Transportation Public-Private Partnership Policy

National Center for Transportation Systems
Productivity and Management
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Jonathan L. Gifford, Director
Center for Transportation Public-Private Partnership Policy
George Mason University
School of Public Policy
jgifford@gmu.edu
Outline

- Background on U.S. Transportation Finance
  - U.S. transportation finance
  - Limitation of traditional approaches
  - Description of P3s in the U.S.

- State of P3s in Virginia
  - VA PPTA
  - OTP3
  - Project showcase

- Research Activities on P3 Policy at GMU
  - Case Studies
  - White Papers

- Direction for the Future
  - Executive / Staff Training Program
  - On-going research
Background: U.S. Transportation Finance

Transport and communications investment as a percentage of GDP, OECD nations

Background: Funding Models for Highways

- **User fees**
  - Excise tax on gasoline: Highway Trust Fund
  - Federal – 18.3 cents/gallon
  - Some states have their own gasoline taxes
    - Georgia: 29.1 cents/gal (increase of 0.6 cents)
    - Virginia (May 2013) gas tax reform: 3.5% sales tax on the wholesale price of gasoline, 6% on diesel fuel; $64 alternative fuel vehicle fee, and locality specific additional 0.7% local sales tax, etc.
  - Car registration fee (state)
  - Tolls (state / project)

- **Non-user fees**
  - Sales tax, etc. (state, local)

- **Debt-Financing: Bond by state and local governments**
  - Tax-exempt municipal bonds
  - Various bond products (Private Activity Bond, GARVEE, etc.)

- **Debt-Financing: Loans for state and local governments**
  - Transportation Infrastructure Finance and Innovation Act (TIFIA) loan
  - State Infrastructure Bank loans
  - Private loans

Source: Tax Foundation (Jan 2013). Institute on Taxation and Economic Policy (June 2013)
Background: Issues with the Traditional Funding Model

- Funding Crisis:
  - Increasing costs of construction
  - Declining purchasing power of 18.3 cents/gal federal gas tax
  - Aging infrastructure = increasing costs of maintenance / renewal
  - Improving fuel efficiency (e.g. electric vehicles do not pay fuel tax)
  - Political inability to raise gas tax

Note: CBO projections published in 2013
Background: Public-Private Partnerships (P3s or PPPs)

An emerging procurement mechanism to address issues of public provision model

- **P3s**: long-term contractual agreement between public and private partners to provide services traditionally done by the governments
  - Bundling of project delivery stages
  - Allocation of some project risks to the private partner

- A wide range of P3 contract types have been used
  - Design-Build
  - Design-Build-Operate-Maintain
  - Design-Build-Finance-Operate-Maintain
  - Lease, etc.
Background: P3s Advantages & Disadvantages

- Advantages
  - Utilization of private financial resources
  - Explicit incentives to be on-budget, on-time delivery
  - Cost saving through innovative practices of the private sector

- Disadvantages
  - Substantial transaction costs (e.g. legal, financial and technical consulting service fee, higher interest costs in cases of private debt-financing)
  - Potential stakeholder opposition to private sector involvement
  - Complexity makes the projects more prone to risks
P3s: State Initiatives

States with P3 Legislation (March 2013)

Source: Federal Highway Administration Office of Innovative Project Delivery (March 2013)
Some states have aggressively used P3 arrangements for key infrastructure

- Leading states with established institutions and experiences:
  - Virginia
  - Florida
  - Texas

Other states are emerging in the U.S. P3 markets

- States that recently passed P3 enabling legislation
  - Maryland
  - Pennsylvania
Georgia’s experience with P3s

- **P3 legislation (2003):**
  - Unsolicited proposals for Public Private Initiative (PPI) allowed
  - Submitted unsolicited proposals: GA-316, GA-400, I-285, I-75/I-575
  - Only I-75/I-575 (Northwest Corridor) advanced, then the program was terminated

- **P3 legislation (2009):**
  - Public Private Partnership Program established within GDOT
  - Only solicited proposals allowed to maintain control of project identification, selection, procurement and construction

- **On-going P3 projects in GA:**
  - I-75 Northwest Corridor Managed Lanes (best values proposer selected, financial negotiations underway)
  - Multimodal Passenger Terminal in metro-Atlanta (being solicited)
  - Rest Area (beginning stage)
P3s: State of U.S. P3s Market

- Early deals: up-front payment with revenue risk
  - Chicago Skyway
  - Indiana Toll Road

- Some (big) failures
  - South Bay Expressway (California)
  - Pocahontas Parkway (Virginia)

- Emerging appeal of availability payment model
  - For roads without tolls or when revenues are expected to be inadequate
  - Public agency pays private sector after achieving certain milestones
  - It takes away the benefits and costs of private sector financing
P3s: State and Local Initiatives

Number of P3 Projects Reaching Financial Close in the U.S., 1986 -2012

Numbers of P3s Project

Note: includes transportation, water and sewer, school, prison and other non-military buildings.
Source: Public Works Financing and U.S. Department of Treasury, Bureau of Public Debt
P3s: State Initiatives

- P3 arrangements are used for various types of infrastructure systems
- Types of US P3 projects that reached financial closure, 1986-2012

Note: including both proposed P3s, completed P3s and P3s under construction.

Source: Public Works Financing
Virginia & P3s: VA PPTA

• VA legislation on P3s (1995)
  • Authorizes private sector to BMO qualifying transportation facilities
  • Agreement with State and Local Govs

• Important financial impact
  • Around 20% of the funding comes from the State for: the 495 Express Lanes (northern Virginia), the Midtown Tunnel-Downtown Tunnel-MLK Expressway (Norfolk), and the I-95 Express Lanes (northern Virginia)
Virginia & P3s: VA OTP3

- Virginia Office of Transportation Public-Private Partnerships (OTP3)
  - Facilitate timely delivery of PPTA projects, within established laws and regulations
  - Develop multimodal and intermodal solutions consistent with state, regional and local transportation policies, plans and programs
  - Encourage competition for innovation and private sector investment creating value-for-money for the commonwealth
  - Promote transparency, accountability, informed and timely decision making
  - Achieve lifecycle cost efficiencies through appropriate risk transfer
- Independent office – reports directly to the Secretary
- $6 billion in last 2 years

Source: OTP3
Virginia & P3s: VA OTP3 Portfolio

Source: OTP3
Virginia P3s: 495 Express Lanes Project

- Original concept not approved (1994)
  - Excessive Costs: $2.68-3.25B
  - 170 acres (70 hectares) of right of way
  - 300 homes displaced
  - 32 commercial properties displaced
  - 8 public parks disturbed
- Unsolicited proposal by Fluor Corp. (2002)
- Design-Build-Finance-Operate-Maintain
- HOT lanes, less costly design features (no homes displaced)
- 14 mile (22.5km) stretch of Express Lanes for $1.7B total cost, 75-year concession
- Construction
  - Construct 14 miles (22.5km) of express lanes
  - Rebuild existing 14-mile (22.5km) freeway, rebuild +50 bridges, upgraded 12 key interchanges
- Completed on-time, on-budget, and began operation in November 2012
- Currently an extension, I-95 Express Lanes, is under construction

<table>
<thead>
<tr>
<th>495 Express Lanes</th>
<th>2013 1st Quarter</th>
<th>Note</th>
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<tbody>
<tr>
<td>Ave. Daily Trips</td>
<td>21,008</td>
<td>Grew 13% from Dec.2012</td>
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<tr>
<td>Ave. Workday Trips</td>
<td>26,294</td>
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Source: 222.495expresslanes.com/feature/1083
Virginia P3s: VA SR895 Pocahontas Pkwy

- Concept developed in 1980s but no funding
- Pocahontas Parkway Association, a 63-20 (non-profit) project company in 1998
  - 8.8-mile (14km) highway
  - A bridge with 145’ (44m) clearance
- Original project funding sources:
  - $18M State Infrastructure Bank loan
  - $354M tax exempt bond issued by PPA
  - $9M Federal funds for design
- Opened in 2002, but traffic and revenue lower than projected
- Transurban acquired the right of a 99-year lease, in 2006
  - Total funding of $611M:
    - $420M Bank debt
    - $55M Subordinated debt
    - $141M Equity contribution
    - $140M TIFIA loan
- In June 2012, Transurban wrote down the asset value to zero
  - Transfer is expected to go to the lenders, a consortium of European banks, fall 2013
  - Richmond Metropolitan Authority considering bid to operate
Virginia P3s: I66 Air-rights

- Interstate 66 right of way

- RFI closed last September
  - Most attractive site
  - Cost of platform
  - Public subsidy
  - Key risks

- 70,000 sq ft to develop, but additional area available depending on private sector interest

Source: OTP3

**Pink** – Study site identified by OTP3  
**Green** – other potential Air Rights over I66 held by VDOT

Source: OTP3
Virginia P3s: Port of Virginia PPP Proposal

- Public Owner:
  - Virginia Port Authority

- Private Operator:
  - Virginia International Terminals, Inc. (VIT)

- An unsolicited proposal of PPP submitted (May 2012)
  - Initial bid: APM Terminals Americas
  - Competitive bids: Carlyle (later withdrew); RREEF/JPMorgan, and; VIT (Incumbent)

- Rule: VPA Board would decide (October 2012)

- The VPA Board rejected the P3 proposal, and to reform the incumbent operator (March 26, 2013)
Virginia P3s: Midtown Tunnel Lawsuit

• Citizens Against Unfair Tolls vs VDOT
  • Circuit Court Judge agreed in May with main argument: tolls are taxes
  • A $2.1 billion P3 was declared unconstitutional
  • Stops tolls in Downtown and Midtown tunnels
  • Stops MLK Jr Expressway in Portsmouth

• Supreme Court of Virginia took the case this past September
  • Ruling is expected by the end of this year

• This case can jeopardize other P3s and tolls in VA and potentially across the US
  • $3.5 billion needed for existing projects will need to come from other sources
  • Credit ratings – due to existing projects
  • New infrastructure – due to lack of funds
CTP3P: Center for Transportation Public-Private Partnership Policy

• Goal: to advance objective consideration of public-private partnerships in transportation system renewal and development through research, education and public service

• Activities
  • Documenting case studies of PPP projects across various transportation modes
  • Developing best practice guides for assessing the appropriateness of PPPs for a state or local government
  • Developing analytical tools and frameworks for assessing the financial viability of PPPs
  • Conducting comparative studies
  • Conducting policy analyses of transportation PPPs to identify key ingredients for successful PPPs
  • Providing graduate and executive education on transportation PPPs
  • Sponsoring workshops and conferences to convene experts, decision makers and practitioners to share knowledge on PPPs and to articulate research and policy agendas.
CTP3P: Research

• **Case Studies of US P3 Projects**
  • 495 Express Lanes
  • South Bay Expressway
  • Miami Port Tunnel
  • Las Vegas Monorail

• **White Papers**
  • Research Needs
  • Best Practices

• **Manuscripts for peer-reviewed journals**
  • P3s from the view of existing economic theories
  • Financial involvement of the private sector in P3 projects
CTP3P: Conferences

- Co-sponsoring National Research Conference on P3s
  - In partnership with the 25th Annual American Road & Transportation Builders P3 Conference, July 24-26, Washington, D.C.

- Conference Presentations
  - November 2012 North American Regional Science Association Conference (Spatial Analysis of P3)
  - January 2013 Transportation Research Board Conference (Research Needs)
  - May 2013 – International Transport Forum (Leipzig)
  - June 2013 Innovative Public Finance Conference (Milan)
  - July 2013 World Conference on Transport Research (Rio)
  - November 2013 Global Challenges in P3s (Antwerp) [US States’ Use of P3s]
  - November 2013 Association for Public Policy Analysis & Management Conference (panel discussion)
Future: Training Program & Future Research

• Training Program:
  • Provide state and local agency staff with tools to adequately assess P3 convenience for transportation projects and move forward
  • Preparing a draft proposal based on supply assessment and a demand assessment via the Multimodal Group – VA

• Air-Rights P3s
  • VDOT and OTP3 evaluating using air rights in Rosslyn and East Falls Church
  • Identify policy lessons based on experience from other states

• Multi-jurisdictional P3s
  • Identify potential mechanisms by which multiple jurisdictions engage in P3 infrastructure project.

• Municipal Bond Policy and Asset Management for P3s
  • How does access to municipal bond market affect asset owners' propensity to adhere to lowest life cycle cost asset management strategies
Research Key Challenges

• Access to data
  • During construction and implementation
  • Private data from contractors
  • Standardized information

• System vs. project planning
  – Integration with state transportation plans
  – Unsolicited P3 proposals
  – Equity
  – “Beggar thy neighbor” tolling practices

• Institutional structure
  – State wide office vs. projected specific
  – Transportation vs. all functions model
Transportation Public-Private Partnership Policy Program at George Mason University School of Public Policy

For more information:

Visit us at: p3policy.gmu.edu

Jonathan L. Gifford, Ph.D.
George Mason University
School of Public Policy

jgifford@gmu.edu
+1 703-993-2275