

## **Economic Perspectives on Privatization**

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**D**espite being one of the most fundamental issues in political economy, the question of the appropriate boundary between public and private enterprise received relatively little attention in mainstream economic analysis until quite recently. In the 1980s, however, programs of ownership reform were started in many developed and developing countries. Dramatic though some of these policies have been, they are likely to be overshadowed in the 1990s by even greater privatization in the reforming socialist economies.

The opening sections of this paper are organized around three broad and interrelated questions. How does ownership matter for the efficiency of enterprise performance? What is the role for privatization in financing public debts and deficits? What are the distributional and political implications of privatization? Such questions obviously cannot be given general answers: what holds for a developed, market-based economy in western Europe may not hold for a developing country with a thin domestic capital market or severe debt problems, still less for an economy emerging from decades of state control. Nevertheless, we hope to show that a relatively small set of economic principles can be applied to various cases of privatization.

One way to characterize the privatization programs of different countries is in terms of the relative importance given to three types of privatization: 1) privatization of competitive firms—or, more generally, transfer to the private sector of state-owned enterprises operating in competitive product markets free

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from substantial market failures; 2) privatization of monopolies—transfer to the private sector of state-owned enterprises with substantial market power, like network utilities in telecommunications or electricity; and 3) contracting out of publicly financed services, previously performed by public sector organizations, to the private sector. These three types will serve as benchmarks throughout the discussion.

An important difference between types 1 and 2 is that governments frequently retain some rights of control, in the form of regulation, where monopoly power and other market failures are present. Indeed, where government involvement in the affairs of a private enterprise is substantial, the differences between public and private can become a matter of degree. Within type 2 it is important to distinguish between natural monopolies (like electricity transmission), where technological conditions imply monopoly, and “artificial” monopolies, where competition from domestic or foreign firms could exist, but is thwarted by anticompetitive industrial and commercial policies. Type 3, the contracting out case, does not involve the sale of physical assets, but it is a kind of privatization: the asset sold is a service contract or franchise agreement. Rights over any financial surplus arising from the activities concerned are transferred to the private contractor, and rights to residual earnings are central to what is meant by ownership.

France is an example of a country where privatization (in 1986–1988) concerned firms in more or less competitive industries, like banking and insurance. In Britain, while numerous privatizations of all types have occurred, utility privatizations (telecommunications, gas, electricity and water) have been of greater significance than elsewhere. In the United States, where the scope of state-owned enterprises has been relatively limited, privatization has been mostly concerned with contracting out; for example, garbage collection or hospital cleaning. In the formerly socialist economies of central and eastern Europe, a large proportion of privatizations will concern (potentially) competitive industries. Three illustrative country case studies of privatization—Britain, Chile and Poland—will be examined in later sections of this paper.

The possible methods of privatization will not be discussed in any detail here. Assets can be sold, or distributed at zero price, for example via voucher schemes. If the decision is taken to sell, there are questions of whom to sell to (individual shareholders, managers, other employees, banks, mutual funds, corporations, domestic residents, foreigners); how to sell (private negotiation, stock market offer for sale, tender, auction); what form of private participation to adopt (majority/minority stake, joint venture); what initial debt-equity ratio to set; and so on (World Bank, 1988). Other policy instruments—like competition and regulatory policies, the ability of the government to raise money without selling assets, and the existing system of redistribution—will influence both what method is chosen, and whether privatization is appropriate. The general point is that privatization policies should be evaluated not only with

regard to given objectives but also in the light of alternative ways of attaining those objectives.

## How Does Privatization Affect the Efficiency of an Enterprise?

The relationships between ownership, incentives and efficiency are numerous and complex, and our analysis will proceed in steps. We shall consider how privatization can change the objectives of the firm's ultimate owners, the possibilities for government intervention, and ways of monitoring managerial performance. We also discuss relationships between ownership and competition in determining incentives for efficiency. Finally, the empirical evidence on ownership and efficiency is mentioned. The evidence suggests that private ownership has efficiency advantages in competitive conditions, but does not show either public or private ownership to be generally superior when market power is present. Policy towards competition and regulation appears to be very important in the latter case. Indeed, the need to consider the effects of ownership, competition and regulation jointly will be central to the analysis that follows.

### Owners' Objectives

Let us begin with a simple benchmark model. Following Shapiro and Willig (1990), suppose that under public ownership the firm is run by a minister or government bureaucrat whose maximizes an objective function that is a weighted average of social welfare and his or her personal agenda. The personal agenda could consist of a variety of elements: redistribution to favoured interest groups, high wage and employment levels in particular enterprises or sectors, patronage, and so on.<sup>1</sup> Under private ownership, by contrast, suppose that the firm is run for the maximization of profit. Profit is a component of social welfare, but there might also be external effects on welfare from the activities of the firm. These include effects on consumer surplus if the firm has market power, effects due to input market distortions, distributional effects, and so on.<sup>2</sup>

In each case, social welfare and the objectives of the decision makers diverge. In competitive market conditions (and in the absence of other market failures), externality effects are small, so private profit and social welfare objectives are closely aligned, and private ownership is likely to have the

<sup>1</sup>More formally, let us assume that under public ownership the firm is run by a minister or government bureaucrat whose objective  $V$  is a weighted average of social welfare and his/her personal agenda  $P$ :  $V = W(x) + \mu P(x)$ , where  $x$  is a vector of decision variables. The parameter  $\mu$  here reflects the weight given to the private agenda relative to social welfare.

<sup>2</sup>Denoting welfare by  $W$ , profit by  $\pi$ , and the externalities, notably including consumer benefits, by  $E(x)$ , we have  $W = \pi + E$ , or equivalently:  $\pi(x) = W(x) - E(x)$ .

advantage, especially if the public bureaucrat has considerable scope to pursue his or her personal agenda. On the other hand, public ownership may have the advantage if externalities are larger and the pursuit of personal agendas is more constrained, for example by a well-functioning political system.

### **Government Intervention**

This simple approach assumes (among other things) that privatization entails the transfer of all decision-making authority to private hands. But is it credible or desirable for there to be no government intervention in the decisions taken by the firm?

Sappington and Stiglitz (1987) argue that privatization affects the transactions costs of government intervention in enterprise decision-making. For example, subsidies to loss-making activities are fairly common under public ownership. Privatization does not imply a binding commitment by government not to subsidize losses—as witnessed by Chrysler in the United States and British Leyland in the UK—but subsidization is clearly easier under public ownership. Similarly, cross-subsidies that serve political and distributional goals are often a feature of public enterprise pricing. Taxes and subsidies could induce a privatized firm to maintain such a pattern of pricing, but with less ease and less covertly than under public ownership. Of course, competition is even more likely to undermine cross-subsidies in pricing, irrespective of whether there is public or private ownership.

Where monopoly power (or other externalities) are important—that is, in type 2 privatization—intervention by government is likely to be desirable on welfare grounds, and regulation is called for. When a firm is both privatized and regulated, much depends upon the nature of the game between the firm and the government. For example, if the firm chooses sunk investment expenditures to reduce costs, it runs the risk that the government might opportunistically decide to enforce low prices, without allowing the firm to recover its costs. This kind of problem is familiar from the work of Oliver Williamson (1975). It can give rise to problems of underinvestment.<sup>3</sup>

It follows that the welfare effects of privatizing monopolies depend significantly upon how well regulatory problems are overcome. Regulation might even reinstate the problems of public officials acting in their own interest that privatization was intended to sidestep.<sup>4</sup>

<sup>3</sup>This underinvestment problem, which arises if the regulator cannot fully commit not to behave opportunistically, is to be contrasted with the well-known overinvestment problem under rate-of-return regulation explored by Averch and Johnson (1962). Greenwald (1984) argues that rate-of-return regulation can be viewed as a means of commitment that addresses the underinvestment concern. Gilbert and Newbery (1988) describe how this problem may be less severe in a multi-period framework, since opportunistic behavior by a regulator today can have negative consequences for future regulatory objectives. Grossman and Hart (1986) provide related analysis about the importance of the institutional setting.

<sup>4</sup>That is not, of course, to say that public ownership and regulated private ownership have identical consequences. One possible difference lies in the information available to the government decision maker (Shapiro and Willig, 1990).

### **Monitoring Managers**

A criticism often made of public ownership is that incentives to monitor managerial behavior are poor, leaving managers considerable discretion to pursue their personal agendas. However, managers of state-owned enterprises are typically responsible to political decision makers, and while the discretion of politicians to impose their own private agendas can be explained by the limitations of political institutions as monitoring systems, it is not obvious that this will also lead to managerial discretion. Political fortunes might not normally be very sensitive to overall state-owned enterprise performance, and politicians may lack strong incentives to monitor enterprise management. However, some decisions (like plant closures) tend to be very sensitive politically, and the performance of state-owned enterprises may become a priority item on political agendas at certain times, like when the enterprises are losing money and state budgets are being tightened. In such situations, managerial discretion in public enterprises may be more limited.

Privatization alters the means of monitoring managerial behavior. In particular, capital market pressures may be brought to bear.<sup>5</sup> The transferability of private ownership rights reveals information via prices, like share prices. If the stock market is efficient, these prices capitalize the consequences of current actions for future profits. The resulting information can be used in contracts between shareholders and managers—remuneration packages may include stock options, for example—and it might have further incentive effects via the managerial labor market (Fama, 1980; Holmstrom, 1982b). However, if the efficient markets hypothesis is not true (the evidence on this is mixed—see the symposium on bubbles in the Spring 1990 issue of this journal), then the information conveyed by share prices has less value for monitoring purposes.

Moreover, most important cases of privatization (of types 1 and 2) have concerned large corporations with numerous shareholders. With dispersed shareholding, which was actively promoted in privatizations that aimed to widen share ownership (like the utility industries in Britain), obvious free-rider problems remain for shareholder monitoring. It is here that the threats of takeover and bankruptcy become important. The effectiveness of the discipline on managers arising from the threat of takeover remains a subject of controversy (for example, see the symposium in the Winter 1988 issue of this journal), and the dispute has clear implications for privatization.

The threat of bankruptcy, which is also a kind of monitoring device, is another difference between public and private ownership. It can significantly affect bargaining over matters like wages and employment.<sup>6</sup> But the differences should not be exaggerated. Hard budget constraints have been successfully

<sup>5</sup>In economies where capital markets are undeveloped, privatization may be used as an element of policy to promote their development.

<sup>6</sup>It is important to distinguish between the distributional and efficiency effects of soft budget constraints. High wages, for example, show up in firm deficits, but do not necessarily imply (technological) inefficiency.

applied to state-owned enterprises, at least at times. Regulators of privatized utility companies in Britain are effectively required to ensure that they do not go bankrupt. And government has many ways to loosen the budget constraints for private firms, including subsidies, loan guarantees, trade protection, and ultimately nationalization.

### **The Role of Competition**

Competition, which is conceptually distinct from ownership, can greatly improve monitoring possibilities, and hence incentives for productive efficiency. In particular, competition facilitates performance comparisons, which can generally improve tradeoffs between incentives and risk when several agents (managers) facing correlated uncertainties are being monitored (Hart, 1983; Holmstrom, 1982a; Nalebuff and Stiglitz, 1983). Thus, product market competition is important for performance not only for familiar reasons of allocative efficiency but also because it enhances productive efficiency. As Adam Smith (1776/1976, page 163) put it two centuries ago: "Monopoly, besides, is a great enemy to good management, which can never be universally established but in consequence of that free and universal competition which forces every body to have recourse to it for the sake of self-defence."

But head-to-head product market competition, or even the threat of it, does not always exist. If competition has been suppressed by the state through legal barriers to entry, trade protection and the like, as in much of central and eastern Europe, then deregulation and liberalization of markets may suffice for a reasonably rapid transition to competitive markets. Then privatization can be of type 1 (competitive) rather than type 2 (monopolistic). On the other hand, experience in Britain (described below) shows that the legalization of entry does not always lead to effective competition by itself. Regulation for competition may then be a desirable complement to privatization.

The bundling of privatization with the promotion of competition is precisely what contracting out (type 3 privatization) involves. The shift is from monopolistic public supply to private supply (unless the public enterprise wins the contract) with competition. However, contracting out has some potential pitfalls (Williamson, 1976). First, competition for contracts may be ineffective from the outset, perhaps because of collusion, or subsequently as advantages of incumbency accumulate. Second, depending on the observability and transferability of investment, underinvestment can cause problems of dynamic efficiency. Third, for all but the simplest of goods and services, there is generally a continuing role for government authority in contract administration—monitoring, enforcing, bargaining over unspecified contingencies, and so on—and these activities may be only a short step from regulation or having the public agency oversee the work directly. In the end, what matters is how the combination of ownership and regulation under private ownership compares with ownership and (implicit or explicit) regulation in the public sector.

### **Evidence on Ownership and Efficiency**

What follows is simply a summary of some of the main conclusions from empirical studies of the comparative performance of public and private enterprise. (For detail, see Vickers and Yarrow, 1988, chapter 2; Boardman and Vining, 1989.) First, some of the difficulties facing empirical analysis must be noted. They include problems of measuring key variables (like allocative efficiency), the relative scarcity of cases where like-with-like comparisons can be made between public and private firms, the limited time that has elapsed since many major privatizations, and difficulties in distinguishing between the effects on efficiency of changes in ownership, competition and regulatory policies.

In competitive environments (relevant for type 1 privatization) some like-with-like comparisons of performance have been made. An example is the study of Canadian railroads by Caves and Christensen (1980). Once competition was introduced, there was no evidence of inferior performance by publicly-owned Canadian National relative to Canadian Pacific, its private rival. The authors concluded that public ownership was not inherently less efficient than private ownership in this case, and that competition rather than ownership per se was the key to efficiency. However, in competitive conditions, the two types of ownership are likely to be of similar efficiency if state-owned enterprises are not unfairly supported. Boardman and Vining (1989), in their international cross-section analysis of competitive industries, find that state-owned enterprises are less profitable and less efficient than private firms. Overall, the evidence suggests that in competitive industries private ownership is generally (though not universally) preferable on efficiency grounds, and that competition may be a more important influence than ownership.

Studies of contracting out (type 3 privatization), which implies an immediate increase in competition, reach similar conclusions. Donahue (1989) concludes from his study of U.S. privatization that most of the benefits of contracting out have come from the greater scope for rivalry than from private provision per se. However, it may be difficult to introduce rivalry without some private ownership, and, in this context, some privatization may be necessary but not sufficient for substantial performance improvements.

Turning to cases of industries with natural monopoly elements (relevant for type 2 privatization), like water and electric utilities, the results of the empirical studies are very mixed: some give the advantage to public ownership, others to private ownership, and yet others can find no significant difference between the two. Substantial performance differences among utilities do, nevertheless, exist, both within and between countries. The major factor that appears to be at work is regulatory policy. This point is supported by before-and-after comparisons of enterprise performance when there is a major shift of regulatory regime. For example, there have been significant changes in the productivity performance of some protected nationalized industries in Britain since the regulatory reforms of the late 1970s and early 1980s, which emphasized tighter

financial constraints (Molyneux and Thompson, 1987). British Steel is a very good example.

Perhaps the most important point to emerge from the evidence is the importance of competitive conditions and regulatory policies, as well as ownership, for incentives and efficiency.

## **Raising Revenue**

Privatization is likely to influence the profit streams of firms, for all the reasons just discussed. Moreover, it gives governments the opportunity to capitalize those profit streams and raise immediate revenue (or promote distributional ends by underpricing assets as described in the next section). Like the sale of government bonds, privatization converts future cash streams into present cash sums.

Where privatization increases profits in ways not feasible under public ownership (for example, because of greater efficiency), revenue-raising advantages can enhance the already existing case for privatization (Jones, Tandon and Vogelsang, 1988).<sup>7</sup> If privatization does not increase profits, can it nevertheless have advantages on revenue-raising grounds? To examine this question, let us assume that privatization has no effect on the firm's earnings prospects.

In terms of transactions costs, selling bonds would appear to be a less costly way of raising revenue than privatization (selling equities). Many countries, especially in the developed world, have liquid bond markets, so that bonds can be priced quite accurately (or simply auctioned), whereas with equities there can be a tendency to underpricing (as explained further in the next section). Direct costs of sale—prospectuses, advertising, underwriting, and so on—are also higher with equity sales.

Governments constrained in their ability to sell bonds, like some Latin American countries facing debt crises, might nevertheless favor equity sales. The private discount rate applied to bonds might be higher than that applied to equities if the perceived risk of default on bonds is higher than the equity risk; that is, if the government commitment not to expropriate equity holders is more credible than the commitment not to expropriate bondholders. Expropriation of bondholders can occur by inflation (unless the bonds are indexed), by the withholding of interest payments, or by non-repayment of the principal. Expropriation of equity returns can occur by outright nationalization (without proper compensation), or less directly, by tightening price or environmental regulation once privately financed investments have been sunk. The credibility

<sup>7</sup>Note that this argument depends on the gains in profits being unobtainable under public ownership. For example, it would certainly be fallacious to favor on revenue grounds the privatization of a monopoly because it would lead to greater exercise of monopoly power and hence profits, which would be capitalized in privatization proceeds, if monopolistic pricing could also be implemented in the public sector.



of government commitment not to “default on equity” is likely to vary by industry, as sunk costs and the extent of regulation vary, and by country, as legal and political institutions and international relations differ. It may also depend on the way that privatization is carried out, such as whether the assets are sold to domestic residents or foreigners, or whether large or small investors are encouraged to buy.

Finally, another reason governments may feel constrained in selling bonds is that many have promised not to do so. For example, the British government in the early 1980s was committed to limits on public sector borrowings to make its anti-inflationary stance more credible. These constraints had led to what were considered undesirable limitations on the investment programs of state-owned enterprises such as British Telecom. Privatization moved the borrowings of these state-owned enterprises out of the public sector accounts, and thereby freed them from the government-imposed constraints. Since the real macroeconomic effects of the firms’ borrowings are much the same irrespective of whether they are deemed “public” or “private,” this seems rather curious. Maybe signalling considerations can explain how privatization could save anti-inflationary face in these circumstances?

The revenue-raising argument for privatization depends on the circumstances of a particular country and the credit rating of its bonds. For a developed economy with a stable financial and political system, the risk of default on bonds is likely to be low, and it is hard to make the case for privatization purely on revenue grounds. But for a less developed country prone to bouts of rapid inflation, bond sales may be constrained in such a way that there is a pure revenue motive for the privatization of firms in sectors where the “default” risk on equity is not too great. Because this risk is related to the availability of regulatory instruments, these tend to be the more competitive (and hence less regulated) sectors, where the efficiency case for privatization is already the strongest.

## **Political and Distributional Issues**

Privatization presents significant opportunities for redistribution of income and wealth. Just as aspects of regulation can be analyzed in terms of their implicit tax and subsidy aspects (Posner, 1971), so too can some aspects of privatization programs.

In discussing distributional issues, it is useful to identify the major groups which might be affected by privatization. Apart from political decision makers themselves, these include consumers, employees (including managers), new shareholders, taxpayers, suppliers of inputs other than labor, and suppliers of “privatization services” like financial institutions responsible for handling the sales, recipients of advertising revenues, consultants and lawyers.

Consumers will be affected by changes in both the level and structure of prices of newly privatized enterprises. Here, as elsewhere, policies towards competition and regulation are also very important. For example, the creation of a privatized monopoly subject to weakened price controls could be a method of raising revenue less overtly than by an equivalent increase in commodity taxation. Peltzman (1989) has put forward the hypothesis that state intervention in the utility industries has tended to suppress spatial (often urban versus rural) price differentials associated with economies of density, usually by creating monopoly rents which are partly used (implicitly or explicitly) to cross-subsidize high-cost consumers. If the policy preference survives privatization, then the promotion of competition may be sacrificed to the distributional objective, since competition will undermine the cross-subsidization unless explicit taxes and subsidies are used.

Many privatization programs, as in Britain, have included schemes to allow enterprise employees to acquire shares in their organizations on particularly favorable terms. The rationale for these policies may be based upon the perceived efficiency-enhancing incentive effects of employee share ownership, but these are questionable in large firms. There may also be a desire to compensate employees for potential loss of rents accrued under public ownership, or to influence the longer-term probability of re-nationalization.

However, this last point is questionable. Pressure from workers for public ownership is likely to be strongest when their firm is in financial difficulties. But share values will tend to be low in that case, and, even if employee shareholding exists on a substantial scale, protecting returns to labor may be the overriding priority. Moreover, employee share ownership gives workers extra incentives to oppose policies promoting effective competition and regulation. Thus, what was initially a compensation for loss of privileges may, at a later date, provide stronger incentives for the restoration of those privileges.

The most immediate and dramatic distributional effects of privatization are those resulting from the pricing of privatized assets. Discounts on the market clearing price are a transfer of wealth to the new owners from the wider public, and from taxpayers in particular. Generous pricing may be politically attractive both because it reduces the risk of the shares being unsold (which could be embarrassing), and because the beneficiaries tend to be more aware of their gains than the losers feel the losses. It is costly in (national) welfare terms, however, if there is a premium on public funds, if part of the windfall goes abroad, or if the gainers tend to be wealthier than the losers and, other things equal, there is a preference for more egalitarian wealth distribution.

Pricing at substantial discounts to market values is often associated with policies to promote wider share ownership, together with measures like share allocation rules that favor small investors, and inducements for them to hold on to their shares rather than sell out at a quick profit (for example, loyalty bonuses and discounts on purchases of goods or services from the privatized enterprises). Such methods have been used in the sales of utility industries in Britain, for example.

In the limit, shares can simply be distributed free of charge, either directly or in the form of vouchers that are redeemable for shares in former state-owned enterprises. For example, in 1979 the government of British Columbia in Canada gave each resident five shares in its Resources Investment Corporation. Government revenues are foregone in this process, which is costly to the economy depending upon the social costs of public funds, but it satisfies fairness criteria, may reduce transactions costs, and avoids the transfer abroad of windfall gains that may be a feature of alternative methods of privatization. Free distribution of shares, or something close to it, might be the only practicable means of rapid domestic privatization (as opposed to sales to foreigners) in economies where individual savings are meagre. On the other hand, in some circumstances, selling shares might be a way of absorbing "monetary overhang" resulting from forced saving due to past rationing in non-market economies.

Finally, another motive for wider share ownership is to make it more difficult for a future government to reverse privatization. The numerous new shareholders acquire some financial interest in the continuation of policies (and governments) beneficial to the profitability of the firms that they own, and in the avoidance of policies (and governments) liable to cause them capital losses, such as renationalization on poor terms.

## **Privatization in Practice in Three Countries**

### **Britain**

Privatization in Britain has involved various policies. Large amounts of public sector housing stock were sold the early 1980s. There has been considerable contracting out of services at local government level and in organizations such as the National Health Service. However, the discussion here will focus on the transfer of state-owned enterprises to private ownership, which is the aspect of the policy that has attracted the most international attention. Vickers and Yarrow (1988) provide a detailed account of this program.

In 1979, at the beginning of the privatization program, state-owned enterprises accounted for about 10.5 percent of Britain's gross domestic product. The greater part of public enterprise output came from state monopolies in telecommunications, gas, electricity, water, rail transport and postal services. However, major state-owned enterprises also existed in competitive or potentially competitive industries such as steel, coal, oil and vehicles.

Studies of the performance of the state-owned enterprise sector during the 1960s and 1970s found numerous specific examples of inefficient resource allocation, but overall productivity growth was broadly in line with that in the British private sector (Molyneux and Thompson, 1987). The state-owned enterprise sector did, however, have substantial, persistent financial deficits in the pre-privatization period. This deficit amounted to over 20 percent of the

state-owned enterprises' contribution to GDP in 1979, which was down from a high of over 35 percent in 1975. This reduction reflected changes in public policy that placed much greater stress on financial objectives for public enterprises, and the emphasis on financial objectives was increased further by the Conservative government that came to power in 1979.

Privatization of state-owned enterprises was barely mentioned in the Conservative party manifesto of that year, but the great majority of state-owned enterprise assets have now been privatized, leaving coal, rail and postal services as the only major industries still in the public sector. This transfer of enterprises to the private sector can usefully be divided into three phases, corresponding to the periods between national election years.

*Phase 1: 1979–83.* Asset sales in the first phase were concentrated on enterprises other than the major monopolies that lay at the heart of the public sector. These included Associated British Ports (port operations), British Aerospace (aircraft and defence contracting), Britoil (North Sea oil exploration and production), Cable and Wireless (telecommunications operations), National Freight (road haulage), and sales of stock in British Petroleum (already part privately owned). Although some of these firms possessed pockets of market power, to a first approximation they can be regarded as examples of the first of our three benchmark cases of privatization. Total privatization proceeds were no higher than £500 million per annum during this period.

Both efficiency and revenue objectives were involved in these privatizations. For example, National Freight was a deeply discounted management/worker buyout, which had incentive effects, but raised little revenue for the Treasury. On the other hand, the sale of shares in British Petroleum, which could not be expected to make much difference to incentives, raised substantial amounts. Similarly, the sale by tender of shares in Britoil in 1982 can be viewed as a forward sale of oil motivated chiefly by revenue considerations. At the time British macroeconomic policy was committed to limiting the public sector deficit, which was under pressure because of recession.

During this period, the government was also active in competition and regulatory policy. Stricter budget constraints were placed on state-owned enterprises and were sometimes accompanied by new management, most notably in the steel industry. Legislation was introduced with the aim of increasing competitive pressures on state-owned enterprises in the telecommunications, gas, electricity and road transport industries. In telecommunications, for example, a second public network operator, Mercury (owned by Cable and Wireless), was licensed in 1982 to compete with British Telecom. Although the impact of some of these measures turned out to be disappointing (because entry-detering strategies of incumbent firms went largely unchecked) the legislation does indicate that increasing efficiency was an important policy goal at the time.

*Phase 2, 1983–87.* Sales of enterprises operating in reasonably competitive industries continued, including Enterprise Oil (oil exploration and production), Jaguar (motor cars), the Trustee Savings Bank, British Airways and Rolls-Royce

(airplane engines). The distinguishing feature of this second period, however, was the first sale of a utility/network industry, in the form of the flotation of just over 50 percent of British Telecom shares in November 1984, which raised £3,900 million less costs, followed by the sale of British Gas in December 1986 (£5,600 million). These two privatizations mark a shift in emphasis in the program toward the second benchmark type of privatization.

When the government announced its intention to privatize British Telecom in 1982, it emphasized allowing British Telecom access to capital markets, so that investment in new technology could be undertaken without increasing public sector borrowings (which were constrained by the macroeconomic commitments referred to above). In addition, because privatization proceeds are treated in British public sector accounts as negative public expenditure, selling BT would help the short-term deficit, whatever its effect on the net worth of the public sector in the long run. As explained in the discussion of revenue-raising above, selling bonds and selling equities are rather similar in economic terms, but their very different accounting treatments enhanced the attractiveness of privatization.

Another important innovation of the BT sale was the extent to which the share issue was targeted at small investors by advertising, generous pricing, share allocation rules, and loyalty bonuses to encourage individuals to hold on to their shares. For the first time, successful applicants for shares were numbered in millions, and the offer price was such that first day capital gains amounted to 33 percent on the full price and 86 percent on a partly-paid basis. A similar pattern was followed during the second phase of privatization, including British Airways, Rolls-Royce, British Gas and the Trustee Savings Bank, and with the subsequent water and electricity sales. While new equity issues by private companies typically go to a premium on the opening of trading, the average premium with these privatization issues was considerably higher. Moreover, there was a shift in methods of sale. In the earlier period, sale by tender offer and privatization of companies in stages were common. These methods facilitate accurate pricing; for example, it is easier to price shares in a company if some of its shares are already traded on the stock market. But later, especially after 1985, tendering was rarely used, and sales tended to be all in one go. This suggests that the weight attached by the government to political and distributional objectives, for example wider share ownership, had substantially increased.

The privatization of BT, the monopoly supplier of telecommunications services, raised the question of whether or not to restructure the industry before transfer to the private sector (the restructuring of AT & T in the United States was in progress at the time) and how to regulate the industry. The restructuring option was rejected: although it might have facilitated the development of competition it would have delayed privatization, perhaps considerably, and hence would have delayed the political benefits from the asset transfer. The incumbent management, whose cooperation was important in the

privatization process, was also strongly opposed to restructuring. Similar remarks also apply in the case of gas.

New regulatory bodies, the Office of Telecommunications (OfTel) and the Office of Gas Supply (OfGas), were established in connection with these privatizations. Their job is to apply price controls to the regulated firms and, within limits, to promote competition. Some of the powers initially given to these bodies were rather limited—the aim was to have “regulation with a light touch”—but they have been increasingly active in influencing market conduct. For example, in its 1988 review, OfTel successfully tightened the original pricing constraint on BT from a rule specifying that real prices must, on average, fall by 3 percent per year to one requiring a 4.5 percent per annum reduction. And a review in 1988 of British Gas’s conduct in the industrial market led to a tightening of regulation.

*Phase 3, 1987–91.* Although these years included 3 major asset sales such as British Steel and the British Airports Authority, the third phase of the program was dominated by the sales of the water (1989) and electricity (1990–91) industries. These later utility sales were similar to the earlier telecommunications and gas privatizations in that new bodies were established to regulate the industries and the sales were heavily targeted at small investors. Unlike telecommunications and gas, however, in both cases there was substantial restructuring of the state-owned enterprises before privatization. The purpose of restructuring the water industry was to separate environmental regulation, which used to be a duty of the public enterprises, from the business of water supply, rather than any notion that competition might be increased as a result. Indeed, the government explicitly recognized that the prospects for competition in the supply of basic services were poor, and instead emphasized the potential for the development of “competition by comparison” that existed by virtue of the fact that there are a number of regionally-based water utilities.

Pressures for improved water quality (for example, to meet European regulatory standards) meant that the industry was planning for a large-scale investment program. Privatization raised fears of possible underinvestment by privately-owned water utilities. Initial price controls therefore took the form of formulae which promised the regional utilities future prices which, year by year, would rise substantially faster than the general rate of inflation, provided that key investment objectives in each region were met. In effect, “regulatory contracts” were struck with the utilities allowing the latter to obtain finance for investment from consumers.

In contrast, industrial restructuring in electricity has been motivated by an attempt to increase competition. The monopoly generation and transmission enterprise in England and Wales, the Central Electricity Generating Board, has been split into four parts: two non-nuclear generating companies, one nuclear generating company, and a national transmission grid company, owned jointly by the regional distribution companies. The whole industry was originally to be privatized, but the nuclear power stations were later withdrawn from the sale

and will remain in state ownership. While a number of significant limitations on competition remain associated with this structure and with the associated regulatory regime, by international standards the measures taken with electricity supply are the most radical of the whole privatization program. In particular, generation and transmission have been de-integrated, and a quasi-spot market for wholesale power supplies has been set up. In addition, generating companies can compete with electricity distributors to supply power to larger customers, and they have successfully done so. Given its experimental nature, however, it remains to be seen how effectively the system will work in the longer term. One unanswered question is whether the essentially duopolistic structure of electricity generation will be compatible with developing effective competition in the bulk power market (Vickers and Yarrow, 1991).

The British privatization program has raised tens of billions of pounds for the Treasury, has created millions of new shareholders, and has significantly reduced state involvement in enterprise decision making in a number of industries. However, its impact on economic efficiency is rather less clear (Bishop and Kay, 1988; Yarrow, 1989). Inferences are necessarily limited by the short elapsed time since some of the more important privatizations, but, thus far, radical shifts in conduct and performance appear to have occurred in only a few cases, all of which are characterized by a reasonable degree of product market competition (like Associated British Ports, National Freight, Cable and Wireless). To complicate the interpretation of these cases, the most dramatic changes have occurred in state-owned enterprises like (pre-privatization) British Steel and British Coal, where productivity gains have been massive by any standards. In steel and coal there was less scope to meet tighter financial constraints by price rises than in more monopolized industries, and the government successfully confronted the coal miners union. Perhaps the only sound conclusion at this stage, therefore, is that the British evidence is consistent with the view that competitive conditions and regulatory environments (in the broad sense) are key determinants of performance.

### **Chile**

The history of state-owned enterprises in Chile dates back well into the nineteenth century, with the development of industries such as railroads, ports, postal services and finance. The public sector was expanded during the 1940s and 1950s, a period when the state-owned investment bank CORFO created large enterprises in sectors like steel, petroleum and electricity. Difficulties in securing imports of industrial goods, investment finance and technology in wartime conditions were motivating factors in this expansion, and the result was a state-owned enterprise sector that accounted for approximately 15 percent of GDP by the late 1960s (Luders, 1990).

During 1970–73, the Allende government sought to turn Chile into a fully socialist economy. This involved a dramatic increase in the size of the state-owned enterprise sector to around 40 percent of GDP (a significant fraction of

which was accounted for by the nationalization of the copper industry) and a range of other measures that included land nationalization, the establishment of state monopoly in international trade, and extensions of state control over enterprises and markets outside the state sector itself.

When the military government ousted Allende, privatization was part of a general policy designed to reverse the measures introduced by the Allende government. It was accompanied by measures of deregulation and liberalization, including liberalization of international trade. The privatization program in Chile, which was to become very far-reaching, has had four main stages (World Bank, 1988, vol. 2).

*Phase 1, 1974–75.* The first phase of privatization consisted largely in the simple return to their original owners of enterprises that had been nationalized in the immediately preceding period, and these transfers did not involve payments either to or from the government.

*Phase 2, 1975–83.* More than 100 enterprises were privatized in the second phase, including firms in which the Allende government had taken an ownership stake or which it had created. Over this period, the principal objective of privatization was to raise revenues for the state. In the peak year of 1975, for example, privatization raised revenues equal to approximately 3.3 percent of GDP. Though large in relation to programs in other countries (in Britain that ratio was a little over 1 percent in the late 1980s), this was but a small fraction of the fiscal deficit, which had soared to a level equal to 25 percent of Chile's GDP in 1973. Privatization proceeds fell to approximately 1.5 percent of GDP in 1976, and then to less than 1 percent per annum.

The priority attached to raising revenue had a strong influence on how assets were sold during the second phase of privatization. The main sales method was public auction followed by negotiation with the most qualified bidder. The buyers included corporations, notably banks, but not individual investors. Many of the sales involved partial payment, with the balance financed by loans from the state. The granting of loans lowered the net revenue on any given asset sale, but the procedure was intended greatly to increase the number of state-owned enterprises that could be sold quickly. One consequence of the approach was a commercial structure characterized by highly leveraged financial and industrial conglomerates and by concentrations of ownership. This structure failed to withstand the financial crisis of the 1982–83 period, when widespread bankruptcies, including bank failures, led to many of the newly privatized enterprises again being placed under state control.

*Phase 3, 1985–86.* The third phase was motivated by desires to reverse the renationalizations that had taken place during the 1982–3 financial crisis, and to promote “popular capitalism” by wider share ownership, including employee share ownership, by appropriate share pricing and allocation rules. A major goal was to foster a more broadly-based ownership structure less vulnerable to collapse and more resistant to further re-nationalization, and thereby to enhance the durability of privatization.



*Phase 4, 1986–.* Though its objectives have been a continuation of those in the immediately preceding period, most of the enterprises targeted for privatization in this fourth stage have been the state-owned enterprises whose establishment pre-dated the Allende government, including state monopolies such as the main electricity utility. In these cases, the issues and tradeoffs are, in broad terms, similar to those already discussed in relation to Britain.

The fate of many of the enterprises sold during the second phase of Chile's privatization policy illustrates the problems that can arise when different parts of public policy are not properly aligned. In attempting to privatize quickly, the government sold assets in a way that jeopardized the survival of the new enterprises, at a time when increases in market pressures were being promoted by liberalization and trade policies. While an efficiency case may sometimes exist for selling state-owned enterprises with highly leveraged capital structures, a general policy of this type, implemented in conditions of economic turbulence, would appear to have been misguided. Liberalization in advance of privatization might have been a safer policy sequence (World Bank, 1988, vol. 2). But although the second phase of privatization in Chile can generally be deemed a failure, the policy of promoting competition and regulatory reform may have had more durable effects (Luders, 1990).

Perhaps the most important lesson to draw from the Chilean experience is that privatization per se is not always an effective way to establish credible commitments to new incentive structures, and that the method of privatization may well be of crucial importance in this regard.

### **Poland**

Privatization policies in Poland are part of a much wider package of policies aimed at fostering the development of a market economy, as they are in the rest of central and eastern Europe (Kawalec 1988; Lipton and Sachs, 1990a). There are some similarities here with post-Allende Chile, although the scale of problem is greater in Poland, given both the extent and duration of state control over economic activity. Thus, in the late 1980s, state ownership dominated both the industrial and service sectors of the economy, which together accounted for over 85 percent of GDP. In the industrial sector, for example, private production accounted for less than 6 percent of measured output (although it was growing quite rapidly, and there was also considerable black market activity). Only in agriculture was private ownership prevalent.

The first priority of the incoming Solidarity government in 1989 was macroeconomic stabilization in the face of hyperinflation. Price reforms allowed enterprises to set their own prices (although state control was retained in politically sensitive areas like energy), but the aim was largely to achieve a more realistic level of prices in relation to wages. Given the nature and structure of socialized enterprises and markets, there was little expectation that the resulting price structure would provide accurate signals for the next round of resource allocation decisions.

A more distinctive feature of the Polish situation has been uncertainty about initial property rights (Lipton and Sachs, 1990b). Economic reforms in the 1980s had sought to decentralize planning functions, increase enterprise autonomy, and expand the influence of workers on enterprise decisions. Partly as a result, it was possible to find the state treasury, the relevant local government body and employees (including management) each claiming ownership rights in a particular enterprise. Lack of clarity concerning property rights is particularly damaging because it can lead to severe incentive failure. For example, managers and employees might begin to expropriate potentially productive capital. Moreover, uncertainty can lead rival claimants to devote their energies and resources to influencing the allocation of property rights, rather than to more socially productive activities. Hence, it was important for the Polish government to give a high priority to securing an acceptable property rights settlement, implying that at least some distributional issues had to be tackled before privatization could even begin. Unfortunately, conflict over the distributional consequences (including the distribution of control as well as wealth) of alternative privatization schemes acted as a brake on the development of the enabling legislation for privatization during the course of 1990.

Another distinctive feature of the situation in formerly communist economies like Poland is the lack of capitalist financial markets and institutions (like a stock market, pension funds, private banks, mutual funds, and so on). Their creation must accompany the process of privatization. Various techniques of privatization have been proposed, including distribution of shares to individuals, employees, and financial intermediaries (Lipton and Sachs, 1990b).

The desirable pace of privatization has been another subject of heated debate. There are tensions between objectives—for example, between state revenue objectives and the desire to privatize rapidly—so as not to delay the benefits of privatization and not to risk the whole process being mired down. (The difficulty of combining vigorous pursuit of revenue objectives with rapid privatization is illustrated by the outcome of phase 2 of Chile's program). Given the squeeze on household liquidity and wealth that resulted from the 1989/90 stabilization program, sale of assets to domestic nationals at anything but the lowest of prices would require a relatively slow pace of privatization. Alternatively, assets could be sold on a large scale to overseas investors, but this would risk a political backlash.

It should be noted that this argument applies to the privatization of state-owned enterprises, and not to contracting out forms of privatization. Given the extent of state involvement in service activities in the Polish economy, there is considerable scope for efficiency gains via contracting out of service provision by, for example, local government bodies. As argued earlier, the achievement of financial benefits through contracting goes hand-in-hand with the promotion of efficiency via competition for the relevant contract. Pressures on public sector budgets could, therefore, act as a factor making for the speeding up, rather than the slowing down, of this type of privatization.

An important argument against rapid privatization is that it might leave inadequate time for the creation of durable incentive structures for efficiency. For example, without market liberalization, many of the state-owned enterprises would simply be transformed into private monopolies, as happened with some of the larger privatizations in Britain. In Poland, however, the greater proportion of the state-owned enterprise sector is made up of enterprises that could quickly be subjected to increased competition by the liberalization of international trade and the withdrawal of industrial subsidies, policies that the Solidarity government has chosen to adopt independently of privatization.

A related argument for delay is that, even if the Chilean pitfall of creating highly leveraged enterprises was avoided, the withdrawal of industrial subsidies and the opening up of markets to international competition might proceed too quickly to allow efficient response. Hence, enterprises that might be economically viable in the longer term could find it hard to survive in the short term. On this view, the better sequence is to promote competition first, to establish more realistic price signals that can be used by the state to restructure enterprises, and, finally, only when these stages are completed, to privatize (a sequence followed, with great success, by the British government in the case of British Steel).

This is rather like the infant industry argument. It relies upon state ownership, rather than tariffs, to provide the necessary degree of protection, and can therefore be assumed to rest upon a favorable view of the operation of state-owned enterprises and a relatively unfavorable view of the efficacy with which capital markets function. The difficulty with it is a familiar one: the protection may never be removed.

Analysis of the tradeoffs between distributional, revenue and efficiency objectives in the Polish case, therefore, brings us back to the basic issues discussed earlier. If market failures are large relative to government failures in the new political situation, then state-owned enterprises might perform better relative to privately-owned enterprises in the period of transition than when market failures are smaller and political agendas are less constrained. If reality in Poland lies closer to the former situation, the analysis would point toward a policy sequence of partial liberalization (liberalization cannot be said to be complete when enterprise-specific subsidies are retained), enterprise restructuring within the public sector and, only then, privatization. On the other hand, a situation close to the second possibility would point towards full liberalization and rapid privatization, leaving restructuring and other major resource allocation decisions to be taken by owners or managers within the new structure of property rights.

Perhaps the most difficult aspect of the problems confronting Poland, however, is that reality does not lie close to either of the above two hypothesized situations. Rather, what will be observed through the 1990s will be the simultaneous existence of substantial externalities in several major markets (largely the result of the socialist inheritance) and of the implementation of

discretionary political agendas (associated, for example, with interest group capture of parts of the state apparatus). In the Polish case, the tradeoffs facing privatization policy appear particularly difficult.

## **Concluding Remarks**

Any form of ownership is inevitably imperfect. Market failures can lead to divergence between profit and welfare objectives in private firms. Government failure leads to divergence between political/bureaucratic and welfare objectives in state-owned enterprises. Monitoring failure leads to divergence between the objectives of enterprise managers and their principals, whether the principals are private owners or political superiors. The effects of ownership changes on welfare will depend upon the relative magnitudes of these imperfections. As a first approximation, privatization can be viewed as a means of reducing the impact of government failure, albeit at the risk of increasing market failures, and of changing monitoring arrangements.

Of course, it would be simplistic to view privatization as a universally effective remedy for agency problems in the public sector. First, where market failures are significant (and sometimes where they are not), government intervention frequently continues after privatization, so that significant opportunities for the direct implementation of political and bureaucratic agendas will often remain. Second, while privatization may increase the obstacles to government intervention, commitments not to intervene at all may lack credibility or be undesirable, especially in industries with monopoly power or other market failures. This can result in inefficient underinvestment. And the possibility of partial "default on equity" via renationalization, tighter regulation, high profits taxation, and so on, is important for the issue of whether the government should raise revenue by selling bonds or equities. Third, privatization is itself a government activity, and one with potentially large distributional and political consequences. The process of asset transfer will tend to open new opportunities for the pursuit of private agendas by political decision makers. As with other areas of public policy, privatization cannot be expected to be exempt from the impact of government failure.

The effects of privatization in any particular context will, therefore, be highly dependent upon the wider market, regulatory and institutional environments in which it is implemented. The challenge to economic analysis of privatization is to develop a more complete understanding of the implications for business conduct and performance of these complex interactions among ownership, market structure, regulatory, and political variables.

■ *We are grateful to the UK Economic and Social Research Council and Office of Fair Trading for research support, and to Carl Shapiro, Joe Stiglitz and Timothy Taylor for very helpful comments on an earlier version of the paper, and to Mark Armstrong for research assistance. The views expressed are entirely our own, and we are responsible for any errors.*

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