a private partner also needs to be done meticulously giving attention to all aspects. Development of a healthy financial market is also essential to boost investment in this sector. For facing challenges on the path of economic growth, it is necessary to effectively deploy various PPP models available and innovate through new models.

4 ANALYSIS OF PPP IN CONTAINERIZED RAIL OPERATIONS IN INDIA

4.1 Review of Rail Sector in India

India has the largest rail network in Asia and the second largest in the world (behind the USA) spanning 64,456 km and more than 7,133 railway stations. Indian Railways operate 19,000 trains daily, transporting 2.65 MMTs of freight and 23 million passengers across the country. Rail freight has been growing at 7% annually crossing 1 billion ton mark in 2013. However according to Planning Commission (2013), share of PPP investment in railways has remained low in the 11th Five year plan – only 4% of the plan outlay.

The functions of Indian Railways can be categorized under core and non-core activities. Core activities include transportation of freight and passengers, operation and maintenance of tracks, wagons, stations and other assets. Non-core activities include running schools, catering and other services for the railway staff.

In the past, Indian Railways have attempted organizational reforms in a piece-meal manner by creating wholly or partly owned subsidiaries to deal with specific areas such as catering, container train operations etc. It has also partnered in a limited manner with state governments and/or private sector for creation of infrastructure projects such as construction of new railway lines, procurement of wagons and wagon manufacturing.

The Ministry of Railways (Hereinafter: MoR), Government of India oversees the functioning of this mammoth organization. Railway Budget is presented every year before the Indian Parliament. The facilities, services, operations and administration of the Indian Railways are all tightly controlled and monitored through respective divisions, zones and the Railway Board. The secretaries of the MoR also double as the top management, thereby bundling the roles of licensor, infrastructure service provider, operator and regulator.

Expert Group on Indian Railways (2001), also known as Rakesh Mohan Committee has identified various reasons for inefficiencies in Railways. It has shown that Railways themselves had undertaken a large number of unrelated activities such as manufacturing, catering, maintenance, telecommunications etc. that were not core to the rail operation. The large set of non-core operations took away valuable senior management time that could have been better spent on the core business. The Committee has recommended radical restructuring measures in the Railways relating to ownership, organization, competition and regulation.

4.2 Overview of PPP projects in rail sector

Efforts made by Indian Railways to bring in private participation in areas such as Catering, Wagon ownership on leasing and joint ventures for rail infrastructure projects have been limited in scale and scope. The recent railway budgets have noted the need to bring in private

capital through PPPs to the maximum extent in areas which are amenable to PPPs to improve efficiencies and control costs.

Although the Railways Act enacted in 1989 does not preclude private railway systems, railway transportation is reserved for the public sector under the industrial policy resolution of 1991, as amended from time to time. This means that currently train operation can be done only by public sector while other related activities such as that of design, construction, financing and maintenance can be undertaken through private participation through a concession award by government of India. Unlike other infrastructure projects in ports, airports and highways which can be operated and maintained independently, it is not feasible to segregate core activities in Railways. New projects have to be tailor-made in conjunction with an existing larger Railway network. This historical perspective effectively precludes participation by private sector through PPP mode in capacity building.

Railways initiated unbundling of its auxiliary activities by setting up independent corporations such as Container Corporation of India Limited (1988), Indian Railway Catering and Tourism Corporation Limited (IRCTC), Pipavav Railway Corporate Limited (PRCL), Rail Vikas Nigam Limited (RVNL) etc. Though these corporations were entities under the control of Ministry of Railways, the primary focus on specialized functions and activities was achieved by these companies.

A major project that the Railways have embarked upon is the construction of a new Dedicated Freight Corridor (DFC) initially covering about 3,338 kilometers. This ambitious project comes at an estimated cost of US$ 6 billion which involves linking the ports of Western India and the ports and mines of Eastern India with Delhi and the state of Punjab. The construction of this corridor has been possible by a Special Purpose Vehicle being set up with amalgamation of engineering, procurement and construction (EPC) and such PPP methods. A major part of the project is being financed through multilateral/bilateral debt from the World Bank and Japan International Cooperation Agency funding. Part of this section on eastern DFC is to be implemented through PPP model. The DFC will be a major game-changer in rail transport in India as this will facilitate the average speed of freight trains to go up from 25 km/h to 70 km/h and reduce the transit time by less than half from the present levels and enhance axle loads and capacity (Planning Commission, 2013).

Investment in railways can be enhanced with the help of PPP. So far private investments in railways have been limited to the tune of 4% of the plan outlay. PPP projects related to manufacturing units for rolling stock, railway stations' modernization, multi-functional complexes, logistics parks, private freight terminals, freight train operators, liberalized wagon investment schemes, building dedicated freight corridors and so on which are in pipeline offer an excellent opportunity for private investment.

In the container business, the government of India initiated a policy in 2006 permitting private operators to operate private container trains which involves acquisition of rolling stocks and construction and operation of port side and inland container depots through a

concession agreement. The Railways have also permitted opening of Private Freight Terminals by private agencies. Construction of Dedicated Freight Corridors with PPP sub-projects on Delhi - Mumbai and Delhi - Kolkata sectors are also under execution. It is estimated that the ongoing projects require over $ 37 billion investment and $ 16 billon is targeted to be generated through private investments in 12th Plan (Planning Commission, 2013). The review of this sector after liberalization is an eye opener as far as the mode of execution of PPP in rail sector is concerned and is of relevance to the study of impact of PPP projects.

4.3 PPP in containerized rail operations: origin and growth

Indian Railways had taken up an ambitious and well planned initiative to containerize cargo transport and to bring it abreast the global standards in the logistic field, thereby putting India on the multi-modal map for the very first time in 1966. India is a country of continental proportions with distances as long as almost 3,000 km from North to South and East to West. Railway transport proves to be a cheaper option for all cargo over medium and long distances, especially if inter-modal transfer costs can be minimized. Containerized multi-modal transport with last mile connectivity provided an effective solution to this problem leading to Indian Railways entering the market for moving door-to-door domestic cargo in special DSO containers starting in 1966. In 1988, Container Corporation of India Ltd (hereinafter: CONCOR) was set up as a wholly owned subsidiary of Indian Railways. It has built up a strong asset base over the years (Retrieved from www.concorindia.com).

It is very important to understand the role of CONCOR in the Indian Railways sector and the whole story behind the opening of the sector to private players. The demand for containerized movement by rail grew rapidly with increasing conversion of bulk cargoes to containerized mode. From a monopolistic situation with CONCOR as the sole service provider, container movement was then thrown open to competition and private sector entities were made eligible for running container trains.

Since its inception in the year 1988, CONCOR had been responsible for developing the business of rail based container movement in India. Being a public sector undertaking under the Ministry of Railways, CONCOR received considerable support – and to some extent protection – from its parent organization, facilitating its growth in inter-modal rail operations. The support was evident in provision of infrastructure, services, tariff structure, deputation of personnel and various other aspects.

Prior to incorporation of Container Corporation of India Limited (CONCOR) in March 1988 under the Companies Act, Indian Railways were providing domestic container service at sixteen pairs of stations and ISO container service from seven Inland Container Depots (ICDs). CONCOR commenced operations in November 1989 when it took over the then existing Inland Container Depots (ICDs) from the Indian Railways. The main objective of setting up of CONCOR was to carry piecemeal traffic which the Indian Railways had lost due to its shift to carry bulk traffic in rake loads. CONCOR being an integral part of IR was to

work as a multi-modal transport operator and was to undertake the marketing functions as well as market research for integrated logistics infrastructure for the country's trade, commerce and industry. The infrastructure to be developed by CONCOR was primarily to serve the rail traffic, especially high rated container oriented and sundry piecemeal traffic helping to increase the revenue for IR.

Till 2006, container services by rail were operated only by CONCOR. Subsequently, 15 other private container operators (PCOs) were permitted and licensed to enter the container rail business. The Indian Railway recovered only the haulage charges calculated on the basis of fully distributed cost of operations plus a margin of profit and had no arrangement for sharing the revenue earned by Private Container Operators.

The primary objective of promoting CONCOR and other private operators was to increase the rail share of traffic by focusing on sundry and piecemeal traffic which railway had decided not to carry with the objective of improving its operational efficiency through rake load movement. However, in practice the container operators including CONCOR had been allowed to carry bulk commodities traditionally carried by Indian Railways in their wagons and the risk of possible loss/diversion of conventional traffic had remained unaddressed. Further the policy of allowing private operators including CONCOR to lift traffic at suboptimal tariffs was bound to cause continued loss to Indian Railways on account of operational cost not being recovered, with little incentive for private operators to invest in expansion of rail terminals (Comptroller & Auditor General of India, 2011).

The Rakesh Mohan Committee in 2001 recommended the entry of new operators in the field of container traffic.The Ministry of Railways took a policy decision to invite and induce private sector investments and participation in the container train operations in 2006.Subsequently Indian Railways has awarded licenses for container operations to 17 private sector companies thus ending the monopoly of Container Corporation of India (CONCOR) in this area. These companies have tried to differentiate their services by providing integrated solutions starting from booking of traffic, aggregation and distribution at the destination by arranging transport. The Private Container Terminal Operators (hereinafter: PCTOs) have since invested significant sums of money into development of terminals, material handling equipments, procurement of wagons etc. and also time and effort to develop the market, besides being in the process to expand the investment.

Pursuant to the grant of category-1 license, a Concession Agreement was signed between the Ministry of Railways and the Container Train Operators (CTOs). The Concession Agreement among others guaranteed a level playing field for all CTOs as against Indian Railways and CONCOR (now also a CTO) and no restrictions were placed on carrying of commodities by private operators that executed the concession agreement with Indian Railways.

4.4 Evolution of policy, model concession agreement and legal environment

1. Evolution of policy and legal environment

The Policy to permit various operators as listed above to move container trains for Indian Railways was taken out after diligently going through the prescribed practices and considerable deliberations. In pursuance of the decisions taken on this issue, revised policy guidelines have the following features (Ministry of Railways, GOI, 2006):

2. Eligibility as per policy guidelines:

The scheme was opened to all Indian public/private sector companies/persons who were registered either individually or in joint venture. It also included Indian registered companies of foreign entities.

3. Export and import traffic (EXIM)

It was specified that the party acting as operator should have appropriate access to a rail linked Inland Container Depot (ICD) with satisfactory handling capacity in the neighbourhood/internal location for handling of container trains. The operator was also given the option to tie up with an existing rail ICD operator or rail terminal operators for utilizing the facility for container train operations, within six months of obtaining in principle approval from ministry of railways. Alternately, they could also give an undertaking stating that they shall develop their own ICD with rail facility. Such arrangements had to be made within a stipulated timeframe of three years from the date of in principle approval in order to operate container trains.

4. Domestic traffic

Similarly, in the case of domestic traffic also, it was specified that appropriate access is to be provided by the prospective operator to two rail linked ICDs with adequate handling capacity in two hinterland/inland locations for handling of container trains or tie up with an existing ICD/ rail terminal operator in two locations within six months. Alternately, they could also give an undertaking that they will develop terminals with rail facility at two locations within a period of three years from the date of in principle approval to operate container trains.

5. Byelaws of rail container operations

For a better regulation of the entry procedure for new rail container operators on Indian Railways network, the Indian Railways decided to group various routes into four categories. This was done based on the existing as well as anticipated traffic volumes on these different rail corridors serving gateway ports. These categories are the following:

6. Category – I: JNP/Mumbai Port - National Capital Region Rail Corridor and beyond

This category includes all existing/future ICDs serving JNP/Mumbai Port in National Capital Region like Tughlakabad, Dadri, Gurgaon, etc. This will also include all destinations reached

via National Capital Region like Dhandari Kalan, Moradabad etc. This category will also include all domestic traffic.

7. **Category – II: Rail corridors serving JNP/Mumbai Port and its hinterland in areas other than National Capital Region and beyond**

This category includes all existing/future ICDs serving JNP/Mumbai Port at locations other than those covered in category I. This category will also include all domestic traffic except that on category I routes.

8. **Category – III: Rail corridors serving the ports of Pipavav, Mundra, Chennai/Ennore, Vizag and Kochi and their Hinterland**

This category includes all existing/future ICDs serving these ports. This category will also include all domestic traffic except that on category I routes.

9. **Category – IV: Rail corridors serving other ports like Kandla, New Mangalore, Tuticorin, Haldia/Kolkata, Paradip and Mormugao and their hinterland and all domestic traffic routes**

This category includes all existing/future ICDs serving these ports. This category will also include all domestic traffic except that on category I routes.

10. **Financial capability**

The turnover or net worth requirement in case of individual or single company was kept at Rs.100 crores. Rs 50 crore was the minimum requirement set for each constituent member, if a number of companies form a consortium for the purpose of operating container trains. Companies which have been declared non operational/ insolvent under Sick Industrial Companies Act (SICA) will not be eligible to participate in the proposed scheme either singly or in association with the other companies for container train operation.

11. **Approval process**

The operators planning to set up new ICDs for rail linkage with the ports were required to obtain the requisite permissions from the concerned authorities of the Government of India for setting up and operating the ICD within six months. 'In principle' approval was thereafter given by Railways after due examination of the proposal. The operators were required to set up the necessary infrastructure and operate the trains within 3 years of the approval, failing which the agreement would be deemed to have lapsed unless prior extension is given by railways at its sole discretion.

The operator was required to execute an agreement with the Railways containing detailed operating and accounting processes and details of ownership of new lines/assets. This agreement would also have a provision for suitable arbitration procedure for resolving any dispute.

12. Registration Fee

A non- refundable registration fee of US $ 8.2 million was payable for applying for all categories of routes including category I and US $ 1.7 million for each individual category of routes except category I at the time of submission of application to run container trains. The registration fees of applicants who are not found eligible were to be refunded without any interest.

13. Modalities of Granting New Licenses

Flexible consent to run trains between any pairs of points in the entire country was given if the successful operator had opted for category I. This comprised approval for all other categories also. In case the operator opted for a particular category (except category I), they were to get permission to run trains between any pairs of points in that category only for EXIM traffic and in domestic traffic for all routes, except those in category I.

14. Model Concession Agreement (MCA)

A Model Concession Agreement was drafted in lines of the PPP Policy and the CTO Rules which was to be executed between MoR and PCTOs. This Model Concession Agreement guaranteed among other things, (a) Non-discriminatory access to the rail network including rail terminals, (b) Non-discriminatory access to PCTOs trains on networks not owned by MoR (i.e. private sidings), (c) Uniform Haulage charges without any discrimination on any basis and (d) Level playing field for all concessionaires. To facilitate private operation of container trains on the existing railway network, the policy and regulatory framework addressing important issues such as risk mitigation and un-bundling of risks, allocation of risks and rewards, symmetry of obligations between contracting parties, reduction of transaction costs, force majeure etc. were chalked out in the Model Concession Agreement (MCA) executed with the private operators. (Secretariat for PPP & Infrastructure, GOI, 2014)

The MCA provides for non-discriminatory scheduling of trains among different operators both public and private. Risks have been identified and assigned to the private sector only to the extent it is capable of managing them. The concessionaire has been allocated the commercial risks, as they are best suited to manage them. On payment of notified charges, railway administration would provide locomotives to haul trains on a non-discriminatory basis. Railway administration would notify haulage charges for movement of containers on the railway network from time to time, which would be applicable to all operators on a non-discriminatory basis. Fixation and recovery of charges from its customers/users for the services provided is left to the will of the concessionaire without any interference from the railway administration. The MCA also tries and addresses issues such as dispute resolution, variations in laws, insurance, liability, indemnity, redressal of public grievances and disclosure of project documents etc.

4.5 Current Status and Progress of PPP initiative

In the initial phase, the opening up of the sector was met with wide enthusiasm as the private operators were enamored of the high margins enjoyed by CONCOR and it was thought that their business model could be easily replicated. In the first round of registration (16 January-15 Feb. 2006) 14 operators, including the incumbent CONCOR, signed agreements with Indian Railways (IR). In principle approval was given to these 14 operators before 31st March, 2006, in spite of the fact that Model Concession Agreement (MCA) was not in place at the time (Gangwar and Raghuram, 2010).

Having obtained the licenses, the private operators were mulling grandiose plans for procurement of large number of wagons and development of terminals at various strategic locations in the country. The initial bout of financing was used up in procurement of wagons. However, after being laden with wagons, the private operators faced a major problem in the absence of terminals to run the rakes on a regular basis. The only agency with a network of terminals in the country was CONCOR, who were however, a competitor and were not willing to provide access to their terminals to the umpteen operators. Access was selectively granted only to a few operators who were deemed strategically beneficial to CONCOR. CONCOR also put a restriction on CTOs that they should not do business with its existing customers at these terminals.

As a result the private operators had to start their services from a common user facility operated at Loni or operate domestic services between pairs of domestic rail heads on the Railway network. However, these terminals also had to be readied for container handling with substantial investment and considerable efforts. Realizing the commercial potential of its domestic rail heads, Railways started charging access charges for use of its terminals by the private operators.

In the second round of registration that followed in the year 2007, only one company opted for the license although applications from 60 companies were received. The one year gap made the aspiring companies gain a realistic assessment of operational viability and returns on investment. Subsequently, the registrations were kept open for all with effect from April, 2007 and two more companies have taken the license thereafter. The Model Concession Agreement (MCA) that followed in January, 2007 further deflated the enthusiasm with segregation of restricted/ notified commodities such as coal, coke, iron ore and minerals for movement exclusively by IR. The first rake by a private operator, M/s.Gateway Rail Freight Pvt. Ltd. was flagged off on 3rd May, 2006 using a CONCOR rake. The first privately owned rake was run on 30th Oct. 2006 (Gangwar and Raghuram, 2010).

Total 17 Container Train operators including CONCOR executed concession agreement with Railways. These CTOs are listed below:

Table 2. Container Train Operators with licenses from Railways

S.N	Company	Promoter Group
1	Adani Logistics Ltd.	Adani Group
2	Central Warehousing Corporation (CWC)	Public Sector Undertaking under the Ministry of Consumer Affairs, Food and Public Distribution
3	Container Corporation of India Ltd. (CONCOR)	Public Sector Undertaking under the Ministry of Railways
4	ETA FreightstarPvt. Ltd.	ETA Star Group
5	Gateway Rail Freight Ltd. (GRFL)	Gateway Distriparks Ltd. (GDL)
6	Hind Terminals Pvt. Ltd. (HTPL)	Sharaf Group (UAE) & MSC Agency
7	India Infrastructure & Logistics Pvt. Ltd.(IILPL)	APL Indialinx - part of NOL Group and Hindustan Infrastructure Project and Engineering
8	Container Rail Road Services Pvt. Ltd. (CRRSPL)	DP World
9	Reliance Infrastructure	Reliance (ADAG)
10	Sical Multimodal and Rail Transport (SMART)	Sical Logistics
11	Boxtrans (India) Logistics Services	JM Baxi& Co.
12	Pipavav Rail Corporation Ltd. (PRCL)	A Joint Venture between Indian Railways and Gujarat Pipavav Port Ltd., a subsidiary of Maersk shipping line
13	Transrail Logistics Ltd.	DelhiAssam Roadways
14	Innovative B2B Logistics Solutions	Bagadiya Brothers and Bothra Brothers (P) Ltd.
15	KRIBHCO Infrastructure Ltd. (KRIL)	KRIBHCO (Public Sector)
16	Arshiya Rail Infrastructure	Arshiya International
17	Fourcee Infrastructure EquipmentsPvt. Ltd.	Fourcee Group

Source: 2010, Gangwar and Raghuram: Container Train Operators in India

Looking at the development of terminals by CTOs, it is seen that CONCOR, the dominant player in this sector is far ahead of other private CTOs having established a network of 63 terminals at various strategic locations in India and 3 are in progress. As far as private CTOs are concerned, they have been able to develop a total of 12 terminals only while 11 other terminals are still in progress.

Table 3. List of terminals developed by Container Train Operators

S. No.	Name of the Operator	Terminal Commissioned	Terminal Under Progress/ Likely to come in near future
1	ADANI	Patli	
		Mandawariya	
2	ARSHIYA	Khurja	
3	BOXTRANS		Bhodwal Majri
4	CRRS	---	---
5	CWC	Noli	Bamanheri
			Nabha
6	ETA		Butibori
7	GATEWAY	Garhi Harsaru	Asaoti
		Sahnewal	
8	HIND	Dronagiri	Palwal
9	IILPL	---	Panchi Gujaram (Sonepat)
10	INDOLOGISTICS	Kalomboli	
		Sahnewal	Bondamunda
11	KRIL	Hazira (PFT)	
		Pali (PFT)	
12	SICAL		Anuppambattu (Chennai)
			Devangothi
13	TRANSRAIL	---	---
14	CONCOR	63 Terminals	Jharsuguda (PFT)
			Jaggayapalem (PFT)
			(PFT)
15	FOURCEE	---	---

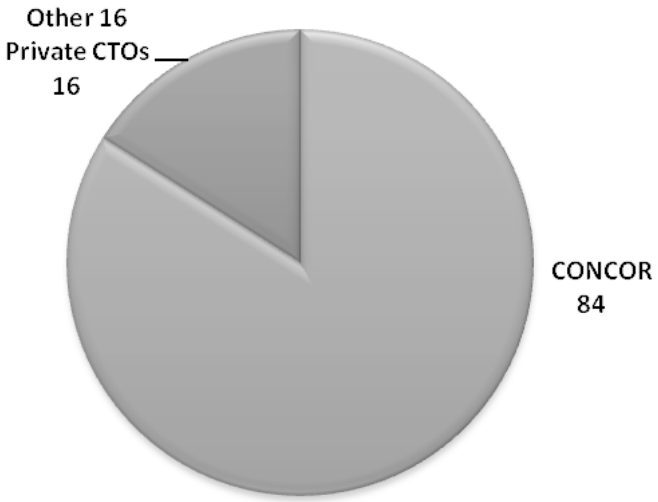
Source: 2010, Gangwar and Raghuram: Container Train Operators in India

Listed below are terminals where containers are handled (developed by other private parties on their own or in collaboration with private container terminal operators):

1. Associated Container Terminal Ltd., Asaoti
2. Kanpur Logistics Park Ltd., Panki (Kanpur)
3. Continental Multimodal Terminals Ltd., Timmapur
4. Navkar Corporation, Somathane (near JNPT)
5. Lloyds Steel siding PFT, Wardha
6. Vimla Infrastructure Pvt. Ltd., Silyari
7. Vimla Infrastructure Pvt. Ltd., Bhupadeopur.

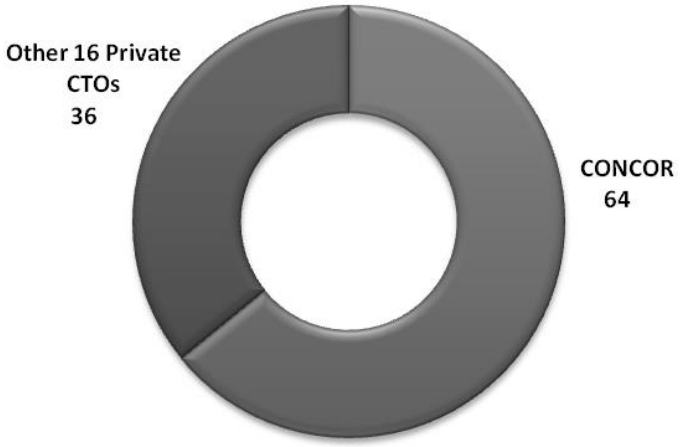
At a glance, these 16 new operators own 134 rakes and have developed 12 new terminals. CONCOR itself owns 241 rakes and 63 terminals. 11 more terminals of CTOs are at various stages of development.

Figure 10. Share of CONCOR's terminals and terminals of other CTOs (In % age)



Source: Statistics Directorate, Railway Board

Figure 11. Number of Rakes – CONCOR vis-à-vis other CTOs (In % age)



Source: Statistics Directorate, Railway Board.

The annual growth rate in container traffic after introduction of PPP policy is 12.8%. It may be pertinent to mention that despite global economic slowdown, IR has maintained the growth profile.

Table 4. Annual growth rate of container rail business*in India in the period 2007-2014

YEAR	EXIM		DOMESTIC		TOTAL	
	TONNES	GROWTH	TONNES	GROWTH	TONNES	GROWTH
2007-08	17.39		3.74		21.13	
2008-09	23.29	33.9%	7.05	88.5%	30.34	43.6%
2009-10	25.32	8.7%	9.63	36.6%	34.95	15.2%
2010-11	26.58	5.0%	11.01	14.3%	37.59	7.6%
2011-12	28.54	7.4%	9.48	-13.9%	38.02	1.1%
2012-13	31.81	11.4%	9.28	-2.2%	41.09	8.0%
2013-14	32.66	2.7%	10.94	17.9%	43.60	6.1%
Avg. Growth		**11.1%**		**19.6%**		**12.8%**

** "Export and Import Traffic" or "Exim Traffic" means carriage of maritime Containers/ goods where (i) in case of export, the origin of such Container/goods is from any location within India and the final destination is at a location outside India and (ii) in case of import, the origin of such Container/goods is from any location outside India and the final destination is at a location within India.*

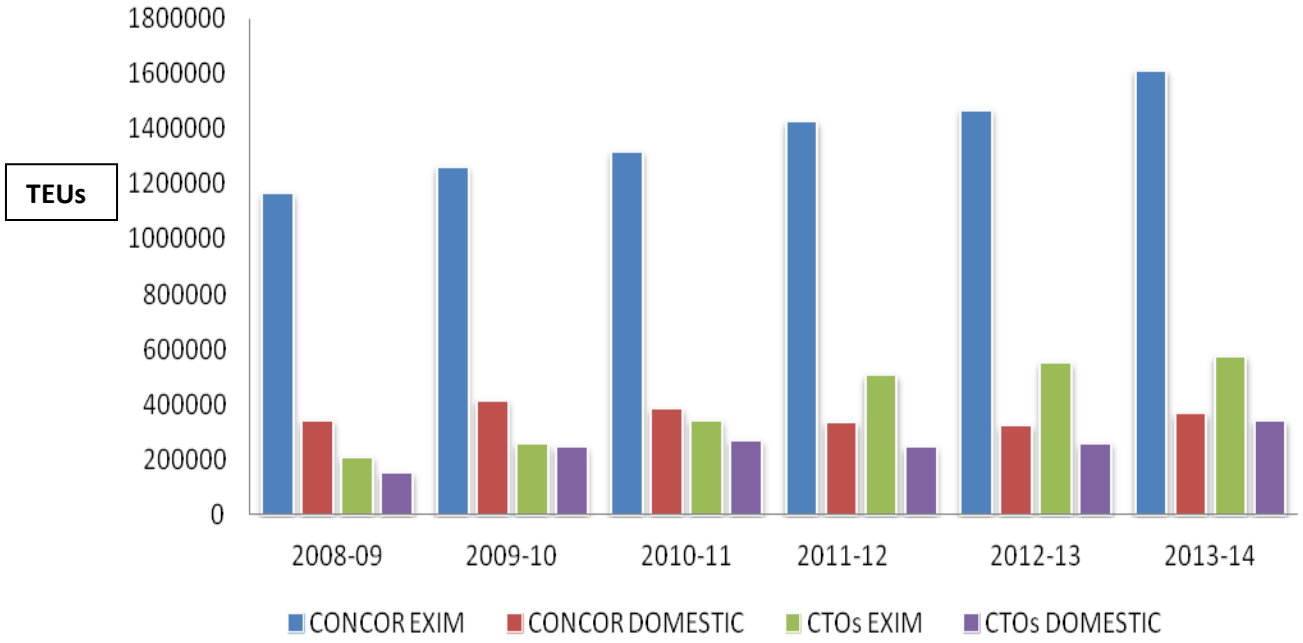
"Domestic Traffic" means Container trains carrying traffic other than Export and Import Traffic within India;

"Growth Rate": (Y2-Y1/Y1) 100 where Y2 is current year and Y1 is previous year.*

Source: Statistics Directorate, Railway Board.

Though an overall growth has been witnessed by the sector, the majority of it has come through contribution primarily from CONCOR . As can be seen by studying the data on the performance of Container Train Operators in terms of number of containers transported by them on the Indian rail network (in Twenty Feet Equivalent Units) from 2008 to 2014, figure 12 shows the significant role that CONCOR has played in the growth of the sector.

Figure 12. Container Handling by Container Train Operators (in Twenty Feet Equivalent Units- TEUs), from 2008 to 2014

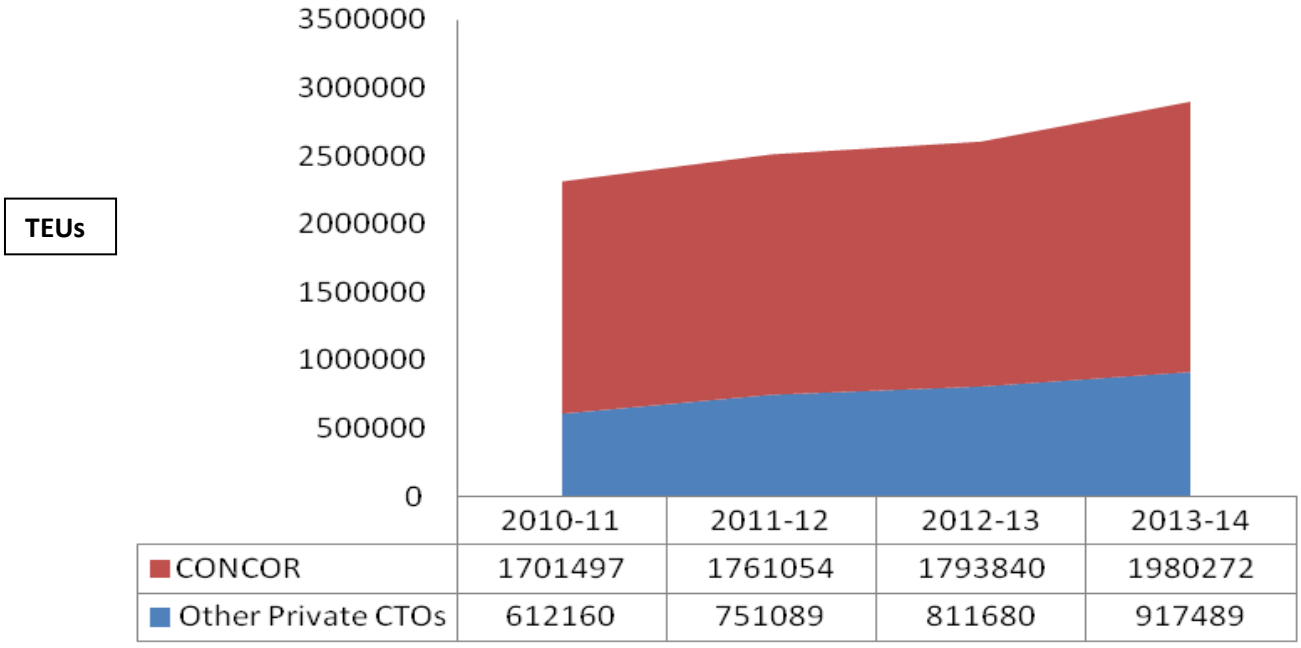


Source: Statistics Directorate, Railway Board.

Looking at the figure 12, it becomes clear that CONCOR leads the Export Import (EXIM) business by a vast margin and the cargo handled by all the other 16 private CTOs is far less that the cargo handled by CONCOR individually. More importantly EXIM business has seen a positive growth for both CONCOR and the other CTOs. On the other hand, domestic container business has not seen a regular positive trend, both for CONCOR and the other CTOs. The overall contribution of CTOs to the domestic traffic has been less, but still CONCOR does almost the same amount of business as managed by 16 other CTOs together.

In fact, if operator wise performance of Container Traffic, i.e, container handling in TEUs is studied from 2010 to 2014, it is clearly seen that CONCOR once again manages to outperform other private CTOs, as is also clearly depicted in figure 13. However, it is noteworthy that the traffic handled by other CTOs is steadily increasing.

Figure 13. Container Handling of CTOs in TEUsfrom 2010 to 2014



	2010-11	2011-12	2012-13	2013-14
CONCOR	1701497	1761054	1793840	1980272
Other Private CTOs	612160	751089	811680	917489

Source: Statistics Directorate, Railway Board

4.6 Fluctuating policies of Indian Railways

As more serious players entered this space, they attempted to address the bigger problem of domestic movement investing in bringing economies of scale to the rail business. However, foray into the bulk commodities segment by offering transportation of commodities such as steel, cement, etc. in containers by the private operators was resisted by the Indian Railways. On 11.10.2006, Ministry of railways issued a letter according to which, along with many others, four commodities that is ores, minerals, coal and coke were brought under the category of restricted commodities. This resulted in foreclosure and denial of market access to PCTOs to the extent of 70% of the relevant market identified as market for rail freight transportation (Gangwar & Raghuram, 2010). According to the private CTOs, later on, through various rate circulars (RC), IR has, without any justification, increased haulage and other charges payable by the CTOs. Additionally it was felt that the Indian Railways has taken a one-sided decision between CONCOR and other CTOs by offering different rent-structure for the land leased to the CTOs. Further, it was also felt that by not permitting private parties to carry out repairs and maintenance of wagons owned by the PCTOs, IR had gone into tie-in arrangement thus limiting competition in the wagon maintenance market.

The following policy decisions of the Indian Railways are stated to have crippled the industry in its nascent state. The actions are enumerated below:

1. **Ban on the movement of certain cargoes classified as coal, coke, ores and minerals.**

   While the Concession Agreement signed between the CTO and the Indian Railways does not provide for any such ban, still the Railways have imposed this ban through a Rate Circular dated 11.10.2006. (Rate Cicular no. 2006/TT-III/73/12 dated 11.10.2006 issued by Traffic Transportation Directorate, Railway Board, Indian Railways).

2. **Imposition of restrictions and punitive damages**

   Railway Board, vide its Rate Circular no. 5 (2011), notified revised scheme for levy of haulage charges in respect of nine notified commodities, namely, Cement, other than White Cement; Foodgrains other than Flours & Pulses; Chemical Manures; Iron & Steel; Bricks & Stones other than Marble & Ceramic Tiles; Sugar; Oil cakes & Seeds; Alumina and Petroleum products & Gases. The haulage charges for such commodities were drastically hiked in comparison to general domestic container haulage charges, in case the number of the wagons carrying such commodities exceeded 30. Further, heavy punitive charges to the tune of 4 times of normal freight have been imposed on CTOs in case overloading is detected; vide Rate Circular no. 30 dated 1.8. 2011. Both these policies have had a back breaking impact on the CTOs leading to road lobby being the beneficiary.

3. **No free access to industrial sidings / private sidings**

   The Industry today has the choice of either moving their cargo through Road or conventional Wagons of the Indian Railways. Although the Container Train Operator has invested into the rail Infrastructure (wagons) he does not enjoy a free access to the Rail Network.

4. **Terminal access charges for use of terminal owned by Railways (Goods Sheds)**

   Till the private CTOs entered the business the usage was free of cost for CONCOR. In 2008, access charges for use of Container Rail Terminals (CRTs) owned by Railways was fixed @ Rs. 13,500/- per move totalling Rs. 27,000/- per one into/out movement. The rate has thereafter, been increased to Rs. 1,37,500/- per move and Rs. 2,75,000/- per one into /out movement, a whopping 10 times increase.

5. **Withdrawal of the special discount given for the development of domestic traffic through containers.**

   Since announcement of the PPP the tariff regime was encouraging the Operators towards the domestic segment of the business, for which a discount of 10% was given. However, this was subsequently removed. The incentive to be operating in the domestic segment became much more costly.

4.7 Critical issues faced by private container train operators

The story of PPP in India, especially in context with the operations of Private Rail operators has been a mixed bag, where both the participating entities i.e. the Railways and the Private operators who applied for the licenses, have learned at each step. However based on various interviews conducted with the officials, especially from the private entities, it seems that somehow, the latter have been not receiving the benefits as anticipated.

Indepth interviews were held with senior and middle level executives of 10 private container train operators and senior officials of CONCOR and Railways.Based on discussions and field visits to the container terminals at ICD Tughlakabad and Loni, the following issues are identified as critical for the private operators:

1. **Entry costs**

The nature of the business entails heavy capital investment with long gestation period for the private operators. For obtaining the license they had to pay one time registration fees of $ 1.6 million or $ 8.2 million depending on the nature of the license. It was mandatory for them to construct terminals within three years of getting the license. Considering the heavy investment required in land acquisition this cost was turning to be prohibitive for the private operator. Although CONCOR was approached for access to their terminals the prohibitive charges and selective access was not encouraging to the CTO's. Besides, heavy investments to the tune of $2.4 million were required for procuring rakes and containers.

2. **Pricing by Railways**

Haulage charge levied by the Railways on private operators for using its tracks, locos and signaling infrastructure is a major element of pricing. Railways have successively increased haulage charges without consultation with private operators and they were forced to either absorb the frequent hike or pass it on to the customers at the peril of losing their business. Besides railways also introduced new charges towards stabling, shunting, terminal access etc. which added to the burden. The haulage charges for certain commodities like steel, POL, fertilizers, cement, food grains, clinker etc. were linked to the freight rates charged by IR from its direct customers, with a small discount to CTO's. Railways also started imposing charges towards empty container and empty wagon movement. Additionally as per rate circular No.2007/TC-I/302/1 dt.25.3.2008 of Ministry of Railways, Railway Board, 2% development surcharge on haulage was imposed w.e.f. 1st April 2008.

The economic down turn in 2008-09, shortly after operators got their licenses, forced many operators to stable their rakes for want of business. Heavy stabling and shunting charges have been levied by Railways from time to time. All these charges have impacted the operators by adding to their operational costs.

3. **Service Levels by IR**

The private operators were totally dependent on IR for provision of locomotives and operations. Service level guarantees missing in the MCA were denied on the ground of

network capacity constraints by the Railways. In the absence of such a guarantee, the private operators were having difficulties in ensuring timely delivery to their customers and managing their logistics. Although an assured transit time service was announced by railways in December 2009, it only notified a premium of 10% for scheduled service without mentioning any discounts or penalties in case of non-compliance.

4. Rake Maintenance

The private operators were also dependent on railways for routine maintenance of their rakes which have to be mandatorily examined after a pre-specified distance run. Due to paucity of adequate examination points and man power at different locations on the railway network, the operators were forced to ply their empty rakes over long distances incurring losses in the bargain.

5. Non-Availability of Terminals

The private operators were required to develop their own container depots. However, owing to the heavy investments involved in land acquisition and development of infrastructure, many of the operators refrained from developing the terminals and started gravitating to common user terminals setup by other private agencies. For handling domestic containers, relief was sought by the private operators from the railways, who authorized zonal railways to notify one or more railway owned terminals (Goods sheds, railway sidings, unused railway lines, etc.) as a Container Rail Terminal (CRT) depending on the requirement. The railways started charging terminal access charges, detention charges and ground usage charges for these facilities which again proved detrimental to the growth.

6. Level Playing Field with CONCOR

The private operators have been frequently harping that although the policy provided for a level playing field with CONCOR, but it is still benefiting from its association with the railways. The CONCOR were provided land at prime locations from IR at low rates, but the CTO's have not been provided land by the railways.

7. Other concerns

From the perspective of the private operators, they were drawn to make investments in the sector looking at the revenue model of CONCOR but after entering the sector they realized that the ground reality was different. At present, a large number of players are offering non-differentiated products and as a result there are price wars, over capacity of rakes and under capacity of terminals resulting in huge pressure on margins. It was opined that the policy on the basis of which the rail container sector got de-regulated is largely diffused. IR,as the mother carrier, lacks adequate capacity on most of its routes and is not reliable in terms of timely delivery. As far as domestic segment is concerned, there is a strong conflict of interest vis-à-vis private CTO's. Alleged fear of scrutiny has been resulting into all the policies being interpreted against the interest of the potential user of infrastructure and in the interest of the railways. The operators also cited during their interview sessions that the persisting import export imbalance resulting in empty return of rakes and low inland penetration of containers

are other issues of concern. Pace of setting up of terminals was attributed to be slow due to delays in obtaining clearances as the gestation period was much more than expected.

The CTO's were however positive in their outlook hoping that the expected growth in GDP, GST implementation and DFC operations will drive the demand for logistics. Further, a positive market sentiment with expectation of 10-15% growth was projected in container transportation segment. They expressed that a regulatory mechanism was required to balance the supply and demand side. Consolidation was also expected to take place in the future and wagon leasing companies were expected to play an important role.

A major and unanimous concern of the private entities is with matters related to policies. Matters such as Brake Power Certificate (BPC), moving from Freight All Kind (FAK) tariff to Notified Commodities, No free access to Industrial Sidings / Private Sidings, Terminal Access Charges for use of Terminal owned by Railways (Goods Sheds), Withdrawal of the special discount given for the development of Domestic traffic through containers etc. issues have made moving cargo through the container dearer for the end users. Moreover, the users having an option to use BCN rakes for moving cargo puts the private rail container operators in direct competition with the Railways i.e. the Public entity of their PPP.

One major concern came up when the Indian Railways hiked the haulage charges for container train operators in two phases, with effect from December 2012 and February 2013. This led to an overall, increase in the rates for Twenty feet Equivalent Units (TEU), for 20 feet containers by 31% for containers weighing between 10 and 20 tons and 16% for containers weighing above 20 tons (SurajSowkar, 2012).CONCOR, the largest container train operator in the country, generated nearly 75% of its revenues from the business at the time when this tariff came in to action. Also the rail divisions of Gateway Distriparks and Arshiya International contributed 50% and 25% to their total revenues, respectively. Due to a flat growth in volumes, container train operators were not able to pass on the entire price increase to customers. Within the first six months of the new tariffs coming in, container train volumes dropped 1% for CONCOR annually, while that of Gateway Distriparks' rose by 35% mainly due to addition of new routes. Container train operators fear that if they pass on the rise in tariffs, it may reduce their competitiveness with respect to road transporters. It is believed that if rail operators pass on the entire hike, some short-distance volumes may shift to road operators. However, it will still be economical for long-distance volumes to be transported on rail. So, rail operators had to partially pass on the hike to its customers and absorb the rest. CTO's thus feel strongly that there should be a regulation in the tariffs.

As per Amritha (2010), attempts have always been made both from the industry as well as the side of the Government to keep the partnership attractive and maintain a balance. Indian Railways announced the opening up of freight train and terminal operations to private firms in 2010. Under the new private freight terminal (PFT) and special freight train operator (SFTO) scheme, the ministry allowed private firms to use the Indian Railway's network for commodity transport and to develop freight terminals. Private players were allowed to set up private freight terminals and also operate freight trains. The ministry planned to extend this to

the existing registered container train operators and users having private sidings on private land. According to industry officials, existing container train operators at that time were thought to be interested in this offer. However, companies being a bit skeptical opted to study the offer thoroughly before taking any action. It was felt that private operators had got a raw deal when rail containerization was privatized earlier.

4.8. Railways' Perspective

From the perspective of Indian Railways, the privatization of container train operations was one of the most successful PPP measures undertaken by IR. Container traffic, since the commencement of the private operations has more than doubled from 21 million tons to about 43 million stones in 2013-14 at a CAGR of around 14%. Container traffic is now third highest in terms of growth after iron ore and coal and there are huge growth opportunities in this segment. Several measures have been taken by IR to promote the growth of private container operations such as formulation of MCA, permitting use of railway goods sheds/terminals for use by container train operators; category III terminals having volumes of less than seven trains per day have been opened up for lift on / lift off operations and opening up of category I and II stations where there are spare lines, is also being contemplated. Rake examination has been allowed at railway yards due to lack of adequate infrastructure. Double stack operations have been extended to Gurgaon from Mundra and Pipavav ports. E-payment system has been introduced. There is a grievance redressal mechanism at various levels. 600 routes have been opened to hub and spoke model. Additional weight category has been added for light weight cargo. More and more commodities are being opened for like food grains, fertilizers, sponge and pig iron, fly ash and hydrated lime etc. Lack of adequate infrastructure, to be built up by the container terminal operators, is a major concern.

4.8 Critical factors affecting PPP in India, with focus on Containerized Rail Transport

Apart from literature research (e.g. the articles in academic and professional journals, publications and monographs published on the subject of public private partnerships), in depth interviews were held with experts heading or holding important positions in the major active licensed private operator companies during the course of the research. Based on these interviews and secondary research, some critical factors concerning the industry have been identified and a questionnaire was distributed to 11 out of 17 operators in August, 2014 who were granted the licenses. The selected companies for the study were:

- ADANI
- GRFL
- HTPL
- JM BAXI
- APL
- ARSHIYA Ltd.

- DP WORLD
- ETA
- B2B
- KRIBHCO
- CONCOR.

The responses obtained from these agencies against each area of their concern have been graphically represented.

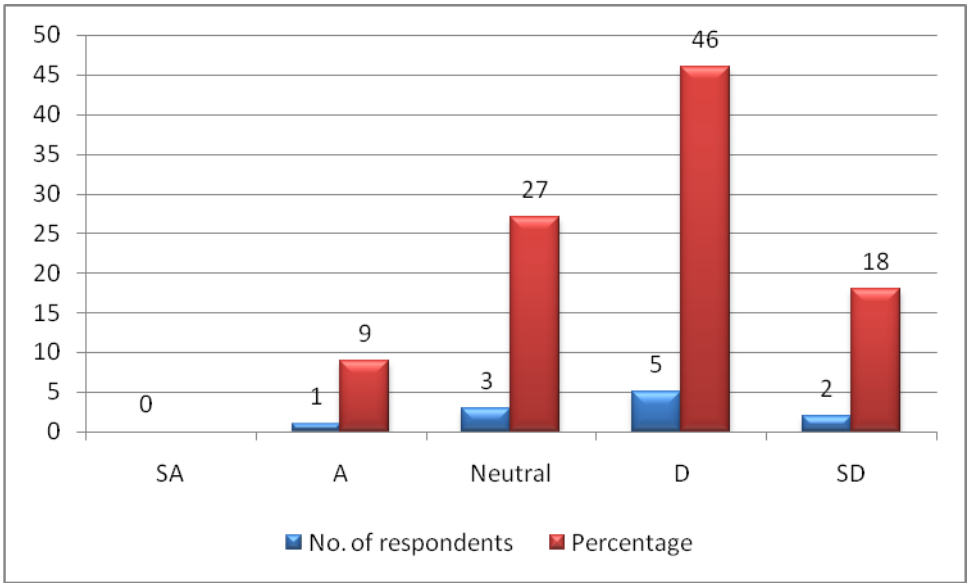
Critical factors affecting PPP in India in the area of Containerized Rail Transport have been identified as:

- Inadequate assessment of potential of sector
- Renegotiation of contracts
- Long procedures for Dispute Resolution.
- Inadequate economic feasibility analysis of the project.
- No proper Risk allocation amongst the stakeholders.
- Land acquisition.
- Deficiencies in Model Concession Agreement
- Lack of Standard procedures
- IR's dominant role & attitude for private players
- Laws related to tax viz. VAT, Service tax etc.
- Multiple clearances by various agencies
- Lack of Central body for representation of issues
- Changes in tariff structures
- Frequent modifications in policies.

The interviewed companies have rated the challenges on the basis of five-point Likert scale:

1. Strongly Disagree (SD)
2. Disagree (D)
3. Neutral (N)
4. Agree (A)
5. Strongly Agree (SA).

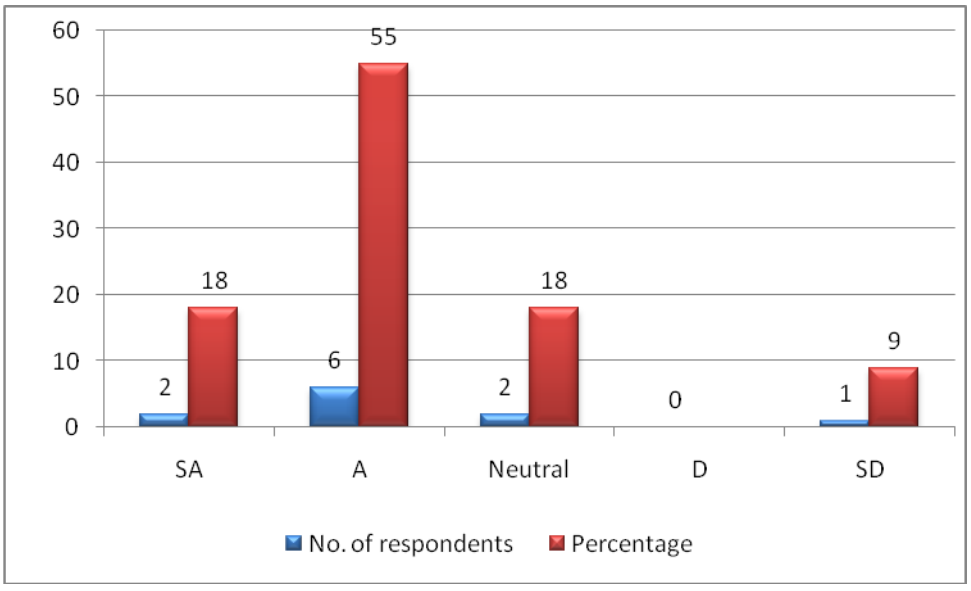
Figure 14. Inadequate assessment of potential of sector



Source: Own work

From figure 14, it would be seen that 64% of the respondents disagreed with the perception that bloated projections of demand and potential of the sector were made and an over optimistic approach was followed at the time of entering into this new sector. This points to the overall view held that the sector still has a lot of potential which can be effectively tapped, provided a supportive environment is in place.

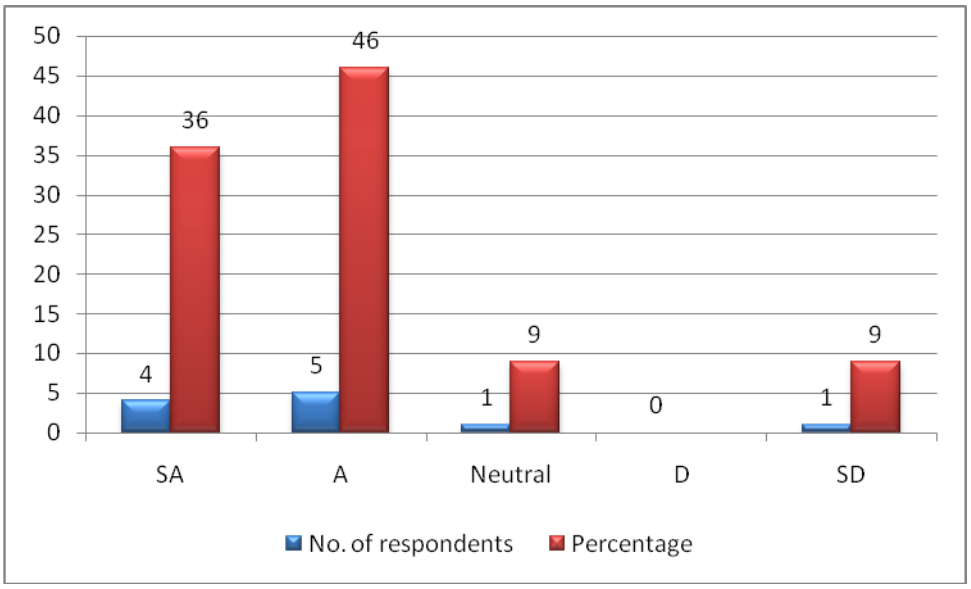
Figure 15.Renegotiation of contracts



Source: Own work

The above graph shows that the respondents agree that renegotiation of contracts is a major challenge and private partners have for long been pushing for the renegotiation clause in contracts. The absence of such a clause often poses a major challenge, particularly when a project runs into rough weather due to unforeseen circumstances and becomes unviable. In such a case, the investor is at times left with no option but to abandon the project midway since he has no scope to renegotiate the terms.

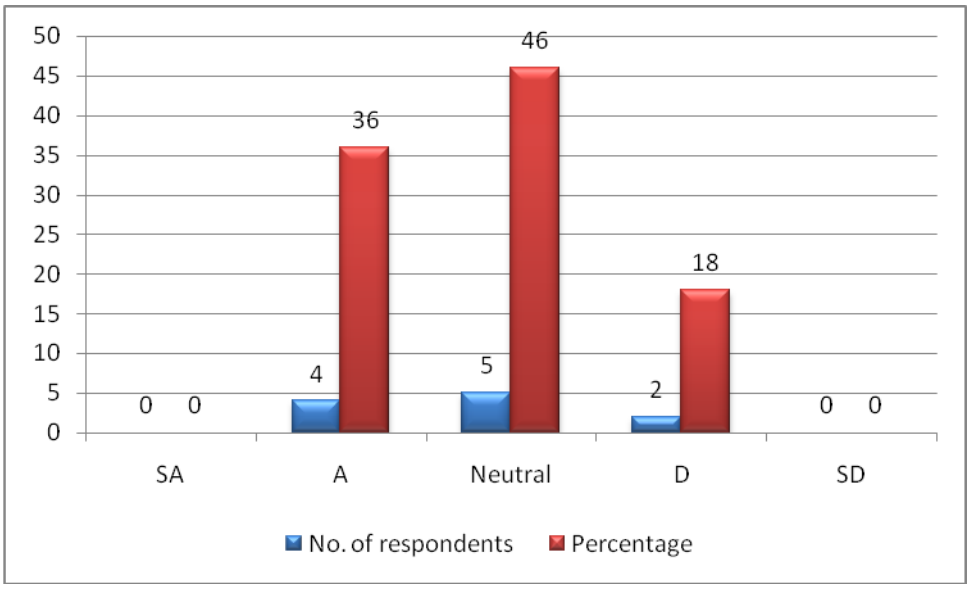
Figure 16. Long procedures for dispute resolution



Source: Own work

82% of the respondents agreed/strongly agreed with the fact that the long procedures for dispute resolution is a challenge for them and government should work on it, as this on the whole affects cost, time and efficacy. Disputes mean delay and delay in turn would mean escalation of costs; and for a private investor it would mean loss of earnings from the resources which he could have utilised otherwise. Effectiveness of dispute resolution mechanism thus holds significance in attracting private investors to partner with the government. As the above discussion shows, resolving disputes through amicable means like mutual discussions, conciliation or mediation at the earliest, or going for arbitration holds the best solution in any PPP initiative.

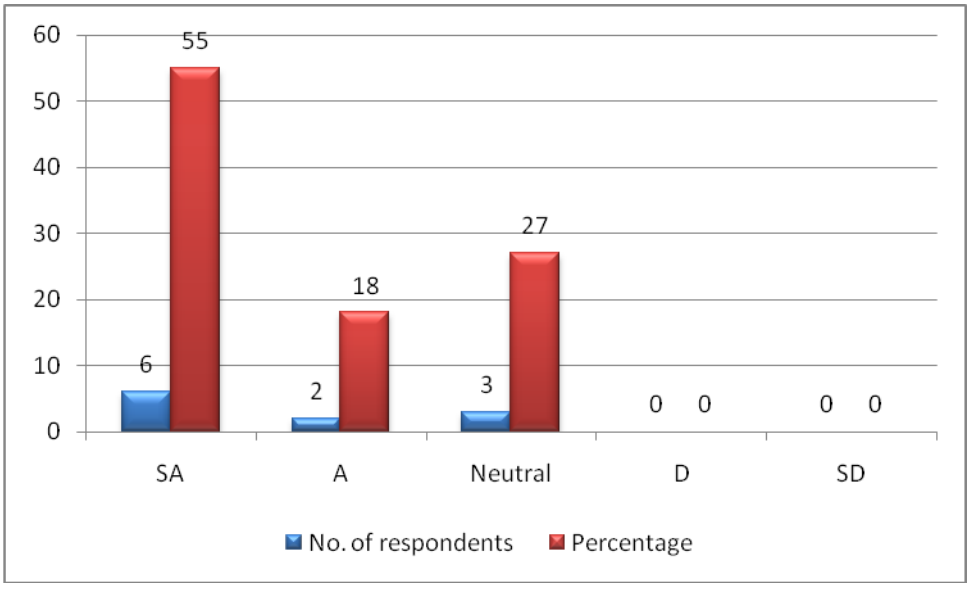
Figure 17. Inadequate economic feasibility analysis of the project



Source: Own work

It is clear from the above shown graph that 46% of the respondents have a neutral response to the poser that adequate economic feasibility analysis of the project was not done by the private operators prior to taking up the license and 36% agreed with the premise. This points out to the continuing perception that the sector holds promise, in spite of the various challenges.

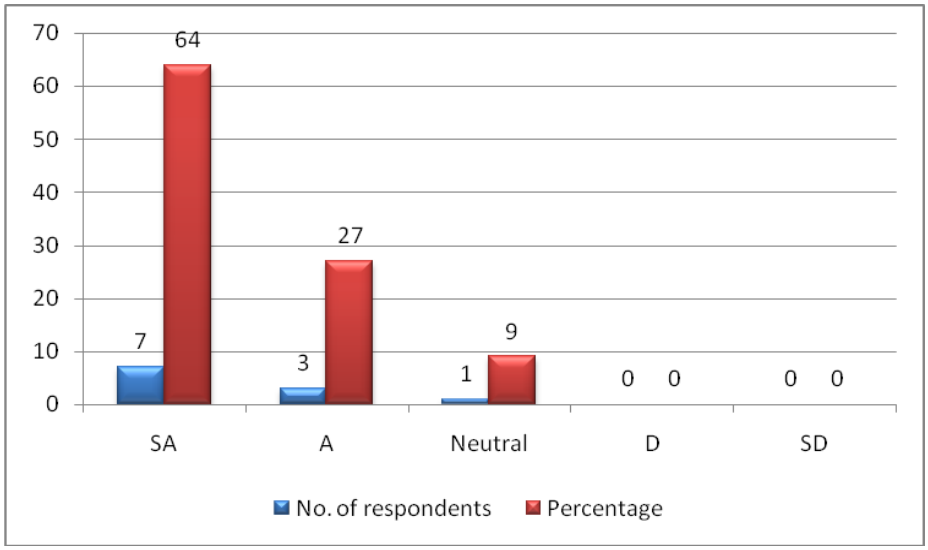
Figure 18. No proper risk allocation amongst the stakeholders



Source: Own work

73% of the respondents have agreed/ strongly agreed with the view that there is no proper risk allocation amongst the stakeholders. Although the model concession agreement is devised to address these concerns, the general perception is that Railways is the dominant partner and continues to devise policies in contravention to the MCA, for which there is no effective redressal mechanism. The risks are transferred to the private operators who bear the brunt and continue to bleed.

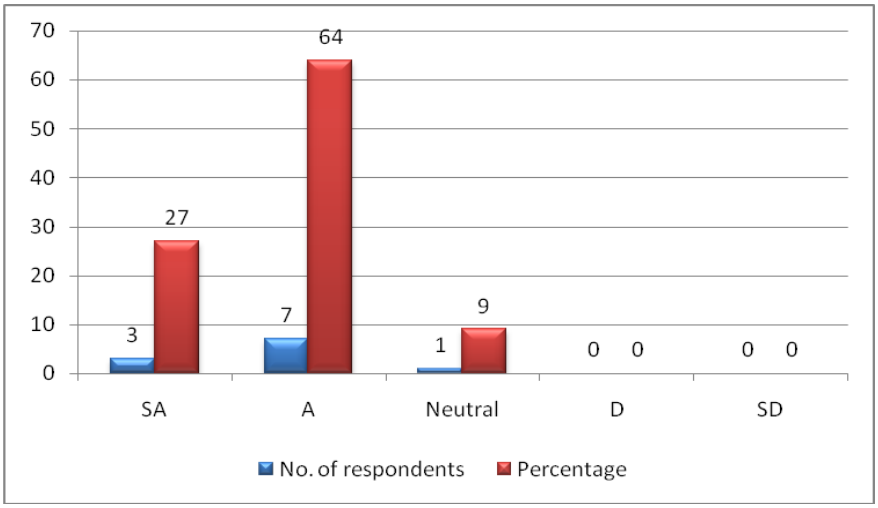
Figure 19. Land acquisition



Source: Own work

About 91% of the respondents have agreed/ strongly agreed that land acquisition is the important aspect in PPP as unavailability of land leads to unwanted delays and cost overrun risks in the PPP projects. Although setting up of terminals is a requirement on the part of the private operator as per the policy, this has been a long and tedious process in the absence of support from the government, policy flaws and long drawn litigation.

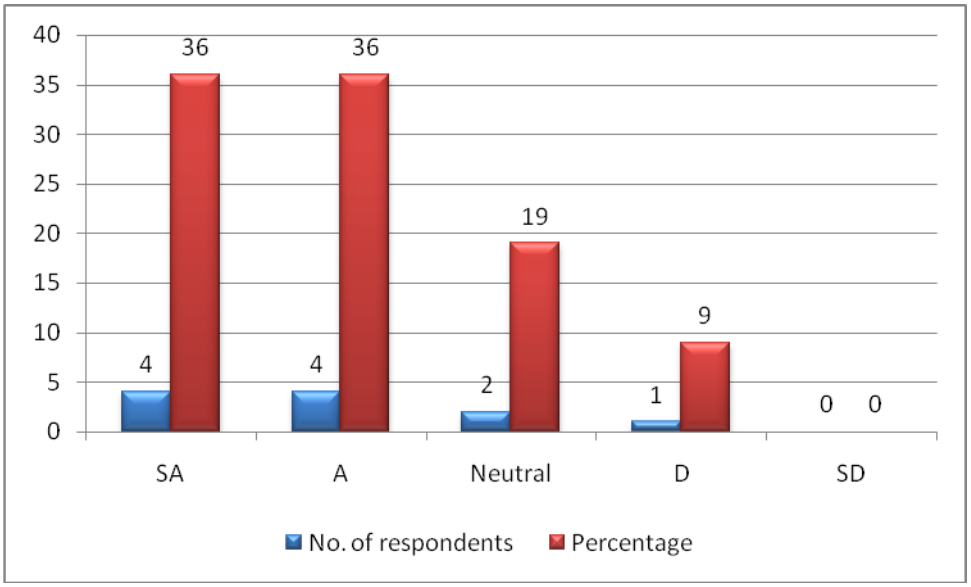
Figure 20. Deficiencies in Model Concession Agreement



Source: Own work

As per the response, 91% of the respondents agree/strongly agree that there are flaws in the MCA which need to be addressed. The MCA should be unbiased and not loaded against the weak partner in the relationship. It was felt that the MCA was not prepared with adequate deliberation with all stakeholders and did not address their concerns effectively. Sometimes due to changes in policies from government, the same becomes outdated. It thus becomes important to keep revisiting the same to make changes as are necessary under the dynamic circumstances.

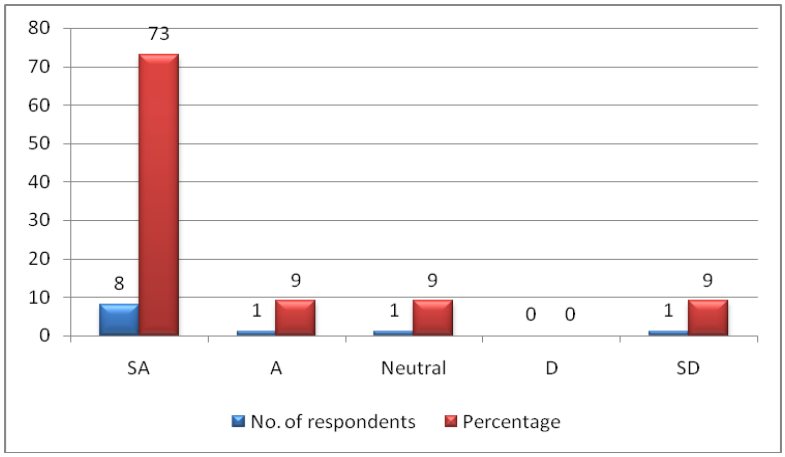
Figure 21. Lack of standard procedures



Source: Own work

72% of the respondents agree/ strongly agree that lack of standardization in the system is a challenge that needs to be addressed for ensuring success of PPPs. Standardization and models has the potential to reduce transactions costs and diffuse good practices.

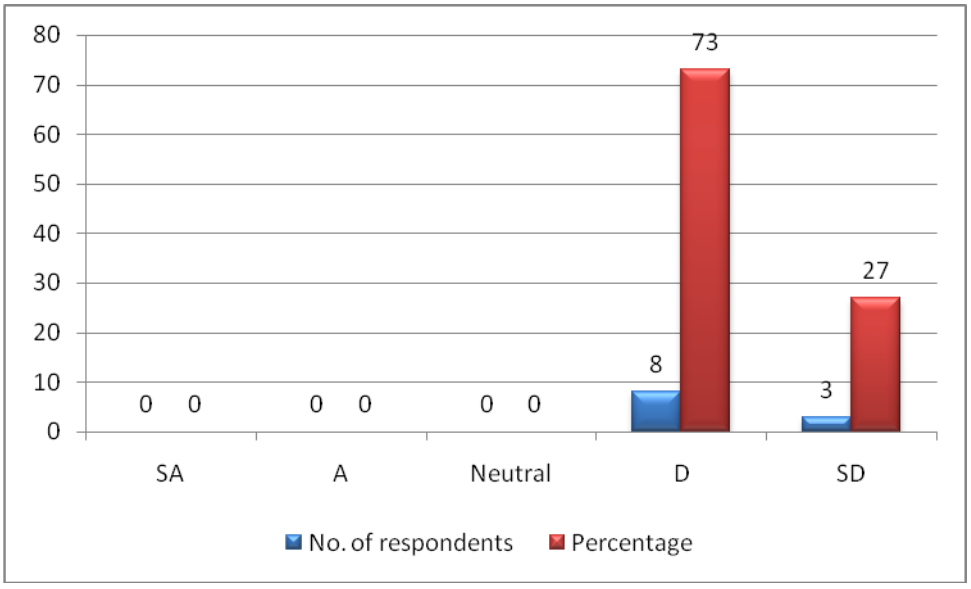
*Figure 22.*Indian Railways' dominant role and attitude for private players:



Source: Own work

As per figure 29 it is clear that IR has to bring an attitudinal change in order to attract the private partners. Specifically when challenges related to the PPP model in the containerized rail are discussed, most private players feel that IR has a significant role to play in making or breaking the sector lucrative and most of the times the dominant role of IR brings out a negative impact. Very often the private players feel that the IR is indifferent to their requests and makes policies that are difficult to implement and are unsustainable. On the other hand, due to the vast structure of IR as well as it being a social responsibility, the officials of IR defend that they have a much bigger role and that private players should work as a whole to improve sectoral growth rather than just aiming for individual profit margins.

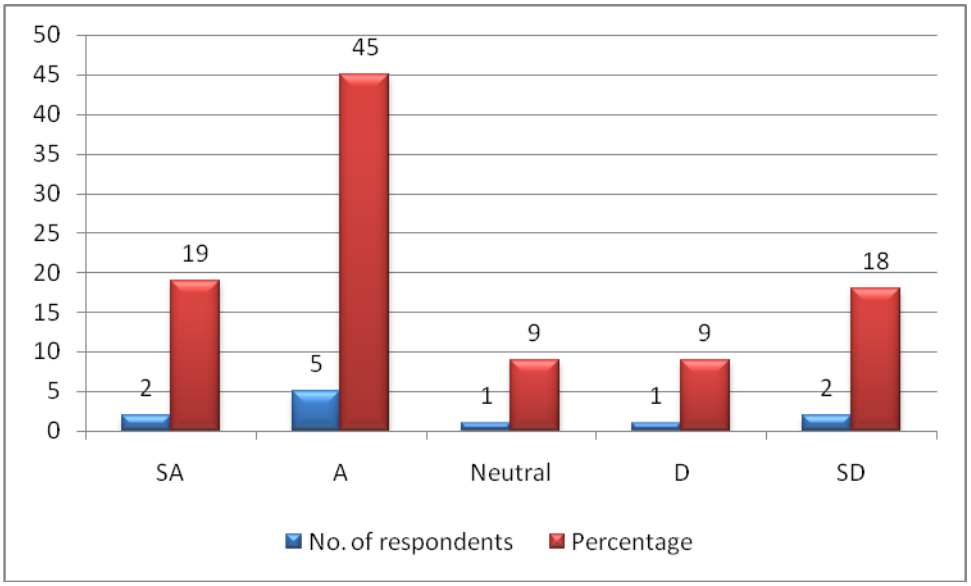
Figure 23.Laws related to statutory compliances



Source: Own work

All the respondents have rated that law on taxation, such as VAT, service tax etc. are not a challenge. In context of container rail operations, wherein the biggest advantage of transferring goods through this medium is the safety net from changing taxes, etc as levied by various states, this is an important point as the end user ultimately adds up the cost at each level and very wisely chooses only the most economical option.

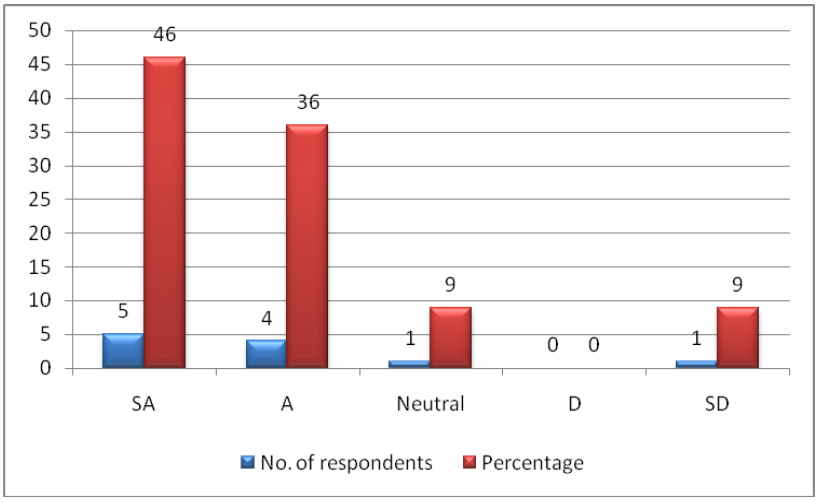
Figure 24. Multiple clearances by various agencies



Source: Own work

As per the study 64% of the interviewed respondents rated that multiple clearances by various agencies is a challenge which needs to be addressed as multiple clearances kill time leading to delay and incurring cost.

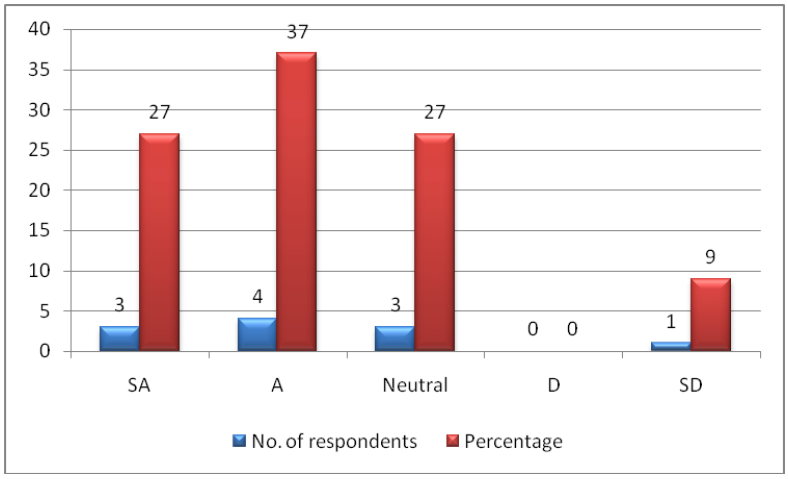
Figure 25.Lack of central body for representation of issues



Source: Own work

82% of the respondents agree / strongly agree that there is a lack of centralized body for addressing the issues. Since the private players in a PPP model not only bring in their money but also expertise related to skills, technical knowhow, good management etc. a lot goes riding on the partnership. But what often is felt by most industry experts is that once into the project what is a clear demarcation of experience in an entirely private project to a PPP project is the ability to handle the challenges as they surface during the execution and be more dynamic in resolution of such challenges by taking prompt rational decisions. But since with government a set of rules and procedures need to be followed and things often need to move through a structured hierarchy, dynamic decisions also take longer than usual time. Thus a central body that can review the projects and has the authority to address the issues by taking decisions becomes vital for its success.

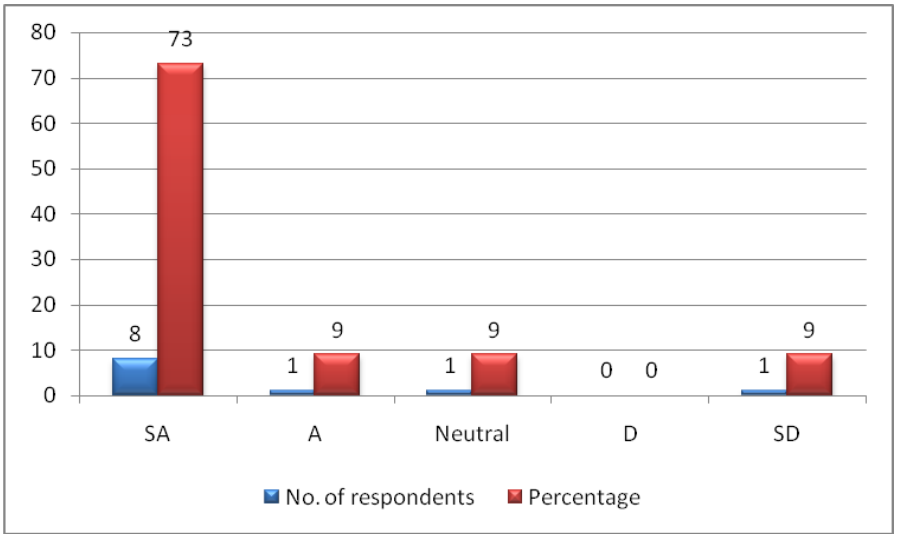
*Figure 26.*Changes in tariff structures



Source: Own work

One challenge more generic to the container rail operators that emerged from various discussions and interviews is the frequent revisions in tariffs and change of tariff structure from Freight All Kind (FAK) to notified commodities, thus restricting the commodity basket available to the operators. This is eroding the competitive advantage of the containerized rail cargo movement and leading to diversion of traffic to road.

Figure 27. Frequent modifications in policies



Source: Own work

Majority of the respondents feel that due to the frequent changes in the policies, there is a lack of stability in the system which makes the current PPP model unviable. Policy shifts by successive administrations and governments play havoc with the project and put its sustainability at risk. A PPP model is a long term investment and until a stable and long term existence of favourable policies and government regime exists the former cannot flourish.

4.10 Recommendations

A dispassionate analysis of the progress of PPP introduced in the container rail transport sector in India yields a mixed score board. While 17 operators joined the fray by opting for licenses, many of them are either inactive or languishing without adequate returns on their investments. However, this was only to be expected as the operators rushed in without adequate business analysis of the sector basing their investment decision on the CONCOR model, which enjoyed phenomenal growth, drawing support and benefits from its parent Railways in its formative years. The intensity of competition in the sector after opening up also precluded significant gains for any one player.

It would appear that the policy of opening up the sector to all and sundry indiscriminately without adequate provision of resources by the GOI also resulted in lopsided development. For commencing the business it is necessary to have a combination of rakes, terminals, containers, handling equipments etc. in place, whereas the policy only provided access to track operations on the rail network, Most of the operators started with the easy option of procuring rakes and putting them on tracks without supporting infrastructure at both ends. This resulted in frequent knocking on Railway's doors for opening up access to terminal infrastructure, which was dominated by the rival operator, CONCOR or crowding of other

private terminals. The CTOs also delayed their investment plans in terminal development, drawing on the experience of early developers whose terminals continued to languish in spite of heavy investments.

It could be stated that a piecemeal approach was adopted by Railways while opening up the sector, as the critical rail operations still remained with IR, and the operators became totally dependent on IR for provision of services without guaranteed transit time. In turn, no differentiation in services could be offered to the customers when it came to rail transits and delivery. However, the private operators adopted innovative methods such as dynamic pricing, door-to-door solutions to capture the market and were successful to a limited extent. As regards pricing of services, the tariffs notified by the market leader, CONCOR, provided the benchmark and discounts or incentives were offered liberally by other private operators. However, CONCOR continues to play a dominant role with its vast network of terminals, large number of container rakes, containers and a nimble, experienced workforce.

The various policy changes and frequent tariff revisions adopted by Railways and alleged lack of level playing field also proved a dampener for the CTOs, who even went to the extent of representing their case to the Competition Commission of India, who, however, categorically rejected their case and ruled in favour of Railways. However, it also underlines the need for an independent regulator to arbitrate and take neutral balanced decisions in the interest of developing the sector. Today the Railways are the Policy Makers, Infrastructure Owners, Operators as well as regulators. However the Railways need independent bodies to maintain a level playing field and ensure fairness in decisions. Container train operators which come under the PPP projects, very often suffer from conflicts of interest, especially when the public entity is also providing similar elements as the private entity or has proximity to the contracting authority. Independent regulation is must to protect the interests of all entities and the end users.

Considering the revenue implications, this segment of business must be nurtured and an immediate policy correction process must be initiated. The PCTOs need to be treated as Partners and not looked at as Competitors. This will not only garner more haulage revenues to the Railways but will also infuse confidence in the Railways Support to PPP initiatives.

In spite of the initial hiccups and continuing grouses, there is an emerging optimism among private operators in view of the new government's initiatives for accelerated growth and anticipated development of dedicated freight corridor, etc. There is renewed hope for revival of the sector through policy reforms and other positive economic reforms.

Taking a holistic and fundamental assessment of the sector's potential and concerns against the background of experience in PPP projects in India and at the global level, the following recommendations are made:

1. A review of restrictive policies in consultation with CTOs by the Railways is a must to bring back confidence and boost up further investment in the sector. Perception of Railways as dictating the policies needs to be changed to that of a handholding partner.
2. There is a need for an independent regulator to resolve issues related to pricing, service levels, level playing field, policy flip flops, etc. which needs to be put in place early. IR's multiple roles as a licensor, operator and regulator need a review.
3. Separation of rail operations from infrastructure, unbundling of roles, nondiscriminatory rights for rail infrastructure, competitive access to private operators and policy for capacity allocation are part of the reform guidelines practised in varying degrees in countries in European Union which could be implemented after due study and deliberations on feasibility in the Indian context by IR.
4. While the model concession agreement needs to be honoured in letter and spirit, the common grouse that it is one sided and flouted occasionally needs to be addressed by the railway administration in consultation with the stakeholders.
5. The allegation of lack of level playing field vis-à-vis CONCOR is often cited by the private operators. However, it must be ceded that the private operators were aware of CONCOR's network and lead in the sector when they stepped. They also enjoy much more flexibility in decision making and execution which puts them in an advantageous position in comparison to CONCOR.
6. The private operators should look at ways and means of sharing of resources, consolidation and other strategies to counter the dominant presence of CONCOR through widening its network, technology and service upgradation and offering composite end-to-end solutions.

CONCLUSION

This master's thesis analysesthe concept of Public Private Partnership as seen in various countries across the globe. The characteristics of Public Private Partnership and its positive and negative outcomes as witnessed over passage of time, both in the developed and developing economies has been studied for an overall perspective of the mechanism and its performance with changing variables.

The evolution, applicability, challenges and perspectives on PPP in the Indian context have been studied in considerable extent through literature surveys and special attention has been given to analyse international experiences in PPP in the rail sector,contribution of railways in infrastructure development in India and the role of PPP in the railway sector. Extensive interactions were held with representatives of both public and private counterparts through interviews and questionnaires to analyse the evolution of PPP in the containerized rail transportation sector in India and assess achievements and pitfalls in policy formulation and implementation. Based on the findings, conclusions have been drawn and recommendations made for effecting policy changes to facilitate successful evolution of PPP model in this sector.

The goal of the thesis is to close the gap between expectations of the private partners against the rules and obligations put forward by the public entities under a PPP arrangement. Grey areas that need to be looked into by both partners have been identified so that such Public Private partnership can flourish for the benefit of the nation.

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Appendix: Questionnaire

QUESTIONNAIRE:

1. Is the Public Private Partnership (PPP) model a suitable way to fund projects in India: (Please tick one)

5 4 3 2 **1**

Strongly Agree **Strongly Disagree**

2. Are the current government policies in favor of a sustainable PPP arrangement? (Please tick one)

5 4 3 2 **1**

Strongly Agree **Strongly Disagree**

3. Top of the Mind:

List 3 Challenges you think the current PPP model faces in India:

_____

_____

_____

4. Has opening the market to Private players benefitted the overall development of the Containerized cargo movement: (Please tick one)

5 4 3 2 **1**

Strongly Agree **Strongly Disagree**

5. Please rate the following identified challenges faced by Containerized Rail Transport In India as most Significant to least Significant on a scale of 1 to 5 where **1 -** least Significant &**5-** most Significant challenge:

Challenge	Rating Scale				
i. Inadequate assessment of potential of sector.	5	4	3	2	1
ii. Renegotiation of contracts.		5	4	3	2	1
iii. Long procedures for Dispute Resolution.	5	4	3	2	1
iv. Inadequate economic feasibility analysis of the project.		5	4	3	2	1
v. No proper Risk allocation amongst the stakeholders.	5	4	3	2	1
vi. Land acquisition.	5	4	3	2	1
vii. Deficiencies in Model Concession Agreement		5	4	3	2	1
viii. Lack of Standard procedures		5	4	3	2	1
ix. IR's dominant role &its attitude for private players	5	4	3	2	1
x. Laws related to tax viz. VAT, Service tax etc.		5	4	3	2	1
xi. Multiple clearances by various agencies		5	4	3	2	1
xii. Lack of a Central body for representation of issues	5	4	3	2	1
xiii. Changes in tariff structures		5	4	3	2	1
xiv. Frequent modifications in policies		5	4	3	2	1

Name of the organization: _____

Type or Organization (Public/ Private): _____

Name of Representing Officer: (Optional) _____

Have you ever participated in a PPP project: YES/ NO

Are you aware of current government PPP policies: YES/NO