PUBLIC PRIVATE PARTNERSHIP IN INFRASTRUCTURE FINANCING

By

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Master of Business Administration in Finance
Institute of Business Management, 1998

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May 9, 2014

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ABSTRACT

The global financial crisis, which was unique in its magnitude and after effects, has generated significant interest in Public Private Partnership (PPP). Lack of investments and deteriorated infrastructure challenges economic competitiveness of countries in global market and forced governments to look innovative ways to fund the projects.

PPP is a successful model in many developed economies. Availability of funding, efficiency, timely completion and regular maintenance in PPPs are main attraction for governments. While misallocated and mismanaged federal funds, inefficiency and trust deficit are key concerns when government build & finance infrastructure projects.

This study explores pros and cons of PPP in challenging economic environment, evaluate key success factors and provide review of few case studies.

Thesis supervisor: Joseph Weber
Title: Professor of Management
ACKNOWLEDGEMENT

Firstly, I like to thank my Almighty God who provides me an opportunity to attend this (MIT) prestigious school. I never thought it.

Secondly, I dedicate this thesis to my mother (Qudsia) and to my family (Munazza, my wife, Maaz my son and Maira, my little daughter). I would like to thank to my mother whose prayers brought me here, and to my family who provided me moral support to complete this study.

Thirdly, I would also like to thank Professor Joe Weber, my thesis advisor, who not only provided me guidance to connect the dots and pointed me in the right direction but also gave me deep insight about challenges of PPP deals in the United States.

Last but not the least, I am grateful to my friend and my mentor, Robby Arnold, who encouraged me to write this document. During my entire year in MIT, he always challenged me to push boundaries and guided me whenever I need advice. I cannot find appropriate words for him to say thank you.

Thank you God
Thank you Ammi (mother)
Thank you Munazza, Maaz and Maira, I love you all
Thank you Joe, It was really an exciting experience
Thank you Robby ....You are great
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1. **INTRODUCTION**

1.1. **Public Private Partnership**

Public Private Partnership, which is often referred as PPP or P3, can be defined as commercial relationship between government or quasi government institution(s) and private sector to complete a specific project often related to infrastructure. It is the process to channel private investments to public projects.

The Canadian Council for P3s (CCPPP) offers a very broad definition:

"A cooperative venture between the public and private sectors, built on the expertise of each partner, that best meets clearly defined public needs through the appropriate allocation of resources, risks and rewards."

International Monetary Fund defines PPP as “Public-private partnerships (PPPs) involve private sector supply of infrastructure assets and services that have traditionally been provided by the government."\(^1\)

Partnerships BC, the agency created by British Columbia, Canada, focuses the definition a bit more tightly:

"A public private partnership is a partnership arrangement in the form of a long-term performance-based contract between the public sector (any level of government) and the private sector (usually a team of private sector companies working together) to deliver public infrastructure for citizens. A public private partnership could be any kind of infrastructure or service such as a new hospital or bridge or highway, a new type of technology that delivers services in a faster and more efficient manner, or a new federal government building – anything that citizens typically expect their governments to provide."

\(^1\) IMF – Public Private Partnership  
1.2. Examples:
These partnerships can take many forms. Here are few examples;

- A state or city government wants to build a new highway for better connectivity but reluctant to launch the project due to limited funding. They invite private parties to invest in the project in return for profit from operations which in this case is toll payments collected from vehicles used this highway.

- Power generation in Middle East is often classified as PPP where government issues tender to private parties to build, own and operate the projects in return of guaranteed power purchase for long term (20-30 years) based on pre-defined formula price.

- Apart from attracting private monies, taking advantage of skills also sometime bring two parties (public and private sector) in contractual agreement. Management of airports in few countries has already been privatized. The Government of India has developed airports in Delhi and Mumbai through Operation, Management and Development agreements with private entities.\(^2\)

There is no single definition of Public Private Partnership and there is no single model of typical PPP arrangements. Every country, economy and sector develops its own model/structure based on the legal framework, objective, nature of the project and willingness to offer and accept risk and reward by both parties. However, one commonality in all PPP can be defined as the arrangement whereby few of the responsibilities, which falls under the umbrella of public sector shared by private sector in return to some reward. One clear distinction is service contracts or turnkey construction contracts or the privatization of public companies where there is a limited ongoing role of public sector.

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The most common example of PPP is in infrastructure projects; power, water, highways, airport development, telecommunication, railways, ports, bridges, information technology etc.

1.3. Potential Benefits of PPP:

It is debatable whether crises are good or bad but one thing is common that every crisis gives us an opportunity to reset our priorities. The 2008 financial crisis, which was unique in its magnitude and after effects and still quoted as recent financial crisis in economic discussion despite being five year old, has generated significant interest in PPP in many economies. Limited fiscal space has forced governments to look innovative ways to fund the projects. Also the recognition of importance of investments in infrastructure to remain competitive in international scale put pressure on governments to look to private sector to help them deliver public goods for a variety of reasons;

- Participation of private sector brings operational efficiency and fiscal discipline which often lacks in government sponsored projects
- Transferring knowledge and expertise to local private sector when government initiate joint venture with large international firms
- Creating diversification of ownership in public sector goods by inviting private sector
- Supplementing limited public sector capacities by joining hands with big corporations both national and international
- Government has to provide sound legal framework to promote PPP and this helps to set priorities in for long term
- Risk transferring helps government to focus on planning and developing policy guidelines
- Private sector has limited risk appetite and reluctant to invest heavily in new technologies. Government support through PPP helps to promote innovative culture in the country
Whether the development of new and/or improvement of existing infrastructure, new and efficient solutions can be created by inviting private sector. The government can also focus on policy, planning, strategy and regulations by delegating some of its tasks to private sector. Government can also free financial resources and put them in areas where the private sector is reluctant to come forward due to limited commercialization of projects or risk acceptance capability.

However, careful planning, defined responsibilities, developmental objectives and balanced risk and reward allocation are quintessential to make this partnership successful. Government should also provide adequate legal framework, level playing field to all private parties and post construction monitoring (in terms of green field projects) to ensure consistent delivery with acceptable quality of public goods are also important ingredients of successful PPP model.

1.4. PPP Versus Privatization

Both are similar concepts and revolves around the key objective of bringing private sector efficiency in public goods. Both provide fiscal breath to governments in difficult time and therefore we see high level of interest worldwide especially after financial crisis. While PPP and privatization are often used interchangeably, there are some key differences in terms of ownership, transaction structure, responsibilities and risk.

A key difference is the ownership and control of asset. Privatization can be better defined as "hand off" where government sell high value commercial assets to private parties. Post privatization, the government's role is minimal or in fact negligible. In contrast, PPP is more like "hand on" where governments are willing to offload some ownership and control to private parties in return to receive private sector expertise and capital to develop infrastructure projects. The Government remains an active participant in PPP.
### Asset Ownership

<table>
<thead>
<tr>
<th>Public Private Partnership</th>
<th>Privatization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private or Public</td>
<td>Private</td>
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<tr>
<td>depend on structuring</td>
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### Structure

<table>
<thead>
<tr>
<th>Public Private Partnership</th>
<th>Privatization</th>
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<tr>
<td>Complex</td>
<td>Outright sell</td>
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### Risk

<table>
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<tr>
<th>Public Private Partnership</th>
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<tbody>
<tr>
<td>Shared responsibilities</td>
<td>Sole responsibility of private sector</td>
</tr>
<tr>
<td>among stakeholders</td>
<td></td>
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<tr>
<td>including public sector</td>
<td></td>
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</table>

### Government Role

<table>
<thead>
<tr>
<th>Public Private Partnership</th>
<th>Privatization</th>
</tr>
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<tbody>
<tr>
<td>Shareholder</td>
<td>Regulator</td>
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### Funding

<table>
<thead>
<tr>
<th>Public Private Partnership</th>
<th>Privatization</th>
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</thead>
<tbody>
<tr>
<td>Arranged by private</td>
<td>Arranged by private sector with no government guarantee</td>
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<tr>
<td>sector with or without</td>
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<tr>
<td>government guarantee</td>
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### Customers /Product Off take

<table>
<thead>
<tr>
<th>Public Private Partnership</th>
<th>Privatization</th>
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<tr>
<td>Both government &amp;</td>
<td>Public</td>
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<tr>
<td>public</td>
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### Demand Risk

<table>
<thead>
<tr>
<th>Public Private Partnership</th>
<th>Privatization</th>
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<tbody>
<tr>
<td>High demand risk</td>
<td>To some extent yes but often these projects have high commercial value</td>
</tr>
</tbody>
</table>

### 1.5. Challenges:

There are a number of potential risks associated with Public Private Partnerships:

**High Cost of Debt** — Although private sector involvement in PPP's will help governments bridge the funding gaps, this form of funding has high cost as compare to fully sponsored government projects.

In general, sovereign borrowing is cheaper than borrowing by private firms. This reflects the lower default risk of the sovereign, which tends to be able to raise money by way of taxation. As a result the interest rate on sovereign debt is commonly called risk-free. In fairly stable economies with well-functioning capital markets (e.g. the United Kingdom, the United States) private corporate debt is typically priced a few percentage points higher than the risk free rate, and structured project debt yet another 1 or 2 percentage points above this. The corporate debt is therefore is almost always costlier than sovereign debt.

**Not Every Project Attracts Private Sector** — Private sector has different priorities while for government social aspect of projects also an important factor. When private sector participants analyze a project, operating cash flows, profit and loss, payback period are typically their primary focus. A highway project to connect remote side of
the country may be the highest priority for government but if it does not attract traffic volume to generate enough cash flows, the private sector would be reluctant to come forward to sponsor these types of project.

**Long Term Commitment Issues** – Change of policies or even priorities by the government is always a key concern for private parties. Private sector typically reflect the risk of change in governmental policies in the pricing of the funds they provide to the partnership. The challenge for government is how to provide comfort for private parties for long-term period.

**Accountability** - If the project or the partnership fails or does not deliver what was promised in the outset of the partnership, citizens will hold the government accountable.

**Unforeseen Events** – Infrastructure projects are very long term in nature. From drawing board to construction phase involves many complex steps and often requires years of planning, negotiation, reviews of agreements, arrangement of financing and selection of right parties for right skills. Despite all these efforts, there are many events, which may arise during pre or post development phase. Sometime international events also force governments to reset priorities or force parties to withdraw their commitments. Not every issue can be addressed in legal agreements at the time of negotiation. These contingencies have long-term impact on project delivery and performance. Sometime government may have to increase its stake and realign role and responsibilities.
2. STRUCTURE, FUNDING & DIFFERENT MODELS

2.1. Structure of PPP Projects
Sharing technical expertise and risk are the fundamental reasons parties form consortium in large infrastructure projects. In order to make a clear separation, consortium partners form a Special Purpose Vehicle (SPV). The SPV then develop the project and all transactions/payments are routed through SPV. Roles, responsibilities, liabilities and shareholding of each partner clearly define in the legal agreements. The typical structure of a PPP projects is shown below.

2.2. Funding Mechanism
There are three main funding mechanisms available for PPP projects;

2.2.1. Project Financing
Project financing is one of the most common and the most efficient forms of financing in infrastructure projects in general. A detailed due diligence is required by the lenders to negotiate any unforeseeable events due to long term funding. In some

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3 PPP in Infrastructure Resource Center
http://ppp.worldbank.org/public-private-partnership/financing/mechanisms
cases, credit enhancement features are also introduced to guarantee payments in case of project delays or if the project fails to generate required cash flows.

Generally, sponsors negotiate grace periods long enough until the project start generating revenues. The project funding remains off balance sheet for sponsors.

2.2.2. Government Funding

The government is one of the key sources of finance in infrastructure deals in different forms and shapes and invite private sectors to bring efficiency and expertise. In certain cases where private sector has limited risk appetite or a project may not be commercially viable, governments will typically assume a majority share and active role. However in order to encourage private sector, government may offer other benefits like subsidized land, long term concessions, tax holiday and guarantee.

2.2.3. Balance Sheet Financing:

The private operator may accept to finance some of the capital investment for the project and decide to fund the project through corporate financing – which would involve getting finance for the project based on the balance sheet of the private operator rather than the project itself. This is typically the mechanism used in lower value projects where the cost of the financing is not significant enough to warrant a
project financing mechanism or where the operator is so large that it chooses to fund the project from its own resources, as opposed to raising capital from other sources.

The benefit of this is that the cost of funding will be the cost of funding of the private operator itself and so is typically lower than the cost of funding of project finance. It is also less complicated than project finance. However, there is an opportunity cost attached to corporate financing because the company will only be able to raise a limited level of finance against its equity (debt to equity ratio) and the more it invests in one project then less will be available to fund or invest in other projects.

2.3. Investors in Infrastructure Projects

No doubt mature economies have far better options of financing given the well developed capital markets, however, innovative methods of financing, risk sharing mechanisms and governments willingness to share fair amount of rewards with private parties bring many unconventional investors in emerging markets.

![Investors in Infrastructure Financing](image)

Heavy reliance on budget financing/federal grant may not be the right option, similarly heavy reliance on foreign funding exposes economies to other types of risks;

a) Many infrastructure projects derive revenues denominated only or primarily in local currency. Where obligations to suppliers or providers of debt and equity are denominated in foreign currency, the project is exposed to exchange rate

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4 Practical Solutions and Models for Addressing Obstacles to Institutional Investment in Infrastructure in Developing Countries – January 2014
Prepared by the Staff of the World Bank Group for the G20 Investment & Infrastructure Working Group
risks. Since foreign investors are generally unwilling to bear these risks, risks are often shifted to the government or to consumers.

Hedging is an option to mitigate exchange rate risk. It's a zero sum game or kind of insurance to avoid negative consequence of investors' position. Individual investors and corporations use hedging techniques to reduce their exposure to various risks including foreign currency. Hedging against exchange rate risk means strategically using instruments in the market to offset the risk of any adverse price movements. However, hedging comes with price. By reducing risk, investors also tend to reduce potential profit as they have to pay fee (insurance premium) to other party. It's a trade off which may or may not suit particular situation.

b) foreign ownership sometime is unacceptable due to political reasons or security reasons for sensitive projects.

Government is the biggest player in developing economies but focus to enhance the role of domestic equity markets is also growing. Emerging economies are making progress and building regulatory framework to widen the investors' net.

2.4. Most Commonly Used Models of PPP

There are different PPP models in practice depending on the nature of project and market conditions. Each contract represents different characteristics. Below are a few of the most common models;

2.4.1. Service Contract

This is the most simplistic form of PPP's contract in which government appoint private parties to do specified task. The length of these contracts is often short term (1-3 years) and payment is contingent on successful delivery of services. Clearly defined terms, low barrier to entry and easily traceable performance parameters are key characteristics of this type of partnership. They are often called performance

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5 Public Private Partnership In India, Ministry of Finance, Government of India
The Canadian Council for Public Private Partnership
Authority for Electricity Regulation, Oman
Public Private Partnership Handbook – Asian Development Bank
based management/maintenance contracts.

This model is often used in water supply, sanitation, solid waste management, road maintenance etc.

2.4.1.1. Benefits of Service Contracts

- Encourages and promotes contractors to be innovative and find cost effective ways of delivering services
- Ties contractor compensation to performance achievement
- Provide a relatively low-risk option for expanding the role of the private sector
- Create substantial impact on system operation and efficiency, and
- Provide a vehicle for technology transfer and development of managerial capacity

2.4.2. Lease Contract

In this type of contract, the private sector undertakes the responsibility of operation and maintaining quality in its entirety at their own expense and risk. The asset ownership remains with public authority with responsibility of any replacement and new investment. The duration varies from 10 years to 30 years and even beyond in different markets.

In Asia, lease contracts are usually used in operating airport terminals or seaport container terminals. Thailand and India have ongoing lease contracts to operate container terminals at the seaports of Bangkok and Cochin, Karala State. Port Authority of Thailand announced an open bidding for the interested private sector to lease and operate the terminals at Laem Chabang Port in accordance to the government policy. 6

6 http://www.asiatradehub.com/thailand/ports.asp
Private Participation in Infrastructure database, World Bank
2.4.3. Build Own Operate (BOO), Build Own Operate Transfer (BOOT) and Other Arrangements

These are specialized kind of arrangement where private parties are invited to build own and operate an infrastructure project. The successful firm or consortium arrange financing, develop the project and provide output at a predetermined rate to public sector. In BOOT, the asset ownership transfer to public sector after specified time long enough to generate sufficient cash flows for return on investment of private parties. At the end of the contract, apart from assuming the ownership the public sector can also opt to assume operating responsibility, contract the operation responsibility to the developer, or award a new contract to a new partner.

The inverse of BOOT is BTO (Build Transfer Operate) where the asset transfer to the public sector right after the completion of construction phase rather than at the end of the project. Another example of this type of arrangement is DBO (Design Build Operate) in which ownership never in the private sector. These variation based on many factors such as type of the project, requirement of technical skills, financing arrangement and government priorities.

### Project Delivery Options

<table>
<thead>
<tr>
<th>Models</th>
<th>Ownership</th>
<th>Conceive</th>
<th>Design</th>
<th>Build</th>
<th>Operation &amp; Maintenance</th>
<th>Financial Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design-Build</td>
<td>Public</td>
<td>Public</td>
<td>Private by Fee Contract</td>
<td>Public</td>
<td>Public</td>
<td>Public</td>
</tr>
<tr>
<td>Design-Build-Finance-Operate</td>
<td>Public</td>
<td>Public</td>
<td>Private by Fee</td>
<td>Public or Private</td>
<td>Public or Private</td>
<td></td>
</tr>
<tr>
<td>Build-Own-Operate</td>
<td>Private</td>
<td>Public or Private</td>
<td>Private</td>
<td></td>
<td>Public or Private</td>
<td></td>
</tr>
<tr>
<td>Build-Own-Operate-Transfer</td>
<td>Public</td>
<td>Public</td>
<td>Private</td>
<td></td>
<td>Public or Private</td>
<td></td>
</tr>
</tbody>
</table>

2.4.4. Example of Build Own Operate Model:

a) Las Vegas Monorail – United States\(^7\)

The Las Vegas Monorail is a seven-stop, elevated train system that travels along a 3.9-mile route (6.4 kilometers) and connects major hotels and attractions along the world famous Las Vegas Strip.

The Monorail was originally envisioned as a joint venture between MGM Grand and Bally's Hotel, with the idea to create a one-mile transportation system linking the hotels. This exciting and forward-thinking idea took flight in 1993 and soon included plans to expand to other locations along the Strip. In 1997, the State of Nevada passed legislation that enabled a private company to own, operate and charge a fare as a public Monorail system. Da-based Liaise Corporation, Granite Construction Company, Gensler & Associates, Carter-Burgess and Salomon Smith Barney, were assembled to develop the Monorail system.

Bombardier Transportation, a Canadian company and one of the world's largest transit system manufacturers experienced at turnkey operations, was contracted with operating and maintaining the trains, automatic train controls and other control subsystems.

The Las Vegas Monorail Company runs the only privately owned public transportation system in the United States. The Monorail is privately-funded, utilizing no public funds to build or operate the system. The project cost was USD 650 million raised by tax exemted revenue bonds backed by fares and advertisement revenue.

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\(^7\) [http://www.lvmonorail.com/about/history/](http://www.lvmonorail.com/about/history/)
[http://www.fhwa.dot.gov/ipd/project_profiles/nv_lasvegas_monorail.htm](http://www.fhwa.dot.gov/ipd/project_profiles/nv_lasvegas_monorail.htm)
b) I-495 Capital Beltway – Virginia, United States

The Capital Beltway High Occupancy Toll Lanes project (officially the 495 Express Lanes) is a public-private partnership between Virginia Department of Transportation and Capital Beltway Express, LLC (a joint venture of Fluor and Transurban) that opened in November 2012. The total cost of the project was $2.068 billion out of which $348 million was provided by private sector.

The total length of the concession is 85 years including five years of construction period and the facility opened to public in November 2012.

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8 http://www.fhwa.dot.gov/ipd/project_profiles/va_capital_beltway.htm
3. CRITICAL SUCCESS FACTORS

Private investment is the powerful tool for innovation, sustainable growth and efficiency. However, there are few important elements, which attracts private sector in PPP deals.

3.1. Government Support:
Public goods are typically the responsibility of government. The participation from the private sector is just to facilitate the government to provide quality projects and maintenance at an affordable cost. Given this fact, it is the duty of the policy makers to provide a level playing field, which provides balance between risk and incentives among all parties (government and private investors). The imbalance in risk reward equation may lead to disagreement in the project implementation or thereafter.

The high-level policy parameters adopted by those governments who have been successfully implemented PPP models are as follows;

   a) Create successful PPP model projects
   b) Strengthen PPP institutions
   c) Avoid bureaucracy hurdles and red tape in PPP process
   d) Try to minimize transaction cost
   e) Provide regulatory framework which facilitates private sector participation

3.2. Public Private Link
Compared to governments, private sector investors will typically place more emphasis on economic viability and return while evaluating projects. There are projects, which can fulfill social needs but may not be commercially viable. Therefore, not every project financing can be raised on commercial terms. Policy makers should always keep this factor in mind during feasibility stage and evaluate government participation level based on the economic viability of the project. A broad categorization is mentioned below;
3.3. **Government Versus Private Sector Involvement**

The degree of private sector's involvement in public projects depends on the commercial viability of the project. If the project is not commercially viable, high level government support is essential to execute it. This support may come in providing financial support or taking higher stake in ownership structure. Marginally viable projects may attract private sector in operation & maintenance phase where private sector assume less responsibility for short term period. The reverse is true for commercially viable projects. These projects often attract enough interest from private parties, these projects are perfect target for PPP model.

Below graph explains how project feasibility affect private sector involvement in construction, operation & maintenance and financing structure.

**Degree of Involvement of Private Sector**

Source: PPP Policy & Regulation in Indonesia, Ministry of National regulation Planning/National development Planning Agency

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9 PPP Policy & Regulation in Indonesia, Ministry of National regulation Planning/National development Planning Agency
3.4. Achieving Successful Partnership

It is important for policy makers to identify different goals of different participants. The long-term nature of many PPP's and the number of participants will both increase the complexity of the project and also make it difficult to establish level playing field for all stakeholders. For private sector, the key drivers are the potential to earn reasonable profits. In addition, before committing any capital, private sector also demands clear regulatory framework. These partnerships are complex to design, implement and manage. Partnerships require the will of all parties involved to work together. They also rely on clear and carefully crafted agreements defining the rights and obligations of the parties involved and establish a framework for responding to new situations as they arise.

3.5. Institutional Support

The hurdles in PPP implementation are the slow approval process at various authorities and ministries. Projects often take years from concept stage to actual ground breaking or signing of agreements. This increases transaction cost and private sector losses interest. Government priorities also change with time.
In different markets government will often establish special purpose institutions to expedite process. Such authorities and institutions are responsible to work with consultants to organize and execute planning and feasibility studies, conceptual design work, and in many cases establish financial demand model. Special purpose authorities can assume responsibility for liaison with all parties, as well other government departments/ministries. Often these agencies also negotiate with government own financial institutions like development banks and other multilateral agencies like International Financial Corporation, Asian Development Bank, World Bank etc. Once projects have been identified, the authority procures them on behalf of the government and then oversees their construction and operation. While the presence of a development authority can never guarantee success, it does streamline and organize government involvement, helps develop government expertise, and encourage consistent policy.

3.6. Tax Issues

Taxation directly impacts the profitability of private investors. To attract private monies for long term, government often provide PPP’s with exemptions from taxes. It could be direct benefit i.e. ‘tax holiday’ for certain period of time or indirect tax relief i.e. provide concession to import duty free machinery, spare parts or raw material. Tax exemption for dividend payments, repatriation of profits for foreign partners and reduced property charges are also common.

Another concern is the consistency of levies and taxes. There are some governments that provide ‘tax stabilization’ clause, which guarantee that project does not provide specified maximum tax rate. Below is the brief analysis of tax relief provided by few Asian economies to attract large scale investments.

3.6.1. Indonesia

The Indonesian government has a policy on Public-Private Partnerships as part of its long-term national development plan. In September 2011, the government identified
total infrastructure needs in the 2011 to 2025 period at $211 billion\textsuperscript{10}, half of which will be funded by the state budget, with the remainder coming from state owned enterprises and the private sector through Public-Private Partnership Schemes.

The Income Tax Law\textsuperscript{11} provides various incentives to encourage companies to invest in certain qualifying business sectors are:

- a 30% investment allowance
- accelerated depreciation of fixed assets (twice as fast as the normal rate)
- longer tax loss carry forward period (extended from five years to ten years)
- a reduction of withholding tax on dividends paid to foreign shareholders from 20% to 10%
- tax holidays - In August 2011, the government announced tax holidays for firms which have a wide range of connections, provide additional value and high externalities, introduce new technologies and have strategic value for the national economy. Eligible taxpayers may enjoy an income tax exemption for a period of five to ten years from the start of commercial production. At the end of the tax holiday period, the tax payers are given a 50% income tax reduction for a further period of two years.

3.6.2. Malaysia

Malaysia has traditionally offered a wide range of investment incentives. These are contained in the Promotion of Investment Act 1986. Incentives available under this legislation are set out on the Ministry of Finance website.

The main incentives applicable to Public-Private Partnerships are as follows:

\textsuperscript{10} Government of Indonesia, 2011 Master Plan for Acceleration and Expansion of Economic Development 2011-2025, Jakarta


\textsuperscript{11} PWC, The Report Indonesia 2012, p.286
- **Pioneer Status** - the most important advantage of acquiring pioneer status is the partial exemption from income tax for a period of five years. The status is granted to companies participating in promoted activities producing promoted products. Companies are granted a tax exemption on 70% of statutory income. However, a company located in Sabah, Sarawak and the designated Eastern Corridor of Peninsular Malaysia will be granted tax exemption on 85% of statutory income for five years\(^{12}\).

- **Investment Tax Allowance** - this is an alternative incentive that companies can opt for, rather than pioneer status. Companies will be granted an allowance of 60% in respect of qualifying capital expenditure. Companies located in Sabah, Sarawak and the designated Eastern Corridor of Peninsular Malaysia, will be granted an allowance of 80% in respect of qualifying capital expenditure incurred within five years from the date the first capital expenditure is incurred\(^{13}\).

- **Infrastructure Allowance** - this is available for any company resident in Malaysia engaged in manufacturing, agriculture, hotel, tourist and other industrial and commercial activity in Sabah, Sarawak, and the Designated Eastern Corridor of Peninsular Malaysia. A company will be granted an allowance of 100% in respect of capital expenditure on infrastructure such as reconstruction, extension or improvement of any permanent structure including bridges, jetty, port or road. The allowance can be offset against up to 85% of statutory income in the year of assessment. The balance of that statutory income will be taxed at the prevailing company tax rate. Any unutilized allowances can be carried forward to the subsequent years until they are fully utilized\(^{14}\).

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3.6.3. Philippines

The government of the Philippines has adopted a policy of encouraging private sector participation in infrastructure development. The Build – Operate – Transfer (BOT) Law sets out the policy and regulatory framework for private sector participation in infrastructure projects. A government agency, the BOT Centre, was established to manage and coordinate the implementation of the BOT.

Enterprises registered with the Board of Investments (BOI) can obtain the following tax incentives:

- Income tax holiday concessions, which exempt income taxes from 4 years (non-pioneer enterprise) to 6 years (for pioneer enterprise). This incentive can be extended upon approval by the BOI, but cannot extend more than eight years. A pioneer enterprise either manufactures goods that have not been produced in the Philippines on a commercial scale, or employs a formula, or production scheme, which has not yet been tried in the Philippines.
- Exemptions from tax and duties on machinery, equipment, spare parts, and accessories, imported by new and expanding registered enterprises
- In the first five years from registration, an additional deduction from taxable income of 50% of wages of additional skilled and unskilled workers in the direct labor force. However, the enterprise must meet prescribed capital to labor ratios
- Exemptions from local taxes to six years from the date of registration for pioneer enterprises, and four years from the date of registration for non-pioneer enterprises

3.6.4. Summary of Infrastructure Tax Incentives in Asian Markets

3.6.4.1. Tax Holiday

In Indonesia tax holidays are available for five to ten years. In the Philippines, Non-Pioneer Enterprises can obtain a tax holiday of four years and a Pioneer Enterprise
can obtain a tax holiday of six years. Thailand provides an exemption from tax for up to eight years.

### 3.6.4.2. Reduced Corporate Tax Rates

In Vietnam a concessional tax rate of 10% applies for the duration of the project. In Malaysia entities with Pioneer Status are granted an exemption on 70% of Statutory Income. Companies located in special regions such as Sabah, Sarawak and the designated Eastern Corridor of Peninsular Malaysia are granted a tax exemption on 85% of Statutory Income.

### 3.6.4.3. Location Based Tax Incentives

Vietnam, Malaysia, Oman, Bahrain, United Arab Emirates, Pakistan and other Asian economies provide good examples of this incentive. Government of Oman offers the following incentives to attract large-scale investments in Special Economic Zone such as Duqm\(^\text{15}\).

- 100% foreign ownership
- Free repatriation of profits & capital
- No currency restrictions
- Exemption from import & export duties
- Zero personal income tax
- Sales to domestic & other middle eastern countries duty free
- Long term land lease (up to 50 years) at competitive prices

There are more than 38 free zones in United Arab Emirates. The broad incentives are as follows:

- 100% foreign ownership of the enterprise
- 100% import and export tax exemptions
- 100% repatriation of capital and profits
- Corporate tax exemptions for up to 50 years

\(^{15}\) Special Economic Zone Authority, Duqm, Oman

http://www.duqm.gov.om
• No personal income taxes

Each Free Zone is designed around one or more business industry categories and only offers licenses to companies within those categories\textsuperscript{16}.

3.6.4.4. Reduced Taxes (WHT, VAT) & Other Incentives

This is also one of the most common forms of providing incentives to investors. For example, in Korea the Special Tax Treatment Control Act provides for a special taxation on interest from infrastructure bonds and special taxation of dividend income received by residents possessing stocks in a social fundamental facilities investment and lending company. Government also offers reduction in property tax & value added tax (VAT) for Public-Private Partnership infrastructure projects.

In order to encourage foreign investments, Vietnam provides a reduction of withholding tax on profits remitted overseas. Indonesia also provides a reduction in withholding tax on dividends paid to foreign shareholders from 20\% to 10\%.

The Philippines also reduces customs duty on machinery and raw materials.

3.7. Legal Framework

It is difficult to answer whether a new policy/rules are required to promote PPP in the country. There are examples of both cases; successful PPP models without implementing new laws and high-level participation of private sector once the new policy implemented. The importance of new rules, laws and policies, depends upon the country’s existing legal structure and respect of laws. What are the consequences of breach of rules? What is the process for dispute resolution? Domestic or international arbitration. In case of international arbitration, can it be enforced effectively? There is high co-relation of successful PPP programs in those countries where there is strong legal framework.

\textsuperscript{16} UAE Free Zones
http://www.uaefreezones.com
The countries’ legal framework is not only important for investors but also for lenders. Rules for insolvency and the lenders right to step in (take over the project) are also critical.

3.8. Political Stability

Political will is the foundation of PPP. Government can hire the very best advisors but without determination it may not get the desired results. The successful private sector projects can only be implemented if there is an agreement of administrative hierarchy and all participants of government machinery. A conflict/disagreement or even different objectives between federal and state level government may jeopardize the viability of the PPP model.

The World Bank stresses an important lesson learned from its experience with PPPs over the last 20 years: “strong political commitment to attract private finance is required at the highest level, and should be sustained over time . . . Continued leadership will ensure that PPPs remain integrated into the financing plan for an investment program, with the government and incumbent agencies aligned around this agenda”.

For this commitment to be “developed, sustained and communicated by the necessary institutional structures... experience has shown the value in identifying a ‘political champion’ of PPPs able to provide an effective link between political priorities and institutional structure.”\(^\text{17}\)

\(^{17}\) Economic & Social Commission Report for Western Asia, P-17
There is no single model of PPP and there is no specific success formula. Policy makers picked successful models around the world, tailored the project to the institutional details in their organization, and implement it. A few case studies are mentioned below:

4.1. Canada – The Forefront in PPP due to Government Support

The Canadian Council for Public Private Partnership (CCPPP), established in 1993, is a national not-for-profit non-partisan, organization with representation from across the public and private sectors. It’s key objective is to promote and facilitate PPP projects and provide a platform where member organizations share resources.

4.1.1. The First PPP in Canada

The history of PPP dated back in early 80s when the government decided to replace existing ferry service from eastern Canadian provinces of Prince Edward Island and New Brunswick to fixed road link. The decision followed by heated debate among residents of Prince Edward Island about how new construction would affect their way of life. Finally policy makers decided to poll to resolve the issue. The federal department of Public Works and Government Services selected bridge design out of several proposals from the private sector, and on January 18, 1988, Premier Joseph Ghiz asked Prince Edward Islanders to make the final decision in a plebiscite. At the polls, 59.4% of Islanders voted “Yes” to a fixed link.

Five thousand workers with construction cost of over a billion dollar helped to shape

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18 Source:
The Canadian Council of Public Private Partnership
Privatisation & PPP Review 2013/14, published by Euromoney Yearbooks
The Success of P3 in Canada
Report on Understanding Public Private Partnership in Canada – Association of Consulting Engineering Companies – Canada
The Confederation Bridge - http://www.confederationbridge.com/about/confederation-bridge.html
the dream of fixed link from eastern Canadian province to New Brunswick in four years, now known as 'Confederation Bridge'. The 13 kilometer long, curved bridge is one of the longest in the world crossing ice-covered water, still endures as one of Canada's top engineering achievements of the 20th century even after fifteen years of construction and the first successful private sector participation in public goods.

4.1.2. Reasons for Success

Following the successful delivery of Confederation Bridge, the authorities and policy makers looked this model more seriously to pull private sector in public projects. Provincial governments came forward and established provincial agencies to facilitate investors interaction with government. British Columbia created Partnerships BC in May 2002 with a mandate to implement P3 infrastructure projects in that province. Other jurisdictions also followed this practice, with Ontario, Quebec, New Brunswick, Alberta and others quickly setting up similar agencies or specialised procurement units within existing government ministries. It is difficult to say which factor played an instrumental role in successful implementation of PPP model rather it is the combination of multiple factors. That being said, Canada is a good example where the government supports PPP endeavors.

4.1.2.1. Government Initiatives to Support PPP

i) The federal and most of the provincial government made it mandatory to tendering authorities to evaluate the feasibility of implementing PPP model in projects beyond certain threshold level. For example, Infrastructure Québec, Quebec's major infrastructure implementation agency, is required to consider any project of Canadian Dollar 40 million or above as a prospective PPP project.

ii) In addition, federal government also established an agency, P3 Canada, in 2008 to expedite efforts of promoting PPP model across country. P3 Canada also launched the first infrastructure funding program in the country called 'P3 Canada Fund'\(^{19}\).

\(^{19}\) P3 Canada Fund - http://www.p3canada.ca/p3-canada-fund-overview.php
PPP Canada looks to invest in P3 projects, through the P3 Canada Fund, that are:

- Well-structured and deliver Value for Money
- Demonstrate substantial risk transfer to the private sector
- Establish public benefits; and
- Promote jobs and economic growth

iii) The Government of Canada made it mandatory in budget 2011 for all government agencies to evaluate possibility of using PPP models for those projects which creates an assets of life of at least 20 years and capital cost of Canadian Dollar 100 million or above.

4.1.2.2. Transparency, Standardization in Processes and Documentation

Transparency in government negotiation and procurement process are the key factors to raise private sector confidence. In addition, project pipeline, which is often available well in advance in Canada, will provide sufficient lead-time to participants to form consortium and organize other resources. Availability of draft legal documents and standardized approach also helped participant to understand their role and responsibility clearly.

4.1.3. Conclusion

Government commitment, legislative framework and overall conducive environment helped Canadian model as a successful model for others.
4.2. India – Lack of Transparency is one of the Key Deterrent in Growth of PPP Deals

The Indian PPP market is not new but not as developed as in the western economies. The Government is promoting PPP as viable option for country's dire need of infrastructure and realizing the need of specialized institution in infrastructure financing space in India, 'Expert Group on Commercialization of Infrastructure Projects' (a group formed by Economic Affairs, Ministry of Finance, India in 1994) recommended developing an independent organization to promote investment in this sector. This give birth to Infrastructure Development Finance Company\(^{20}\) ("IDFC") in 1997. The agency invested significant efforts in its early years in policy and regulatory framework changes to facilitate private investment in infrastructure. More commercially viable infrastructure projects emerged and IDFC proved successfully that the government can work with private sector on a risk sharing basis.

India Infrastructure Finance Company Limited (IIFCL) is also another example of government commitment. Incorporated on January 5, 2006 under the Companies Act 1956 as a wholly Government owned Company, IIFCL is a dedicated institution for financing and development of infrastructure projects in the country.

| Highlights\(^{21}\) |  
|------------------|-------------------|
| **Infrastructure sectors** | Energy, Telecom, Transport, Water and Sewage |
| **Project reaching financial close** (From 1990 – 2012) | 725 |
| **Sector with largest investment share** | Energy |
| **Type of private participation in infrastructure with largest share in investment** | Greenfield project |

IDFC - Company Website; http://www.idfc.com/our-firm/history.htm  
4.2.1. Delhi International Airport Limited\textsuperscript{22}

In 2006, the Government of India awarded the Delhi International concession to a joint consortium of GMR Group (54%), Airport Authority of India (26%) and Fraport AG & Eraman Malaysia (10% each). The contract period is 30 years and has an option to extend the term for another 30 years. The mandate includes the right to operate, maintain, develop, design, construct, finance, upgrade, and modernize the Indira Gandhi International Airport, Delhi.

The project was divided into five phases of development. The first phase required a capital investment of US$2 billion and completed in 2010.

The Airports Authority of India (AAI) has a 26 percent stake in DIAL and is the designated public body for the project. The AAI is a public-sector body wholly owned by the Government of India. The AAI was constituted in April 1995 by merging the erstwhile National Airports Authority (NAA) and International Airports Authority of India (IAAI) with a view to accelerating the integrated development, expansion, and modernization of the airports in the country to conform them to international standards.

Private-sector shareholders have a 74 percent stake in DIAL;

- GMR Group: The consortium leader, with a 50.1 percent equity stake
- Fraport AG: A German airport company, with a 10 percent equity stake
- Malaysia Airports Holdings: A Malaysian airport company with a 10 percent equity stake
- Infrastructure Development Finance Company Ltd. Private Equity (IDFC PE): Financial investor, with a 3.9 percent equity stake

\textsuperscript{22} GMR Group - Company Website
http://www.gmrgroup.in/Airports/Delhi_International_Airport__P__Limited.html
World Economic Forum Report 2010 – Paving the Way
4.2.2. Key Performance Measure

Government of India devoted special attention to negotiate long-term contractual obligations to ensure smooth operation. Delhi is the capital city and its airport is the second largest in terms of passenger handling. A growth rate of 25% was witnessed from 2004 to 2007 in traffic. Given the nature of strategic asset, ten consortium parties submitted initial interest in response to tender, while six qualified for second stage screening.

The government has imposed following performance indicator to successful bidder;

- After completion of capital upgrades in 2010, DIAL should achieve a rating of at least 3.5 for Airports Council International passenger surveys
- The airport master plan should be updated at least every 10 years;
- DIAL should participate in the International Air Transport Authority within 12 months of contract signature.
- DIAL provides a performance guarantee of Indian Rupee 5 billion for the first five years of contract; this guarantee is required to be escalated as per the CPI on an annual basis.
- All the shareholders are required to maintain their stake in DIAL for a specified period.

4.2.3. Termination Clause

In case of default by either party, the compensation has to be paid as follows;

- If AAI default: 100 percent outstanding debt and 120 percent equity invested as part of core assets
- If DIAL default: 90 percent of debt outstanding

The government provided first refusal to DIAL to develop a new airport within 150 kilometers of the project during the first 30-year concession period.
4.2.4. Transaction Structure

4.2.5. Challenges

There is suddenly a spike of contract renegotiation and withdrawn of PPP projects in India. The Bangalore-based GMR group had won the project for 6-laning of 555 km Kishangarh-Udaipur-Ahmedabad highway through international competitive bidding in September 2011 at Rs 636 crore annual premium for 26 years. The company has announced in January 2013 to withdraw the contract due to unviability because of
cost escalation\textsuperscript{23}.

The Delhi-Gurgaon Expressway was the first project to be given on a premium by the government. However, traffic congestion and allegation of mismanagement raised the issues of operational efficiency in PPP. The matter is in court these days\textsuperscript{24}.

Adani Power had petitioned Central Electricity Regulatory Commission for evolving a mechanism to meet the escalation in fuel cost due to enactment of new coal pricing regulation by Indonesian government\textsuperscript{25}.

Tata Power is also facing same issues and renegotiating contract terms with Central Electricity Regulatory Commission\textsuperscript{26}.

Economic growth cannot be separated from political stability and good governance in the country. Both go hand in hand. This is the case for India.

4.2.5.1. Corruption

Massive corruption, scandals in political elites, nexus between power and business are main headlines in India. Corruption has increased manifold during the last decade and now rampant in the society. No government has taken serious efforts to eradicate corruption. Complicated project execution process, which involves many

\textsuperscript{23} GMR GVK exiting mega projects – January 17, 2013

India’s Infrastructure Challenge http://www.eastasiaforum.org/2012/11/07/indias-infrastructure-challenges/

\textsuperscript{24} IDFC in talks to resolve Gurgaon e-way mess

\textsuperscript{25} CERC to hear Adani Power compensatory tariff issue – October 31 2013

\textsuperscript{26} Tata Power hopes for quicker resolution – October 16, 2013
http://www.thehindu.com/business/Industry/tata-power-hopes-for-quicker-resolution-of-mundra-project-tariff-revision-issue/article5240755.ece
irrelevant steps, undue favors and nepotism, is the major hurdles to attract private participation. There is a widespread consensus among economists that transparency is crucial in the case of PPP projects.

4.2.5.2. Political Instability & Differences between Center and State Governments

A coalition government has to fight many fronts to keep all the partners on board. Precious time and government machinery are devoted to enact coalition partners, which lead to political compromises. This creates lack of focus, commitment and inconsistency in policies. A high risk reward incentive is demanded from private sector to compensate these issues.

Similarly, differences in Center & State governments create unnecessary delays and bureaucratic hurdles, which can be avoided by political will, co-ordination and cooperation among various stakeholders. There are no two opinions that effective and responsive government machinery at lower levels is important.

There are multiple reasons for problems in PPP enterprises in India; poor planning, imbalance risk sharing, fiscal uncertainties, pressure groups and short term approach of political governments to show quick results for the next election. PPP redefines the role of government. Innovative and bold decisions, which mark a complete break with the existing mindset and present way of doing things are required. Professionalism, accountability and decentralization to remove red tape are key ingredients to expedite private sector partnership in public sector development.
4.3. Australia – Policy Reformed Acted as Catalyst

PPP in Australia is not new. The government of Australia engaged with private sectors to provide public resources in different shapes and forms. The Sydney Harbor Tunnel is one of the first projects in Australia where government and private sector jointly worked to deliver a public asset. The tunnel is a 1.4 mile long four-lane (two lanes in each direction) underwater tunnel linking North Sydney with the Sydney Central Business District. The Tunnel was constructed at a cost of Australian Dollar 749M between 1987 and 1992. The Tunnel was financed and delivered through an innovative built-own-operate-transfer (BOOT) contracting approach. The BOOT arrangement was the first of its kind in New South Wales and was selected by the New South Wales Government to close the gap between the States infrastructure requirements and its ability to finance these requirements.

The Government of New South Wales was the project sponsor and selected the Sydney Harbor Tunnel Company Pty. Ltd. as the preferred consortium in 1987. The consortium included the Australian conglomerate Transfield together with the Japanese tunnel construction company Kumagai Gumi, each with a 50 percent stake in the Joint Venture.

The thirty-five year contract with the Sydney Harbor Tunnel Company provided for a five-year construction period and a thirty-year operating period. Hence the Joint Venture will operate the Tunnel until 2022 when it will be handed over as an asset to the New South Wales Government.

The major financing responsibilities of the public and private sector partners are:

- Public Sector - provided Australian Dollar 223 million (approximately 30 percent of the contract value) through an interest-free loan by the NSW Government repayable in 2022

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Case Studies of Transportation PPP around the World, US Department of Transportation, Federal Highway Administration, Section 4-5
Private Sector Debt - financed Australian Dollar 506 million (approximately 65 percent of the contract value) through an issue of 30-year bonds.

Private Sector Equity - The remaining five percent of the contract value was financed by private sector equity provided by the joint venture partners.

Tolls are charged on both the Sydney Harbor Tunnel and Sydney Harbor Bridge to assist in meeting financial obligations resulting from these financing arrangements.

The development of PPP in Australia is now in its second-generation phase. The overall development and implementation can be defined in two phases; Pre and post 2000. The major distinction is the “Partnership Victoria Policy” released in June 2000 by Victoria state (second most densely populated state in Australia), which changed the government approach towards PPP. The Department of Treasury and Finance, Australia defines the main objective of Partnership Victoria as;

“The Partnerships Victoria policy focuses on whole-of-life costing and full consideration of project risks and optimal risk allocation between the public and private sectors. There is a clear approach to value for money assessment and the public interest is protected by a formal public interest test and the retention of core public services”28.

Later in 2008, government of Australia issued policy framework for PPP. The key objective of “National Public Private Partnership Policy Framework”29 are

- encourage private sector investment in public infrastructure and related services where value for money for government can be clearly demonstrated
- encourage innovation in the provision of infrastructure and related service delivery

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28 About Partnership Victoria – Department of Treasury and Finance, Australia

29 National PPP Guidelines – December 2008
ensure rigorous governance over the selection of projects for PPPs and the competition for and awarding of contracts;
provide a framework and streamlined procedures for applying PPPs across Australia; and
clearly articulate accountability for outcomes

The early market engagement by the government led to policy development to improve process. This also help to improve market confidence due to i) consistent approach, ii) rigorous process and benchmarking of projects, iii) single interface by the provider, iv) strong focus on contract management to avoid issues during operational phase (as witnessed in India) and v) strong pipeline of projects.
4.4. Middle East – PPP Only in Power/Water Sector; Absence of Legal Framework & Undeveloped Private Sector are Main Obstacles

The Al-Manah power project in Oman was the first PPP in Middle East. Oman was the first to privatize its power generation in the region and since then the country has developed more than seven power plants based on the same model. Saudi Arabia, the largest economy in the gulf region, United Arab Emirates and Bahrain also developed its power generation and water desalination plants based on the PPP models.

Electricity & Co-generation regulatory Authority of Saudi Arabia, Oman Power & Water Procurement Company and Authority for Electricity Regulation, Oman, Abu Dhabi Water & Electricity Authority and Electricity and Water Authority, Kingdom of Bahrain have done notable work to attract private sector in these sectors. Each authority has slightly modified the model and implemented in local market.

There are many factors for successful implementation of PPP models in power generation sector across gulf countries. The most important is the government support through long term power purchase agreement (often ranges from 20-25 years) at a pre-determine rate (formula based on input cost) which guarantees specified returns to investors as long as there is no unplanned shut down in plants. Growing population, high urbanization, high overall consumerism and harsh desert climate contribute to high demand of electricity.

Mode of payment also includes guaranteed capacity payments in case the operation of the plant is disturbed by political reasons from the government side. Early termination compensation to sponsors which ensures government will buy the entire project at a price sufficient to pay all outstanding debt in most cases except when the sponsors defaults. Other concessions like custom duty and tax holiday also available in most cases. All these factors minimize market risk and make a good case for investments in this sector.
4.4.1. Oman Power Sector

Though second largest in size after Saudi Arabia, Oman is a small oil producing state with a population of just over 3 million. Prior to the discovery of oil in the 1960s, it was estimated that 90 per cent of the people worked in the agricultural sector, with the remaining 10 per cent involved in other activities such as fishing and trading. However, since the discovery of oil in the early 1960s, the Omani economy has been transformed through the export of oil.

The Oman Power and Water Procurement Company (OPWP) is the single buyer of power and water from all Independent Water and Power Producers (IWPPs). In addition, OPWP also responsible for planning and developing project pipeline. It is the objective of OPWP to ensure that there is sufficient electricity and water production capacity available at the lowest cost to meet the growing demands.\(^\text{30}\)

The company has successfully developed following power projects with the help of private sector in Oman.

<table>
<thead>
<tr>
<th>Plant Owner</th>
<th>Type</th>
<th>Status</th>
<th>Contract Start</th>
<th>Contract Expiry</th>
<th>Power &amp; Water Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Power Company</td>
<td>PPA</td>
<td>Operational</td>
<td>1996</td>
<td>2020</td>
<td>273 MW</td>
</tr>
<tr>
<td>Al-Kamil Power Company</td>
<td>PPA</td>
<td>Operational</td>
<td>2002</td>
<td>2017</td>
<td>297 MW</td>
</tr>
<tr>
<td>ACWA Power Barka</td>
<td>PWPA</td>
<td>Operational</td>
<td>2003</td>
<td>2018</td>
<td>450 MW, 30 MIGD</td>
</tr>
<tr>
<td>Wadi Al-Jizi Power Company</td>
<td>PPA</td>
<td>Operational</td>
<td>2005</td>
<td>2020</td>
<td>245 MW</td>
</tr>
<tr>
<td>Rusail Power Company</td>
<td>PPA</td>
<td>Operational</td>
<td>2005</td>
<td>2022</td>
<td>687 MW</td>
</tr>
<tr>
<td>Al-Gubrah Power &amp; Desalination Company</td>
<td>PPA</td>
<td>Operational</td>
<td>2005</td>
<td>2018</td>
<td>475 MW, 40 MIGD</td>
</tr>
<tr>
<td>Sohar Power Company</td>
<td>PWPA</td>
<td>Operational</td>
<td>2007</td>
<td>2022</td>
<td>590 MW, 26 MIGD</td>
</tr>
</tbody>
</table>

\(^{30}\) Company Website – Oman Power and Water Procurement Company
http://www.omanpwp.com/Our.aspx#30opwp
<table>
<thead>
<tr>
<th>Company</th>
<th>Type</th>
<th>Status</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMN Barka Power</td>
<td>PWPA</td>
<td>Operational</td>
<td>2009</td>
<td>2024</td>
<td>710 MW 33MIGD</td>
</tr>
<tr>
<td>Sembcorp Salalah Power &amp; water Company</td>
<td>PWPA</td>
<td>Operational</td>
<td>2012</td>
<td>2027</td>
<td>445 MW 15 MIGD</td>
</tr>
<tr>
<td>Al-Batinah Company</td>
<td>Power</td>
<td>Under Construction</td>
<td>2013</td>
<td>2028</td>
<td>744 MW</td>
</tr>
<tr>
<td>Al-Suwadi Company</td>
<td>Power</td>
<td>Under Construction</td>
<td>2013</td>
<td>2028</td>
<td>744 MW</td>
</tr>
<tr>
<td>Phoenix Power Co.</td>
<td>PPA</td>
<td>Under Construction</td>
<td>2014</td>
<td>2029</td>
<td>2000 MW</td>
</tr>
</tbody>
</table>


Transparency in bidding, well managed tendering process and strong pipeline of upcoming projects are key factors for the development of PPP in Oman.

However, apart from power and water sector, there are not many examples of successful partnership in Middle East. The main reason is the lack of political will to give up public sector control and absence of policy framework. Government is the biggest buyer in almost every field and therefore private sector lack expertise, resources and risk taking initiatives.
4.5. Malaysia – Tax Incentives & Government Support Stimulate Private Sector to Come Forward

The Government of Malaysia has announced the formation of Private Finance Initiatives in the 9th Malaysian Plan in 2006. In 2009, the government took another initiatives and established a new unit in the Prime Minister’s Department known as “Privatization and Private Finance Initiative Unit – PFI (currently known as Public Private Partnership – 3PU)\(^{31}\).

PFI is defined as:

"the transfer to the private sector of the responsibility to finance and manage a package of capital investment and services including the construction, management, maintenance, refurbishment and replacement of a public sector asset...which creates a stand-alone business. The private sector will create the asset and deliver a service to the public sector client. In return, the private sector will receive payment...commensurate with the levels, quality and timeliness of the service provision throughout the concession period. The structure of the lease rental payment for PFI projects will guarantee a total return to the concessionaire’s capital investment expenditures including financing cost repayment and profit to investment. The asset and facilities will be transferred to the public sector at the expiry of the concession period". (Source: Ninth Malaysia Plan 2006)

The major responsibility of 3PU is to coordinate the Privatization and the Public-Private Partnership (PPP) projects, which have made an impact to the country’s economy. However, the government set following criteria to consider any project as PPP, if the project has;

- socio-economic impacts
- value for money and cost savings to the Government
- quick delivery of the project and service enhancement
- increased level of accountability, efficiency and effectiveness

\(^{31}\) PPP Guidelines Report, PPP Unit, Prime Minister Department, Putrajaya, Malaysia
The government has claimed that PPP has been successful. This claim is based on the fact that between 1983 and May 2010, 511 projects had been implemented, and with these projects the government was able to transfer to the private sector and eliminate 113,440 jobs from its payroll, saved RM164.23 billion in capital expenditure, and earned RM6.50 billion from the sale of government equity and assets.\(^\text{32}\)

4.5.1. PLUS Expressways

PLUS Malaysia Berhad operates and maintains a 973-kilometre length of inter-urban expressways in Peninsular Malaysia, including the North-South Expressway (NSE) stretching from the border of Thailand to Singapore and others including the Expressway Lingkaran Tengah (NSECL) linking Kuala Lumpur to the Kuala Lumpur International Airport (KLIA), the Malaysia- Singapore Second Crossing (MSSC), and the Penang Bridge linking Penang Island to the mainland Peninsular Malaysia.

It is the first expressway to be implemented via PPP using the Build Operate Transfer model in Malaysia. It was completed in 1988.

4.5.2. KLIA Express and KLIA Tansit

The KLIA Express and Transit, which commenced operations in 2002, is a daily high-speed, non-stop air-rail connection between Kuala Lumpur International Airport (KLIA) and Kuala Lumpur City Air Terminal (KLCAT).

Under the BOT model, the high-speed rail train is designed, financed, constructed, operated and maintained by Express Rail Link Sdn Bhd (ERLSB) for a concession period of 30 years. The Concession Agreement was signed between ERLSB and the Ministry of Transport in August 1997.

4.5.3. Conclusion

It is pertinent to mention that government support is key to stimulate private sector involvement. The Government of Malaysia also realized this fact and introduced the Facilitation Fund under the Economic Stimulus Package in the Ninth Malaysia Plan.

\(^{32}\) 3PU – 2010
Public Private Partnership Unit is now known as UKAS or Unit Kerjasama Awan Swasta
(9MP, 2006-10) as an initiative to encourage implementation of private sector projects. Under the Tenth Malaysia Plan (10MP, 2011-15), the Government has allocated a sum of RM20 billion for the Facilitation Fund. Even in 2014, a sum of RM 2.7 billion is allocated to assist private sector involvement.33

In addition to government support, tax holiday and various incentives helped government to pull private monies in its development plans.

33 RM 2.7 billion allocated for PPP projects in 2014  

Facilitation Fund Guidelines  
4.6. United States – Changing PPP Landscape

Public financing in US is starting to change but still US is behind in comparison to other foreign nations who have successfully developed PPP models. Insufficient federal funding coupled with crumbing infrastructure in US makes a strong case for innovative financing solutions.

4.6.1. Present Status of Infrastructure in the United States

There is no doubt that infrastructure is the backbone of every economy. Every sector (power, port, transportation, aviation, sanitation, social facilities) is linked to another and its performance also to some extent link to other type of infrastructure. Unreliable infrastructure leads to decrease in productivity and loss of man-hours. The pace of supply is not matching up the growing demand of more and more better quality public goods. Chemical spill in West Virginia in January 2014, broke down of power in Georgia and South Carolinia in last (2013) winter and the overall impact of cold weather on infrastructure raised the concern of underinvestment.

It is clear that American infrastructure is ageing. As per American Society of Civil Engineers Report 2013, estimated funded requirement in infrastructure is USD 3.6 trillion by 2020. The country spends only 2.2 percent of its GDP in infrastructure as compare to 9.0 per cent by China. The huge investment lag creates efficiency loss. According to the U.S. Chamber of Commerce, decaying transportation system costs the U.S. economy about 78 billion dollars annually in lost time and fuel.

The American Society of Civil Engineers has given America's crumbling infrastructure an overall grade of D.

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aviation</td>
<td>D</td>
</tr>
<tr>
<td>Bridges</td>
<td>C+</td>
</tr>
<tr>
<td>Dams</td>
<td>D</td>
</tr>
<tr>
<td>Drinking Water</td>
<td>D</td>
</tr>
<tr>
<td>Energy</td>
<td>D+</td>
</tr>
<tr>
<td>Category</td>
<td>Grade</td>
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<tr>
<td>--------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>Hazardous Waste</td>
<td>D</td>
</tr>
<tr>
<td>Inland Waterways</td>
<td>D-</td>
</tr>
<tr>
<td>Levees</td>
<td>D-</td>
</tr>
<tr>
<td>Ports</td>
<td>C</td>
</tr>
<tr>
<td>Public Parks &amp; Recreation</td>
<td>C</td>
</tr>
<tr>
<td>Rail</td>
<td>C+</td>
</tr>
<tr>
<td>Roads</td>
<td>D</td>
</tr>
<tr>
<td>Schools</td>
<td>D</td>
</tr>
<tr>
<td>Solid Waste</td>
<td>B-</td>
</tr>
<tr>
<td>Transit</td>
<td>D</td>
</tr>
<tr>
<td>Wastewater</td>
<td>D</td>
</tr>
</tbody>
</table>

Each category was evaluated on the basis of capacity, condition, funding, future need, operation and maintenance, public safety and resilience.

A = Exceptional, B = Good, C = Medicore, D = Poor, F = Failing

4.6.2. Global Ranking in Infrastructure

The United States' global rank in infrastructure has also dropped off considerably which challenges its competitive position in developed economies and new rivals from emerging countries. According to the Global Competitiveness Report for 2012-2013, U.S. infrastructure ranked 14th in the world in 2013, drop off complete seven points than it was in 2008.

4.6.3. Source of Funding

Although federal grant is one of the key components of funding but there are many alternative-financing options being used in infrastructure financing in the United States. Municipal34 bond is one of them.

34 Municipal Bond market Outlook – 2013

By, Jonathan L. Gifford, Ph.D. George Mason University School of Public Policy
Municipal bonds are debt obligations issued by state, cities, municipalities and counties. These are project specific bonds where proceeds invested in infrastructure projects mainly highways, buildings, bridges, hospitals, sewage system and to improve overall infrastructure within the jurisdiction of issuing authority. The well developed capital market, tax-free investment (interest not subject to federal tax for bond holders which lowers cost of funding for issuers) and low risk helped municipal bond market to achieve the size of USD 3.7 trillion and become the principal source of funding (15%-20% of GDP) in United States.

In addition to lower cost of funding, controlling rights is also an important feature, which favors debt versus any kind of equity whenever type of funding assessed by authorities. The choice between accessing the debt markets and engaging in a public-private partnership will depend on whether the state/municipality is seeking private sector’s management practices, ownership transfer, or just the capital investment.

The role-played by municipal bond in US infrastructure market is significant in one hand but it also act as deterrent for authorities who heavily relied only one kind of funding and did not explore other options.

4.6.4. PPP Deals in US

The heavy reliance on municipal bond is changing in post financial crisis. Limited financial resources and budgetary constraints forced authorities to pull back their allocation in infrastructure investments and opt for other alternatives. Thirty-three (33) states have passed P3 legislation. Most activity can be noticed in California, Florida, Texas, New Jersey, Massachusetts, New York & Virginia.
Chicago Parking Meter lease is an example of raising funds from private sector. In 2008, the city leased some 36,000 of its meters to Chicago Parking Meters LLC in a $1.2 billion, 75-year contract\textsuperscript{35}. The deal received huge critique where at one end private contractor increased the parking price (four times) and also increased enforcement of law to forced drivers to feed the meter even if they park the care for few minutes.

However, there are some notable examples specially in road and transportation sector; Interstate-595 in Florida, Chicago Skyway, Chicago Parking Downtown Garage System and Indiana Toll Road.

\textsuperscript{35} Chicago Parking meter Lease – 07/17/2013
http://www.huffingtonpost.com/2013/07/17/chicago-parking-meter-dea_n_3612219.html
4.6.5. Interstate 595, Florida

<table>
<thead>
<tr>
<th>State</th>
<th>Florida</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponsor</td>
<td>Florida Department of Transport (FDOT)</td>
</tr>
<tr>
<td>Cost</td>
<td>$1,833.6 million</td>
</tr>
<tr>
<td>Description</td>
<td>The project is being implemented as a public-private partnership between FDOT and a private concessionaire to design, build, finance, operate, and maintain the roadway for a 35-year term. FDOT will provide management oversight of the contract; will install, test, operate and maintain all tolling equipment for the express lanes; and will set the toll rates and retain the toll revenue.</td>
</tr>
<tr>
<td>Project Contract</td>
<td>Design, Build, Finance, Operate &amp; Maintain</td>
</tr>
<tr>
<td>Construction Period</td>
<td>Construction began in June 2009; expected completion summer 2014</td>
</tr>
</tbody>
</table>
| Key Features | • First U.S. application of availability payments to a transportation project.  
• I-595 Express, LLC will receive no compensation from FDOT until the facility is fully operational. Upon FDOT's final acceptance of the project construction, I-595 Express, LLC will be eligible to receive a series of annual lump sum final acceptance payments, including potential incentive bonuses for completing a series of interim milestones (related to major construction activities) within established... |

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36 US Department of Transportation, Federal Highway Transportation
https://www.fhwa.dot.gov/ipd/project_profiles/fl_i595.htm
contractual deadlines.

- Performance-based availability payments will be made monthly during the operating period of the project. A maximum availability payment of $65.9 million (in 2009 dollars) begins in 2014 and escalates annually. If quality and performance requirements stipulated in the contract as well as availability of the roadways to traffic are not met, then the availability payments will be subject to downward adjustment in accordance with the contract.

4.6.6. Chicago Skyway Bridge - Transferring Existing Assets to Private Parties

The Chicago Skyway Bridge is a 7.8-mile toll road built in 1958 to connect the Dan Ryan Expressway to the Indiana Toll Road. In January 2005, after a competitive bidding process, the City of Chicago and a private consortium reached financial close on a $1.8 billion concession to operate and maintain the Chicago Skyway. The transaction is the first example of transferring existing assets to private party.

The bridge offers growing stream of revenue from toll. In 2002, the Chicago Skyway attracted a record 18.7 million motorists whose tolls amounted to $43 million dollars in revenue—twice the $21.5 million in tolls collected in 1993. In 2003, during the final phase of reconstruction, the Chicago Skyway served 17.4 million motorists who paid $39.7 million dollars in toll revenue.

http://www.chicagoskyway.org
For almost 50 years, it was operated and maintained by the City of Chicago Department of Streets and Sanitation. In January 2005, the Skyway Concession Company, LLC (SCC) assumed operations on the Skyway with a 99 year operating lease that gave the City of Chicago a $1.83 billion dollar cash infusion. SCC is responsible for all operating and maintenance costs of the Skyway but has the right to all toll and concession revenue. This agreement between SCC and the City of Chicago was the first privatization of an existing toll road anywhere in the United States.

The private consortium of Cintra Concesiones de Infraestructuras de Transporte S.A., a Spanish toll road developer, and Macquarie Infrastructure Group, an Australian toll road developer and operator paid the City of Chicago the full $1.8 billion upfront in exchange of obtaining the right to operate and maintain the toll road for 99 years. The private investors will use the toll revenue to pay for operations and maintenance, to repay the debt that financed the $1.8 billion upfront payment, and to provide a reasonable return on its members' contribution of equity. Apart from toll revenue collection risk, annual toll rate increases are also fixed till 2017 and are capped thereafter at the greater of (i) 2 percent, (ii) the consumer price index, or (iii) per capita gross domestic product.

The City of Chicago used the upfront amount for a variety of purposes. It used $465 million to redeem outstanding indebtedness on the Skyway, $390 million to redeem other City of Chicago debt, $500 million to fund a long-term reserve account, $375 million to fund a mid-term annuity account, and $100 million to fund various City of Chicago programs, such as home heating assistance and assistance for the disabled to make home modifications.

There are many examples of successful PPP transactions in transportation sector. However, due to available source of funding at lower rate without giving up controlling rights in terms of municipal bond, pace of PPP was a little slow in the US. Lack of political support and fear of public pressure are also other concerns, which kept policy makers away to take drastic steps in promoting PPP.
The challenge of how to encourage private sector investments in infrastructure is key issue for policy makers. However, there is no one size fits for all formula for successful PPP models, as every economy is different than others in terms of its structure, risk, performance, size, regulatory framework and labor market reforms. By providing favorable investment climate, government not only achieves its development target but also enhance labor productivity through acquisition of skills from foreign partners. There are many factors, which works concurrently to make the public private partnership a successful model and it is difficult to rate which one should come first.

**Economic Conditions** – Strong economic conditions often helps the government to attract foreign parties to bring both capital and expertise in large infrastructure projects. Well established macroeconomic indicators bring predictability in evaluating returns which is key criteria for private parties.

**Legal Framework** – Although all parties involved in PPP tries to plug contingencies but not every contingency can be predicted at the time of negotiating contracts. A transparent and stable legal framework helps to make the contracts and agreements bankable. Similarly, an adequate dispute resolution system also increases investors comfort level.

**Political Stability** – A predictable political environment helps the country to maintain its image, credit rating and overall risk perception both domestically and internationally. Consensus among federal and state/city government is a crucial factor. In India, different priorities by various government machinery delays project for years. Interest alignment by all government stakeholders helps to expedite approval process and keep private sector interested in government projects.

**Clarity of Roles & Responsibility** – In defining partnership, policy makers should consider defining roles, responsibility and repercussions, in case of default, in
advance. Similarly, appropriate risk allocation and sharing is key in partnership. Government should not offload all risk to private sector, healthy balance in risk and reward equation keep all parties motivated.

**Strong Consortium Partners** – Establishing criteria where only competent parties with sound financial background come forward is key responsibility of the government authorities. Appointing strong consortium partners not only eliminate operational risk but also bring credibility to the project.

**Public Goods at Affordable Price** – PPP provides fiscal space and efficiency to government but both factors increases the price of goods. This is the duty of the government to ensure that prices should not go too far. In few cases, government received huge criticism once the existing assets transfer to private sector and cost escalated manifold in short span of time. Quality, efficiency and price affordability bring favorable response by the general public and pave the way for future projects.

**Incentives/Concessions/Tax Holiday** – To promote private investment in particular sector or an area, which is either neglected or cannot provide enough economic justification for some reasons, government incentives play important role. It could be either in the form of concessions in duty, reduced tax rate, tax holiday for initial period of operations, availability of land at discounted price, duty free import of machinery and raw material etc. These concessions are part of developmental strategy of governments. Notable examples are Oman, Dubai, Malaysia, Indonesia, Pakistan, India etc. where government not only attracts FDI but stimulate local investments in designated areas and/or sectors in the form of PPP by providing financial incentives.
APPENDIX

PPP Flow Chart

Phase I

Project Assessment Stage
- Justifiability of the Project
- Alignment with the line ministry
- Optimum allocation of the risks
- Value for money
- Monitoring timelines and budgets

Planning Stage
- Communication to the market
- Market Sounding
- Project Tendering
- Bids Assessment
- Project documents & agreements evaluations
- Award of Contract

Phase II

Financial Close
- Negotiations with Lenders (local and/or international)
- Government guarantee, if any
- Review of contracts /legal agreements
- Equity call
- Financial Close

Construction
- Close monitoring & timeline
- Budgeted parameters
- Close co-ordination among partners
- Public Communication
- Ensure variations are within approved limits
- Government concessions/subsidies

Phase III

Operational Stage
- Revenue collection
- Close monitoring
- Ensure availability of services at affordable price for public
- Maintenance

Managing & Monitoring the Contract
- Evaluate efficiency
- Provide political support
- Public Communication
- Price evaluation