Public Private Partnerships and Urban Transport

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Urban Transport Infrastructure and Services

- This presentation does not address
  - What needs to be done
  - How this gets decided

- It addresses
  - Given
    - what needs to be done and that
    - projects are an outcome of planning

    how can it be done best

Outline

- Characteristics of Infrastructure and Services
- PPP Examples
- Learnings

Characteristics of Infrastructure and Services

- High investment costs : decreasing average costs
  - Economies of scale & scope leading to natural monopolies: need for regulation
- Use of a key ‘national’ resource
  - Need for regulation
- Benefits from users to non users
  - Framework for fiscal cycle and concessions

Why Public Sector?

- Production characteristics
- Consumption characteristics including those of the ‘poor’
- Strong ‘public’ interest

But, Governments Have Not Achieved Their Own Goals

- Poverty alleviation
  - Water
  - Daily fuel
- Vested interests
  - Public Distribution System
- Project gestation period significantly longer than planned
- Cadres: Does not promote ‘ownership’ and ‘specialisation’
- Incestuous institutions

Transport Infrastructure Uniformly Poor

- High transit times
- Variable transit times
- Damages, losses, accidents
- Logistics costs
  - Transportation
  - Inventory
  - Handling
  - Losses

Framework for Commercialization

Improve Asset Creation Efficiency	Improve Asset Management Efficiency	Improve Service Delivery Effectiveness & Efficiency
Increase Stakeholding	Increase Accountability	Increase Autonomy

Issues of incentive compatibility

Framework for Commercialization

- Restructure the ‘business’ of infrastructure/ services by leveraging appropriate ‘stakeholders’

- Such stakeholders can be from
  - Users
  - Suppliers
    - management
    - technology
    - equipment
    - land
    - financing

PPP Examples

PPP Examples

- Ahmedabad Municipal Transport Service
  - Modernization and maintenance of bus stops in Ahmedabad
    - Sambhav group has been awarded a five year contract for upgrading/new construction and maintaining 260 bus stops in Ahmedabad, with the freedom to earn income from advertisements
    - The group has been charged a one time license fee and will also pay an annual fee to the government as a part of the contract. The total income for the AMTS is ~ Rs 44 million
    - No capital expenditure (~ Rs 5 million) and no maintenance expenditure for AMTS for the next 5 years

Source: DNA Money, 26th Feb, 2007

PPP Examples

- **Indore City Transport Service Ltd**
  - Indore City Transport Service Ltd was set up to operate and manage public transport system with PPP
  - There are six members on the Board of Directors with District collector (DC) as the executive director, Mayor as the chairperson, chairman IDA as the vice chairperson, municipal commissioner, CEO of IDA, and the joint collector. SP and RTO are ex-officio special invitees
  - Common ticketing system has been outsourced to an agency with passes as the main source of revenue
  - Advertisement has been outsourced to an agency on revenue share basis
  - Bus ownership is with the private operators on revenue share basis

PPP Examples

- **Delhi Transport Corporation**
  - Significant additionality of buses to DTC routes by various schemes, one after the other
    - Private operator with revenue risk
    - Private operator paid on km basis
  - The model is not yet right since the stakeholder is not as ‘professional’ as the services demand

Source: TERI, 2001, Annual Reports, DTC

PPP Examples

- **Coimbatore Bypass and Bridge**
  - In1995, MoST floated a global tender to select a private sector participant for development of the Coimbatore Bypass
  - The offer by the only private participant was a conditional bid which included a bridge over Noyyal river on NH47, that passes through the city and a ROB on NH209 apart from the Bypass road
  - The government, after negotiation, decided to approve the bid for the construction of the Bypass road along with a bridge on Noyyal river

Source: Raghuram et al (IIR 2001)

PPP Examples

- **Coimbatore Bypass and Bridge**
  - The cost of the project was Rs 900 million. While the bypass had a larger investment, the larger revenue share was expected from the bridge
  - Since the commissioning of the bridge in Dec 99, people have been agitating against paying toll. Several meetings with different associations have lead to revision of toll for frequent users
  - Average toll collection was ~ Rs 75000 as against a projection of ~ Rs 2 lakh. The BOT operator recorded a loss of ~ Rs 60 million in 2002
  - A case is still in court with the BOT operator expecting government to make good the losses due to nonpayment of toll

Source: Raghuram et al (IIR 2002)

PPP Examples

- **Mumbai Metro** (First line)
  - Metro will be implemented on a build-own-operate-transfer (BOOT) basis for a period of 35 years
  - The construction period is expected to be for four to five years.
  - MMRDA will hold 26% equity in the consortium
  - State will provide a viability gap funding of Rs 6,500 millions to enable the consortium get a 15% rate of return

PPP Examples

- **BRT at Ahmedabad** (under progress)
  - Planned on BOT basis
  - The project cost is expected to be Rs 5000 million for the first phase of 50 km
  - Design of BRT system is provided by the government
  - Ahmedabad Bus Transit Authority (ABTA) has been formed to execute the project with equity participation of 50% from AMC, 35% from GoI and 15% of GoG
  - Mayor of Ahmedabad is the chairman of ABTA, with an MD appointed by the board of directors.

Source: Ahmedabad Rapid Transit News, Issue 1, Feb 06

PPP Examples

- **BRT at Ahmedabad** (under progress)
  - However, currently AMC is inviting bids and is over seeing the design and planning of the routes (physical infrastructure)
  - Tenders have been invited by the government
    - Infrastructure development on a contract basis
    - Structure for operations and revenue collection yet to be finalized

PPP Examples

- Other Sectors
  - Telecom
  - Airport
  - Railways
  - Ports

Learnings from PPP

Learnings

- How can the government avoid its conflicting roles of being a regulator, licensor, operator, or owner at the same time?
- When can the market be allowed to function independently and when should regulation be imposed?
  - When should only one player be allowed to provide the infrastructure/service to reap the advantage of natural monopoly and when should multiple players be allowed?

Learnings

- What should be level of bundling/unbundling of the PPP projects to leverage maximum potential for (i) government and (ii) user?
  - **Users are markets for many related activities**

- What should be the framework for tendering to ensure that the right stakeholders come into the pool and are considered for PPP?

- How should contestability be maintained at various stages of the project?

Learnings

- What should be the level of autonomy given to various players?
- What should be the mechanism for risk sharing?
- What should be the nature of financing of the projects?
- What kind of contracts should be prepared so that quality of infrastructure/service provided is satisfactory?

Key Implications

- Project structuring: (Appropriate bundling)
- Risk assessment and management
- Framing of concession agreements/contracts
- Project financing: (Appraisal, sourcing and engineering including taxes/subsidies)
- Project management: (Implementation)
- Financial restructuring, and mergers and acquisitions
- Regulatory and institutional framework

Framework for Appropriate Bundling

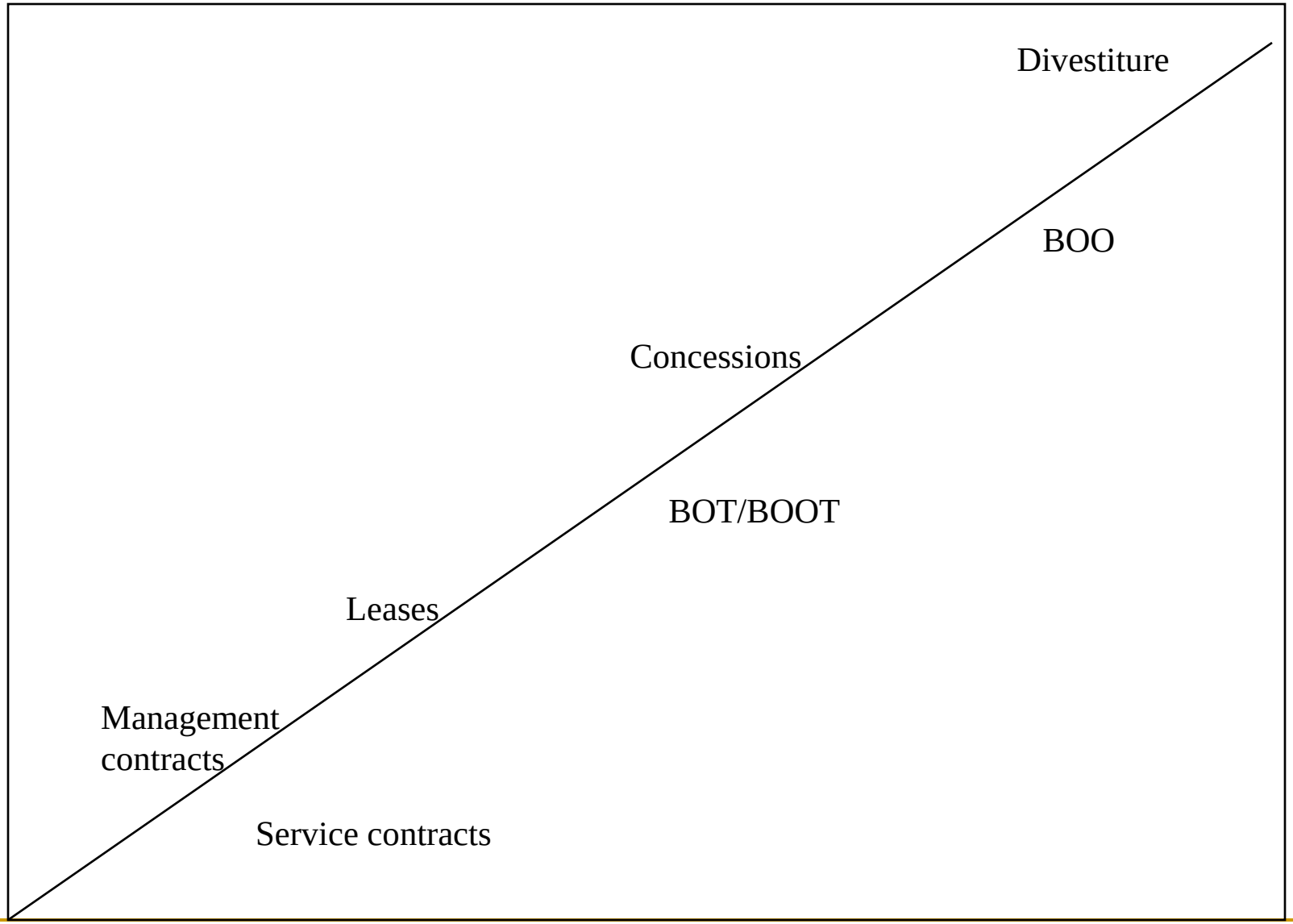
- To attract commercial interest
- Cherry picking vs Social responsibility
  - Subsidy and Cross-subsidy
  - Who pays for whom?
- Retention of control
- Transparency of transactions

Allocation of Responsibilities to Partners

Option	Asset ownership	Operations and maintenance	Capital investment	Commercial risk	Duration
Service contract	Public	Public and private	Public	Public	1-2 years
Management contract	Public	Private	Public	Public	3-5 years
Lease	Public	Private	Public	Shared	8-15 years
Concession	Public	Private	Private	Private	25-30 years
BOT/BOOT	Private and public	Private	Private	Private	20-30 years
Divestiture/ BOO	Private or private and public	Private	Private	Private	Indefinite (may be limited by license)

Source: World Bank 1997

Private Participation Options



Source: World Bank 1997

System of State Involvement

Infrastructure	Owner	Contractor
1. Ownership and asset creation - Right of Way - Terminals - Rolling stock and equipment		

Source: Raghuram, 2001 (IIR, 2001)

System of State Involvement

Services	Principal	Agent
1. Maintenance -Right of way -Terminals -Rolling stock and equipment		
2. Operations -Right of way -Terminals -Rolling stock and equipment		
3. Customer services -Basic services -Special services		

Source: Raghuram, 2001 (IIR, 2001)

System of State Involvement

Regulation
1. Licensing
2. Environmental impact
3. Safety
4. Pricing
5. Service levels
6. Dispute resolution

Source: Raghuram, 2001 (IIR, 2001)

Thank you

Back Up

Urbanization and Urban Transport

- Urban sector is the engine of growth for a country. For India, urban sector contributes approximately 55% of its GDP (Annual Report MORTH, 2004-05)
- Urban population in India grew at a rate of 2.28% during 2000-05, whereas total population of India grew at a rate of 1.5% during 2000-2005 (http://globalis.gvu.unu.edu).
- The growth rate of urban population in India is expected to be around 2.4% to 2.5 % for the next 20 years
- Urban transport is a key driver of urban development. Cities spend 15% to 25% of their total expenditure on transport. 5% to 15% of household income is spent on urban transport in developing country (www.worldbank.org).

Current State and Developments in Urban Transport in India

- Growth of transport and investment requirement
  - Motorized trips demand will continue to grow faster than the population due to economic and motorization growth
    - Fast economic growth expected (7-8% annual growth in GDP during 11th FYP)
    - Motorization is growing faster than the population (more than 10%/year for sale of cars and two/three wheelers over the past 5 years)
  - To keep cities competitive, and thus sustain and accelerate economic growth, cities must provide efficient urban transport systems
  - Urban transport investment required for the 11th FYP is Rs 574,000 millions (~USD12.8 billion)
    - About 2% of India's GDP

Current State and Developments in Urban Transport in India

- Steps taken by government
  - Political and technical steps
    - MoUD designated as a nodal ministry for urban transport
    - Jawaharlal Nehru National Urban Renewal Mission (JNNURM)
    - National Urban Transport Policy (2006)
    - Working group on urban transport for the 11th FYP (2007-2012)
  - Financial steps
    - Direct budgetary devolution (tax-payer money)
    - Debt raised against government guarantees
    - Escrowing revenues such as property tax, entry tax/ octroi
    - Public Private Partnership including Pooled Finance and Selling/ securitizing/leasing land

Our Focus

- PPP has become one of the most favored way of ***financing*** the urban transport projects in last few years
- PPP is becoming popular as it not only adds to ***technological improvements*** and ***efficiency in operations*** but it also brings ***modern techniques of management*** though a right set of stakeholders

- We examine the early experience of PPPs in urban transport in India to
  - Leverage lessons for the future
  - Raise theoretical questions that need further study

PPP Examples

- Vishakapatnam
  - Passenger service was provided by private operators till 1978
  - Buses were operated on 44 routes with 124 buses
  - Bus operations were tardy and were involved in frequent accidents
  - City witnessed large scale public agitation against poor city service by private buses
  - Sate government issued direction to APSRTC to introduced bus services

Source: M K Thomas, 2003

PPP Examples

- Vishakapatnam
  - APSRTC introduced 100 buses from Dec 78 which has increased now to ~150 buses

- Takeaway
  - Private service need not necessarily be better than the government service
  - It is important to have right stakeholders on board in the PPP process to get a good and reliable service

Source: M K Thomas, 2003

PPP Examples

- Jaipur
  - In 1979, Rajasthan government issued 64 permits to private players to provide service in Jaipur along with RSRTC
  - The number of licenses were increased to 122 in 1990 due to strike of government buses. Subsequently permits were issued for 289 mini buses
  - Slowly the service level provided by the private players deteriorated and frequent complaints of rash driving, misbehavior, excess fare charge were reported

Source: M K Thomas, 2003

PPP Examples

- Jaipur
  - Private players also forced the government to reduce the license fee to 1/8th of its original value by forming a cartel (from Rs 832/vehicle/year to Rs 167/vehicle/year)
  - To meet the increasing demands, RSRTC resumed its services in Jaipur
- Takeaway
  - It is important to have the right stakeholders
  - The tax charged to the government service provider is very high. It should be fixed keeping the viability of the service and the marginal cost to the asset provide

Source: M K Thomas, 2003

PPP Examples

- Delhi Metro Rail Corporation
  - It was established by 1995 under the Companies act, 1956
  - It was established to design, construct, and operate the metro in Delhi. The organization also provides consultancy services
  - As of March 2005, the total equity participation by Government of India and government of NCT of Delhi has been Rs 28,210 million
  - Grant by DDA is of the tune of Rs1,580 million.

Source: Annual Report Delhi Metro Rail Corporation 2004-05

PPP Examples

- Delhi Metro Rail Corporation
  - A loan of Rs 64,340 million from JBIC has been taken for the project till July 2005
  - Interest free subordinate loan from Government of India and Government of NCT of Delhi for land is approximately Rs 2,520 million each
  - Interest free loan from GNCTD for project development of IT park Rs 200 million
  - Unacknowledged debt against DMRC Rs 5204 million as of financial year ending 2005

Source: Annual Report Delhi Metro Rail Corporation 2004-05

PPP Examples

- Delhi Metro Rail Corporation
  - The construction has been on schedule for different phases, though the expected ridership has not been the same as estimated
  - There has been minimum hindrance to this project
  - Imported technology and premium services provided by DMRC are not financially sustainable and require subsidy of various forms

Source: Annual Report Delhi Metro Rail Corporation 2004-05

PPP Examples

- Delhi Metro Rail Corporation
  - Total loss for the financial year 2004-05 was of the order of Rs 763 million. The operational profit for the years 2005-06 was Rs 800 million. The operational profit for the year 2006-07 is also expected to be of the same order
  - The average speed on the road has increased to 14.5 kmph from 10.5 kmph
  - Around 1,650 buses have been taken off the road
  - The road accidents have reduced by 30%and the fuel savings is estimated to be Rs 5,000 million

Source: Annual Report Delhi Metro Rail Corporation 2004-05

PPP Examples

- Delhi Metro Rail Corporation

  Takeaway

  - It is important to have right set of organizations with adequate autonomy.
  - It is also important to have the right people at the right place in the organization (Delhi metro has a technocrat leading the team as managing director)
  - Service level should commensurate with the kind of pricing and target commuters
  - Other infrastructure provisions can also affected in the process

PPP Examples

- Ahmedabad Municipal Transport Service

Takeaway

- Bundling/Unbundling of infrastructure/services needs to be carefully carried out to extract maximum benefit
  - How should one decide on the bundling/unbundling of project? Can one evolve a set of parameters what would help decide on the successful bundling of the project?
- Other sources of revenue can not only off set construction/modernization cost but also provide additional revenue
- Should there be any restriction on the kind of advertisement that can be exhibited. A generalized question would be – What should be the level of regulation on the bundled/unbundled infrastructure/services

PPP Examples

- Indore City Transport Service Ltd (ICTSL)

- *T*akeaway
  - Proper bundling of services and infrastructure can be remunerative
  - For better integration ticketing has been kept common and this service is being provided by ICTSL
  - Proper route selection is very important