Preliminary Investigation of the Impact of Project Delivery Method on Dispute Resolution Method Choice in Public Highway Projects

By:
Outline

- Background
- Objectives
- Methodology
- Results & Analysis
- Conclusions
10 to 30 percent of construction projects have serious disputes

1 in 4 projects have claims

Transactional costs for dispute resolution may total $4 - $12 billion per year.

(FFC 2007)
Paradoxically, experts frequently refer to the construction industry as being on the innovative edge regarding dispute resolution

(ENR 2000)
traditional PDMs and low bid process

adversarial relationships

alternative PDMs

collaborative environments &
less disputes

Is this TRUE???
Objective
Methodology
Results & Analysis
Background

PDMs

Time
Quality
Cost
Sustainability

DISPUTES & DRMs
Results & Analysis

Conclusions

Methodology

Objectives

Background

**Design-Bid-Build**

**CMR**

**PPPs, IPDs, …**

**Arbitration**

**DRBs**

**Mediation**

**Litigation**

**Negotiation**

**PDMs**

**DRMs**
Performance assessment

- time & cost performance of 60 projects from Florida DOT (Minchin et al. 2013).
- how quality is handled in DB projects (Gransberg et. al. 2008).
- Arizona DB projects quality study (Ernzen and Feeney 2002)
- quality qualifications assessment in DB solicitation documents (Gransberg and Molenaar 2004)
- FHWA national study on DB contracting effectiveness from different states taking the lead on DB (FHWA 2006)
- ……. 
Federal Facilities Council (2007) compiled a report of presentations given by speakers who are experts in resolving construction disputes.

1. Presentation by *Blumenfeld* on Pentagon renovation
   - Projects transferring more risk to contractor & using low-bid process >>> more prone to having claims.
   - Contracts should portray *realistic risk assignment* rather than convey bargaining powers of the parties.
   - Disputes’ causes could be attributable to *contracting/bidding strategy* such as low bid process, poorly developed contracts, and lack of PM procedures.
Federal Facilities Council (2007) compiled a report of presentations given by speakers who are experts in resolving construction disputes.

2. Presentation by Barshop on Methods for Reducing Claims

- In contrary to perception that fewer claims are anticipated in shared risk contracts, no difference between shared risk versus contractor-allocated risk contracts.
- Arbitration encouraged inflated claim values while other forms such as DRBs and mediation did not affect claim frequency.
Two other studies, in Malaysia & in UK

- Alternative PDMs reduced disputes frequency (Ndekugri and Turner 1994, Yusof et al. 2011).

Study of DRM provisions in standard contract forms

- Regardless of PDM, same dispute resolution provisions were used (Mante et al. 2012)
- Paper reinforced literature review >>> amount of research done related to PDM and dispute resolution is limited.
There are many DRMs, with varying hostility +
many PDMs forms, some of which assumed to create collaborative environment less prone to disputes.

No consolidated research conducted to investigate the effect of PDMs choice on selection of DRMs or process, especially as related to public highway projects.
Objectives

Conduct a preliminary investigation on how PDMs’ choice has affected Department of Transportation (DOTs) selection of dispute resolution methods (DRM)
Research Methodology

Literature Review → Data Collection → Data Analysis

- Qualitative Study
- Content Analysis
  - 3 State DOTs
  - Colorado
  - Florida
  - Ohio
<table>
<thead>
<tr>
<th>State DOT</th>
<th>Specification document - Issue Date</th>
<th>Traditional project delivery</th>
<th>DB project delivery</th>
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<tbody>
<tr>
<td>Colorado</td>
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<td>- Standard Specifications for Road and Bridge Construction – 2011</td>
<td>RFP documents (Book 1 DB Contract Provisions) for the following projects:</td>
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<td>- Standard Special Provision revising CDOT’s Standard Specifications for Road &amp; Bridge Construction-11/6/2014</td>
<td>- I-25/Cimarron Street (US 24) - 2014,</td>
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<td>- I-25 North - 2012</td>
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<td>- SH 285 Reconstruction - 2008</td>
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<td>Florida</td>
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<td>- Standard Specifications for Road &amp; Bridge Construction - 01/2015</td>
<td>- Design-Build Specifications – 09/08/2014</td>
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1) how DOTs define the word ‘claim’ and ‘dispute’
2) process that precedes resorting to formal DRM, if stated
3) formal DRM employed.
How DOTs define the word ‘Claim’ and ‘Dispute’?

**CDOT**

... disagreement concerning contract interpretation, price, time, or all three between parties at project level regarding or relating to Contract

A separate demand by Contractor for:
(i) time extension disputed by CDOT, or
(ii) payment of money or damages.

A claim will cease to be a claim upon resolution

**FDOT**

No definition found

... written demand submitted to the Department by Contractor ... seeking additional monetary compensation, time, or other adjustments to Contract, entitlement or impact of which is disputed by the Department.

**ODOT**

Disagreements, matters in question and differences of opinion between the Department’s personnel and the Contractor.

Disputes that are not settled through initial steps of DR & Administrative Claim Process.

The Dispute becomes a Claim when the Contractor submits a Notice of Intent to File a Claim.
What is (1) the process that precedes resorting to formal DRM, if stated and (2) the formal DRM employed?

- Colorado

Partnering was listed as an integral process in DB projects but not in DBB projects.
What is (1) the process that precedes resorting to formal DRM, if stated and (2) the formal DRM employed?

- **Florida**

  **DBB:** other than DRB to be used under specific work disputes—
  no mention of DRM if contractor is not in agreement with engineer’s decision

  **DB:** non-binding DRB added as an option to be used generally.
What is (1) the process that precedes resorting to formal DRM, if stated and (2) the formal DRM employed?

Ohio

ODOT did not amend the dispute resolution section in its DB specification.
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| **Partnering Efforts**  
(in case of DB projects) | **Project level Negotiations** | **Mitigation Steps w/ Engineer**  
(oral & written notification) |
| **Project Engineer** | **Project Engineer** | **Step 1: On-site Determination of Engineer** |
| **Resident Engineer** | | |
| **DRB**  
(Standing or on-demand) | **DRB**  
(Standing non-binding and/or Statewide Binding) | **Step 2: District Dispute Resolution Committee** |
| **Mediation**  
(optional) | | **Step 3: Board or ADR**  
(mediation OR binding arbitration) |
| **Region Transportation Director** | | |
| **Chief Engineer** | **Arbitration or Litigation**  
(in case non-binding DRB preceding) | **Litigation**  
(in case mediation preceding)** |
Conclusions

- Some states must be acknowledging alternative PDMs necessitate use of a more amicable dispute resolution process while others are using mitigation/partnering efforts regardless of PDM.

- A stepped process in general is preferred in all states with some form ADR (DRB & mediation) being used before resorting to litigation.

- This study addresses an important knowledge gap and paves the way for future in-depth studies regarding dispute prevention and minimization and alternative PDMs.
Limitations

- External validity of study is limited to three states DOTs (Colorado, Florida, and Ohio);
- This study was limited to conducting content analysis on current documents and lacks empirical support;
- This study just looked at DRMs provided by owners and does not provide any insight towards the behavior of stakeholders in a project.
Recommendations

- Test statistically the hypothesis that more integrated PDMs provide more collaborative environment and as a result reduce potential of disputes in a project.

- How choice of a stepped process affect claim frequency and number of claims that move to litigation and how the stepped process help reduce number of claims in DOTs compared to others.
THANK YOU...