The GAO's Bid-Protest Mechanism: Effectiveness and Fairness in Defense Acquisition?

Abstract

What are bid-protests? What functions do they perform? This article proposes that government contracting, especially the source-selection process, gives rise to a particularly intractable set of transactional hazards: *governmental opportunism*, involving elected officials and public employees, and *third-party opportunism*, involving businesses engaged in protesting decisions made by public employees. It shows how the first of these hazards can be addressed by *third-party intervention* and how third-party intervention leads to third-party opportunism. It argues that existing arrangements governing the source-selection process, primarily the GAO's bid-protest mechanism, effectively mitigate the consequences of governmental opportunism and, owing to this mechanism's design, reduce the direct harm resulting from third-party opportunism as well. More formally put, it concludes that this mechanism works to minimize the sum of the costs of opportunistic behavior in the source selection process and of the costs of protecting against it and, therefore, that these governance arrangements are effective solutions to the idiosyncratic transactional hazards associated with government contracting.

Keywords: Governance, Bid protests, GAO, Defense acquisition, Procurement, Fairness, Opportunism, Transaction costs

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Contracting can be broadly characterized as sequence of activities: procurement planning, solicitation planning, solicitation, source selection, contract administration, and contract closeout (Rendon 2008). In government contracting, each of these steps raises distinctive issues of fairness, efficiency, transparency, and accountability. Under the arrangements governing defense contracting in the United States, any person with a direct pecuniary interest in a source-selection decision may contest its outcome. When third parties, such as rejected offerors, exercise this right, we say they are making a 'bid protest.' For the past twenty-five years, the primary venue for protesting source-selection decisions has been the Government Accountability Office (GAO), the audit, evaluation, and investigative arm of Congress. Alternatively, interested third parties may petition the federal district courts or the Court of Federal Claims (COFC) for redress of their grievances. We refer to a set of rules for contesting and deciding bid protests as a 'bid-protest mechanism.'

In this article we generalize analytically about bid-protest mechanisms and test the implications of these generalizations statistically to answer the following question: what does this mechanism do and why? We base our analytical generalizations on Nobel Laureate Oliver E. Williamson's ideas about the economics of governance (1967, 1985), which holds that various kinds of transactions are associated with differential hazards. These hazards are a consequence of the human propensity to exploit opportunities when they arise.[1] They show up in fraud, abuse, and waste and necessitate the elaboration of transactional mechanisms designed to limit or avoid their adverse consequences. Under this formulation, the comparative advantage of alternative governance arrangements boils down to a simple matter of cost minimization: the opportunistic behaviors an arrangement allows plus its running cost. For example, carrying out transactions through organizations rather than markets or through government rather than private organizations makes sense where it reduces this sum (Melese, Franck, Angelis, & Dillard 2007). Reduction does not imply elimination, however. This fact implies a very important corollary to the basic governance insight: there are very few if any perfect governance mechanisms; the conditions that adversely affect markets, for example, also impair organizations and governments (Gibbons 2003). Even so, there is a second corollary: governance mechanisms tend to evolve over time to check the adverse consequences of opportunistic behavior and/or to reduce monitoring and enforcement costs (Brown & Potoski 2003).

We propose that government contracting, especially the source-selection process, gives rise to a particularly intractable set of transactional hazards: *governmental opportunism* and *third-party opportunism*. We show how government opportunism arises, how it can be addressed by *third-party intervention*, and how third-party intervention leads to third-party opportunism. We further argue that existing arrangements governing the source-

[1] "The main risk facing the parties in complex transactions is opportunistic behavior by the trading party" (Spiller 2009: 49).

selection process, primarily the GAO's bid-protest mechanism, mitigate the consequences of governmental opportunism and, owing to this mechanism's design, also substantially reduce the direct harm resulting from third-party opportunism. Consequently we infer that the bid protest mechanism is a reasonably effective solution to the idiosyncratic transactional hazards associated with government contracting.

Bid-Protest Mechanisms are really extraordinary Transactional Arrangements

What is most remarkable about bid-protest mechanisms is that they give third parties *standing to protest* government's choice of a partner and, thereby, often the ability to overturn relationships.[2] While these mechanisms are a feature of public-private partnerships, not only in the U.S. but elsewhere, they are idiosyncratic to government. They have few if any apparent counterparts in the governance of non-governmental contractual relationships.

The following analogy might help explain, in part, why we say that these mechanisms are extraordinary. It may also help to make sense of them where a government agency is one of the parties to a relationship. Imagine that a young lady, Juliet say, issues a request for proposals. Several suitors respond. She selects one, Romeo. Under this mechanism, a rejected suitor, Paris for instance, could protest her decision, based on Juliet's decision-making process, *ex parte* deliberations from her balcony, for instance, or its outcome.

Of course, our initial reaction is that Juliet's preference for Romeo is none of Paris's business. And, we would be callous, indeed, not to sympathize with the star-crossed lovers. But, this reaction reflects an implicit assumption that this is a transaction involving two principals, Romeo and Juliet. It is not. The tragedy arises because Juliet is not a principal in Shakespeare's story; she is an agent. The paterfamilias Capulet is the principal and he counts on Juliet to accept Paris, his friend, as her partner. Unfortunately, Juliet's preferences aren't the same as her father's. Moreover, because Capulet is unaware of Romeo's seductions, she is given the opportunity to pursue her infatuation and disloyally does so. In the end, "all are punished:" Juliet dies, Romeo dies, and so does poor, blameless Paris. (A transaction-cost analysis might attribute this unhappy outcome to monitoring and enforcement failures on the part of Capulet.)

A similar transactional relationship is central to the logic of bid protests. In this story, the role of Juliet (agent) is played by the contracting agency; the role of Capulet by Congress (principal). This relationship is fraught only where their preferences differ. Were their aims congruent, acquisition officials would be perfectly responsive to the wills of their principals in Congress, whose agents they are. In turn, imperfectly aligned preferences point directly to the crux of this transactional relationship: information asymmetry. Acquisition officials possess information that their principals lack. This reflects the fact that they have an information-intensive function to discharge. But left to their own devices, it also means that acquisition officials can exploit this asymmetry to pursue their

[2] Of course, only the government, not an unsuccessful offeror, has the authority to overturn contractual relationships.

own aims at public expense or, using the language of transactions-cost economics, to behave opportunistically.

To counter opportunistic behavior on the part of acquisition officials, Congress has enacted the Federal Acquisition Regulations (FAR) and the Defense Federal Acquisition Regulation Supplement (DFARS), which prescribe the steps that they must follow in making a source-selection decision. It is not sufficient, however, for Congress to establish these rules to ensure that they will be applied impartially and in a manner consistent with their meaning. Congress must also effectively monitor the behavior of acquisition officials to detect any deviations from the desired state of affairs and provide sanctions that are activated when deviations are detected.

Governmental Opportunism

This is, of course, the case in any principal-agent relationship. But where relationships between elected representatives and the bureaucracy are concerned, the scope and complexity of the functions discharged by the agents and the relative (rational) ignorance and indistinct voice of the principals can give rise to exceptionally severe information asymmetries, especially where mammoth enterprises are concerned and *a fortiori* under the separation of powers that obtains in America. The size and extent of these asymmetries are so vast as to constitute a difference in kind from those found in most enterprises, and not merely one of degree. Certainly, they are often great enough to render direct monitoring unworkable. Consequently, relationships between elected representatives and the bureaucracy can be said to give rise to an idiosyncratic transactional hazard: *governmental opportunism*.

Unusual transactional hazards call for unusual alterations in institutional arrangements. As C.J. Friedrich observed, "no mere reliance on some traditional device can be counted upon to render the vast public services of a modern government responsible." Indeed, Friedrich was skeptical that this hazard could be remedied: "responsibility must remain fragmentary because of the indistinct voice of the principal whose agents the officials are supposed to be" (Friedrich, 1940, p. 20). In contrast, Matt McCubbins, Roger Noll, and Barry Weingast (McCubbins & Schwartz 1984; McCubbins, Noll & Weingast 1987; 1989) are more hopeful. They argue that, where acute information asymmetries render direct monitoring of agency performance problematic or ineffective, "elected officials can gain leverage over bureaucrats through informal oversight mechanisms and carefully structured administrative procedures to guarantee that the relevant legislative constituents are well served."

Frequently, the fix takes the form of what McCubbins, Noll, and Weingast call "fire-alarm" mechanisms. Under these mechanisms, responsibility for alerting politicians to agency decisions that stray from *preferred policy paths* is assigned to the parties who bear the consequences of the agency's failures, that is, interested *third-parties.* Their point is that elected officials rely heavily on third parties to monitor public employees' compliance with policy priorities in a large number of fields.

Bid protests are a member of the general class of "fire alarm" mechanisms. Indeed, that policy control is the reason third parties are given standing to protest source-selection decisions almost passes for a commonplace, as does the claim that third-party protests hold contracting officials accountable for their source-selection decisions. Franck, Lewis, and Udis (2008) observe, for example, that Congress gave the GAO responsibility for hearing and adjudicating bid-protests because it does not trust executive-branch agencies to make 'sensible' source-selection decisions.

Presumably, this mechanism works as follows: protests are costly to agencies and to contract winners (Kelman 1990; Greenstein 1993). When a protest is filed, progress on the project in question is arrested until GAO issues a decision, which ties up resources that could have been allocated to other high-value projects (waivers to continue work are rarely requested or granted). If the protester prevails, these costs may increase. Agencies must also expend resources directly responding to protests. Consequently the threat of protest provides incentives for agencies to design and operate source-selection processes that are transparent in terms of promoting compliance with the law; fair in terms of access to contracting opportunities; and effective in terms of responsiveness to Congressional preferences.[3]

Nevertheless, the design features of the GAO bid-protest mechanism render it an extraordinary member of the "fire alarm" genre. For example, Congress does not entertain third-party protests directly; it delegates their reception (detecting deviations from a desired state of affairs) and disposition (provide sanctions that are activated when deviations are detected) to an agent, the GAO. Moreover, not all third parties may protest source-selection decisions; standing to protest is restricted to eligible bidders. The specialized expertise of the GAO and its streamlined decision-making processes are also noteworthy. To wit:

- GAO attorneys summarily dismiss claims that fail to identify an error in a contracting agency's processes or where the outcome of the source selection would have been the same even if the agency had not erred.
- The GAO must hear the protest and announce its findings within 100 days of filing and its rules and procedures are relatively informal.
- GAO applies a standard of reasonableness in its bid protest decisions and works hard to maintain that standard.
- Contract winners are permitted to join in the process on the side of the agency.

[3] Indeed, there is evidence that the bid-protest mechanism works to reduce inefficient government opportunism (Marshall, Meurer & Richard 1991, 1994). Marshall, Meurer and Richard (1991) also implicitly acknowledge the possibility of third-party opportunism, which in their analysis takes the form of over deterrence of agency officials and 'buyoff settlements,' both of which lead to inappropriate sole-source contracts, but they note that 'buyoff,' which they claim is bad, is hard to distinguish from 'fedmail,' which they claim is not.

The upshot is that very few source-selection decisions are protested, most protests are summarily dismissed, and, of those that go to hearing, only a few succeed. These design features didn't just spring full-blown from the mind of Congress, they evolved via trial and error over an extended period.

To the extent that GAO is responsive to Congressional policy priorities, it is reasonable, therefore, to say that the GAO bid-protest mechanism repairs the adverse effects of governmental opportunism where it is combined with acute information asymmetry and to infer that it was not only designed to perform this function but also that it persists because GAO's principals in Congress attach importance to its performance.[4] However, even if true, these particulars would not constitute the whole story. Governmental opportunism combined with acute information asymmetry does not account for the mechanism's unique design features.

Third-Party Opportunism

According to Pablo Spiller (2009: 56-7),

> A fundamental feature of interest groups as [third-party] monitors, though, is that they are interested. In other words, they are biased. They provide information only when it is to their advantage. That is, the third party (or parties) may behave opportunistically. As it relates to public contracts, interested third parties may have incentives to challenge the 'probity' of a particular public agent when by such action they may benefit…. [T]he challenge may be exercised even if the [agent's] action is ethical and/or legal.

Hence, he concludes that public contracts are characterized by a second hazard: *third-party opportunism*.

The evidence corroborates the existence of third-party opportunism and that this hazard may be widespread. Contractor executives and bid protest attorneys report (Roemerman 1998) that they protest to:

- Win and thereby be competitive in a successive solicitation or to recover costs
- Send the agency a message, be heard, seek justice, when they believe they have been wronged because government erred, even against advice of counsel that their protest is unlikely to be sustained given past precedents or that, if their protest is sustained, they are unlikely to become the eventual winner
- Obtain information to help them improve their future bids

[4] In contrast, the traditional explanation for bid protests goes to the law-governed nature of governmental enterprises. Just as the bid-protest mechanism is unique to government, so too is the logic of this formulation, which holds that fairness to *all* potential suppliers matters, not only to winners, but to losers as well. According to rule-of-law doctrine, official duties are supposed to be defined primarily by neither instrumental aims nor political pressure, but by law (Fesler & Kettl 2005: 10).

- Obtain competitive intelligence
- Hurt the winner by delaying the award
- Retain a revenue stream for the duration of the protest at GAO (in the case of an incumbent who loses)
- Demonstrate resolve to board members or senior executives that everything that can be done to pursue a contract is being done
- Be granted work under the contract, either by the agency or by the winner (buyoff or fedmail)
- Improve the their chances of getting future contracts

Consequently, we accept Spiller claim that, once one embraces third-party intervention, the threat of third-party opportunism is inevitable. But he goes further, implying that its hazards cannot be mitigated. Moreover, he hypothesizes that "the more complex the public/private transaction, the higher the inherent informational asymmetries…, the higher the probability of third party opportunism" (Spiller 2009: 57), which he speculates leads to a vicious cycle in which government increases the complexity, rigidity and specificity of its search, negotiation, and monitoring and enforcement procedures, leading to increased informational asymmetries and, eventually, to even greater exposure to the risks of third-part opportunism (58; see also Bajari & Tadelis 2001). He concludes that, as a result, government contractual processes are necessarily more rigid than the procedures governing equivalent relationships between private parties. He asserts that this conclusion implies, for example, "that 'relational' contracting is less likely to evolve in the public sphere" (Spiller 2009: 58).[5]

We take issue with Spiller's pessimism. While we do not doubt that the threat of third-party opportunism is omnipresent under existing institutional arrangements or that opportunism can increase with institutional complexity, we believe its adverse consequences can be minimized. Indeed, many of the unusual design features of the GAO bid-protest mechanism have evolved to remedy the hazards associated with third party opportunism. These carefully structured administrative procedures ensure that protests will be promptly dealt with, that spurious and immaterial protests will be rejected, and that valid, material protests will be upheld. As a consequence, bid protests are rare and the direct costs they impose on government and winners tend to be low (Gansler & Lucyshyn 2009).[6]

[5] Of course, we know that some public-private partnerships are governed by relational contracts (Ysa 2007) and that this is the case even where bid-protest mechanisms exist (Kapstein & Oudot 2009). However, we acknowledge that this governance mechanism appears to be relatively unusual where government contracting is concerned.

[6] To put Gansler and Lucyshyn's findings in perspective, about 2 percent of all protestable source-selection decisions are protested and about 7.5 percent of all protests are upheld, this implies and error rate of .0015, only .0005 above the six-sigma level.

Hypothesis Testing

Are these analytical generalizations consistent with the evidence? That the GAO bid-protest mechanism works to mitigate the hazards of governmental and third-party opportunism implies two kinds of hypotheses: those which have to do with GAO's disposition of protests and those which have to do with the decision to protest.

If the GAO bid-protest mechanism were, in some sense, designed to repair the adverse effects of governmental opportunism and acute information asymmetry, it follows that GAO must be responsive to Congressional policy priorities. The problem with this claim is that it is hard to say what Congress wants[7] or to specify an appropriate counterfactual that would allow us to test this claim.

Nevertheless, while the members of Congress have a variety of policy priorities, there is one dimension upon which they are all presumed to be alike: responsiveness to constituent interests. It is a commonplace that constituency politics are pork-barrel politics. Thomas McNaugher (1989), for example, claims that the pork barrel dominates Congressional acquisition policy concerns, almost to the exclusion of everything else. This is because the local interests best positioned to play the constituency card are large-scale businesses and their employees, who are concerned with sales, profits, and share prices, jobs and wages.

To cite a specific example, Shane Harris (2010) explains the futility of the Air Force's decade-long struggle to replace its 400 aged KC-135 tankers in terms of this dynamic. The companies seeking the contract to provide replacements are Boeing, the Democrats' choice, and the European Aeronautic Defense and Space Company (EADS), the Republican favorite. In both cases, party preferences reflect the location of the jobs the contract would create and the political affiliations of their representatives. Harris argues that the Air Force's failure is ultimately due to bad timing. Every time it reached the culminating step in its protracted source-selection process, the party controlling Congress changed. First they selected Boeing, just before the Republicans took control of Congress; then they selected EADS, shortly after the landslide that returned the Democrats to power.[8] In both cases, third-party protests at GAO halted the process.

To the extent that this commonplace is valid, it is doubly relevant. First, although Congress assigned the GAO primary responsibility for hearing and adjudicating bid-protests, rejected suitors are free to take their protests to the Court of Federal Claims (COFC) or the districts courts. The courts are presumably independent of Congress. Consequently, we can rely on this difference to test the GAO's responsiveness to

[7] If that weren't the case, the information asymmetry problem, of which institutional inconstancy, both in general (Miller 1993; La Porte & Keller 1996) and specifically with respect to public-private partnerships (Teisman & Klijn 2002; Romzek & Johnston 2005) is one aspect, would be much less severe than it appears to be.

[8] If Harris is correct, a divided Congress means that the selection scheduled to be announced in late-December 2010 will probably be sustained.

Congressional leaders: to the extent that the GAO is responsive to their preferences, the outcomes of protests heard by the GAO will be more likely to reflect the constituency interests of Congressional leaders than the outcomes of protests heard by the district courts or the COFC. This logic implies hypothesis 1 (H1).

> H1: Large businesses headquartered in districts represented by powerful congressional leaders are more likely to *prevail* before the GAO than before the COFC.

Second, to say that Congress is especially concerned with constituency interests implies that other public officials are not, which means that at times their policy priorities will diverge. Acquisition officials are probably less likely to be concerned with constituency interests than Congress, perhaps much less likely, and might exploit the information asymmetry that characterizes the acquisition process to pursue other institutional preferences. From a Congressional perspective, pursuit of other aims at the expense of their constituents' welfare might well constitute opportunistic behavior. This implies that, if rejected suitors believe that their interests are better aligned with the preferences of the Congressional leadership than winners' and if they believe the GAO is responsive to the preferences of Congressional leaders in a way agency officials are not, they will be more likely protest than their less well-connected rivals. Hence, the following three hypotheses (H2, H3, and H4):

> H2: Large businesses headquartered in districts represented by powerful congressional leaders are more likely to *protest* source-selection decisions than are large businesses headquartered in districts not represented by congressional leaders.

> H3: Large domestically headquartered businesses are more likely to *protest* when they lose a source-selection competition to a business headquartered abroad than when they lose to a domestic business.

> H4: Businesses headquartered abroad are less likely to *protest* than businesses headquartered in the United States.

These hypotheses go to the logic of third-party protests as a solution to the hazards of governmental opportunism. We are, of course, mindful of their irony, as they rely on Congressional preferences not codified in the FAR/DFARS, preferences that have more to do with who gets public money and where it goes, than with what it buys for the public at large. To the extent that these preferences are reflected in the GAO's handling of bid protests, which GAO insists is not the case, or the outcomes of source selections, they can be welfare reducing and, in that sense, opportunistic.

Our second set of hypotheses goes to the logic of the GAO mechanism as a solution to the hazards of third-party opportunism. Here, we note that despite the low cost and prompt resolution of petitions for redress under the GAO bid-protest mechanism, very few source selections are protested, most protests are summarily dismissed, and of the

remainder, only a minority prevails. The most obvious, although not the only conceivable, explanation for this pattern of behavior and results is that the GAO does a good job of distinguishing opportunistic protests from those with merit. If this explanation is correct, experience with the process should lead to fewer protests (Kahneman, Knetsch and Thaler 1986), especially fewer opportunistic protests. This, in turn, implies that, because small businesses, with fewer defense contracts, tend to be less experienced than large businesses, they ought to protest more often than big businesses and, because, their protests are more often without merit, less like to succeed before the GAO. This implies hypotheses 5 and 6 (H5, H6).

> H5: Small businesses are more likely to *protest* source selections than large businesses.
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> H6: Bid protests from small businesses are less likely to be *sustained* than are protests from large businesses.

A similar logic holds with respect to the number of bidders. There should be no correlation between the likelihood of an agency violation of the FAR/DFARS and the number of bidders participating in the source-selection process. However, the likelihood that a bidder would protest – because of inexperience, opportunism, or an expectation that GAO will be more responsive to their interests than source-selection officials – ought to increase when the number of bidders participating in the source-selection process increases.[9] This implies hypothesis 7 (H7).

> H7: Contracts with more bidders are more likely to be *protested* than contracts with only two bidders.

Further, Spiller argues that increased project and procedural complexity increases both meritorious and opportunistic protests. Aspects of complexity include the inventiveness of the work required, the amount of systems integration called for, the need for investment in project-specific assets, the duration of the project, and the anticipated difficulty of assessing performance at project completion. Complex projects necessitate complicated RFP's and procedures, which increase the likelihood that the agency will err (Snider & Walkner 2001). Complexity also increases uncertainty and informational asymmetries, which invites opportunistic protests. Hence, hypotheses 8 and 9 (H8, H9).

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[9] In an earlier version of this paper, we argued that if only meritorious protests are sustained, the number of bidders should have no effect on sustain rates. This conclusion reflected the belief noted above that an increase in the number of bidders would not significantly increase the likelihood of a material procedural error on the part of agency officials, which implies that there should be no relationship between the number of bidders and the likelihood a protest is sustained, and if this hypotheses were upheld (it wasn't) we could conclude most protests were opportunistic. As a very astute reviewer, reminded us, that would be true only if the interests of rejected suitors were never more closely aligned with the policy paths preferred by politicians in Congress than with those preferred by agency officials.

H8: The more complex the contract the greater the number of bid *protests*.

H9: The more complex the contract, the greater the *sustain* rate.

In the analysis that follows we use a variety of proxies for complexity: contract pricing, contract duration, project stage, and object of contract – service vs. product, weapon vs. other, etc.

Data

Studying the outcomes of bid-protests and the decision to protest proved to be nontrivial exercises. First, bid-protest records generally provide a lot of useful information but they often do not include the single item we need to test several of our hypotheses: the source solicitation number for the contract being protested, which is the key to unlocking other information from public databases; the name of the contracting agency, which might allow us to determine whether some agencies tend to be involved in more protests than others; and, when recommendations for remedial action to be taken by the agency are made, the results of the action. Missing information is a significant problem.[10]

Information on *bid-protest results*, including the identities of contract winners and protesters, was taken from the GAO's website (651 cases) and from the Lexis/Nexis database for cases before the COFC (293 cases). We coded[11] all digested decisions issued in calendar years 2001 through 2009 in terms of whether GAO denied or sustained them or in terms of whether the protester or the government was supported by the COFC.

Information about the characteristics of contract winners and protesters came from FEDMINE.US, an advanced database-driven web application that aggregates data from various authoritative federal-government sources, as did information about the political jurisdictions in which bidders are headquartered. Additional and confirming information about the contract solicitation numbers, values, types and contracting commands came from databases such as FedBizOpps (fbo.gov), the Federal Procurement Data System (fpds.gov), and fedspending.org, a project of the nonprofit OMB Watch. This information was then hand matched to bid-protest results.

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[10] We encourage GAO to include source solicitation numbers on all if its decisions.

[11] Three students at our College of Law coded the decisions. Legal details matter. Different interpretations of the requirements for a debriefing, for example, even though agency officials are reading the same sections of the Federal Acquisition Regulations (FAR) that govern them, lead to different behavior. Government procurement rules and regulations are affirmative law, which means: as opposed to private contracting, the government can impose a requirement if it chooses; the contractor can not be held accountable for failing to satisfy a requirement if the government has not imposed it, and holding a contractor responsible for failing to meet a requirement that has not been imposed can be grounds for a protest. Understanding law and how to spot issues in GAO and COFC opinions requires legal skills.

To make sense of the *decision to protest*, we required information about the universe of protestable contracts in each calendar period, which is not so readily available. We report analyses based on two approaches. First, we obtained information about DOD contracts with source solicitation numbers and listed in FedBizOpps for fiscal year 2004-2009, approximating the universe of protestable contracts, which we hand matched to bid protest decisions issued between October 2003 and September 2009. This provided us with an accurate description of all protestable source selections (about 65,000) and allowed us to accurately distinguish those that were protested from those that were not, but provided us with data on only a portion of the variables with which we were concerned (for example, there were no data on losers, except for protesting bidders).

Second, we used information about the total number of contract actions per fiscal year from FEDMINE, which varies from zero to hundreds per contract, as a proxy. After reviewing samples of all contract actions in selected military services, we estimated an average 2.5 contract actions per contract and applied this ratio to data about the lengths of contracts to estimate the number of protestable contracts in a calendar period. This allowed us to look at all the variables we were interested in, but produced an inferior set of observations (108 months for dependent variable, ~140,000 protestable contracts).

In other words, we analyzed data from two different sources, one, which is known to be representative but comprehends a truncated set of variables, and another, which comprehends many of the variables we are concerned with but features a sample of convenience.

Analysis

Hypothesis 1 – Large businesses headquartered in districts represented by powerful congressional leaders are more likely to *prevail* before the GAO than before the COFC – goes to congressional influence on bid-protest decisions.[12] Figure 1 shows the GAO sustain rate for bid protests by type of protester (large, small) and by the protester representation on House and Senate defense authorizing and appropriations subcommittees. Figure 2 shows the COFC sustain rate by type of protester (large, small) and by the protester representation on House and Senate Defense authorizing and appropriations subcommittees. Both show clearly that bid protests from small businesses are less likely to be *sustained* than are protests from large businesses, as predicted by hypothesis 6 (H6).

[12] For each bid protest, we coded the geographical location of the headquarters of the winning contractor by state and Congressional district for every winner and protester. We then recorded whether the Senator or Congressperson representing each of these locations sat on one of the four Congressional committees or subcommittees with direct oversight responsibility for DOD. The range was 0 to 3, meaning some protesters effectively had no elected representatives on any of these committees; others had representatives on as many as three.

Figure 1

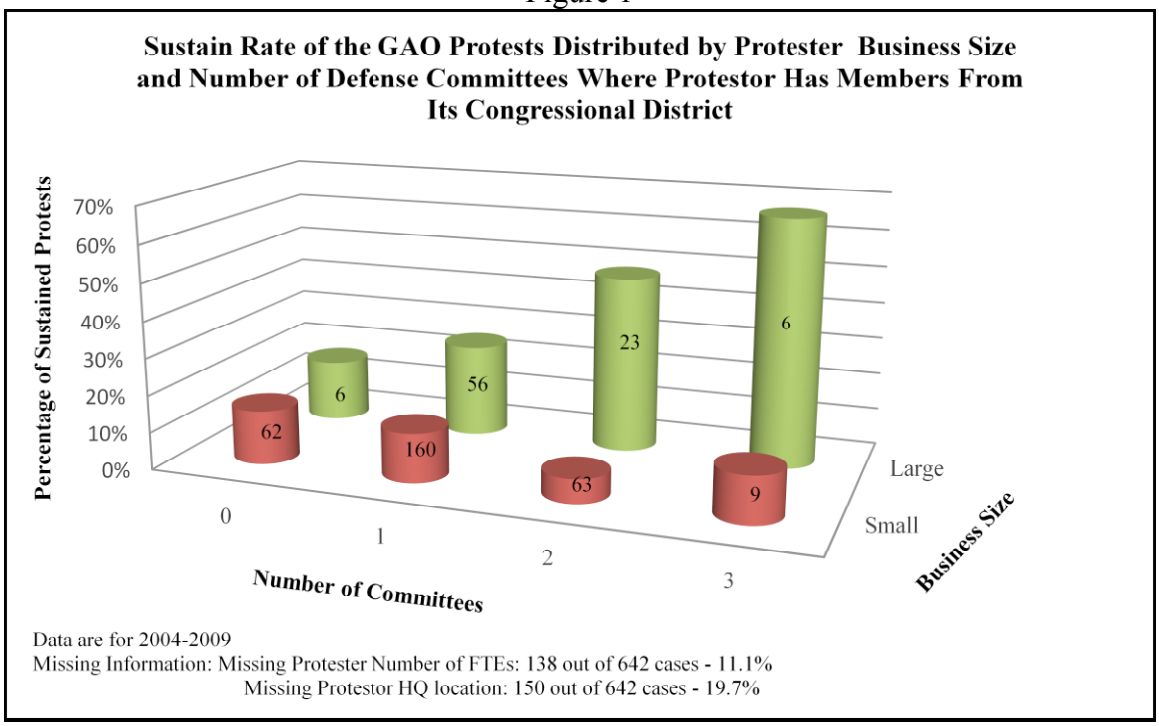
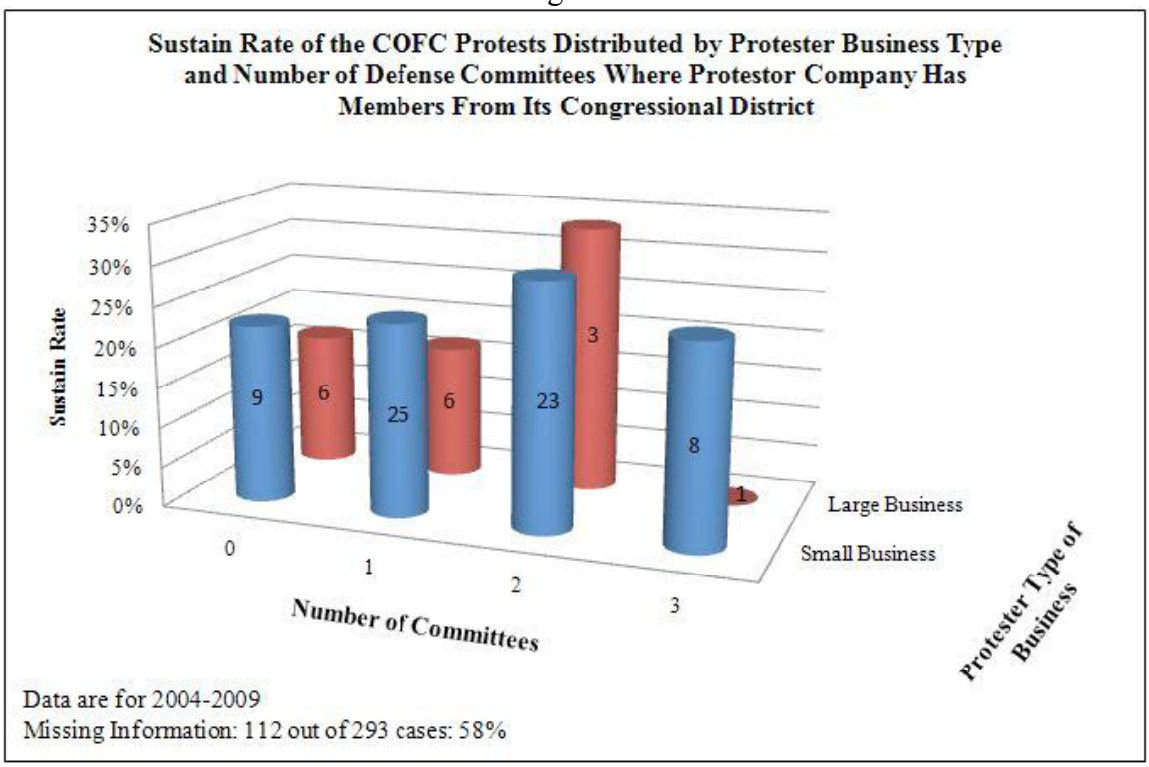


Figure 2



Further, using a X^2 test, we cannot reject the null hypothesis that there is no difference between the sustain rate for small firms in the two venues. That is not the case with respect to large firms. Representation on a greater number of defense-related committees

is associated with a higher sustain rate at the GAO, but not at COFC. The X^2 value is 8.98, which is greater than the critical value of 7.82 (with degrees of freedom equal to 4 and alpha level of significance equal to 99 percent). This was further confirmed by analysis of the standard error of the difference in skewness. Hypothesis 1 (H1) is sustained.

One would expect bid-protest decisions in COFC to be largely immune from political influence because of the relative independence of the judiciary. Figure 2 is consistent with that expectation. It shows no evidence of a relationship between protesting-companies' representation on military-related committees and sustain rates. That, of course, does not mean that COFC has no political biases, merely that there is no evidence that it is responsive to congressional influence. Note also that the overall rate at which protestors prevail at the COFC is more than twice as high as at GAO. Moreover, despite its much more formal procedures, COFC outcomes are much less predictable than GAO's using the variables we have access to.

Least-angle logistic regression analysis, where the dependent variable is 1 if sustained and 0 if denied, confirms that large losers from politically influential districts are more likely to prevail before the GAO than losers from less politically influential districts or foreign firms (see Appendix). Both hypotheses 6 and 9 are upheld: there is a strong and highly significant relationship between the size of the protester and the sustain rate; there is a strong correlation between contract stage and the number of source-selection criteria (proxies for level of complexity of the contract) and the GAO decision. Note, however, there is no difference between the sustain rate of domestic businesses protesting contracts won by foreign businesses and the sustain rate of domestic businesses protesting contracts won by domestic businesses. An interesting fact, which we had not earlier noted, is that foreign-headquartered firms rarely (never?) protest source-selection decisions. None of the protesters in this sample were made by businesses headquartered abroad, which unexpectedly confirmed hypothesis 4 (H4: businesses headquartered abroad are less likely to *protest* than businesses headquartered in the United States).

While four variables: business size, political influence, and the two proxies for project complexity explain 77 percent of the variance in GAO case dispositions, which is a remarkable result, it should be stressed that political influence is not the only thing that matters or even the variable that matters most. On its own, political influence explains less than 25 percent of the variance in GAO outcomes. In other words, this result is consistent with, but does not prove, that delegating reception and disposition of bid protests to its agent, the GAO, lets Congress influence a small number of presumably significant contracts, but gets myriad insignificant ones off its plate. Consequently, we cannot discount the possibility that this mechanism is a means of deflecting/reducing constituent demands aimed at influencing source-selection decisions.[13] With respect to

[13] It isn't obvious how one would go about testing this possibility, but if this were a self-denying ordinance on the part of Congress, we might expect to find differences in the pattern of defense spending across states and congressional districts after 1986 and again after 1994 consistent with reductions in pork-barrel spending.

'bigger fires,' this is consistent with McCubbins, Noll, and Weingast. McNaugher's position, that Congressional priorities are dominated by pork, seems overstated.

What affects the decision to protest? To answer that question, we used information on protestable contracts from FEDMINE's database on 65,000 contracts with solicitation numbers, identified as listed in FedBizOpps, matched to the protested contracts in our database of GAO decisions. That allowed us to conduct a logistic regression where the dependent variable is dichotomous: 1, if protested; 0, otherwise. Unfortunately, the data from FedBizOpps included information *only* on the type of contract, the contracting agency, and the contract winner. This means we can test hypothesis 3 (H3: businesses are more likely to *protest* when they lose a source-selection competition to a business headquartered abroad) and hypothesis 6 (H6: the more complex the contract the greater the number of bid *protests*) and determine whether some defense agencies' source-selection decisions are more or less likely to be protested, but can say nothing about hypotheses 2, 5, and 7 (H2, H5, H7) using this data, since testing those hypotheses requires information on non-protesting contract losers.

The results of this exercise are shown in Table 1, which supports hypotheses 3 (H3) and 6 (H6) awards to foreign businesses are more likely to be protested; more complex products and services generate more protests. Table 1 also suggests that Navy and DLA contracts are less likely to be protested than Army, DOD, or Air Force contracts. We also found that awards to large businesses are more likely to be protested than awards to small businesses. We did not predict that result and have no explanation for it.

Table 1
Protests in FY2004-2009

Logistic Regression Table					
Predictor	**Coef**	**SE Coef**	**Z**	**P**	**Odds Ratio**
Foreign Winner	1.4803	0.2056	0	0.009	0
Size of Contract Winner	0.3472	0.2786	1.25	0.003	1.42
Contract Pricing	1.5052	0.3336	4.51	0.000	4.53
Service vs. Product	0.2825	0.2133	1.32	0.009	1.32
Navy	-0.6747	0.2005	3.37	0.001	1.96
DLA	-1.3110	0.1459	8.98	0.000	3.71

To test hypotheses 5 and 7 (H5: small businesses are more likely to *protest* source selections than large businesses; H7: contracts with more bidders are more likely to be *protested* than contracts with only two bidders), we ran an ordinary least squares regression where the dependent variable was the protest rate in each month during our time period (108 periods). The independent variables were the mean and mode of business size (number of employees and gross revenues); of contract pricing (1, cost plus; 0, fixed price,); total number of bidders; of winner's nationality (1, foreign; 0, otherwise); of stage of project (1, R&D; 0, production); of object of project (1, weapon; 0, non weapon and 1, service; 0, product); of contract duration; of a set of dummy variables for

contracting agencies; and multiplicative interactions terms for all the possible combinations and permutations of independent variables.

We then used data mining software (Clementine and MiniTab, both produced identical results) to construct a series of stepwise models, starting with the strongest explanatory variable and continuing until all significant variables ($p < .05$) had been exhausted. The results are shown in Table 2.

Table 2
The Determinants of Bid Protests FY2004-2009

Step	1	2	3
Constant	0.000357	0.000337	0.000316
Number of bidders	0.005	0.005	0.006
T-Value	-5.67	-13.6	4.74
P-Value	0.005	0.001	0.042
Foreign winner		0.004	0.006
T-Value		4.25	23.82
P-Value		0.024	0.002
Business size			-0.005
T-Value			-17.76
P-Value			0.003
R-Sq	**78.94**	**88.42**	**89.99**

The results shown in Table 2 strongly confirm hypotheses 5 (H5) and 7 (H7). They also reconfirm hypothesis 3 (H3: businesses are more likely to *protest* when they lose a source-selection competition to a business headquartered abroad). We never figured out how to use the data available to test hypothesis 2 (H2: businesses headquartered in districts represented by powerful congressional leaders are more likely to *protest* source-selection decisions than are businesses headquartered in districts not represented by congressional leaders).

Conclusions and Implications

The hazards of governmental opportunism are two sided, where one side is the mirror image of the other: self-seeking behavior on the part of bureaucrats and the pursuit of parochial constituent interests by elected officials. These are real threats. Their potential for harm is present wherever government replaces nongovernmental organizations or

markets. This is the case because, even where government action reduces the conditions that cause markets and nongovernmental organizations to fail, the conditions cannot be eliminated. The information gaps and incentive incompatibilities that wreck markets and undermine nongovernmental organizations also necessarily impair governments.

The issue is what to do about the threat of governmental opportunism, if anything. The traditional prescriptions – run government like a business, quarantine administration from politics, marketization, etc. – seem to us to be not only naïve but often profoundly misconceived. Head-in-the-sand expostulations about citizen self-governance and public service values don't even rise to that level. Governmental opportunism creates real threats and their effects, where those threats are realized, come at the expense of the general public, but they are not the usual ones. Mitigating them requires the elaboration of governance mechanisms that are equally unusual.

> The simple fact is that we have not developed governance mechanisms … to match contemporary government's tactics and responsibilities… [T]his task should be central to our enterprise…. [H]owever, much of our knowledge remains equivocal. (Thompson 1993: 314)

The process of getting the knowledge we need to design more effective mechanisms should start with the governance mechanisms we have (see Marshall, Meurer & Richard 1991), especially those that are idiosyncratic to government. Until we understand how they work, it is unlikely that we will be able to design something better. That is, of course, the main purpose of this article.

Third-party protests appear to mitigate government opportunism on the part of acquisition officials. The GAO bid-protest mechanism also mitigates third-party opportunism, except perhaps for the largest third parties because of their influence on elective officials. Clearly, how the bid-protest mechanism works to mitigate third-party opportunism deserves further attention. There is much more to be said about this mechanism, how it works and how well, and how it might be made to work better. Perhaps, the GAO should engage in thoroughgoing efforts to define quality, configure, and monitor the behavior and performance of the process.

More specifically, DOD and Congress could improve upon the data they are collecting to monitor performance of the acquisition function from specification of need through contract award, taking into account bid protests or COFC lawsuits, as well as the time required for an agency to amend or reissue a request for proposal and complete the selection. The number and dollar volume of protestable contract actions can be tracked, as can corrective actions and protester reasons for withdrawing protests. This expands a recommendation offered by the Congressional Research Service to require GAO to include in its annual report to Congress the most common grounds for sustaining protests (Schwartz and Manuel 2009). Tracking this information will allow decision-makers to understand the dynamics of the system and to try to improve it. It also will induce public-private decision-makers to manage to the measures being monitored.

The question of relational contracts in government also deserves attention. It is possible that mechanisms for governing public-private partnerships have evolved that have many of the features of relational contracts: long-term collaborative arrangements based on informality, shared problem solving, reciprocity and high trust (Maser 1998; Ysa 2007; Franck, Lewis & Udis 2008 Kapstein and Oudot 2009; Jansen, Hocevar, Rendon, and Fann 2009; Elliott & Johnson forthcoming). If we look, we may find them – even in America.

Appendix: Least Angle Regression Analysis of Protest Outcomes

The Appendix describes an analysis of the results of a least angle-logistic regression on 651 GAO protests between 2004 and 2009.

Matrix of Predictors:

- Weapon vs. Non-weapon (1-Weapon, 0-Non-weapon)
- Product vs. Service (1-Service;0-Product)
- Contract Duration (continuous)
- Business Size (continuous)
- Number of Bidders (continuous)
- Stage of Development (0 - low uncertainty; 1 - high uncertainty)
- Number of Source-Selection Criteria (continuous)
- Contract Pricing (0 – fixed price; 1- cost plus)
- Political Interest (Number of Protester's Representatives sitting on Defense Acquisition Subcommittees, continuous: 0-4)
- Foreign Winner (0 – domestic winner; 1 – foreign winner)
- Foreign Loser (0 – domestic protester; 1 – foreign protester

Response Matrix:

- GAO decision (1-Protest was sustained, 0-Denied)

Least angle regression algorithm:

- Start with all coefficients β_j equal to zero.
- Find the predictor x_j most correlated with y
- Increase the coefficient β_j in the direction of the sign of its correlation with y. Take residuals $r = y-y_{est}$ along the way. Stop when some other predictor x_k has as much correlation with r as x_j has.
- Increase (b_j, b_k) in their joint least squares direction, until some other predictor x_m has as much correlation with the residual r.
- Continue until: all predictors are in the model

Least Angle vs. Stepwise Regression

The least angle regression procedure follows the same general scheme that Forward Stepwise method does, but doesn't add a predictor fully into the model. The coefficient of that predictor is increased only until that predictor is no longer the one most correlated with the residual r.

The Optimal Model Sequence:

LARS Step 1 : added Variable 'Business Size'
LARS Step 2 : added Variable 'All Subcommittees'
LARS Step 3 : added Variable 'Stage'
LARS Step 4 : added Variable 'Number of Criteria'
LARS Step 5 : added Variable 'Number of Bidders'

LARS Step 6 : added Variable 'Contract Duration'
LARS Step 7 : added Variable 'Weapon vs Non-Weapon'
LARS Step 8 : added Variable 'Product vs Service'
LARS Step 9 : added Variable 'Contract Pricing'
LARS Step 10: added Variable 'Foreign Winner'
LARS Step 11: added Variable 'Foreign Loser'

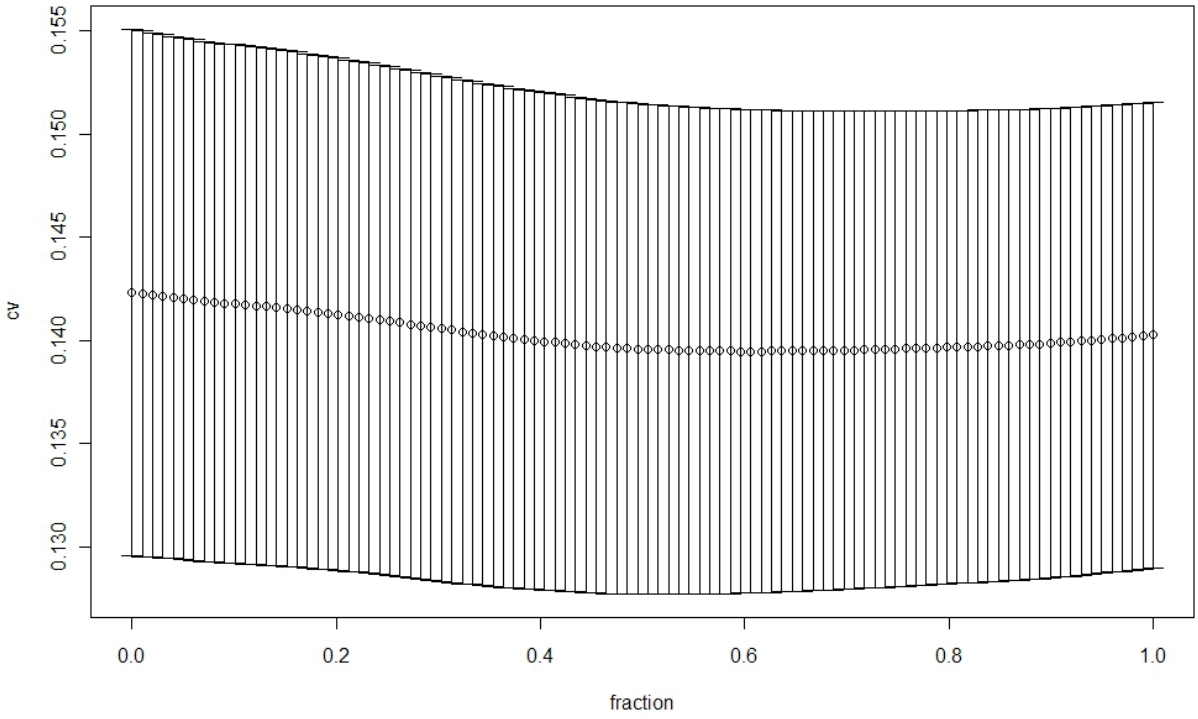
In other words, the model found the optimal combination of variables and ranked them by the level of correlation of the variable with the dependent variable. Because the LAR method does not eliminate variables (like Stepwise does) from the model, there are a series of tests that allow us to identify the statistical significance of each variable.

Model test:

1. K-fold cross-validated mean squared prediction error

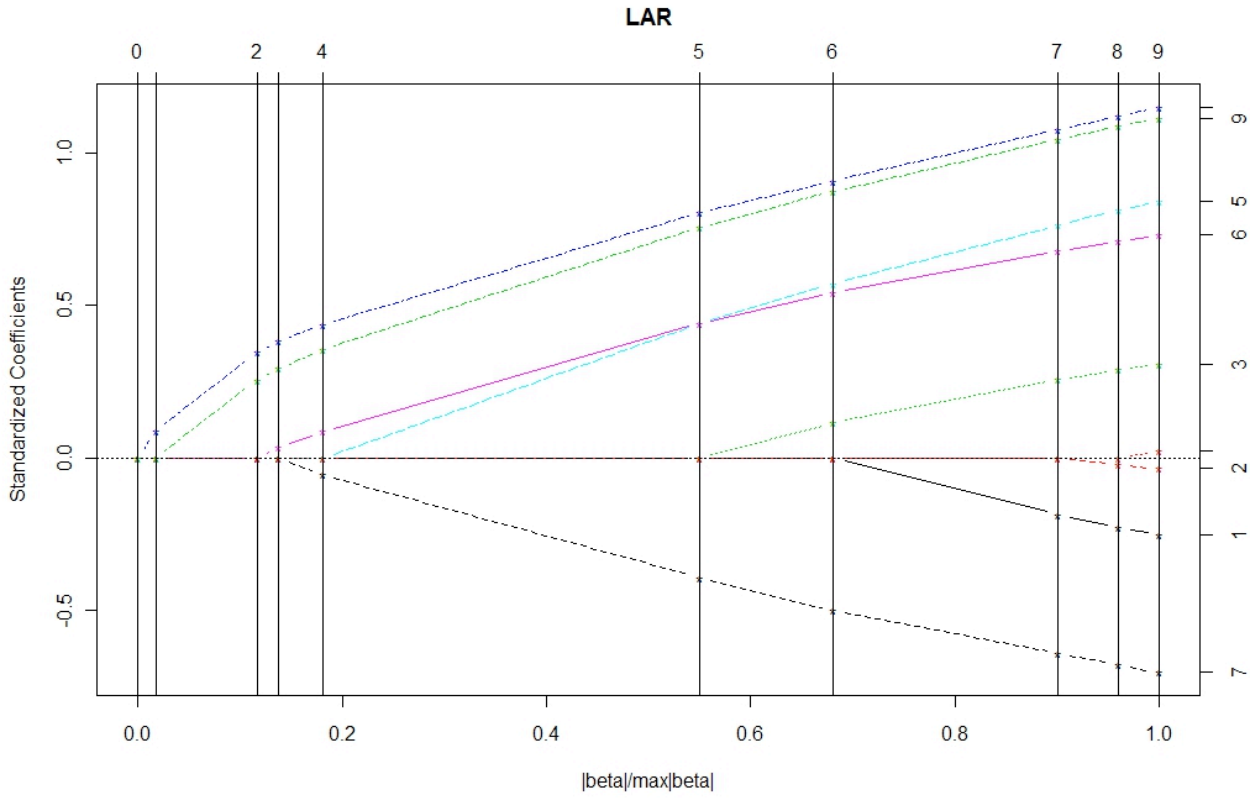
Cross validation is a method for estimating generalization error based on "re-sampling." In k-fold cross validation, one divides the data into k subsets of (approximately) equal size, training the net k times, each time leaving out one of the subsets, but using only the omitted subset to compute whatever error criterion is of interest. In our model, we were using 10-fold cross-validated mean squared prediction error.

Figure A1. 10-fold cross-validated mean squared prediction error



The results from Figure 1 shows that we obtain the optimal variation of the model on the 5th Fold, all the next attempts are slightly worse.

Figure A2. Standardized Model Coefficients



2. C_p Statistics

Table 1. Model Summary

	R_{ss}	**C_p**	**Coeff**
Variable 'Business Size'	87.706	24.5925	0.1356
Variable 'All Subcommittees'	86.742	19.5359	0.1212
Variable 'Stage'	86.567	20.2577	0.1087
Variable 'Number of Criteria'	86.238	19.8514	-0.1044
Variable 'Number of Bidders'	84.247	7.2863	0.0703
Variable 'Contract Duration'	83.876	6.5717	0.0252
Variable 'Weapon vs Non-Weapon'	83.556	6.2332	-0.043
Variable 'Product vs Service'	83.529	8.0361	-0.003
Variable 'Contract Pricing'	83.524	10.0000	0.002
Variable 'Foreign Winner'	82.746	2.0143	0.001
Variable 'Foreign Loser'	80.217	0.00	0.00

Using the Mallows' C_p statistic, Table A1 shows that the most significant variables are:

a. Business Size
b. Number of Subcommittees
c. Stage
d. Number of Criteria

Then entering those four variables stepwise into a standard regression model, we obtained the following coefficients of determination (R^2):

25.3	**48.2**	**67.8**	**77.3**

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