



# **PROCUREMENT PROCEDURES AND CARTEL FORMATION IN BRAZIL**

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# **PROCUREMENT PROCEDURES AND CARTEL FORMATION IN BRAZIL**

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## **ABSTRACT**

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*Law 8.883/93, the so-called “procurement law”, brings the main provisions related to the purchases of the Brazilian government. Some key changes in this legislation have been introduced since 2002, altering the whole format of the auctions for sake of government procurement. Our goal in this article is to assess the impact of the new rules of procurement on bid-rigging and steering of contracts. We show that is not clear whether the new rules facilitated or not bid-rigging and corruption in Brazil.*

Key words: bid-rigging, procurement law in Brazil, auctions

JEL: L41, K21, K42

## **I) INTRODUCTION**

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Law No. 8,883/93, also referred to as the “procurement law,” prescribes the key rules governing public procurements in Brazil. A frequent criticism of the law is that it unduly constrains the range of action available to public officials and often increases, instead of reducing, the attendant costs to government.

In response, over the past decade the government has introduced significant changes to the law, modifying the procurement format through the introduction of onsite reverse bidding procedures (Law No. 10,520/2002) and electronic reverse bidding procedures (Decree No. 5,450/2005), while providing more flexibility to the process, even if only selectively (2014 FIFA World Cup, 2016 Summer Olympics, Growth Acceleration Program – PAC, and other public works), pursuant to Law No. 12,462/2011, through which the Differentiated Procurement Regime (Regime Diferenciado de Contratação – RDC) was enacted.

Despite the strict controls provided for in law to prevent all forms of fraud, there is a widespread view that procurement procedures in Brazil are subject to cartel arrangements or bid-rigging and steering of contracts by the public administrator<sup>1</sup>.

The general consensus in the economic theory of cartel formation in procurement procedures, referred to as bid-rigging, is that the rules of the process, in particular the type of procedure used, oral or sealed bids, have a significant impact on cartel activity.

Our objective in this article is to examine Brazil's procurement system from the enactment of Law No. 8,666/93 through the introduction of onsite reverse bidding procedures and, more recently, the RDC, specifically with respect to their effect on the predisposition of actors to cartel formation. The key question of the study is to what extent the evolution of the rules governing procurement procedures in Brazil has facilitated or hindered cartel formation.

Our focus is on the procedures employed for the procurement of goods and services by the Brazilian public administration, although a portion of the study applies as well to the procurement of public works and the award of concession contracts.

The section below synthesizes the economic theory underlying cartel formation in bidding procedures. Section III examines the modality of bidding procedures adopted in Brazil based on economic theory. Section IV offers some concluding observations.

## **II) BASIC ECONOMIC THEORY OF CARTELS**

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While cartels are possible under any bidding modality, certain modalities are more susceptible to collusion than others. Much of the incentive to defect from participation in the cartel is contingent on the extent to which the information on this defection permits or prevents a timely response by players participating in the cartel agreement and punishment of the uncooperative agent. The more the procurement procedure allows cooperating players to immediately detect and punish defections from cartel conduct, the more the cartel's operation will be facilitated.

The most vulnerable auction mechanism is oral bidding. In the case of government procurements, players enter decreasing bids until reaching a level at which only one player is willing to continue participating. This modality's higher susceptibility to cartel activity is rooted in the fact that players are able to observe each other's bids simultaneously, giving them time to cover proposals that deviate from the amounts agreed within a given cartel. Any attempt to defect from the cartel can be detected and "punished" immediately within the same procurement procedure: if a bidder that is not "supposed" to win submits a bid that deviates

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<sup>1</sup> As long as this action is not inserted in a bid-rigging, this is substitute for the cartel. When this action is linked to a bid-rigging scheme, this is a complement to the cartel.

from the amount agreed, the bidder that is “supposed” to win may immediately respond by submitting an even lower bid. As all participants know that any attempt to defect from the agreement will subject the defector to immediate retaliation, they will have more incentive to cooperate in the cartel.

In the case of sealed bids, however, the temptation to defect is far higher, as the competitor that is “supposed to win” will not have time to react to potential deviations from those competitors that are “not supposed to win.” As such, an uncooperative player may end up winning a procurement process for a slightly lower price than the winning proposal. The higher the bidder’s expected return, the greater the temptation to defect will be. As Klemperer (2004) states “*a first-price sealed bid is usually much more robust to collusion: bidders cannot ‘exchange views’ through their bids, or observe opponent’s bids until after the auction is over, or punish defection from any agreement during the course of the auction, or easily deter entry.*”

In addition, first-price sealed bids attract more new players than oral bids. This is due to the fact that sealed bids provide less efficient agents with the opportunity to win the bidding procedure, as the submission of only one bid deprives the most efficient players of a second opportunity to react and best the winning bid, a circumstance not possible in oral bids. The mere fact that entry is facilitated introduces an additional obstacle to cartels through the first-price sealed bid system.

In sum, oral bids are more susceptible to cartel formation than first-price sealed bids.

In the section below, we examine the procurement modalities employed in Brazil and the predisposition to cartel formation based on the specific type of auction employed.

### **III) PROCUREMENT MODALITIES IN BRAZIL AND BID-RIGGING**

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#### **III.1) Modalities under Law No. 8,666/93**

The five procurement modalities in Brazil, pursuant to article 22 of Law No. 8,666/93 are: 1) competitive bid; 2) request for proposals; 3) invitation to bid; 4) contest bid; and 5) auction.<sup>2</sup>

The contest bid is specific to the selection of works for award consideration, while the last category refers to the sale, not the procurement, of goods and

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<sup>2</sup> From the point of view of economic theory, all modalities are auctions, which should not be mistaken for this specific modality, as defined by law.

services. As such, the focus of this analysis on the procurement of goods and services is restricted to the first three modalities. All of these involve first-price sealed bids, suggesting that the probability of cartel formation is the same among the three modalities and lower than in the decreasing oral bidding format.

The relevant question is whether the three procurement modalities share an intrinsic trait which would predispose one of these modalities to cartel formation more than the others.

In our view, they do not. None of the three restricts the number of participating bidders. Each modality is linked to a specific procurement and acquisition amount: up to 80,000.00 Brazilian Reais for invitations to bid, up to 650,000.00 Brazilian Reais for requests for proposals, and above 650,000.00 for competitive bids.

Pursuant to article 22, paragraph 1, of Law No. 8,666/93, “Competitive bid” is *“the procurement modality between any interested parties that meet, in the preliminary eligibility stage, the minimum mandatory required qualifications set forth in the public notice for execution of the procurement object.”*

For its part, the “Request for proposals” described in article 22, paragraph 2, is *“the procurement modality between duly registered interested parties or those that meet all the conditions required for purposes of registration no later than the third day prior to the date of receipt of the bid proposals, in accordance with the mandatory qualifications.”* The difference between competitive bidding and requests for proposals involves the latter’s requirement that parties register with the public body. As registration is not a difficult step, and may be accomplished, in fact, through registration with another public body, it does not constitute a relevant barrier to entry that could contribute to sustaining a cartel.

The “invitation to bid” modality is used for more basic procurement procedures and is considered a more restrictive format, to the extent it is limited to three participating companies. However, other companies in addition to those “invited” to bid may participate, insofar as *“a copy of the bid notice shall be displayed in an appropriate location and extended to all companies eligible to perform the corresponding specialized activity that express an interest in taking part at least 24 hours prior to the submission of bid proposals”* (article 22, paragraph 3, of Law No. 8,666/93). In other words, while the “invitation to bid” modality makes life easier for those entities invited to participate, to the extent these are not required to seek out the information on the bid notice, which is sent directly to them, it does not limit the number of potential participants.

The key element examined for our purposes and one shared by the three modalities prescribed under Law No. 8,666/93 centers on the fact that all three formats are based on a first-price sealed bidding procedure, which is less susceptible to cartel formation.

### III.2) Onsite Reverse Bidding Procedures

In 2002, Law No. 10,520/2002 was passed. The new statute introduced the reverse bidding modality (or the onsite reverse bidding procedure), a two-stage bidding mechanism. The first stage consists of a first-price sealed bid in which bidders submit sealed envelopes with a price proposal, similar to the three modalities under Law 8,666/93 described above.

In the second stage, an open reverse bidding procedure is held in which only a portion of the bidders in the first stage participate. The agents participating in the second stage include the lowest bidder and those submitting proposals up to ten per cent (10%) above the lowest bid (article 4, subsection VIII, of Law No. 10,520/2002). In the event at least three (3) bids within 10% of the lowest proposal are not entered, the parties submitting the lowest bids, up to a maximum of three (3) bidders, may take part in the second stage and put forth successive, decreasing oral bids (article 4, subsection IX). Those bidders that qualify for the second stage enter new bids, starting from the lowest price proposal offered in the first stage.

The second stage decreasing oral bidding procedure provides greater opportunity for cartel formation. However, the onsite bid includes an initial stage involving a first-price sealed bid, which hinders cartel activities. The first stage of the procedure may already have led to defections, undermining the mutual trust of bidders in the second stage. Nonetheless, for those participants “remaining” after the first stage, there are incentives to enter into collusion in the second stage. If there are only a small number of bidders in the first stage, say two or three, the initial stage is rendered redundant, as all participants will automatically “qualify” for the second stage, irrespective of what they do in the first stage. The proposal submitted in the first stage would not carry any “costs” relating to the risk of disqualification. The actual competition would only occur in the second stage, destabilizing potential cartels formed in the first stage.

Another achievement of the onsite reverse bidding procedure involves the inversion of the procurement stage. Under Law No. 8,666/93, all bidders must be declared eligible prior to the auction. However, pursuant to article 4, subsection XII, of Law No. 10,520/2002, only the bid winner’s eligibility is certified, reducing procurement procedure’s operating costs for the State and respective bidders alike. According to Rezende (2011), when bidder eligibility is verified prior to the procurement procedure “*all bidders have a potential interest in eliminating their competitors from the process through challenges to the respective eligibility documents. This can lead to a veritable torrent of appeals challenging each bidder’s eligibility to participate. By inverting the bidding stage, this possibility is largely mitigated, to the extent that once the lowest bidder is revealed any appeals will be directed against that bidder exclusively, sparing the Administration and bidders time and resources.*” In the case of cartels, attempts to challenge other bidders will be solely aimed at entities not party to the collusive arrangement.

In fact, lower costs to bidders reduce barriers to entry, enabling a larger number of competitors, which, in and of itself, hinders cartel formation. In addition, according to Ceccato (2012), inversion of the bid stages contributes to diminishing the possibility of cartel formation “*to the extent an expedited procedure, the first stage of which is generally concluded on the same day, virtually precludes the capture of agents during the bidding process.*” In other words, because cartels represent a complex method of collective action with substantial margin for free-rider behavior, as per the classic conception expounded by Mancur Olson (1965), all measures that contribute to accelerating the procurement procedure will serve to reduce the time available for organizing cartel arrangements, thus impeding their formation.

However, Ceccato (2012) also shows that the inversion of stages opens the door to cartel conduct when it is associated to a mechanism introduced in the onsite reverse bidding procedure aimed at reducing the number of participants in the sealed bid stage down to just three in the open bidding stage.

Take the following example. Three companies (including shell companies created solely for the purpose of fronting as bidders and submitting fictitious proposals) could hypothetically collude to block a fourth bidder with the potential to win the second-stage bidding procedure, resulting in a higher cost to the public administration. For example, if the three players engaging in collusion entered bids of \$100, \$105, and \$109, while the fourth independent firm put forth a bid of \$111, the latter participant would be out of the second stage. Suppose the three bidders did not enter proposals in the second stage. If the two participants that entered the \$100 and \$105 bids were found to lack the required eligibility documents, the three colluding bidders will have succeeded in excluding the fourth company not party to the cartel, while the company offering \$109 would win the contest without competition in the second stage. The actions undertaken by the first two companies were aimed exclusively at disqualifying the fourth independent participant. If this firm had entered the second round of bidding, the likelihood of competition would have been considerably higher. As such, the solution to this circumstance would be to order that the second stage of the bidding procedure be repeated every time the winning bidder is disqualified, a step which could offer an important legal precedent.

Another problem with inverting the bidding stages is that rejecting the eligibility of a bidder entering the lowest bid is always more difficult after the fact than before. This approach carries the risk of increasing the participation of “intrepid” bidders driven by opportunism that would clearly have been declared ineligible had they been subject to review prior to submitting the winning bid.<sup>3</sup> The pressure exerted *ex-post* by the losing bidders to perform an appropriate verification of eligibility could serve to mitigate this outcome substantially.<sup>4</sup>

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<sup>3</sup> Assuming the calls for technical and financial eligibility are sufficient to eliminate opportunists, which is not the case.

<sup>4</sup> Article 4, subsection XVIII.

One of the innovative features of the onsite reverse bidding procedure, as provided in article 4, subsection XI, of Law No. 10,520/2002, is that the auctioneer may undertake efforts to negotiate additional price reductions with the winning bidder upon conclusion of the open bidding stage. This provides the auctioneer with a reasonable degree of discretion, by allowing for a decision on the extent of the additional price reduction that should be sought beyond the amount contained in the winning proposal.

Note that the auctioneer has latitude to rig the outcome if the necessary signs can be imparted to the bidders that either a more hard line or a softer negotiating stance will be adopted, depending on the specific bid winner. Rigging the procedure in this way can serve as a substitute or as a complement to the cartel. It acts as a substitute when the auctioneer's cooptation of a bidder renders the collective action of the cartel unnecessary. By contrast, acts as a complement when the auctioneer is incorporated in the process of allocating procurement procedures among the cartel members.

Let us assume that the steering of contracts serves as a complement to a bid-rigging conduct. What would be the influence of this negotiation *a posteriori* on the likelihood of cartel formation?

First, it is important to underline that in the absence of any preference for this or that bidder by the auctioneer and if the distribution of expectations among the bidders is reasonably homogenous with respect to the extent to which the auctioneer will force acceptance of a lower price, and presuming the auctioneer has access to the reserve prices of the participating bidders, the post auction negotiations will have no affect on determining the bid winner. The only possible impact would be on the final price.

Let us suppose there are two participating bidders, A and B, with average costs or reserve prices to provide the good or service in question for \$9 and \$6, respectively. In the absence of post-auction negotiations, the likelihood in a decreasing open bid is that A stops submitting proposals at \$9 and B, the more efficient bidder, wins the procurement procedure with an offer slightly below A's cutoff of "\$9 - e." As "e" can be as close to 0 as we want, B's final offer, for all intents and purposes, will be equal to \$9. Thus, the contract would be awarded to B for \$9. Because the auctioneer knows the reserve price of the bidder, he knows that the price cannot be reduced below \$6. In this light, the auctioneer and the final bidder will negotiate a final price somewhere between \$9 and \$6.

Another possibility is that the auctioneer does not have knowledge of the reserve prices and issues an exogenous percentage for the *ex-post* mandatory price reduction. Let us consider how the behavior of bidders is affected when an additional negotiation is added in which both bidders expect a 10% price reduction on the last proposal entered by whichever of the two parties wins the bid. We assume here that the auctioneer undertakes to make a "take it or

leave it” offer, whereby if the winning bidder refuses to accept the price reduction a new auction is held.

Bidder A will be willing to offer a maximum of \$10, which it knows the auctioneer will renegotiate until reaching the intended 10% reduction, namely \$9, which is the bidder’s reserve price. For its part, bidder B will also adjust its maximum bid upward, from \$6 to \$6.66, such that following the respective renegotiation and application of the 10% cut, resulting in a total of \$6, corresponding to the bidder’s reserve price. In this context, the winning bidder would be B, which will increase its proposal from \$9 to \$10, a total the auctioneer will renegotiate down to \$9, precisely the same amount as that secured in the scenario with no additional post-auction negotiations. Therefore, the assumptions above would indicate that post-auction negotiation does not alter the bid winner or the winning bid price.

Let us now turn to the steering of contracts with or without bid-rigging scenario in which the auctioneer has a preference for one of the bidders. To make the scenario more interesting, assume the bidder’s preference is for the less efficient bidder A. Suppose bidder A expects the auctioneer to renegotiate a 10% reduction on its final price offer, while bidder B, who we will designate B’, expects the auctioneer to renegotiate a 50% cut over its final proposal. In other words, the preference centers on the rigor of the auctioneer’s renegotiating position vis-à-vis B’ compared to A. The difference between 50% and 10% will be the measure of the steering of contracts.

In this light, the maximum bid B is willing to submit in the face of a 50% renegotiation of the final proposal corresponds to double its reserve price, or \$12. Although the minimum bid A is willing to enter remains \$10 (with a view to reaching \$9), the bid amount now needed to defeat B would be greater than and equal to \$12. In this case, subsequent renegotiation by the auctioneer with its preferred bidder A will reduce the final amount by 10% to \$10.8. In other words, in the event of a preference for one of the two bidders, the final equilibrium price will climb from \$9 to \$10.8. The table below offers a summary of the figures provided.

**Table I – Behavior of the Bidders in the Oral Bid When There is the Possibility for Negotiations Following the Bidding Stage**

| Bidder | Average Cost or Reserve Price | Percentage of Price Renegotiation by Auctioneer | Maximum Bid Proposal Is Willing to Enter | Equilibrium Bid | Final Price of Winning Bidder |
|--------|-------------------------------|---|--|-----------------|-------------------------------|
| A      | 9                             | 10%   | 10                                       | 10 (for B) e    | 10.8                          |

|    |   |     |      | 12-e (for B') | (when playing with B') |
|----|---|-----|------|---------------|------------------------|
| B  | 6 | 10% | 6,66 | 10-e          | 9                      |
| 'B | 6 | 50% | 12   | 12            |                        |

In sum the prospect of post auction a renegotiation can increase, instead of decreasing, the price paid by the government in the event of bid-rigging.

While the onsite reverse bidding and its two-stage format were considered a step forward at the time, it is not clear to what extent they have facilitated or prevented cartels in public procurement procedures. At the same time, the possibility of post-auction negotiations have made bid-rigging easier and, in those cases in which the practice has served as a complement to cartels, actually facilitated these arrangements.

### **III.3) Electronic Reverse Bidding Procedures**

In 2005, a new modality referred to as “electronic reverse bidding” was enacted through Decree No. 5,450/2005. Its principal feature involves the submission of bids at a distance using electronic platforms, thus reducing the attendant costs to many bidders, while lowering entry barriers and, as such, the space available to cartels.

Article 4 of the Decree mandates the reverse bidding modality for public procurements of goods and services, with preference given to electronic bidding procedures. Paragraph 1 of the same article provides that reverse bidding will not be employed in electronic procedures only if the impossibility of using this format is demonstrated and duly justified by the jurisdictional authority. As such, electronic bidding has become the most prevalent procurement method in Brazil.

The two stages of the electronic reverse bidding procedure operate in a manner similar to those of the onsite reverse bidding procedure: in the first stage, each bidder enters a sealed proposal with the respective price offer in the electronic system (COMPRASNET). After the proposals have been opened by the auctioneer, the second stage of the auction, consisting of decreasing oral bids, is initiated. The fundamental difference in relation to onsite bidding is that the second stage of the electronic reverse bidding procedure does not restrict participation to those bidders within 10% of the lowest bid in the first stage, as is the case in the onsite format, but rather allows for the submission of any and all proposals. Clearly, this reduces the incentive to enter real bids in the first stage. In fact, it could be said that the electronic

reverse bidding procedure works, in reality, as a decreasing oral bidding procedure. That is, only the second stage has any actual relevance to the auction, given that bidders run no risk of elimination if they submit an excessively high price proposal in the first stage.

In addition to the irrelevance of the first stage, another major difference in regard to the onsite bidding procedure is provided in article 24, paragraph 5, of Decree No. 5,450/2005, whereby bidders are continuously informed of the lowest bid submission, yet the identity of the lowest bidder is not revealed until the bidding stage is concluded. In fact, not even the auctioneer announcing the price proposals knows the identity of the bidders in the first and second stages alike, significantly reducing the ability to engage in steering of contracts and/or bid-rigging.

Because the procedure does not involve an onsite bidding process, anonymity is afforded, with a significant impact on the likelihood of cartel formation. The very fact that there is no way of knowing which participant is betraying the cartel or even if the lowest bidder is part of the cartel constitutes a destabilizing element for the cartel agreement. A bidder that is part of the cartel but starts to defect from the original agreement may pass unnoticed and free of retaliation. Indeed, a defecting bidder may only be identified and potentially subject to “punishment” in subsequent procurement procedures if it in fact wins the bid and, by virtue of this fact, is “discovered.” Marshall and Marx (2010) note the importance of the information held by bidders during the auction for cartels: *“As a general rule, the more information the auctioneer conveys about bidder identities, the bids submitted, and auction outcomes, the easier it is for a ring to be effective in its work of suppressing rivalry among members.”*

Klemperer (2008) argues that anonymous bids in auctions has the same effect as an absence of information on other players in ordinary markets: *“Just as in “ordinary” markets, keeping bids secret makes it harder for bidders to coordinate their activities and makes defection from a collusive agreement harder to observe and therefore more attractive. So secrecy fights collusion between bidders.”*

Anonymity also makes it difficult for bidders to communicate among themselves through the bid submission in the case of multiple procurement objects.<sup>5</sup>

Another interesting feature of the electronic reverse bidding procedure is that the time for conclusion of the second stage is randomly set by an independent system not under the control of the auctioneer, ensuring, as such, that defections from cartel agreements cannot be subject to immediate response and punishment in the same procurement procedure. If more aggressive bids are entered and the agent that “should win” does not have time to “punish” the defection, the defecting player will win the auction before the player that “should win” is able

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<sup>5</sup> In addition to anonymity, Klemperer (2008) recommends that float values be prohibited and that minimum increases be determined for each bid, so as to hinder communication via bids.

to react. This increases the uncertainty of bidders in a cartel agreement regarding possible defections, thus destabilizing the cartel as a whole.

In sum, the “electronic reverse bidding procedure,” has mitigated a significant constraint of the onsite reverse bidding procedure to cartel conduct by rendering the initial sealed bid stage irrelevant. However, by introducing anonymity into the bidding process, the electronic reverse bidding procedure has made identifying defectors more difficult, thereby destabilizing cartels.

There is a widespread view in the public sector that electronic reverse bidding procedures have hindered cartel formation in procurement procedures throughout Brazil. An ideal approach, however, would be to preserve the relevance of the first stage by restricting the number of bidders that qualify for the second bidding stage.

#### **III.4) Differentiated Procurement Regime (RDC)**

More recently, the Brazilian government enacted Law No. 12,462/2011, which introduced the Differentiated Procurement Regime (Regime Diferenciado de Contratação – RDC), for the purpose of conferring greater flexibility on the procurement rules governing the FIFA 2014 World Cup, the 2016 Summer Olympics, the federal government’s Growth Acceleration Program (Programa de Aceleração do Crescimento – PAC), and projects undertaken within the framework of the Unified Health System (Sistema Único de Saúde – SUS) and the Public Education System. While a large part of these procurement procedures involve public works, the RDC also applies to the procurement of goods and services for the related events and activities.

Although Law No. 8,666/93 provides for allocation of the procurement object among bidders, it requires that each component be assigned exclusively to a specific bidder (article 23, paragraphs 1 and 2). Article 11 of Law No. 12,462/2011 of the RDC allows more than one company to be awarded a contract for delivery of the same service, where the procurement object can be executed concurrently and simultaneously, thereby facilitating the distribution of gains within cartels in the same procurement procedure. Making the RDC more flexible facilitates compensation mechanisms that permit the operation of cartels in procurement procedures. At the same time, however, this greater flexibility can serve as an efficient mechanism when only a small number of providers are available.

The RDC offers the auction more flexibility in deciding whether to hold an open or sealed bidding procedure, or apply a combination of these, similar to the two-stage onsite and electronic reverse bidding procedures. Assuming the auctioneer is honest, this added flexibility makes it possible to design the auction so as to effectively respond to the key challenges faced. For example, open auctions are recommended in cases of the winner’s curse problem. However, if the primary issue is cartel activity a predominantly sealed bid auction is

preferable. In the case of two-stage auctions, such as onsite or electronic reverse bidding procedures, reestablishing the relevance of the first stage of the sealed auction could serve as an effective measure to counter cartel activity. In sum, the flexibility to choose the auction type could contribute to preventing cartels. However, as with any discretion conferred on the auctioneer, this flexibility can also be exploited for the purpose of steering of contracts and/or bid-rigging.

While Law No. 8,666/93 restricts employment of the best technical proposal criterion (even in combination with the “lowest price” criterion) for the procurement of “*services of a predominantly intellectual nature*,”<sup>6</sup> the RDC significantly expands the possibility of applying this criterion. The greater subjectivity of “best technical proposal” criterion increases the range of opportunities for steering of contracts and/or bid-rigging, as noted by Rezende (2011).

By the same token, more frequent use of the best technical proposal allows for the incorporation of a larger array of quality factors in connection with the respective good or service subject to the procurement procedure, and can serve to bring the logic of government procurements more into line with the experience of individuals who purchase goods and services for personal use and invariably base their decisions on a cost-benefit analysis of those goods or services, not simply their price. Currently, qualitative criteria can only be included in procurement procedures through a description of the minimum required characteristics. Incorporating technical factors as a criterion could encourage bidders to offer better innovations for the proposed solutions. Ultimately, boosting the potential weight given to “technical” criteria in public procurements presents a clear trade-off: an increase in the price and space available for steering of contracts and/or bid-rigging, on the one hand, and the possibility of more effectively incorporating quality variables in the government’s consumption decisions, on the other.

The RDC introduces an entirely new criterion, namely “highest financial return” (article 18, V). Pursuant to article 23, the “highest financial return criterion” is “*used exclusively for the execution of efficiency contracts, and the proposals are considered with a view to selecting the offer that provides the highest cost savings to the public administration through contract execution.*” In addition, article 23, paragraph 1, provides that the efficiency contract compensates the contractor for the percentage of cost savings generated.

Rezende (2011) notes the difficulty in evaluating how to apply this type of contract, suggesting that “*they could facilitate misappropriation and fraud of public funds.*” Indeed, a criteria such as highest financial return seems to confer ample discretion on the auctioneer to calibrate the rule for determining the bid winner. The gains from this innovation are not clear. We will see.

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<sup>6</sup> Pursuant to article 46 of Law No. Lei 8,666/93 “*services of a predominantly intellectual nature, in particular the project development, calculations, inspections, oversight, management, and engineering consulting in general and, especially, the development of preliminary technical studies and basic and executive project designs.*”

Article 6 of Law No. 12,462/2011 provides that the previously estimated procurement contract will only be made public after the procurement procedure. The objective of the government is to prevent price hikes and cartel formation, as described by Rezende (2011).

Disclosure of an expected price could in fact serve to merge the expectations of agents in regard to the contract amount. Note, however, that this does not mean that disclosure will always lead to an upward convergence in the expected price, generally the trend in cartel formation scenarios. Disclosure influences bids in relation to situations in which the RDC is not disseminated, to the extent bidder expectations fall below or above the amounts reflected in the budget. If the budget amounts are below expectations, their disclosure could drive the ensuing bids lower, a factor dependent on how realistic the government's estimates are perceived to be. If the estimates are deemed realistic, disclosure could have the effect of reducing prices, not increasing them.

The opposite occurs in the case of government estimates above the market's perception, a situation that would appear to provide the government with reason not to disclose the RDC. In this case, disclosure of the government's estimate could spur tacit collusion or facilitation of explicit collusion.

Ultimately, in sufficiently competitive auctions with a reasonable and homogenous degree of information between the market and the government, disclosure of the estimates will not make much of a difference.

The RDC provides the auctioneer with the opportunity to negotiate a better price for the public administration after the bidding stage just like the previous two modalities. However, on this point the text of the law suggests greater flexibility for the auctioneer in negotiating with bidders other than the winning bidder. Article 4, subsection XVI, of Law No. 10,52/2002 on onsite reverse bidding procedures authorizes the auctioneer to negotiate with other bidders *"if the offer is not acceptable or the bidder fails to meet the applicable eligibility requirements."* For its part, article 26, sole paragraph, of Law No. 12,462 of 2011, on the RDC, provides that *"negotiations may be entered into with the remaining bidders, based on the initial order of classification, where the price submitted by the first-place bidder, including following negotiations, is disqualified by virtue of exceeding the budget estimate."*

As the winner of the bid stage does not have precise knowledge of the budget estimate, the bidder can be disqualified by an auctioneer interested in rigging the procurement procedure, depending on the outcomes of the respective negotiations.

However, no problem will arise if the auctioneer is unable to "alter" the estimate *ex-post* and, further, is forced to "disclose the estimate" and put forth a "take it or leave it offer" to the winner. The winner will accept the proposal if its reserve price is higher than the budget estimate and officially win the procurement procedure following subsequent negotiations. However, the possibility of steering of contracts and/or bid-rigging will increase if the auctioneer

is able to alter the estimate *ex-post* or cannot be forced to put forth a “take it or leave it offer.” As such, the OECD (2009) recommends that the budget estimate be deposited with another public authority, which in Brazil’s case could be the Brazilian Federal Court of Accounts (Tribunal de Contas da União – TCU) or the Brazilian Office of the Comptroller-General (Controladoria Geral da União – CGU).

To better understand this point, let us consider bidders A and B in Table I above with their respective reserve prices of \$9 and \$6. Assume an initial estimated budget of \$14 and collusion between bidder A and the auctioneer. Suppose A bids \$20 and B wins with a bid of \$19. B wins the bid stage and enters into negotiations with the auctioneer. Naturally, B will strive to maintain its price as close as possible to its \$19 bid. The auctioneer may prematurely suspend the negotiation, claiming, strategically, that B, in the auctioneer’s view, will not go below \$16. The auctioneer then enters into negotiations with A, which has inside knowledge of the \$14 budget estimate, due to its “partnership” with the auctioneer, and, as such, quickly arrives at the target figure. If conclusion of the procedure by the auctioneer were contingent on a “take it or leave it” offer of \$14, B would accept lowering its proposal to the established price.

If the auctioneer could alter the estimated amount, he could simply establish the amount of \$5 for B and \$14 for A, making it even easier to rig the bid for A.

In the end, post-auction negotiations based on confidential budget estimates make steering of contracts and/or bid-rigging even easier. Introducing a mechanism such as “take it or leave it” and deposit of the budget estimate with an independent public authority could serve as effective instruments to prevent this scenario.

Ultimately, it is not clear if the greater flexibility provided in the RDC has contributed to reducing the risk of bid-rigging or steering of contracts.

#### **IV) CONCLUSION**

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Cartels in procurement procedures are a common and familiar phenomenon in international experience. In Brazil the Secretariat of Economic Law (Secretaria de Direito Econômico – SDE/MJ), a component body of the Ministry of Justice, prepared a primer in 2008 on cartels in procurement procedures with tangible guidelines for public administrators. The primer was based on the accurate premise that this is a promising area for advocacy on behalf of competition in the framework of a broader educational effort among public officials on how cartels operate.

There is a general perception of widespread fraud in procurement procedures in Brazil. A substantial portion is directly associated to steering of contracts, not necessarily to cartel formation. Clearly, pure steering of contracts is a simpler matter, as the problem involves fewer parties than the daunting specter of collective action by cartels. It is

important to assess if the steering of contracts in the specific case at hand is a complement to or a substitute for bid-rigging.

The recent trend in procurement mechanisms in Brazil has evolved from the first-price sealed bidding format provided for in the “competitive bidding,” “invitation to bid,” and “request for proposal” modalities to the onsite reverse bidding procedure (2002) and, subsequently, the electronic reverse bidding procedure (2005), both of which consist of two-stage auctions composed of an initial sealed bid and a second open bidding process. The RDC, the most recent modality, has been applied to specific large-scale events, such as the 2014 FIFA World Cup and the 2016 Summer Olympics, although the method raises questions in regard to the risks of bid-rigging and steering of contracts.

The migration of models based on sealed bids to models founded on two stage reverse bidding procedures in which the open bidding stage is the most relevant may have, contrary to initial expectations, expanded, instead of reduced, the predisposition to cartel formation in public procurement procedures. The absence of limits on the number of bidders who move on from the first stage to the second stage in electronic reverse bidding procedures, in contrast to what occurs in onsite reverse bidding procedures, has rendered the first stage redundant in practice, further stimulating collusion.

On the other hand, the anonymity of bidders in electronic reverse bidding procedures represents a significant advance in the effort to prevent cartels. It is our view that incorporating a relevant initial sealed bid stage in the electronic reverse bidding procedure would offer an important contribution to ensuring the net effect of this procurement modality was the prevention of cartel formation.

There is a need for further quantitative studies of the net impact of these changes on the predisposition to cartel formation in Brazil. The evidence most often cited by the government consists of comparative analyses between price quotes (or searches) prior to procurement procedures and final price bids submitted in procurement procedures, a method we view as wholly inappropriate given the tendency to overestimate price quotes.

A change introduced by the onsite reverse bidding procedure which could have significant repercussions on the dynamic of auctions involves the auctioneer’s authority to negotiate the prices paid following conclusion of the bid stage. The discretion provided through this mechanism could offer ample opportunity for steering of contracts and/or bid-rigging. It is not clear that the added flexibility incorporated in the applicable procurement legislation is desirable.



The most recent addition to Brazilian procurement procedures, the RDC, is a temporary regime, restricted to large-scale events such as the World Cup and the Summer Olympics, as well as the Growth Acceleration Program (PAC).

We believe the single most consequential innovation introduced by the RDC involves the auctioneer's discretion to choose the type of procedure employed, including greater latitude in applying the "best technical proposal" criterion in place of the "lowest price" criterion. This can contribute to a more effective design of the specific procurement procedure in response to the most pressing challenge identified. What is not clear is if auctioneers in the public sector have any awareness of the critical choices before them.

Indeed, if the risk of steering of contracts (with or without bid-rigging) is prevalent, providing greater flexibility could have an unintended effect. Instead of designing a well-balanced auction to prevent the problem of cartel formation, the result could be a large number of public administrators doing just the opposite.

This, to our mind, is a core component of the basic trade-off underlying Brazil's procurement law. On the one hand, there is widespread agreement that Law 8,666/93 is excessively bureaucratic, hampering the efforts of well-intentioned public officials to execute good procurements for the government. On the other hand, an explicit and more restrictive prescription of the steps which may be adopted tends to reduce the capacity for steering of contracts by corrupt public officials and/or bid-rigging. Incorporating greater flexibility in the RDC could offer an ideal opportunity for testing this trade-off in the Brazilian context.

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