Global Scientific JOURNALS

GSJ: Volume 8, Issue 8, August 2020, Online: ISSN 2320-9186
www.globalscientificjournal.com

# PUBLIC PRIAVTE PARTNERSHIP (A CASE STUDY OF LAHORE-ISLAMABAD MOTORWAY)

Zagham Abbas Shah, Hamza Nawaz, Ahmad Waqas, Abdul Moeed

1. Manager Planning and Development, Lahore Motorway City, Preston University,
2. BS Public Administration, Department of Political Science, Bahauddin Zakaria University, Multan.
3. Urban Planner, Lahore Motorway City, Chief Executive at Urban Planners & Architectural Consultants, Bahria University, Lahore Pakistan.
4. MSc Disaster Management, University of Engineering and Technology.



## ABSTRACT

The purpose of this paper is to promote greater understanding of the role institutional factors (including statutory, regulatory, financial, organizational, procedural, and cultural) play in facilitating or impeding the formation and successfully implementation of public-private partnerships and to identify effective strategies for overcoming institutional impediments and facilitating successful PPP development and implementation, based on the experience of a number of successful international PPP projects. To accomplish this purpose PPP project from transport sector have been selected to study and to compare with international case studies. This review paper will help to understand the importance of PPP and also to learn from the west and our past mistakes.

# INTRODUCTION

Public-Private Partnerships involves the investment of private capital to design, finance, construct, operate, and maintain a project for public use for specific term during which a private investment consortium is able to collect revenue from the users of the facility. When the consortium's limited term of ownership expires, title to the project reverts to the government at no cost. By then, the consortium should have collected enough revenue to recapture its investment and turn a profit on the investment.

→ PPP is an arrangement where private parties participate in or provide support for the provision of infrastructure.

→ PPP describes a government service or private business venture which is funded and operated through a partnership of government and one or more private sector company.

→ PPP is not the procurement of an asset but the payment of a stream of services under specified terms and conditions.


**FIGURE 1: PUBLIC PRIVATE PARTNERSHIP DIAGRAM**

## 1.1) INSTITUTIONAL ROLES AND RESPONSIBILITIES

**Key Institutions:**

Government of Pakistan establishes clear and flexible institutional arrangements for the successful implementation of PPP program. These institutional arrangements need to support three broad, but separate, high level functions:

i) PPP policy development, dissemination, monitoring and enforcement.
ii) Individual project sponsorship, design, preparation and execution.
**iii)** Financial management of funded and contingent obligations.

**The following institutions play key roles in these arrangements**

- Ministry of Finance
- Infrastructure Project Development Facility (IPDF)
- Planning Commission
- Public Private Partnership Cell

## 1.2) OBJECTIVES OF THE PPP POLICY

The key objectives of this policy are to:

i. Promote inclusive social and economic development through the provision of infrastructure.
ii. Leverage public funds with private financing from local and international markets.
iii. Encourage and facilitate investment by the private sector by creating an enabling environment in PPP in infrastructure.
iv. Protect the interests of all stakeholders including end users, affected people, government and the private sector.
v. Set up efficient and transparent institutional arrangements for identification, structuring and competitive tendering of projects.
vi. Develop efficient risk sharing mechanisms such that the party best equipped bears the appropriate level of risk.
vii. Provide viability gap funding where the projects' viability is insufficient to attract private sector funding.

The PPP Policy is therefore targeted to provide a wider variety of better quality and timely services. This will be achieved through faster project implementation, maximum leveraging of public funds, enhanced accountability and a shift to life cycle costing and infrastructure management by the private sector.

## 1.3) BENEFITS OF PUBLIC PRIVATE PARTNERSHIP

PPP is a viable option with a great potential which by combining skills, expertise and other resources from different entities can help achieve outcomes that are unattainable by independent action. There is growing realization in government about the significance of

such partnerships. There is also greater willingness and capacity among the private sector today to engage in profitable partnerships with the government.

The benefits of PPP include the following:

i. Development of more infrastructure on time and within budget.
ii. Encouraging the private sector in innovative design, technology and financing structures and including increased international and domestic investment.
iii. Risk sharing by GOP with private sector partners.
iv. Ensuring good quality public services and their wider availability.
**v.** Real financial benefits, and a better utilization and allocation of public funds.

Economic growth and increased and wider employment opportunities

## 1.4) OPPORTUNITIES FOR DEVELOPING PPP IN PAKISTAN

The opportunities for developing PPPs in Pakistan are considerable. Pakistan's public sector investment in infrastructure has declined as a percentage of GDP since the early 1990s resulting in a huge backlog in the provision of infrastructure. Currently, the public sector can only accommodate about half of the annual infrastructure requirements of $ 3.5 – 4.0 billion per year. Accordingly there is need to obtain private resources and improve efficiency of these investments. With a growing economy and government commitment to decentralization and market solutions to infrastructure, there has been an increase in local and international interest in PPPs.

## 1.5) STATUS OF PPPS IN PAKISTAN

Pakistan, for a long time, has financed infrastructure and development projects directly from budget allocations, and therefore lacks the institutional and regulatory capacity necessary to facilitate private participation in infrastructure provision. There is also need for a change in the mindset of public functionaries. The reasons why private sector infrastructure projects have not materialized in Pakistan include:

(i) Reforms have not progressed as fast as anticipated;
(ii) Present governance structures are not suited for the broad participation by the private sector in infrastructure envisaged in liberalized environment;
(iii) The public-private interface needs substantial strengthening, including enhancement of skills and institutional mechanisms within the Government for effective interaction with the private sector; and

(iv) It remains difficult to disaggregate and allocate risks in the domestic capital market.

## 1.6) SIGNIFICANCE

Public-Private Partnership (PPP) is one of the most effective vehicle to enhance private sector participation in public services delivery, increase growth, and create jobs leading to reduction of poverty. The PPP's help in attracting private capital investment, increasing efficiency through the profit motivation of the private sector, and helping reform the selected sectors through the reallocation of roles and risks.

Pakistan has been promoting private participation in infrastructure with the objective of providing better public services. A national policy on PPP was approved in 2010 and the Infrastructure Project Development Facility (IPDF) was established already in 2006 to promote and facilitate PPP projects. Pakistan has also been working on a Federal PPP Law.



# PROJECT PROPOSAL

2.1 ) Transport sector

## 2.2) NATIONAL HIGHWAY DEVELOPMENT IN PAKISTAN THROUGH PUBLIC-PRIVATE PARTNERSHIP

On 23 April 2014, a Public-Private Partnership contract was signed by Pakistan's National Highway Authority (NHA) for the reconstruction of the Habib Abad Flyover and the modernization of the Lahore-Islamabad Motorway (M-2).

Under the agreement between NHA and Frontier Works Organization (FWO), a new bridge will be constructed to replace existing Habib Abad flyover which is in dilapidated condition. Similarly, the Lahore-Islamabad Motorway (M-2) which is part of Asian Highway (A1) will be renovated to meet international standards and an electronic toll system will be installed.

Lahore-Islamabad Motorway (M-2) is the first large scale PPP project of NHA with estimated cost of US$466 million (46,000 million rupees).

## 2.3) LAHORE-ISLAMABAD MOTORWAY

The Lahore-Islamabad Motorway was Pakistan's first motorway, delivered by the National Highway Authority (NHA). The motorway included a 367 km limited access, six lane divided, dual carriageway motorway linking the historic capital of the Punjab, Lahore with the Federal capital, Islamabad. Design and construction of the project was undertaken by the South Korean company, Daewoo Corporation. Snowy Mountains Engineering Corporation (SMEC) provided design review and construction supervision services including:

→ Contract management and administration,
→ Site investigation and review of existing documentation,
→ Detailed design review and design approval,
→ Preparation of a tollway study to determine the optimum tollway charges and systems,
→ Construction supervision of international contractors including quality control,
→ Certification for payment,
→ Issuance of variation orders and
→ Training of client staff in project management and construction supervision

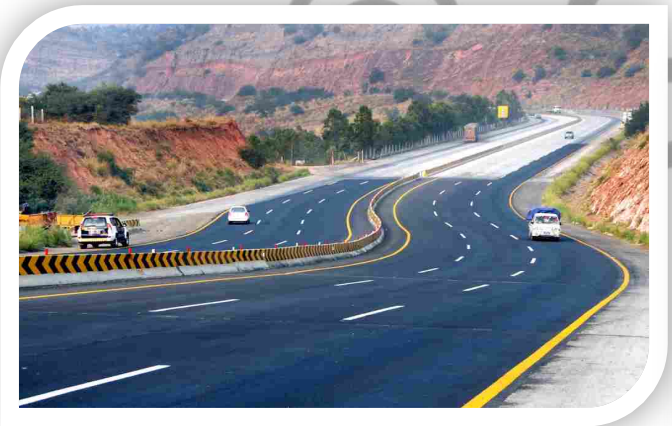

FIGURE 2: MOTORWAY FROM ISLAMABAD TO

FIGURE 3: DYNAMIC STRIP OF LAHORE ISLAMABAD

## 2.4) WHY CHOOSE THIS PROJECT

Authors choose this project as it is one of the major project implemented in Lahore. The Lahore-Islamabad motorway benefit Pakistan by improving the socio economics condition of the country. The multidimensional benefits of the project ought to bring healthy, social, economic, geographical and cultural change according to the sources. The technologies available today offer a number of ways in which we can better manage traffic flows on our

motorways, including the hard shoulder to traffic during congested periods, as seen on the M2. The also offer the potential to implement other innovative managed motorway solutions, such as various form of traffic segregation and access control. Further, into further, the infrastructure could support in vehicle communications with roadside equipment and other advanced technology system that could improve driver information, traffic management and road safety.

## OBJECTIVES OF THE PROJECT

There are many things in Pakistan that don't get into the news. Daily life, for one Pakistani hospitality to strangers, foreigners and others. The M2 is another sign that all is not what it appears in Pakistan that much lies hidden behind the bad news.

- Motorway operations, sufficient through lane and interchange capacity is followed.
- Appropriate interchange and ramp spacing, motorway access only via interchanges with major roads is adopted.
- High quality road design standards, operational efficiency and connections with the local road network is taken into account.
- Other aspects are access to major centers, environmental impacts, social and amenity impacts, land use impacts and engineering feasibility and constructability.
- The M2 motorway with overnight parking and the road to the Indian border was uneventful.
- Built on the **BOT** basis, the M2 motorway has already paid for itself and now generates revenue for Pakistan government.

## DESCRIPTION OF THE PROJECT

The project was constructed by the South Korean company Daewoo and was inaugurated in November 1997. It was also the first motorway to be built in South Asia. It is one of the most expensive motorways in Asia. It passes through Kala Shah Kaku, Sheikhupura, Khanqah Dogran,Kot Sarwar, Pindi Bhattian, Salem, Lilla, Kot Momin, Kallar Kahar, Balksar, and Chakri before ending just outside the twin cities Rawalpindi and Islamabad. It then continues on to eventually become the M1 motorway linking the twin cities with Peshawar. The M-2 crosses the junction of the M3 (to Faisalabad) at Pindi Bhattian. It is part of Pakistan's Motorway Network

**TABLE 1: PROJECT DETAILS OF MOTORWAY M-2**

| | |
|---|---|
| **Project Name** | Lahore-Islamabad Motorway |
| **Country** | Pakistan |
| **Client** | National Highway Authority |
| **Sector** | Transport |
| **Length** | 334 Km |
| **Cost (In Million)** | 46000 |
| **Company** | DAEWOO |
| **Consultant** | SMEC |
| **Date of Commencement** | 30 November 1992 |
| **Date of Completion** | 30 November 1997 |

## 6.1) Background

Pakistan Motorway Project was originally conceived by Mr. Muhammad Nawaz Sharif, Prime Minister of Pakistan, to provide a countrywide link of limited access high speed highway to bring most parts of the country together which could result in greater economic growth, commercial activity and trade with ECO countries. It was envisaged that such a system of modern roads would enable Pakistan to step into the 21St century equipped with a first rate communication system.

The actual plan of motorway after it was approved from the federal cabinet was to connect the newly liberated central Asian states with warm waters of Arabian Sea. The plan was not only to make Pakistan a trade route for central Asia but also to boost up the economic activities by establishing industrial zones alongside the motorways. The plan was to build 9 motorways that connects all the major cities of Pakistan.

With this plan in his mind the Prime Minister initiated and gave the go ahead for construction of the first section of the motorway which joins Lahore with Islamabad providing major link to many remote areas. Being strategically located, it offers an excellent line of fast communications in national emergencies and natural calamities.

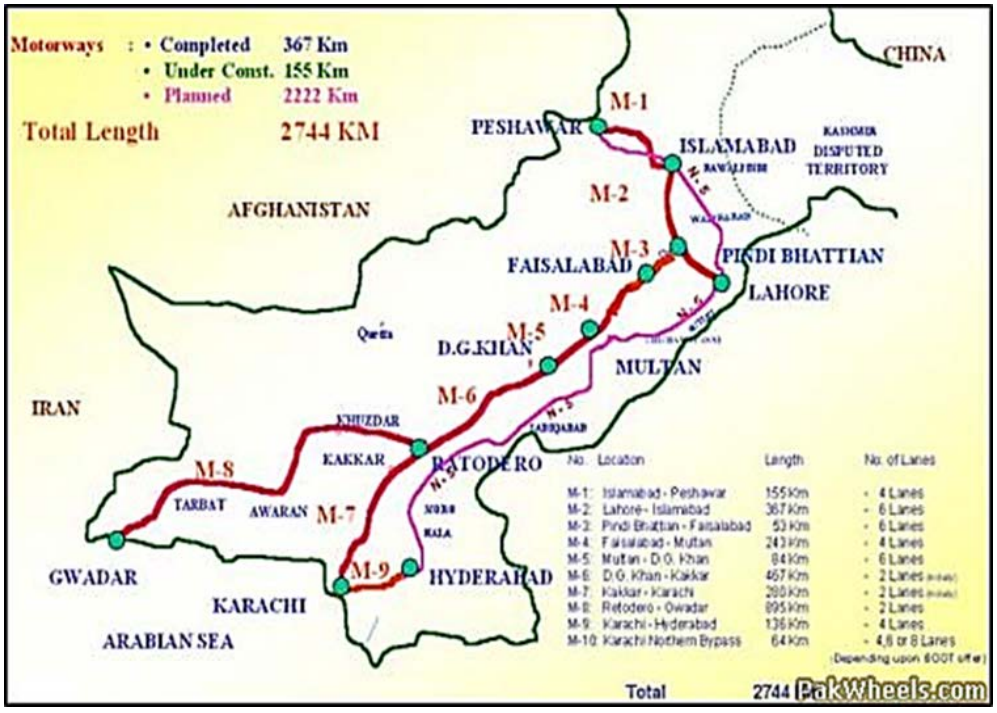


Figure 2 Location map of Lahore-Islamabad Motorway

## 6.2) Motorway project in relation with Public Private Partnership

Daewoo Corporation of Korea financed 60% of the project cost in the form of loan and the balance was arranged by Govt. of Pakistan. Daewoo also designed the project and carried out the construction of the project. After the completion of the construction the motorway (M-2) is being operated and maintained by National Highway Authority.

It was decided through a transparent bidding process that Daewoo a Korean company will construct this 6 lane road. The contract was later amended twice by the Pakistan People's Party govt. during 1993-96. They delayed the schedule to open M2 for traffic on December 1994. The country chief of Daewoo Pakistan expressed his feelings on this unprofessional ethics of PPP govt. while addressing a press conference.

**"**The Benazir government had some negative thinking for the motorway. That's why it did not give us our money according to over monthly invoice. We were neither made proper payments nor was our money reimbursed as per contract. We had to suffer due to this financial fix between a period starting Dec 1997 to another one year. It was not before August 1997 that the Nawaz government started ensuring our payment. But over chairman had pledged that we would complete this project even if we were not paid. We spent from our own pocket. The Motorway design changed four times owing to policy shifts".

Despite of the difficulties posed, the PMLN managed to finish the project that has 6 lane and 32 meters wide highway. It has three major bridges, four overhead railway crossings, 44 bridges over canals, streams and flood ways. Initially, when it was inaugurated it had 22 flyovers, six interchanges, 313 concrete box culverts for minor distributions, subways, cattle creeps and water drainage and 260 pipe culverts for canal irrigated areas. The original project of M2 had six service stations (three on each side) including world class road side services and facilities like restaurants, police posts, medical and emergency centers, pay phone and mosque. The project also had initially 9 toll plazas with 72 toll gates on the road. The speed limit was not more than 120 km/hr and not less than 100 km/hr. M2 also has side shoulders every 4 km for parking of vehicles which breakdown during journey.

## METHODOLOGY

## INTERNATIONAL CASE STUDIES

## PROJECT SELECTED



# COUNTRY PARK MOTORWAY (HONG KONG, CHINA)

## 5.1) BACKGROUND

With the imminent reunification of Hong Kong with mainland China in 1997 and a policy shift to expand the nation's economic development, the regions of the country closest to Hong Kong were expected to significantly grow in the aftermath of reunification. This was expected to result in greater travel demands between the southern provinces of China and Hong Kong, China's gateway to the west and the most advanced capitalist part of China in the 1990s. To accommodate the projected growth in auto and truck travel between Hong Kong and mainland China, a number of highways, bridges, and tunnels were commissioned

Table 2 (PPP project china)

through PPPs in the 1990s and early part of this decade

## 5.2) OVERVIEW

This case study discusses one of the connecting highways (Route 3 Country Park Motorway) which was developed through a Build-Operate-Transfer (BOT) PPP in the mid-1990s. The BOT PPP approach expedited project delivery to meet client schedule needs relative to the takeover of Hong Kong by China from British control in 1997. Another benefit was to expedite generation of funding from tolls to pay for the project cost over the 30 year's franchise period. Due to the tight program schedule, a contractor consortium was set up for efficient construction management.

## 5.3) PROJECT DESCRIPTION

The Country Park Motorway (Route 3) is a 12 km (7.5 mile) three-lane expressway that

| PPP Delivery | Construction Period | Concession Period | Contract value | Status |
|---|---|---|---|---|
| **BOT** | 1995 ± 1998 (3 years) | 1995 ± 2025 (30 years) | US$930 million | Operating |

provides a link between Hong Kong and southern China, connecting Ting Kau and Yuen Long. The project includes twin three-lane 3.5 km (2.3 mile) tunnels below Tai Lam Country Park, 12 major bridge structures, seven pedestrian/vehicular underpasses, 10 major retaining walls, a 22-lane toll plaza, the four-level Au Tau Interchange, and construction of large-scale embankments across very soft and weak soils, 3 km viaducts at Ting Kau Interchange and Au Tau Interchange, noise barriers, traffic control and surveillance system, administration building, and ventilation buildings. The project cost $930 million to complete and was constructed between 1995 and 1998, when it opened to traffic as a tolled highway.

## 5.4) PARTNERSHIP ARRANGEMENT

The core objectives of private funding for this project were to release Government funding for other purposes and to deliver road infrastructure earlier. The inclusion of the construction period within the concession period provided the concessionaires with an incentive to deliver the project as early as possible. Six consortia submitted bids in April 1994 with the concession awarded to a consortium led by Sun Hung Kai Properties, together with China Resources, China Travel, and the Bank of China. The consortium included a number of mainland Chinese partners to mitigate as much political risk stemming from the planned handover of Hong Kong from Britain to China in 1997.

## 5.5) RESULTS

The Country Park Motorway was designed to provide a strategic link between Hong Kong Island, Western Kowloon, the New Territories, and mainland China. It has provided much improved road access from the Chinese boundary to the container ports and airport that have been established in north-west New Territories, while encouraging further development in this region.

## 5.6) CONCLUSIONS

The political and economic development situation in Honk Kong and its geographic neighbors made development and expansion of transportation infrastructure a high priority in the mid- 1990s. The use of BOT PPPs helped the region to develop and delivery major additions to its transportation systems in an expedited manner. Building these facilities as toll-funded PPPs enabled the project sponsors to accomplish this without overwhelming the budgets of either Hong Kong or China.

## 5.7) CASE STUDY # 2



M6 Tollway (M6-T), UK

Also called the Birmingham Northern Relief Road, the M6-T is Britain's first privately-funded tolled motorway, which was designed to relieve congestion on a section of the existing M6 motorway and allow for a 40% traffic increase to 224,000 vehicles per day. It is a 44-km six-lane divided motorway bypass to act as a regional distributor to surrounding towns, and as part of the Trans European Transport Network (TEN-T). Tolls vary by vehicle type, time of day, and station passed on the journey, and can be e-tag prepaid. A 53-year concession contract was awarded 1992 to Midland Expressway Ltd (MEL), which is 75% owned by Macquarie Infrastructure Group (MIG) and 25% by Autostrade, Italy's biggest motorway concessionaire. Project initiation delayed for 8 years due to local opposition against tolls and legal maneuvering. Construction began in 1999 and M6-T opened to traffic in 2003. The benefits to M6-T users include 30 minutes saved on midweek days and 70 on Fridays, while users of the existing M6 enjoy reduced weekday traffic volumes by up to 10%. Critics recently argue that due to the high cost of tolls, the use of M6-T is decreasing with

traffic currently switching back to M6. MIG is currently investing in local public projects to bring more traffic to M6-T.

## CHAPTER # 6. COMPARISON BETWEEN PAKISTAN PPP AND INTERNATIONAL PPP PROJECT

**TABLE 3: PROJECT ISSUES OF MOTORWAY PROJECTS**

| Criticism in china's project | Issues in England project | Criticism in Pakistan project |
|---|---|---|
| Risk Allocation | Un favorable design | Destroyed agricultural land |
| Role of Competition in Consortium Selection | Misleading signage | Environmental issues |
| Non-Compete Restrictions | Protest during planning and construction | Traffic issues |
| Public Sector Financial Involvement | Traffic issues | Protesting issues |

### 6.1) LESSONS LEARNED FROM INTERNATIONAL EXPERIENCES

The key points that have emerged from international experience for successful implementation of PPPs include the following:

i) High level political and institutional support for PPPs is crucial.

ii) Government has central role in defining what it wants and as the regulator.

iii) PPP deals must make sense in terms of delivering both the desired outcomes and commercial returns.

iv) Good PPPs involve optional risk allocation, demonstrable value for money, clarity of affordability and certainty of public service payment obligations based on delivery of outputs.

v) Output based techniques are important for targeted and efficient subsidy allocation.

vi) A well-defined policy framework is required that

(a) Sets out clearly the processes, priorities and scope of PPP;

(b) Drives transparent procurement processes;

(c) includes a communication strategy to improve public and private sector understanding of PPPs; (d) provides clarity of long term government obligations that work across federal and provincial levels;

(e) Includes mechanisms to recognize implicit/explicit government liabilities and public sector balance sheet requirements; and

(f) Includes mechanisms to deal with incumbents.

vii) A well-defined legal framework is required that provides clarity, defines contracting authority powers, minimizes procurement costs and timetables, for example, through standard/model contracts, improves dispute reduction, and accommodates future development.

viii) Public sector capacity should be enhanced, among others through a centrally located core of policy and implementation expertise including guidelines and project evaluation and procurement expertise, and mechanisms to ensure professional management and the purchase of relevant expert advice.

ix) Private sector/supply side issues should be addressed including availability of long term local currency finance, PPP bid capacity and financing skills, and building capacity of local skills.



## RECOMMENDATIONS

Pakistan has been promoting private participation in infrastructure with the objective of providing better public services. Through which future goals could be accomplished without facing any conflicts between stakeholders and government.

- Transparency and a competitive proposal process should be delineated in this statute. However, unsolicited proposals can be a positive catalyst for initiating creative, innovative approaches to addressing specific public sector needs.
- There should be enough security for passengers to avoid unnecessary accidents on motor way.
- In the second phase of motor way in which new road lanes will constructed from Lahore to Karachi, which is considered as "**China Pakistan Economic corridor.** It

should also promote and fulfill all the needs of passengers with full of ease and security.

- Designed speed in plain areas is 120 km per hour but it reduces to 100 km per hour in rolling terrain, and 50 km per hour in salt range area to avoid accidents.

## CONCLUSIONS

The Lahore–Islamabad Motorway (M2) provide a choice of routes between the two cities and, if you have time to jump off the bus, access to an ancient region boasting one of the world's largest salt mines, an awesome stone fort and Hindu and Buddhist Relics. Three lanes of motor way also provided the best and secure way of transportation. Through the motor-way the economic growth and the way of transportation has been changed and become so fast between Lahore and Islamabad. The second Phase of Motor-way from Lahore to Karachi should also have the same characteristics like Motor-way (M2).

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