

Accountability in Procurement

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In this paper we address the issue of corruption in terms of favoritism at the design stage of a complex procurement auction. The risk of corruption arises because the community has preferences over the projects it procures but lacks the competence to translate those preferences into an operational technical specification. This task is delegated to a public officer who may collude with one of the firms and let that firm's interest determine the design of the project. We investigate the value of engaging the competing firm in a simple accountability mechanism. We find that significant improvement can be achieved compared with accountability based on random challenge. The level of penalty needed to fully deter corruption is drastically reduced and independent of the complexity of the project. Instead, it depends on the degree of differentiation within the industry. Below the threshold, corruption occurs with some positive probability. Moreover corruption under alert based accountability tends to move the equilibrium specification toward more standard design when the community favors standardization. The investigated mechanism uses minimal information and commitment ability from the part of the community. And since it is played before the official tender, it can be implemented at minimal cost.

CORRUPTION IN PROCUREMENT

The economic significance of public procurement in Europe is considerable: in 2010 a total of 2 406 billion euros - or around 20% of EU GDP - was spent by governments, the public sector and utility service providers on public works, goods and services. A recent study commissioned by the EC developed a novel methodology to identify the costs of corruption. According to their findings **the public loss encountered in corrupt projects amounts to 29% of the project value in urban utility construction, 20% in roads and rail and 16% in water & waste.** The probability of corruption is estimated between 28--43% in waste & water treatment plants and up to 37--53% of (airport) runway construction works. This study provides a forceful confirmation that even in developed economies corruption in procurement remains a major challenge.

Private sector actors and specialized anti-corruption NGOs are well aware that often when the tender is announced "the winner is already known" partly because **the project has been fine-tailored to one of the bidder** e.g., as part a bid rigging process. Yet, "fine-tailoring" that is corruption at the design stage has received very little attention and policy recommendations seldom address it. The costs of favoritism can however be very significant both in terms of social welfare (the project does not respond to social needs) and over-cost (the project is designed to maximize the winner's rents) even if the rest of the procurement process is clean.

A main reason for the remarkable lack of attention to corruption at the design stage is presumably the particularly difficult nature of the associated probe. Indeed any technical specification of a project tends to favor some firm at the expense of others. This is true even if the design is the social economic efficient one. In order to establish whether or not favoritism has taken place special knowledge is required. In some cases a small detail can be sufficient to seriously reduce competition. It is very difficult for an outsider to detect a technical requirement aimed at unduly favoring a specific firm. Therefore our approach amounts to involving an insider into accountability.

THE CHALLENGE OF ACCOUNTABILITY

An important lesson from the political economy literature is that accountability benefits from an appropriate structure of check and balances that is using and creating conflicts of interest to contain abuses of power. In the present context the agent's mandate is to translate the citizen's choice of project into a technical specification that is offered for tender. **Accountability is about challenging the public official's decision by requesting a justification for his decision.** But requesting that the procurement agent justifies every detail of his decisions is not feasible therefore:

- Efficient accountability demands targeting justification request.
- Efficient targeting requires information unknown to the citizens or its representatives.
- Competitors hold relevant information for targeting.

OUR APPROACH: RELYING ON COMPETING FIRMS TO ACHIEVE ACCOUNTABILITY

We consider a situation in which two firms compete for a complex project. The public official who manages the procurement auction is willing to take bribes to distort the technical specification of the project to favor a firm. One of the firms has close connections with the public official so they collude whenever favoritism is profitable. The representative citizen has preferences for the project but she lacks the knowledge and the time to translate those into a technical specification. She delegates that task to the public official who has significant discretion by force of his private information. **We are interested in assessing the value of engaging the competing firm in a mechanism of accountability in order to contain favoritism in project design.** More precisely we compare a mechanism of accountability relying on random challenge (RCA) with a one relying on alerts sent by the competing firm, alert based accountability (ABA).



The principle of the mechanisms is as follows. Before the submission of offers, one aspect of specification announced by the public official is selected at random (RCA) or by the rival (ABA). The agent is then requested to justify his decision with respect to that aspect. If he fails, the tender is relaunched with a new technical specification and the agent is penalized.

HOLDING A PROCUREMENT OFFICIAL TO ACCOUNT TO CONTAIN FAVORITISM: WHAT DO WE LEARN?

Our results strongly underline the value of engaging competing firms in accountability in the context of a complex procurement auction. Because the competitor can easily be incentivized and has better information than the citizens, he can more efficiently target the request for justification than the citizen. **As a consequence full corruption deterrence becomes feasible at a level of penalty which is much lower and unrelated to the complexity of the project.** Instead it depends on the industry profile. When firms are close competitors so they differ over a small number of dimensions full deterrence is achieved at minimal cost. And if the competitor has no comparative advantage, corruption is deterred by the mere prospect of losing the auction if detected, no penalty is needed.

The analysis also shows that when corruption does occur alert based accountability induces a pattern quite different from that induced by accountability based on random challenge. First while the risk of corruption is most severe when the allocation of the project is at stake with RCA, with ABA there is a risk even when the firm already has a solid advantage but corruption often occurs with a probability less than one and yields no expected gain. Moreover favoritism tends to favor standardization and does not always lead to maximal profit for the winning firm. The specific patterns of corruption under ABA are closely related to the asymmetry between standard and sophisticated specifications. Therefore we find that **ABA increases the efficiency of the much advocated anti-corruption policy that calls for standardization in technical specification.**

Finally, from a practical point of view, a critical argument in favor of alert-based accountability is that it does not rely on rather unrealistic assumptions about the citizen's ability to access and process information and her ability to commit to a sophisticated and potentially difficult-to-enforce mechanism. Moreover alerts and justification take place even before firms prepare their offers on the first announced project specification. Therefore alert based accountability does not imply additional cost for honest firms and minimally disturbs the procurement process.

A well-designed accountability mechanism has a powerful potential to contain corruption!

References

- Ben-Porath, Elchanan, Eddie Dekel and Barton L. Lipman. 2014. "Optimal Allocation with Costly Verification." *American Economic Review*, 104(12): 3779-3813.
- Glazer J. and A. Rubinstein (2004) "On Optimal Rules of Persuasion" *Econometrica*, 72/6, 1715-1736.
- Joshi A. and P. Houtzager "Widget or Watchdogs? Conceptual Exploration of Social Accountability" *Public Management Review*, 14/2, 145-162. "Social Accountability to Contain Corruption" (2015) *Journal of Development Economics* 116, 158-168.
- Kosenok G. and A. Lambert-Mogiliansky (2009) "Public Markets Tailored for the Cartel - Favoritism in Procurement Auctions" *Review of Industrial Organization* 2009/35, 95-121.
- Lupia A. and M. McCubbins (1994) "Designing Bureaucratic Accountability", *Law and Contemporary Problems*, 91-126.
- Malena et al. (2004) , "Social Accountability: An Introduction to Concepts and Emerging Practice" *Social Development Paper No. 76*, World Bank.
- Maskin E. and J. Tirole (2004), "The Politician and The Judge: Accountability in Government" *The American Economic Review*, 94/4, 1034-1054.
- Persson T., G. Roland and G. Tabellini (1997) "Separation of Power and Political Accountability" *Quarterly Journal of Economics*, 112/4, 1163-1202.
- PWC 15 : PwC EU Services and Ecory (2013) "Identifying and reducing corruption in public procurement" http://ec.europa.eu/anti-fraud/sites/antifraud/files/docs/body/identifying_reducing_corruption_in_public_procurement_en.pdf.