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Developing Bankable Transport Infrastructure Projects: Case Studies, Experiences and Learning Materials for LLDCs and Transit Countries

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PPP Overview and Case Studies (Air & Roads)

PPP Overview

Introduction:

- The PPP Knowledge Lab defines a PPP as a long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance. This means that it is a contractual relationship between a government and a private business venture. The business venture delivers and funds public services using a capital asset thereby sharing the associated risks.
- The rationale for PPPs is based on the claim that PPPs have the potential to close the infrastructure gap by leveraging scarce public funding and introducing private sector technology and innovation to provide better quality public services through improved operational efficiency

Types of PPP

- **Build-Own-Operate (BOO):** BOO projects can be likened to the actual privatisation of a facility because often there is no provision of transfer of ownership to the host government. At the end of a BOO concession agreement, the original agreement may be renegotiated for a further concession period.
- **Build-Operate-Transfer (BOT):** The facility is paid for by the investor but is owned by the host. The investor maintains the facility and operates during the concession period.
- **Build-Own-Operate-Transfer (BOOT):** Ownership of the facility rests with the constructor until the end of the concession period, at which point ownership and operating rights are transferred free of charge to the host government.

Types of PPP

- **Build-Transfer-Operate (BTO):** The private sector finances a facility and, upon completion, transfers legal ownership to the public sector. The agency then leases the facility back to the private sector under a long-term lease. During the lease, the private sector operates the facility.
- **Design-Build-Finance-Operate (DBFO**): The private sector partner finances the project and is granted a long-term right of access of about 30 years. The DBFO partner is given specified service payments during the life of the project.

Types of PPP

Public-Private Partnership (PPP)					
Contract Type	**Design-Build-Finance-Operate (DBFO)**	**Build-Transfer-Operate (BTO)**	**Build-Operate-Transfer (BOT)**	**Build-Own-Operate-Transfer (BOOT)**	**Build-Own-Operate (BOO)**
Construction	Private Sector	Private Sector	Private Sector	Private Sector	Private Sector
Operation	Private Sector	Private Sector	Private Sector	Private Sector	Private Sector
Ownership	Public Sector	Private Sector during construction then Public Sector	Private Sector during Contract then Public Sector	Private Sector during Contract then Public Sector	Private Sector
Who pays?	Users or Offtaker	Users or Offtaker	Users or Offtaker	Users or Offtaker	Users or Offtaker
Who is paid?	Private Sector	Private Sector	Private Sector	Private Sector	Private Sector

Case Study: Roads Maintenance Programme for Paraguay (World Bank)

- Paraguay is a land-landlocked country reliant on increasing external trade for future economic development. Good road infrastructure is a vital ingredient of expanding trade by reducing logistics costs.
- As of 2005, road sector management was seen as ineffective at delivering the required results. The main road agency, responsible for 10% of the national investment budget in Paraguay, lacked capacity, especially in planning and strategic management. It favoured new investment over maintenance of existing roads, leading to deteriorating road conditions and higher costs to users (The World Bank, 2018).
- In addition, the needs of rural communities were not being met; insufficient resources were devoted to upgrading poor quality roads in remote areas, thus constraining access to services and opportunities (The World Bank, 2018).

Case Study: Roads Maintenance Programme for Paraguay (World Bank)

World Bank funded the project's three components:

- 1. Strengthening Strategic Planning and Road Management (US$7.42 million) (IEG, 2017). This component aimed at developing the institutional capacities of the Ministry of Public Works and Communication (MOPC) for managing the road network.
- 2. Improvement and Maintenance of the Paved Road Network (US$73.47 million) (IEG, 2017). This component aimed at stopping the deterioration of the priority road network composed of international and regional corridors through increased use of private sector participation in road maintenance activities through performance-based contracting.
- 3. Improvement and Maintenance of the Unpaved Road Network (US$26.34 million) (IEG, 2017). This component aimed at the rehabilitation and conservation of the unpaved road network that connect to the national road network and secondary roads connecting rural communities and providing access to the most excluded rural communities in three departments (San Pedro, Caaguazú and Caazapá).

Case Study: Roads Maintenance Programme for Paraguay (World Bank)

- The World Bank, through the International Bank for Reconstruction and Development, provided a loan in the amount of US$74 million toward the US$107 million total project cost. An amount of US$930,000 was provided through a Policy and Human Resource Development grant to assist in the preparation of the project (The World Bank, 2018).

- The project closed over four years behind schedule. This was due to a combination of factors including, delays in project effectiveness with the project declared effective only in January 2008 although targeted for January 2007 due to the length of time taken to secure the necessary approvals and legal authority for the government to commit to the loan, cost overruns associated with Performance-based Roads Maintenance contracts (GMANS) as well as implementation delays due to the weak capacity of the implementing agency exacerbated by impact of changes in government administration (IEG, 2017)

Case Study: Roads Maintenance Programme for Paraguay (World Bank)

Successes:

- Successful completion of 623 kilometres of road maintenance contracts based on level of service.
- A 93% compliance rate for all level-of-service indicators for the maintenance contracts.
- A new integrated road toll system covering the most trafficked roads.
- Creation of a road strategic planning unit, including a five-year investment plan.
- Implementation of a new communication strategy, including a governance and accountability improvement program.
- Introduction of an enhanced road monitoring system, including regular road inventories and traffic counts.
- Traffic increased by 7% annually on average during the life of the project, well beyond the expected 2.5% increase. As a result of improved roads and regular road maintenance, however, road users experienced the benefits of lower operating costs (per kilometer costs decreased by about 40% in the project areas, according to reports) and reduced travel times. Public transport service in the three project departments is more frequent, and residents enjoy better access to

Case Study: Roads Maintenance Programme for Paraguay (World Bank)

Key Lessons:

- Close coordination between funding partners. The World Bank worked closely with the Inter-American Development Bank (IDB) to introduce output-based maintenance through level-of-service contracts, which enhanced the impact of the road maintenance reform and supported sustainability efforts. The IDB financed an additional 629 kilometers of improvements, and the International Labor Organization provided technical assistance in developing the microenterprise program that helped establish road maintenance capacity in San Pedro, Caaguazú, and Caazapá.

- Performance Based Contracting (PBC) can improve and sustain road maintenance. The experience of this project, which introduced PBC for the first time in Paraguay demonstrated that such contracting can be successfully introduced in low-capacity environments with proper planning and addressing of constraints (IEG, 2017).

Case Study: Roads Maintenance Programme for Paraguay (World Bank)

Key Lessons:

- Efficiency of the local main road agency and local partners. The Ministry of Public Works and Communication played a vital role in all aspects of project implementation. The National Indigenous Institute helped elaborate the plans proposed by indigenous peoples and for the development of the multiuse community centers.
- Sectoral governance and transparency programs can play an important role in strengthening of road planning and management. The initiatives taken through the Government and Transparency Improvement Plan (IGAP) impacted on road management and proved effective in monitoring contracts.
- Introduction of laws to aid development. Five laws were passed during the project execution phase. These included - the Transit and Road Safety Law in 2014, the Road Classification Law in 2016, the creation of the Road Planning Directorate (DPV) in the Ministry of Public Works and Communication (MOPC) in 2007, the toll revenue ministerial direction and the ministerial directive to create the transparency department (DTPC) in February 2007 (IEG, 2017).

Case Study: New Bugesera International Airport, Rwanda

- The newly proposed Bugesera International Airport (BUI) is located 25km southeast of Kigali and has a connecting rail line proposed. It is designed and will be implemented with an aim of generating socio-economic development in Kigali, and other parts of the Eastern Province.
- The airport is further aimed at sustaining the development of Rwanda's aviation sector by backstopping the growth of RwandAir with new facilities and training opportunities (The East African, 2016).
- The development of the new airport is necessary because the pre-existing airport Kigali International Airport (KGL) is unable to support the air travel needs of Rwanda due to rapid development within Rwanda and the country's ongoing economic growth.
- In 2004, the airport served 135,189 passengers but this had increased to 710,000 in 2016 (The East African, 2016).
- KGL was designed to handle only 400,000 passengers per year and it does not have space for expansion.

Case Study: New Bugesera International Airport, Rwanda

- A private company, Mota Engil Engenharia was initially selected as the key contractor for the project and later was awarded a 25-year concession to complete construction, finance and maintain and operate the airport. Mota-Engil is a majority shareholder in the Bugesera Airport Company Limited (BAC) and has had previous experience of constructing new infrastructure developments across Africa.
- Mota-Engil agreed to provide the $418 million to fund the first phase of construction. Commercial operations were expected to begin in 2018. In August 2017, construction began. The projected cost is now US$828 million (The East African, 2016).
- Mota-Engil, through its subsidiary Mota-Engil Africa is the main contractor and was providing 75% of the funding. The Rwandan company called Aviation Travel and Logistics (ATL), is providing the remaining 25% of the funding.
- The new airport's construction was prepared in 2010 and only got underway in 2017 before undergoing a redesign process in 2019 to accommodate the country's expected growth plan (Airline Geeks, 2020).

Case Study: New Bugesera International Airport, Rwanda

- The mandatory redesigning of Bugesera Airport led to a fall out between the government of Rwanda and Mota Engil in 2020 and Mota-Engil was replaced by Qatar Airways.
- Qatar Airways has agreed to take a 60 per cent stake in the airport whose construction is now estimated to cost $1.3 billion up from $825 million, while the government of Rwanda retains 40%.

Key Lessons:

- Utilise funding from well-known contractors in the region. Although they later dropped out, Mota-Engil has experience of constructing infrastructure developments across Africa. Governments should try to identify similar companies that have carried out significant projects in their region and attract them to finance and/or develop projects in their country.
- Several redesigns and changing of plans of the airport indicate that there may not have been enough time spent at the project planning stage in terms of adequate forecasting of the needs of the country and costs of the project. This is an important stage in the project planning process.