Cost-Benefit Analysis of Bid Protests: The Case of Military Acquisition

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Outline

- Background
  - Define Bid Protest & Desired Goals
  - Discuss Costs & Benefits
- Model
  - Introduce static, probabilistic, micro-economic, partial equilibrium, **representative bidder model**
  - Discuss comparative statics results
- Policy Recommendations
  - **Is protest system an example of a well-intentioned government policy with negative unintended consequences?**
  - Explore alternatives to achieve Protest System Goals

Definition

- **What is a Bid Protest?**

   "[A] written <u>objection by an interested party [losing bidder] to</u>:

1. A solicitation...by an [government] agency for...a contract for...property or services,

2. The cancellation of the solicitation...,

3. ***<u>An award or proposed award of the contract</u>,***

4. A termination or cancellation of an award of the contract..."

   – FAR Subpart 33.101 (Also see United States Code, 31 § 3551(1))

Claimed **Benefits** of Protest System expressed in Legal Literature:

1. ## **Bid Protests Deter Fraud & Errors:**
   – "Without the constraints of bid ***protests***, government contracts will be let based on ***favoritism***…and bribery— as they were before the system was initiated."

2. ## **Bid Protests Promote Competition**:
   – "If those affected by the breach of rules cannot ***protest*** in a meaningful way…***competition*** is stifled."

K. Weckstein & M. Love "Bid Protest System Under Review," Legal Times, June 12, 1995 (S29, S30 Special Report)

But Protests are **Costly**
(Hidden Transaction Costs & Performance Penalties for Troops & Taxpayers)

John Young (Former Acting USD AT&L):

- **"[P]rotests are _extremely detrimental to the warfighter & taxpayer_.**
  - **[P]rotest actions consume vast amounts of time of acquisition, legal, and requirements team members;**
  - **[and] delay program initiation, and the delivery of capability…"**

» Quoted in M. Schwartz & K. Manuel, "GAO Bid Protests: Trends, Analysis, and Options," Congressional Research Service, Feb. 2, 2009 p.8

Goal of Study

Examine Costs & Benefits of Bid Protests through Economics Lens:

1. ***Claimed Benefits:***

   ➢ ***Improved procurement process:***

   i. ***Minimizes Favoritism, Fraud & Errors***

   ii. ***Promotes Competition***

2. ***Costs:***

   ➢ ***Higher transaction costs contribute to schedule delays, performance gaps & cost overruns***

Do Protests Minimize Favoritism, Fraud & Errors?

❑ **"Strategic bargaining"**: Evidence suggests companies can use Protests as a negotiating tool, which may inadvertently introduce Favoritism, Fraud & Errors. Examples include:

- **"*Fed Mail*"**: *When Bidders/Vendors* use credible threat of delays from a protest to shape solicitation & influence award.

- **"*Buy Offs*"**: *When Acquisition officials* shape solicitation & influence awards in fear of credible threats of a protest.

  ➢ ***Ex-Ante***: Hidden costs to deter protests

  ➢ ***Ex-Post***: Hidden costs to make them go away

  – Two Examples of Buy Offs:

    » ***Split Buys*** (Coughlan, P. & W. Gates, ***Endogenous Split Buys as a Bid Protest Management Tool***, Acquisition Research Report, Naval Postgraduate School, NPS-CM-12-180, July 18, 2012).

    » ***Quid pro Quo*** "***Lockheed Martin is...offered...block buy for F-35 aircraft, in exchange for not objecting to rival Boeing getting new orders from the Navy for the F/A-18 fighter***..." (Reuters, 2016)

First Policy Recommendation:
Revisit GAO's Protest "Effectiveness Rate" Metric

- GAO's Protest "Effectiveness Rate" Metric:

  - **"[P]ercentage of protesters obtaining relief—either through a protest being sustained, or through _voluntary action_ taken by [an] agency."**

– CRS (2009) claims Effectiveness Rate is:

  - **"[A] good way to measure the number of protests that have _actual or potential merit_."**

- Note: GAO's "**_Effectiveness Rate_**" is **NOT** a good way to measure protests that have **_actual or potential merit_**, if "**_voluntary action_**" taken by an agency consists of "**_Fed-Mail_**" or "**_Buy-Off_**" settlements.

Do Protests Minimize Fraud & Errors?

➢ **Not necessarily if there is:**

1) **"Strategic bargaining"** (Fed Mail & Buy Offs)

2) **"Fishing expeditions" (*Asymmetric info.*)**

   • Bidders use protests to obtain data on competitors, to gain advantages in current and future competitions.

3) **"Side agreements" (*Collusion*)**

   • Bidders make side deals with each other not to protest in exchange for ?

Do Protests Promote Competition?

- *Legal literature focuses on "losing bidders"*
  - Losing bidder types offered a chance to protest may be *more likely to compete* (i.e. possible "second bite at the apple" increases expected value/return from competing)

- *Legal literature ignores "winning bidders"!*
  - Winning bidder types that face extra costs of defending award are *less likely to compete* (i.e. extra transaction costs to defend winning bid lowers expected returns).

- *Result: Net effect on competition is an empirical question!* *(limiting protest could increase competition!)*

- *Legal literature also ignores Transaction Cost Economics:*
  - *i.e. Ex-ante Competition can lead to Ex-post Monopoly*

Second Policy Recommendation

- **To promote competition**, "contestable markets" literature suggests **_lowering entry barriers_** is more cost-effective.

  (Baumol, Panzar, & Willig, 1982, etc.)

- For example, reducing:

  – Bidding costs/barriers

    - Military specs & product complexity

    - Government-specific accounting/reporting
         & other requirements (*regulatory complexity*) ;

    - The degree of asset specificity; and

  – Incumbents' ability to restrict competition through strategic protests.

Dan Gordon (Former Head of the Office of Federal Procurement Policy) observed:

- "It is…true that *very high-dollar procurements are much more likely to be protested*:

- the higher the dollar value, the greater the likelihood of a protest…

- For a company that loses the competition… with all the bid and proposal costs ["*bidding costs*"]…, additional costs of filing a protest ["*filing fees*"] may seem minimal,

- so that filing a protest can be very tempting."

» Quoted in C. Clark (3/12/2013)

Model Assumptions:

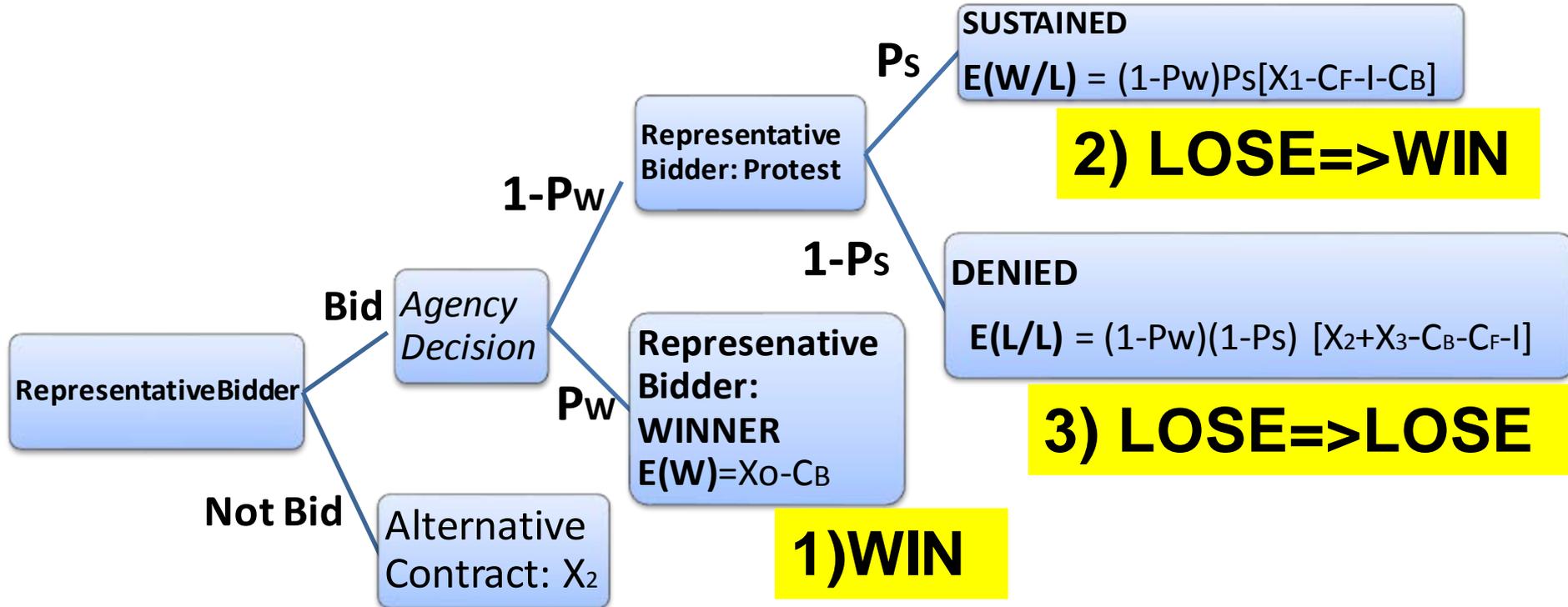*There are no "frivolous" protests, only "strategic" protests.*

➢ **Protests are an integral part of a bidder's profit maximization decision**.

- **Representative Bidder's Objective**:
  - Select a Bid Price (**P**), and Protest Investment (**I**), to Maximize Expected Profits.
  - Three possible profit streams...

Representative Bidder
Three Expected Profit Streams

Probability of Winning: $P_W = P_W(P, N, C_B)$

Probability Protest Sustained: $P_S = P_S(P, I, N, T, I_0, R, C_B)$

SUSTAINED

$E(W/L) = (1-P_W)P_S[X_1 - C_F - I - C_B]$

2) LOSE=>WIN

Representative Bidder: Protest

P_S

$1-P_W$

$1-P_S$

DENIED

$E(L/L) = (1-P_W)(1-P_S)[X_2 + X_3 - C_B - C_F - I]$

3) LOSE=>LOSE

Bid

Agency Decision

Representative Bidder: WINNER
$E(W) = X_0 - C_B$

RepresentativeBidder

P_W

Not Bid

Alternative Contract: X_2

1)WIN

X_0=Award=$[P \times Q(I_o) - C(Q(I_o, R))]$; X_1=Protest Prize; X_3="Booby Prize" or Loser Pays
C_B=Bidding Costs (proxy for quality); N=# of Bidders; I_0=Sum Protests by Other Bidders; C_F=Protest Filing Fees; R=Regulatory Complexity; T=Official Training

Comparative Statics Results

Max V(P,I)=E(W)+E(W/L)+E(L/L)

(Note: Prob(Win)+Prob(Win/Lose)+Prob(Lose/Lose) = Pw+(1-Pw)Ps+(1-Pw)(1-Ps) = 1)

- Representative Bidder Controls: **Bid Price (P*) & Protest Investment (I*).**

- Govt Controls: Protest Win Prize (X_1), Protest Lose Prize/Penalty (X_3), C_F, T & R.

	X_1	X_2	$X_3>0$ $(X_3<0)$	N	I_0	C_B	C_F	T (R)
P*	+?	+	+ (-)	-?	-?	+	-	- (+)
I*	+	-	- (+)	-	-	+	0	- (+)
V*	+	+	+ (-)	?	-	?	-	- (?)

N=# of Bidders; I_0=Protest Investments by Other Bidders; C_B=Bidding Costs (proxy for quality); C_F=Filing Fees T=Official Training; R=Regulatory Complexity;

Alternative approaches to accomplish dual goals of a protest system:

- **Reduce unnecessary regulatory burdens (R); "loser pays" ($X3<0$);** narrow standing (eligibility); set stricter time limits for filing (and deciding) protests; encourage ADR.

- **Invest in human capital (T)**:

  i. invest in education, training & experience (NPS/GSBPP/Acquisition Program)

  ii. Reduce procurement complexity and increase transparency of assessment, evaluation & selection process

  iii. link pay & promotion to successful procurement outcomes

- **Reduce protest prize (X_1)**:

  i. Reduce procurement prize **(Xo)** (unbundle contract vertically—stages of production, or horizontally—quantities e.g. share award—split buys); or

  ii. Use protest data/reputation in future competitions (i.e., for contract quantities, etc.)

  - **Raise filing fees (C_F),** & awareness low probability of awards being overturned

  - **Introduce random IG procurement audits; etc.**

Observation:

- **The private sector does not use bid protests to reduce fraud & errors, or encourage competition!**

- Companies use other mechanisms:

  - *Reputation*

  - *Internal & External (shareholder) audits, and*

  - *Align incentives of procurement personnel with those of the company through:*

    » *Professional training,*

    » *Performance-based bonuses,*

    » *Promotion decisions, etc.*

Final Observations

- Major concern of legal & regulatory literature is limiting protests will inhibit competition, and result in higher costs.   (See Kepplinger, 2009, p. 12)

- However, literature is often silent about **strategic behavior** of bidders & procurement officials.

- Also ignores "winning bidder types" deterred because of higher transaction costs.

- Largely silent about benefits of more timely delivery of projects, products & services, lower transaction costs, and potentially lower prices, from fewer protests.

Policy Recommendations

1) **Revisit GAO's Protest "Effectiveness Rate" Metric**

2) **Promote Competition by *Lowering Entry Barriers***

   – Reduce bidding costs & other barriers to entry:

     – Military specs & product complexity

     – Government-specific accounting/reporting & other requirements (*regulatory complexity*) ;

     – The degree of asset specificity;

   and:

   • **Reduce ability to limit competition through strategic bid protests**.

CONCLUSION

- *Challenge is to apply economic lens of cost-benefit analysis to help select optimum mix (or portfolio) of governance mechanisms that minimize costs of aligning incentives to:*
  - *Reduce the risk of favoritism, fraud and errors,*
  - *Encourage competition, and*
  - *Guarantee the best possible procurement outcomes for Troops and Taxpayers.*

- *This study is intended as a first step.*