



# THOUGHT LEADERSHIP BRIEF

## Kamikazes in Public Procurements: Bid-Rigging and Real Non-Market Outcomes

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### KEY POINTS

- ▶ Bid-rigging in public procurements has severe implications beyond fiscal costs, directly affecting the quality of essential public services.
- ▶ In "kamikaze" strategy, the lowest bidder withdraws after the auction concludes, allowing the second-lowest bidder to win at higher prices. This leads to significant overpricing compared to similar auctions where it is not present. Procurement prices are 16 to 18 percent higher in auctions with kamikaze firms.
- ▶ This behavior correlates with adverse real non-market outcomes: higher mortality rates in public hospitals and increased road accidents after maintenance contracts.

### ISSUE

Governments spend significant resources purchasing goods and services from private companies, with public procurements constituting 12 percent of global GDP. Given this economic significance, inefficiencies in the procurement process can have severe consequences, including on the quality of public service provision. When private firms collude to extract rents from the government – a practice known as bid-rigging – it can increase public costs by up to 20 percent.

The challenge for policymakers and enforcement agencies is twofold: first, detecting coordination among bidders is difficult since explicit collusion is usually only observable in prosecuted cases; second, quantifying the link between bidding practices and service quality requires comprehensive procurement and outcomes data that is rarely available.

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This brief examines how a specific form of bid-rigging – the "kamikaze" strategy – affects pricing outcomes and, more critically, how it impacts essential public services such as healthcare and infrastructure maintenance.

## ASSESSMENT

### The Kamikaze Strategy and Price Effects

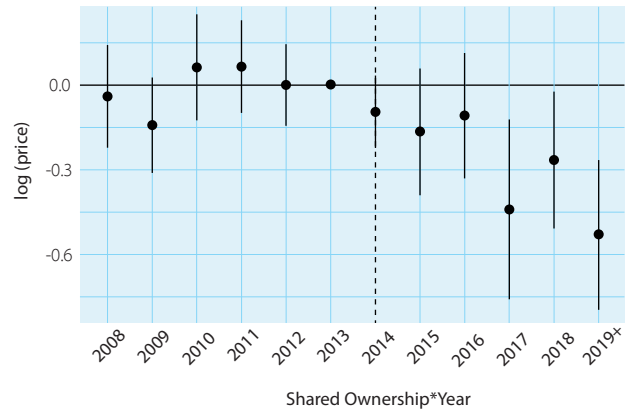
We leverage a dataset from the ComprasNet portal, the electronic platform where government institutions conduct procurements. In Brazil's electronic procurement system, we observe that in 17 percent of government auctions, the lowest bidder withdraws after the auction concludes, allowing the second-lowest bidder to win. These "kamikaze" firms submit extremely low bids (typically 15 percent below the eventual winning price) but strategically withdraw before signing the contract by failing to submit required documentation or citing vague technical issues.

Our analysis of approximately 15 million public procurement auctions from 2005-2021 reveals that this pattern leads to significantly higher prices compared to similar auctions without kamikaze bidders. When controlling for the same item, year, and number of participants, procurements with kamikaze bidders show prices 18 percent higher than comparable auctions. This effect persists even when comparing auctions within the same government institution and for the same product.

The overpricing correlates with less competition during the bidding process. Non-kamikaze firms submit 23-28 percent fewer bids and demonstrate 19-21 percent lower dispersion in bid values when kamikazes are present, suggesting less aggressive competitive strategies.

Our evidence points to deliberate coordination rather than coincidental bidding patterns or honest mistakes. Kamikaze and winning firms often share ownership ties or business addresses. Kamikazes are typically smaller and younger than winners, suggesting they may be special-purpose entities created specifically to support bidding strategies. That this coordination is deliberate is also evidenced from the 2014 transparency reform that allowed auctioneers to observe shared ownership between auction participants. This reform resulted in reduced kamikaze behavior and lower procurement prices, particularly among firms that previously engaged in coordination through shared ownership.

**Figure 1. The Effect of the Transparency Reform on Prices**

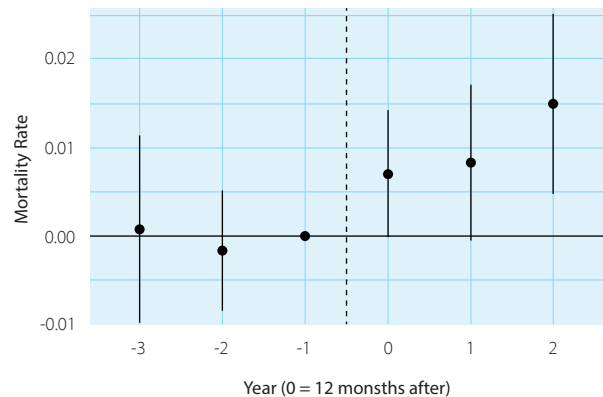


### Real Non-Market Outcomes

Beyond fiscal costs, we document that bid-rigging has tangible negative effects on public service quality through two key channels:

First, bid-rigging places financial strain on budget-constrained government institutions. For essential medicine procurements, we observe that hospitals paying inflated prices due to kamikaze auctions experience a 19 percent increase in mortality rates compared to hospitals purchasing the same medicines without kamikaze interference. This effect persists even when comparing health outcomes within the same hospital in the same year, controlling for any institution-specific factors. Since essential medicines have precise specifications and don't differ in quality, this effect likely stems from reduced residual budgets for acquiring additional medicines or supplies.

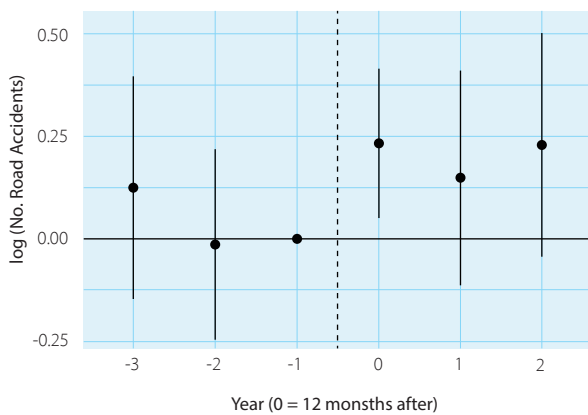
**Figure 2. Excess Deaths in Public Hospitals**





Second, bid-rigging may result in selecting less efficient providers, compromising service quality. For road maintenance contracts, we find that roads maintained under contracts awarded through kamikaze auctions require subsequent maintenance approximately one year sooner than comparable roads repaired through regular auctions. Moreover, these roads experience 13.7 percent more accidents attributed to poor road conditions and 9.6 percent more victims from such accidents. Importantly, we observe no impact on accidents not related to road conditions, confirming that the effect stems from quality differences in maintenance work.

**Figure 3. Number of Road Accidents**



While we study a particular strategy, our findings likely extend to other collusive strategies across different institutional contexts. The fundamental economic forces remain the same with other bid-rigging methods such as bid rotation, market division, or complementary bidding. Like the kamikaze strategy, these methods all serve to reduce competition, whether through explicit coordination or strategic deterrence, and such successful coordination raises prices and depletes public budgets at the same time as favoring cartel firms over potentially more efficient providers.

## RECOMMENDATIONS

Our study documents that bid-rigging in public procurement auctions leads to capital misallocation and ultimately affects the quality of public service provision. We use the “kamikaze” strategy as a bid-rigging marker and show that this tactic, observed in about 17% of Brazilian procurement auctions, inflates prices by 18% and often involves firms that share common owners. Ultimately, we document that kamikaze auctions correlate with increased hospital mortality rates and more road accidents following maintenance services.

Our findings highlight how bid-rigging extends beyond immediate fiscal costs to endanger public wellbeing, with significant implications for procurement policy and enforcement:

First, procurement regulations should prioritize transparency around firm relationships. The 2014 reform in Brazil that made ownership ties visible to auctioneers reduced kamikaze behavior, suggesting that simple transparency measures can be effective. Procurement systems should require disclosure of ownership structures, business addresses, and histories of joint participation before auctions begin.

Second, pre-qualification requirements should be strengthened to prevent kamikaze strategies. Requiring all bidders to submit documentation before bidding (rather than after winning) and implementing modest but meaningful bid deposits would discourage insincere bids. While such measures might slightly reduce participation, our evidence suggests the benefits of preventing bid-rigging outweigh these costs.

Third, enforcement agencies should broaden their focus beyond price effects when investigating bid-rigging. Our findings show that the true cost of collusion includes compromised public health and safety. Quantifying these non-market effects would strengthen the case for prosecution and justify higher penalties that reflect the full social cost of anticompetitive behavior.

Finally, government institutions in budget-sensitive areas like healthcare and infrastructure should implement specialized monitoring for signs of bid-rigging. For instance, tracking unusually aggressive bids that are later withdrawn, monitoring bidder connections, and comparing outcomes across similar contracts can help identify problematic patterns before they result in public harm.

By addressing both the mechanisms of bid-rigging and their consequences for public service quality, policymakers can ensure that procurement systems better fulfill their fundamental purpose: delivering quality public services at reasonable costs.



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His work on international antitrust laws and M&A transactions was awarded Jerry S. Cohen Award for Antitrust Scholarship for the best antitrust work in 2019 while his work on corporate taxes and innovation was awarded Vadas Jurgutis prize in 2022 for the best economics research article written by a Lithuanian researcher over the past five years.

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