What Factors Determine Auction Prices in Privatization?

Auctioning public enterprises is a standard way to achieve a fundamental objective of privatization: generating government revenue. This Note reports on a new study that empirically examines what determines auction prices in privatization. Three sets of determinants are considered: company and industry characteristics, the auction process and its requirements, and enterprise restructuring policies prior to the sale. The Note first discusses why these sets of factors may influence prices and in what direction. Then it outlines the characteristics of the study sample—more than 100 privatization transactions in Mexico between 1983 and 1992—and presents the empirical results from testing this sample against expectations.

The results provide answers to such questions as: Do the timing and design of the auction process matter for privatization prices? What restructuring policies are worth implementing before privatization? Is speed a key ingredient in precluding further government intervention during the sale process? An important lesson from Mexico’s experience is that the direct costs of restructuring prior to sale can be substantial and some of the most popular restructuring programs, including debt absorption and efficiency programs, do not increase sale premiums.

**Company and industry characteristics**

A state firm’s operating and financial performance before privatization is likely to have a significant impact on auction price. But price is also likely to be influenced by the set of contracts between the state firm and its stakeholders, including workers, managers, and shareholders. Labor issues usually matter more in state enterprises than in private firms. Public sector unions tend to place greater weight on high employment levels than do private sector unions, and public union contracts are typically generous by industry standards. Because restructuring by newly privatized firms is likely to be directed at cutting excess employment and bringing wage levels closer to industry standards, strong and active unions may have a negative impact on price.

The presence of private shareholders at the time a firm is privatized might also have an important effect on prices in a public auction. For any level of preprivatization performance, privatizations in which a controlling share is sold might be associated with higher prices. And in privatizations in which the government sells a minority shareholding in what is already a privately controlled firm, bidders might pay low prices, since the benefits of control would accrue to the preexisting controlling shareholder. The benefits of control may be large in such countries as Mexico, which have weak legal systems and poor investor rights. If outside investors are reluctant to become partners in closely held corporations in Mexico, prices might be very low, and in noncontrol privatizations the preexisting shareholders might be the only bidders.

At the industry level, the firm’s market share and the regulation, trade barriers, and market structure might play a part in determining privatization premiums. Industries dominated by government-owned firms often enjoy higher protection and favorable regulation. (This may reflect political objectives: politicians may try to shield state enterprises from competition to increase their profitability and thus reduce the subsidies channeled to those firms.) Such treatment might bring higher prices for firms in these in-
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dustries if bidders expect favorable treatment to continue. Also inducing bidders to pay higher prices might be an expectation that industries dominated by state enterprises have the most to gain when opened to private ownership.

The auction process and its requirements

Prices might also be influenced by the type of auction mechanism, its implementation and timing, and the order in which companies are auctioned. If learning is important, for example, governments might start by privatizing companies in competitive sectors, where any errors will have less impact, and end by selling firms in oligopolistic or nontradable industries, where mistakes may be more costly. And it is possible that as privatization and its results become better known to the public, credibility could increase, translating into willingness to pay higher premiums.

The study's analysis of the impact of speed focuses on the reaction of insiders to the news that their firm will be privatized. The announcement or even the rumor of a firm's privatization could trigger a change in stakeholders' behavior. Like a firm in financial distress, a firm about to be privatized might experience lower productivity, lower performance, wage increases, costly liquidations, or outright theft of assets.

Both theoretical and empirical work so far on the structure of auctions and competition among bidders suggests that more competitive auctions should lead to higher prices. Other characteristics of the auction's structure—such as possibilities for renegotiation or for several rounds of bids when the initial offers do not reach the minimum price expected by the seller—also influence bidding strategies and therefore prices. Another influence on competition in the auction process is participation by foreign investors. The government may favor domestic groups by isolating the sale from foreign bidders. But opening the process to foreign bidders should drive up prices by increasing competition and reducing scope for collusion, particularly in oligopolistic industries of developing countries. Insufficient domestic private savings, often an issue in Eastern Europe, may be another argument for allowing foreigners to bid. Auction requirements that serve to reduce participation, such as bidder prequalification and restrictions on the form of payment (for example, cash-only sales), can also affect prices.

Prior restructuring

What can the government do prior to a firm's sale to raise the price? Or should the government sell as fast as it can without attempting to restructure the firm? There has been no comprehensive research on the effectiveness of restructuring policies, although some are advocated by international agencies, valuers, bidders, and government officials from around the world. The study looks at six types of prior restructuring: (1) change in management; (2) labor cutbacks and renegotiation of labor contracts; (3) absorption of outsiders' debt, cross-liabilities among state enterprises, or past-due fiscal debt; (4) efficiency programs to improve performance; (5) investment measures such as rehabilitation plans, agreements on financial restructuring tied to improvements in operations, or temporary reopenings of plants; and (6) de-investment, or cutting the flow of resources for physical capital.

Management shake-ups before privatization could lower premiums if the loss of experienced management results in declining performance. Or getting rid of an old team could actually improve results or reduce the financial squandering often associated with public enterprises. The old managers may be flawed if they are good at dealing with politicians but not at facing competition and market conditions.

The argument against restructuring labor contracts or firing workers before privatization is based on the premise that the private buyer may achieve these objectives at the same cost and more in line with its preferences and future investment plans. The public sector may have less bargaining power with labor than the private sector if unions can influence the outcome of
political elections. But the public sector may have a comparative advantage in bargaining with the unions if it has in place mechanisms to assist workers displaced by structural changes, such as severance payments and retraining and job search assistance programs.

If a government is willing to absorb debt, it might consider doing so especially when a firm faces large financing costs or is on the brink of bankruptcy. The net effect of debt absorption on price is uncertain. Classic finance theory would hold that a government's absorption of a state enterprise's debt should have a neutral effect on price. But it could have a negative effect if the borrowing terms for the private buyer are worse than those for the government (state enterprise). In effect, the buyer would be able to profit at the expense of preexisting creditors when debt is left in place. But the effect on price might be positive if debt absorption reduces the cost of possible financial distress from an excessively leveraged capital structure—allowing the firm to start afresh, with a new balance sheet.

Another group of restructuring policies includes programs aimed at improving the performance of a firm before privatization. Upgrading efficiency could solve its main problems, improve performance, and result in a higher privatization price if the government can take the measures more cheaply than the private sector. Governments also sometimes invest in firms before privatization to avoid shutdowns and the ensuing unemployment or to support sectors that supply basic goods or services. Or they may decide to de-invest, cutting the flow of resources and canceling previously approved investment programs. Investments to transform large firms into viable smaller units that are a better match for specialized bidders may sometimes sound reasonable. But opponents of investment plans point out that significant time and money may be required to transform state firms and that governments have a poor record in corporate reorganization. Furthermore, the buyer might achieve the same result for the same cost or less, but more in accordance with its preferences. In the extreme, if managers were investing in the wrong assets, cutting the flow of investment resources might have a positive effect on prices or no effect.

**Results**

To see what impact these sets of factors might have on auction prices, the study assembled a database on all the companies privatized in Mexico between 1983 and 1992. In the first two years, the program focused on reducing the number of state enterprises, mainly through mergers and liquidations. Overall, 96 percent of all assets privatized were sold during 1988–92, under the administration of President Carlos Salinas. By June 1992, 361 firms had been privatized—though the number of separate sale contracts was only 236. The amount of revenue generated was the main criterion in selecting the winning bidder for more than 98 percent of the firms privatized.

The firms range across many sectors, from steel mills to banks to sugar-cane mills. The data cover company and industry characteristics, bidders in the auction and their bids, and all restructuring actions taken by the government before the sale of each firm. The study focuses on the net price received by the Mexican government—after all sale, restructuring, and special commitment costs (for example, tax breaks and promised severance payments for workers) are taken into account. The net price is often very different from the price announced in the sale—in the sample, the costs averaged 33 percent of the price paid by the buyer. On average, the net prices were low—only 54 cents on the dollar of the book value of assets privatized, compared with the average of US$1.42 for publicly traded firms in Mexico during the same period.

Empirical analysis of the sample confirms that net income and capacity utilization have a positive impact on net price. The labor contract also affects privatization prices. For example, a labor union's power, as measured by the number of strikes and the cost of contingent labor liabilities, has a significant negative effect on net price. Industry traits, too, affect prices. Industries in which state enterprises produce a
large share of total output carry a premium, reflecting an expectation that favorable regulation and entry barriers will continue and that market power may have previously been underexploited. The sample also confirms that there are large premiums for majority (or control) blocks: the price paid for a controlling share is on average four times that paid for a noncontrolling one. Preexisting shareholders were the winning bidders in 83 percent of noncontrol privatizations.

Net prices rose in the second phase of the program (1988–92), when privatization was high on the government’s agenda. While the results show no positive learning or credibility effect on prices, speed turns out to be very significant. The data show that companies’ profitability and market penetration deteriorate significantly as the day of sale approaches and insiders’ incentives collapse. Firms with a shorter sale period—the time between the first rumor of privatization and the announcement of the winning bidder—fetch higher prices overall. The number of days from rumors to completion of the privatization averaged 719 in the sample, and for at least 25 percent of the firms it was more than 1,000. The analysis shows a significant discount for longer sale periods, with the price dropping 24 percent for every additional year. Also, more competitive auctions lead to higher prices, demonstrating the positive effect of broad participation. Auction requirements that limit participation, such as restrictions on foreign direct investment, reduce the price. When foreign bidders were allowed to participate, the price was on average 25 percent higher.

With regard to restructuring before the sale of an enterprise, the results suggest that it is worthwhile to replace the chief executive officer with a “privatizer” whose task is to clean up the company, reduce the waste of resources, and get the firm on the auction block as quickly as possible. Removing the chief executive officer leads to a 54 percent increase in price. Cutting employment before selling has a small positive effect on price, while renegotiating a union contract has no significant effect. Other restructuring measures, such as absorbing debt and cutting the flow of resources for new investments (de-investing), have no impact on price. Finally, investing in new physical capital and embarking on efficiency programs not only fail to improve firms’ performance, but also fail to increase prices (table 1).

Conclusion

In addition to highlighting the determinants of auction prices, the study helps explain the low net prices of privatized firms in Mexico. Part of the explanation is that state-owned firms are simply less productive than private firms. Econometric estimates suggest that the mean net price of privatized firms evaluated at the average profitability of the private sector would have risen from 54 cents on the dollar (of the book value of assets) to 85 cents. The other, probably more important part of the explanation is that a large share of the assets were wasted in the restructuring process. Suppose that the government had emphasized speed in its privatization strategy, reducing the average sale period by a year, and that firing the chief executive officer was the only restructuring step taken. Under that scenario, the econometric estimates suggest that the net price of a state enterprise that was as profitable as the average publicly traded firm would have roughly doubled to US$1.56 on the dollar of the book value of assets sold. The key lesson from Mexico’s experience: don’t do too much—just sell.