Mariano A. Pando
AUCTIONS WORKSHOP

SUMMARY: "(ANTI-) COMPETITIVE EFFECTS OF JOINT BIDDING AND BIDDER RESTRICTIONS" (by Vijay Krishna and John Morgan)

The paper addresses the effect of joint bidding and bidder restrictions, on bidding behavior and on the expected revenues received by the seller. By joint bidding, we mean the pooling of individual bidders into a single group submitting one bid, whereas bidder restrictions are those imposed by the seller on the number of bidders allowed to participate in the auction.

- JOINT BIDDING.

It has been argued that joint bidding, by reducing the number of bidders submitting bids, generates adverse effects on competition. Nevertheless, joint bidding occurs in a substantial amount of government auctions. The reasons in favor of joint bidding are related to improvements in diversification, circumvention of liquidity constraints and reductions in the cost of acquiring information. The authors provide another argument in favor of joint bidding, which they call "inference effect". This inference effect mitigates the winner's curse, resulting in more aggressive bidding and eventually in higher expected revenues for the seller.

The authors consider the following auction setting: a single object common value auction, where each potential bidder receives an iid signal, and the value of the item is just the average of all the signals. They call this setting an "average signals common value auction". Moreover, they only study the second-price auction. Within this framework, two cases are analyzed: the symmetric joint bidding groups and the asymmetric joint bidding groups.

a) Symmetric joint bidding groups:

Assume there are km bidders. It is shown in Milgrom and Weber (1981), that in a second price auction, it is an equilibrium for a bidder with signal x to bid the expected value of the object conditional on his own signal being x and conditional on the highest of the other km-1 signals also being x. Now, consider a situation in which the km bidders are assigned to k>1 joint bidders groups, each with m>1 members. It is shown that the bidding behavior of each group will depend upon the average signal received by each group.

It is proved in the paper that within this framework, symmetric joint bidding groups lead to more aggressive bidding than in the case of solo bidders. They attribute this result to the fact that there is a difference between the expected value of the item to a solo bidder with signal x and the value when the same bidder participates in a joint bidding group. This difference is given by the occurrence of two effects: the "information pooling effect" and the "inference effect". The former arises from the increased information conveyed by the winning bidder's own signal. The latter is due to the fact that the expected value of exceeding all other pooled signals is greater than the expected value of exceeding all of the signals individually. This mitigates the winner's curse effect. Both effects lead to increased bids.

The results of symmetric joint bidding groups on the expected revenue received by the seller is examined in two examples. They show that with exponentially distributed signals and a given number of groups, the expected revenues are higher than with solo bidders. Nevertheless, this

result seems not to be robust to the number of groups participating in the auction, since it is mentioned in the paper that when k=2, the expected revenues are actually lower.

b) Asymmetric joint bidding groups:

The authors model this case as follows: there are three bidders, each of whom receives an independent signal from some continuous distribution. Now suppose that bidders 1 and 2 form a bidding group and bidder 3 bids independently as a solo bidder. It is shown that an equilibrium in this setting has bidder 3 bidding his signal and the group bidding the average of one and two's individual signals. The result is that in this model, both the solo bidder and the group bid more aggressively.

As regards the effect on revenues, the authors show an example in which the seller gets higher expected revenues in the case of joint bidding. Again, this result seems not to be robust to the choice of the distribution function of the signals.

- PARTICIPATION RESTRICTIONS.

The effect of restricting the number of bidders participating in an auction is analyzed by the authors. They assume that the auctioneer randomly excludes some potential bidders from submitting bids. This assumption is important because, in contrast to the imposition of entry fees or reserve prices, the remaining bidders (called active bidders) can infer nothing about the signals received by the excluded bidders.

The authors show that participation restrictions lead to more aggressive bidding by the active bidders. This result arises as a consequence of the reduction in the winner's curse effect through the exclusion of potential bidders.

The examples provided in the paper regarding the effect of participation restrictions on the expected revenues is very ambiguous and depend on, mainly, the specific functional form of the distribution functions of the signals.

- CONCLUSION.

The main conclusions of this paper can be summarized as follows:

1) In contrast to the traditional opinion, joint bidding and participation restrictions may cause more aggressive bidding and eventually higher expected revenues for the seller, due to information pooling and inference effects.

2) The competitive effects of imposing restrictions on joint bidding and private negotiations is ambiguous. More empirical research is needed in order to assess the competitive effects of this change in rules.