

# Procurement & Infrastructure Costs

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This project will investigate the relationship between state department of transportation (“DOT”) procurement practices and infrastructure costs, about which little is currently known. To do this, we will distribute a survey to transportation procurement officials, contractors, and lawyers in all 50 states. We began by adapting World Bank Doing Business survey to the state DOT context. Our survey is the result of the analysis of data on realized contracts in many states, careful reading of the federal code, calls with procurement officials and contractors, and discussions with legal authorities on transportation procurement.

What follows is the draft survey for distribution to state transportation procurement officials. Though we include in the draft survey the hypotheses that we are testing, we will not include those hypotheses in the distributed survey.

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# Draft Survey

## 1. Case Study Assumptions

To ensure comparability across states, we developed a case study that describes the procurement process for resurfacing a highway. In answering the questionnaire, please take into consideration the following assumptions:

<p><b>Contractor</b> (Company name: BidCo)</p>	<ul style="list-style-type: none"> <li>- Is one of the companies participating in the call for tender and meets all solvency, technical and administrative requirements to compete;</li> <li>- Is a privately and domestically-owned medium-sized Limited Liability Company (or its most common legal equivalent);</li> <li>- Is up to date with all regulations and is in good standing with all relevant authorities, including those related to taxes;</li> <li>- Has all licenses and permits needed to operate in this technical area;</li> <li>- Has <u>already</u> responded to a public call for tender and is already registered with the procuring entity defined below.</li> </ul>
<p><b>Contract</b></p>	<ul style="list-style-type: none"> <li>- Entails resurfacing 5 mi of a flat two-lane <b>road</b> that is part of the National Highway System (but is not an Interstate), extending from the outskirts of a medium-sized city into the surrounding rural area, with an asphalt overlay of 1 in;</li> <li>- Estimated value of contract: \$1.5 million;</li> <li>- Includes all ADA-mandated compliance work, but no additional work</li> </ul>
<p><b>Procuring Agency</b></p>	<ul style="list-style-type: none"> <li>- Is the state department of transportation (DOT), the body responsible for funding all construction projects like the contract above;</li> <li>- Will be referred to from here on as “the agency”</li> </ul>
<p><b>Procurement Process</b></p>	<ul style="list-style-type: none"> <li>- Is an <b>open, unrestricted, and competitive</b> public bid for resurfacing a road like the one described above;</li> <li>- Is completed without protests from interested parties;</li> <li>- Ends with the awarding of the contract to BidCo, whose bid satisfied all technical and administrative criteria and offered the best value for money.</li> </ul>

Please provide your responses to the following sections taking into account the case study assumptions provided above.

**Hypothesis 1a:** Providing more information to bidders on the specifics of the project and engineer’s estimate can reduce costs.

<p>1. When the agency prepares to advertise a new procurement opportunity for a contract like the one described in Section 1, which of the following are used to estimate the contract value and projected length of works? <i>Select all that apply.</i></p>	<input type="checkbox"/> Market analysis <input type="checkbox"/> Standardized unit cost <input type="checkbox"/> Project-specific technical drawings <input type="checkbox"/> Feasibility study <input type="checkbox"/> Similar projects from previous years <input type="checkbox"/> Other, please explain:
<p>2. In practice, is the estimated contract value / budget published in the bid invitation/bid documents?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>a. What additional information is published in the bid invitation/documents?</p>	

**Hypothesis 1b:** Providing more information to bidders on the identity of other potential bidders can increase costs by facilitating collusion.

<p>3. Does the Procuring Entity publish information on the number or identity of [potential] bidders before bids are due?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
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**Hypothesis 2:** The practices and decisions around scheduling and timing of highway procurement opportunities can also drive costs, due to capacity constraints or experience of the contractors.

<p>4. (Only for PE): Are there limits on how many projects the agency can let in a given time period?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>5. (Only for Contractor): How often do you bid on a new project when you have ongoing projects with the DOT?</p>	<input type="checkbox"/> Very rarely (< 10% of cases) <input type="checkbox"/> Rarely (between 10-25%) <input type="checkbox"/> Occasionally (between 25-50%) <input type="checkbox"/> Often (between 50-90%) <input type="checkbox"/> Very often (> 90%)
<p>a. When you bid on a new project and you have ongoing projects with the DOT, does your bidding strategy change?</p>	<input type="checkbox"/> Yes, due to higher costs because I already have committed some of my labor and machinery to the first project. <input type="checkbox"/> Yes, because I have more experience working with the DOT. <input type="checkbox"/> No

**Hypothesis 3:** Advertising the project and doing outreach to potential bidders can have substantial effects on the level of entry. More entry will lead to lower costs.

<p>6. According to the legal framework, is there a minimum time limit between the advertisement of the tender notice and the submission deadline for a bid procedure like the one described in Section 1?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
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a. In practice, how many days would pass between the bid advertisement and the submission deadline for a contract like the one described in Section 1?	
7. Where does the agency advertise the project? <i>Select all that apply.</i>	<input type="checkbox"/> BidX.com <input type="checkbox"/> State DOT Website <input type="checkbox"/> Other, please explain:
8. Does the agency ever do outreach to increase the bidder pool?	<input type="checkbox"/> Yes <input type="checkbox"/> No
a. If "Yes", please describe the type and frequency of the outreach.	

**Hypothesis 4:** Evaluating bids on quality, not only price, can reduce costs by provide incentives for faster delivery.

9. In practice, how often is the award decision based solely on price and not on best value for money?	<input type="checkbox"/> Very rarely (< 10% of cases) <input type="checkbox"/> Rarely (between 10-25%) <input type="checkbox"/> Occasionally (between 25-50%) <input type="checkbox"/> Often (between 50-90%) <input type="checkbox"/> Very often (> 90%)
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**Hypothesis 5:** If the bidding process is too complicated it creates the possibility for bidders to make small technical mistakes that disqualify otherwise qualified bids, artificially reducing competition.

10. According to the legal framework, <b>after the bid advertisement</b> can the agency require bidders to participate in a prequalification process specific to that contract before being able to submit their economic offer?	<input type="checkbox"/> Yes <input type="checkbox"/> No
a. If "Yes", how often would this happen for a contract like the one described in Section 1?	<input type="checkbox"/> Very rarely (< 10% of cases) <input type="checkbox"/> Rarely (between 10-25%) <input type="checkbox"/> Occasionally (between 25-50%) <input type="checkbox"/> Often (between 50-90%) <input type="checkbox"/> Very often (> 90%)
b. In practice, how many days would be necessary for BidCo to receive a decision on its prequalification from the moment it submitted all the necessary documents?	
c. (Lawyers only) Does your state use the ABA standard regulation for procurement as follows?  "Prospective contractors may be prequalified for bidder lists, but distribution of the solicitation shall not be limited to prequalified contractors nor may a prospective contractor be denied award of a contract simply because such contractor was not prequalified. The fact that a prospective contractor has been prequalified does not necessarily represent a finding of responsibility"	<input type="checkbox"/> Yes <input type="checkbox"/> No
11. How often are bidders disqualified at the prequalification stage?	<input type="checkbox"/> Very rarely (< 10% of cases) <input type="checkbox"/> Rarely (between 10-25%) <input type="checkbox"/> Occasionally (between 25-50%) <input type="checkbox"/> Often (between 50-90%) <input type="checkbox"/> Very often (> 90%)

12. What are some common reasons for disqualification in the prequalification stage?	<input type="checkbox"/> Insufficient Bid Guarantee <input type="checkbox"/> Technical error <input type="checkbox"/> Past performance <input type="checkbox"/> Other, please explain:
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**Hypothesis 6a:** Unrealistically low bids are a signal of a bidder’s lack of competence or strategic bidding, both of which lead to increased costs. Therefore, the procurement office needs to be able to identify abnormally low bids (but also, not use it as an excuse to throw out legitimate bids).

13. Does the legal framework establish criteria to identify unrealistically low (or mathematically unbalanced) bids?	<input type="checkbox"/> Yes <input type="checkbox"/> No Legal Basis:
a. In practice, how often are bids declared mathematically unbalanced?	<input type="checkbox"/> Very rarely (< 10% of cases) <input type="checkbox"/> Rarely (between 10-25%) <input type="checkbox"/> Occasionally (between 25-50%) <input type="checkbox"/> Often (between 50-90%) <input type="checkbox"/> Very often (> 90%)
b. If a bid is mathematically unbalanced, how often is it rejected?	<input type="checkbox"/> Very rarely (< 10% of cases) <input type="checkbox"/> Rarely (between 10-25%) <input type="checkbox"/> Occasionally (between 25-50%) <input type="checkbox"/> Often (between 50-90%) <input type="checkbox"/> Very often (> 90%)
c. If a bid is declared materially unbalanced, how often is it rejected?	<input type="checkbox"/> Very rarely (< 10% of cases) <input type="checkbox"/> Rarely (between 10-25%) <input type="checkbox"/> Occasionally (between 25-50%) <input type="checkbox"/> Often (between 50-90%) <input type="checkbox"/> Very often (> 90%)
14. (Only for Contractors) After looking at the engineer’s estimate (EE) of unit costs, which of the following most accurately describes how you would make your unit bids?	<input type="checkbox"/> All unit bids below EE <input type="checkbox"/> Most below EE, 1 or 2 above EE <input type="checkbox"/> Most or all very close to EE <input type="checkbox"/> Most above EE, 1 or 2 below EE <input type="checkbox"/> All unit bids above EE

**Hypothesis 6b:** Trivial reasons to exclude bids in the bid screening process will artificially reduce competition (this is similar to prequalification hypothesis).

15. Does the legal framework define what constitutes a ministerial error or minor informality?	<input type="checkbox"/> Yes <input type="checkbox"/> No
a. In practice, how often does the agency require bidders to amend their offers (because of mistakes, arithmetic errors, etc.)?	<input type="checkbox"/> Very rarely (< 10% of cases) <input type="checkbox"/> Rarely (between 10-25%) <input type="checkbox"/> Occasionally (between 25-50%) <input type="checkbox"/> Often (between 50-90%) <input type="checkbox"/> Very often (> 90%)

<p>b. In practice, how often is a bid disqualified solely because of a ministerial error/minor informality (for example, a missing document, formatting of the bidding documents, etc.)?</p>	<input type="checkbox"/> Very rarely (< 10% of cases) <input type="checkbox"/> Rarely (between 10-25%) <input type="checkbox"/> Occasionally (between 25-50%) <input type="checkbox"/> Often (between 50-90%) <input type="checkbox"/> Very often (> 90%)
<p>c. In practice, in these cases would the bidder be given the opportunity to rectify such error before disqualification?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No Comment:
<p>d. Does your state use the ABA standard regulation for defining minor informalities as follows?</p> <p>“Minor informalities are matters of form rather than substance evident from the bid document, or insignificant mistakes that can be waived or corrected without prejudice to other bidders; that is, the effect on price, quantity, quality, delivery, or contractual conditions is negligible. The Procurement Officer shall waive such informalities or allow the bidder to correct them depending on which is in the best interest of the [State].</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>16. When a bidder is <b>excluded</b> before the contract is awarded, is it provided with an explanation of the reasons for the exclusion in writing?</p> <input type="checkbox"/> Yes, the bidder must always be provided with an explanation in writing <input type="checkbox"/> Yes, but only upon request of the bidder <input type="checkbox"/> No, the excluded bidder will be notified directly in the contract award	
<p>Does your state use the ABA standard regulation for informing bidders of errors as follows?</p> <p>“When a bid is corrected or withdrawn, or correction or withdrawal is denied, ... the Chief Procurement Officer or the head of a Purchasing agency shall prepare a written determination showing that the relief was granted or denied in accordance with these regulations, except that the Procurement Officer shall prepare the determination required under ... this Section.”</p>	<input type="checkbox"/> <input type="checkbox"/>

**Hypothesis 7:** Incomplete contracts can create a costly change process, which bidders might take advantage of when submitting bids in the bidding stage.

<p>17. How often would a contract like the one described in Section 1 have a change order?</p>	<input type="checkbox"/> Very rarely (< 10% of cases) <input type="checkbox"/> Rarely (between 10-25%) <input type="checkbox"/> Occasionally (between 25-50%) <input type="checkbox"/> Often (between 50-90%) <input type="checkbox"/> Very often (> 90%)
<p>18. If the contract described in Section 1 were more complex (<i>i.e., lengthier and/or more costly execution, more complex scope or object, etc.</i>), how often would it have a change order?</p>	<input type="checkbox"/> Very rarely (< 10% of cases) <input type="checkbox"/> Rarely (between 10-25%) <input type="checkbox"/> Occasionally (between 25-50%) <input type="checkbox"/> Often (between 50-90%) <input type="checkbox"/> Very often (> 90%)
<p>19. According to the legal framework, is there a percentage of price increase below which the procuring entity <b>is not required to provide a reason for a change</b>? If "Yes", please provide the percentage and the relevant legal basis.</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No Percentage:

<p>a. Does your state use the ABA standard contract language (printed below) regarding variation in estimated quantities?</p> <p>“Where the quantity of a pay item in this contract is an estimated quantity and where the actual quantity of such pay item varies more than 15% above or below the estimated quantity stated in this contract, an adjustment in the contract price shall be made upon demand of either party. The adjustment shall be based upon any increase or decrease in costs due solely to the variation above 115% or below 85% of the estimated quantity. If the quantity variation is such as to cause an increase in the time necessary for completion, the Procurement Officer shall, upon receipt of a timely written request for an extension of time, prior to the date of final settlement of the contract, ascertain the facts and make such adjustment for extending the completion date as in the judgment of the Procurement Officer the findings justify.”</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>20. In practice, are the results of change orders made publicly available?</p>	<p>Comment:</p>
<p>21. In practice, how many days would pass on average from the moment one of the parties requests/initiates a change order until a new contract amendment is signed?</p>	<p>Time: Comment:</p>
<p>22. How often do bidders submit unrealistically low bids to win the contract, confident of having a possibility to renegotiate at a later stage?</p>	<input type="checkbox"/> Very rarely (< 10% of cases) <input type="checkbox"/> Rarely (between 10-25%) <input type="checkbox"/> Occasionally (between 25-50%) <input type="checkbox"/> Often (between 50-90%) <input type="checkbox"/> Very often (> 90%)

**Hypothesis 8:** Delays increase costs.

<p>23. In practice, how often is the construction project delivered within the original deadline?</p>	<input type="checkbox"/> Very rarely (< 10% of cases) <input type="checkbox"/> Rarely (between 10-25%) <input type="checkbox"/> Occasionally (between 25-50%) <input type="checkbox"/> Often (between 50-90%) <input type="checkbox"/> Very often (> 90%)
<p>24. In practice, if delays are common, what are the main reasons for them? <i>Select all that apply.</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Weather shocks (natural disasters, flooding, etc.)</li> <li><input type="checkbox"/> Burdensome administrative processes within the procuring entity</li> <li><input type="checkbox"/> Capacity of the procuring entity (staff/skills/budgetary constraints)</li> <li><input type="checkbox"/> Capacity of the contractor (technical/financial/managerial/human capital constraints)</li> <li><input type="checkbox"/> Poor planning on the procuring entity's side (poorly designed project specifications, etc.)</li> <li><input type="checkbox"/> Poor planning on the contractor's side</li> <li><input type="checkbox"/> Change of project scope</li> <li><input type="checkbox"/> Legal challenges by citizens' groups</li> <li><input type="checkbox"/> Other, please explain</li> </ul>	
<p>25. In practice, how often are the construction projects delivered within the original budget?</p>	<input type="checkbox"/> Very rarely (< 10% of cases) <input type="checkbox"/> Rarely (between 10-25%) <input type="checkbox"/> Occasionally (between 25-50%) <input type="checkbox"/> Often (between 50-90%) <input type="checkbox"/> Very often (> 90%)

26. In practice, if cost overruns are common, what are the main reasons for them? *Select all that apply.*

- Market conditions (changes in input prices, fluctuations in exchange rate, etc.)
- Weather shocks (natural disasters, flooding, etc.)
- Burdensome administrative processes within the procuring entity
- Capacity of the procuring entity (staff/skills/budgetary constraints)
- Capacity of the contractor (technical/financial/managerial/human capital constraints)
- Poor planning on the procuring entity's side (poorly designed project specifications, etc.)
- Poor planning on the contractor's side
- Change of project scope
- Legal challenges by citizens' groups
- Other, please explain

**Hypothesis 9:** Environmental regulations and permitting increase costs.

27. In practice, in a case comparable to the case study scenario, how many days would pass on average between public notice of award and contract signing? <i>Please include the time for the winner to submit relevant documents and the time to sign the contract.</i>	Time:            days Main reasons for delay:
a. Does BidCo need to obtain work permits or other administrative authorizations <b>between public notice of award and contract signing</b> ? <i>Please include environmental permits, occupancy permits, activity permits, etc. as applicable.</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No Please list them:
b. If "Yes", how many days out of the total time you indicated in Q.31 are devoted to obtaining such permits/authorizations?	
28. In practice, how many days would pass on average between contract signing and receipt of a notice to proceed with construction?	Time: Main reasons for delay:
a. Does BidCo need to obtain work permits or other administrative authorizations <b>between contract signing and receipt of a notice to proceed with construction</b> ? <i>Please include environmental permits, occupancy permits, activity permits, etc. as applicable.</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No Please list them:
b. Are there any labor requirements that increase costs? If so, please list them.	
Other:	
29. Do construction workers need to be unionized?	<input type="checkbox"/> Yes <input type="checkbox"/> No
30. How large of a problem would you rate corruption? Does corruption drive away bidders? Does corruption drive up costs?	<input type="checkbox"/> Very large <input type="checkbox"/> Somewhat large <input type="checkbox"/> Neither large nor small <input type="checkbox"/> Somewhat small <input type="checkbox"/> Very small
31. Does the agency's use of third-party consultants make construction more expensive?	<input type="checkbox"/> Yes <input type="checkbox"/> No



**Survey Feedback:**

32. Is there anything else that you would like to add about contributing factors that increase the cost that the government pays for highway construction projects?	
33. Was anything confusing about the survey? If so, please explain.	

**Thank you very much for completing the questionnaire!**  
We sincerely appreciate your contribution.