

P3 Evidence Project

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Session:

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Transportation P3 Research*

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Developing a Research Program on P3 Evidence

Research question

- How do we know if P3s generate value to citizens?

Early-Stage Project

- State of practice of Value for Money (VfM) analysis

Evidence (Phase 1)

- Identify population of large scale P3 and non-P3 projects
- Classify by contract type, P3 format; collect project meta data
- Develop, pilot methods to collect project sponsor objectives and outcomes; develop phase 2 work plan
- Project started July 1, 2016

What is the VfM analysis about?

Motivation

- How do we know if a P3 project is worth pursuing?
- Value for Money (VfM) is a financial tool to compare among different alternatives
- It acknowledges basic differences between alternatives:
 - Life-cycle costs, capital costs, the role of competition, risk sharing
- Literature has focused on guidelines, not actual practices

Research question

- What is the **state of practice** in the use of VfM analysis of highway public-private partnership (P3) projects in the US?

How are we doing the research?

Data & Method

- VfM collection by contacting DOTs and accessing their website
- Out of 13 VfM studies identified, 7 were compared
- Qualitative case study comparison was performed

Project Name	Public Sponsor	Capital (million) ⁽¹⁾	Current Status
Presidio Parkway Phase 2	California DOT	\$365 ^x	Under construction
I-595 Managed Lanes	Florida DOT	\$1,814	In operation
Port of Miami Tunnel	Florida DOT	\$914 ^x	In operation
I-4 Ultimate	Florida DOT	\$2,323	Under construction
Brent Spence Bridge	Ohio DOT	\$2,632 ⁽²⁾	Procurement TBA
I-64 Managed Lanes	Virginia DOT	\$2,957 ^(2,3)	Project deferred
I-85 Renewal Project	Virginia DOT	\$806 ⁽²⁾	Project deferred

⁽¹⁾ Capital refers to the invested capital. ⁽²⁾ indicates estimates when the P3 model (DBFOM+avail.) is assumed. ⁽³⁾ The estimated cost includes costs of design, construction, operation and maintenance costs, and excludes the cost of financing.

What have we found?

Results

- **Models**
 - Different Public Sector Comparator due to procurement practices
 - Usual P3 under analysis: DBFOM + availability payments
- **Discount rate (DR)**
 - PSC: Similar discount rates despite literature debates on the topic
 - P3: Only one case where risk is recognized
- **P3 Equity Internal Rate of Return (IRR)**
 - Equity IRR for P3 projects in US ranges 11-12% for available payment projects

Project Name	PSC	P3	PSC - DR	P3 - DR	IRR
Presidio Parkway Ph2	DBB	DBFOM+a /DBF	Rf: 5.5%	Rf: 7.5%+risk	11.5%
I-595 Managed Lanes	DBF	DBFOM+a	Nom: 5%	As PSC	11.5%
Port of Miami Tunnel	DBB / DB	DBFOM+a	Nom5%	As PSC	11.33%
I-4 Ultimate	DB	DBFOM+a	Nom: 5%	As PSC	12%
Brent Spence Bridge	DBB+t /DB+t	DBFOM+a /DBFOM+t	Rf: 5%	As PSC	n/a
I-64 Managed Lanes	DBB	DBFOM+a /DBF /DBFOM+t	n/a	n/a	n/a
I-85 Renewal Project	DBB	DBFOM+a	n/a	n/a	n/a

a: availability payments. t: toll. Rf is risk free and tax exempt. Nom: nominal.

What are the implications of our findings?

Practical contributions

- **Legislation.** There is a need to discuss availability payments in enabling legislation, given VfM findings
- **Criteria.** There is a need for clear guidelines on what type of projects require VfM analysis
- **Goals.** There is need for clearly stated objectives : early completion, life-cycle efficiency, risk-sharing, or others.
- **Comparability.** There is a need for some minimal comparability within and among agencies on PSC.
- **Tolling.** There is a need to properly evaluate the tolling option and to enunciate why it may not be a viable option.

Center for Transportation Public-Private Partnership Policy George Mason University

Expanding the evidence base, enhancing agency capacity, educating the workforce and community about P3s

For more information:

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