ON THE PERILS OF PRIVATIZATION

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> The bureaucracy often conceives that...a mind [capable of drawing up a faultless and exhaustive economic plan] is at its disposal; that is why it so easily frees itself from the control of the market.
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> — Leon Trotsky

Just a year or two ago privatization was widely regarded as the true panacea for many of the world's economies. The countries of the British Commonwealth joined the former Soviet nations and those of Latin America in the attempt to toss their nationalized industries, naked, into the marketplace. The market appeared to be accepted as the elixir that would transform moribund industries into gushing sources of abundance, and would do so overnight. Now, many are no longer so sure. Poland and the Czech Republic seem to have remained faithful, at least until recently, when the Polish Parliament rejected a critical piece of privatizing legislation. But in the United Kingdom regulators are interceding between the market forces and newly privatized firms; in New Zealand the courts are intervening; in Puerto Rico at least some privatization attempts have been called off; and in more than one former Soviet land, victory at the polls either has gone or threatens to go to representatives of the *ancien régime*, presumably an indicator of growing public disenchantment with moves toward a market economy.

The fact is that privatization has proved to be less easy to carry out and less magical in its accomplishments than seems earlier to have been believed. Disappointment has been engendered by the slow pace of privatization, the accompanying reduction in jobs, the wealth accumulated by those who are successful at the task, and the apparently long delays before its benefits emerge. These difficulties, of course, are the result of illusion and misunderstanding by the public. They do not recognize that even in the miracle economies of the Far East decades were required before the invested effort began to display fruit of noticeable dimensions. Nor is it recognized that efficiency and competitiveness require elimination of redundant jobs and that the market's incentive mechanism is founded upon the prospects of wealth for those who succeed. Never having recognized these less prepossessing attributes of the market mechanism, the public is understandably distressed when they show themselves.

Perhaps most disturbing, however, is the propensity of even well-intentioned public servants to sabotage the process. It is they who are likely to have made the privatized firm into a monopoly. It is they who, believing that they are encouraging competition, create what are, in effect, governmentally sponsored cartels, in which there coexist many enterprises, each of which is prohibited from competing with the

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others, and in which the most inefficient of the firms in the industry are kept alive at the consumer's expense by impediments to price reductions by more efficient rivals. It is the bureaucrats who, paying lip service to the market mechanism, but often distrusting it profoundly, seek to take away the power of the privatized firms to make decisions for themselves, under the constraining influence of market forces. Finally, it is they who are prone to restrict the profits of the privatized firms and the incomes of their entrepreneurs, without recognizing that they are thereby destroying the very engine that can in time yield the benefits so widely expected to flow from privatization.

The central issue here, of course, is what government should and what it should not do if privatization is to have a chance of fulfilling its earlier promise. The first part of the discussion will focus on privatization in the venerable market economies such as the U.K., New Zealand or France. Then, it will turn to the very different problems in the economies in transition from central to market control.

A FEW WORDS ON THE MARKET MECHANISM

Economists recognize a number of critical features of the market mechanism of which the general public is unaware. There is, however, one crucial attribute of the market in which, in my view, the nonspecialists have a more accurate view of the workings of the market than do many members of our profession.

The public does not seem to recognize that the market serves the consumer effectively and is able to produce its abundance by virtue of its merciless system of rewards and penalties. The impersonal forces of the market accept no excuse for failure, and bankruptcy is their prescribed penalty. The market is also discomfortingly generous in its rewards to those who succeed in serving the public with the products that it wants at costs as low as are currently attainable. Here it does not distinguish merit; the firm that simply stumbles on a popular new product is rewarded as handsomely as the one that invested long and heavily in product development. Efficiency may be repaid even if it is just the result of the happenstance that the enterprise is large and is in an industry that offers economies of scale and scope.

Misapprehensions on these subjects tempt the public to clamor for the imposition of limits on the wealth of those whose are most successful. They elicit political support for public sector rescue of failing enterprises and dying industries. Above all, they engender opprobrium for those driven by greed to conquer new economic worlds and expand the economic horizon. One cannot quarrel with such preferences. But one can deplore the public's failure to recognize that it cannot have things both ways.

Where, in my opinion, the nonspecialist does have the better grasp of the market is in identifying its main accomplishment. We economists have been prone to emphasize its power to achieve static allocative efficiency and have tended to conclude because of spillovers of innovation and for other oft-discussed reasons, that it is rather defective as an engine of growth. The view in the former Soviet economies is very different. There, the contrast between the economic abundance of the free-enterprise economies and their own poverty is probably the most pressing reason for their admiration of the market. Static efficiency is not the focus. Rather, despite defection from other Marxist ideas, there remains agreement with the judgment of Marx and Engels that "The bourgeoisie, during its rule of scarce one hundred years, has created more massive and more colossal productive forces than have all previous generations together" [the *Communist Manifesto*]. Historical evidence supports this view abundantly.

THE VENERABLE MARKET ECONOMIES: DEFEAT FROM THE JAWS OF VICTORY

The Tendency To Monopoly in Western Firms Picked for Privatizing

Thus, those who view the market as a means to improve the flow of abundance have solid grounds for the belief that output and efficiency can be enhanced greatly by a transfer of nationalized firms from the stultifying control of government to the tender mercies of the market. Yet, this transfer seems often to be accompanied by the erection of impediments to the productive contribution of the privatized enterprises. I will argue now that this is hardly fortuitous.

In the older market economies the key problem is the considerable proportion of the candidates for privatization that are firms with monopoly attributes, for which there are at least four reasons, none of them accidental.

Monopolies as Targets of Previous Nationalization. In the free-enterprise economies, it is the monopolies and near monopolies that have been prime targets of takeover by government because it has long been recognized that market forces are apt to be incapable of constraining them effectively. Consequently, when it was proposed to return nationalized firms to the private sector it is not surprising that a considerable proportion of the candidates held either a monopoly position or a position that seemed to confer some degree of monopoly power. This is notably true of the public utilities — the suppliers of electricity, gas, and telecommunications in Latin America and Europe.

Management's Desire for Protection from Competition. A second powerful influence that skewed public enterprises toward monopoly has been the predictable behavior of their public sector managements. Most persons enthusiastically favor competition when it affects others, but not when it constrains themselves and invariably makes their lives more difficult. Bureaucrats are no exception, but they are in a better position than most to make their wish come true. A governmentally owned utility is often protected by law from all but the most insignificant forms of rivalry. The state telephone company, the post office and the electricity supplier are generally secured from the threat of entry — by government decree.

A Monopoly's Assets Command Higher Prices. When a nationalized firm is put up for sale, those who are responsible for overseeing the transaction are likely to consider themselves obligated for the sake of the public interest to seek to obtain for the property as high a price as can be gotten. But it is obvious that higher price bids

can be elicited if the property is offered along with a monopoly license that is protected against the entry of rivals. This temptation is sometimes too great to resist, with the consequence that the newly private firm enters the economy with the grant of a monopoly. But it is not often acknowledged by the government that this automatically entails the threat of close regulation in the future.

Competition Undermines Popular Cross Subsidies. A fourth and more subtle influence skews the nationalized firms toward possession of monopoly power. The agencies that run them, like the regulators in the United States, have strongly and persistently favored a policy known in the business as "universal service." They are moved in this direction by an amalgam of natural inclination and political pressure. Particularly where the firm in question is a public utility and its product is widely desired, it has been considered bad policy to require classes of consumers whom it is particularly difficult to supply to pay the high cost of serving them. It was deemed appropriate for the same price per unit to be offered to everyone — to isolated farmers who could be reached by telephone only by long and underutilized stretches of wire, to inner city firms to which mail delivery costs are increased by congestion, crime and other impediments, and to any other user whose service is extraordinarily difficult and expensive. More than that, some nationalized services such as telecommunications are less costly to deliver to large firms because of the scale economies available in such transactions than to small-volume residential customers. Dedication to universal service impelled those who control nationalized enterprises to price the residential services at levels considerably lower than what the relative cost of serving those customers appeared to require. Characteristically, all this ended up in a complex system of cross subsidies, with the supplier of electricity, for example, required to charge big business customers prices sufficiently high to yield the revenues that could cover losses incurred in serving isolated farmers or inner city user firms or household customers in general.

Nothing in the preceding paragraph is to be construed to imply that these cross subsidies are indefensible or that their social purposes are unworthy. Rather, the point is that such cross subsidies are incompatible with competition and freedom of entry. An electricity supplier that overprices, relative to the pertinent costs, the power it supplies to large business customers, and supplies electricity to farmers at a loss, can continue to do so only as long as it possesses an unchallenged monopoly.

But if the field is opened to entrants, those new rivals are likely to spring up soon enough and to focus their efforts upon sales to the highly profitable business customers. The monopoly incumbent can be expected to denounce this selective entry strategy as "cream skimming," but it is precisely what economists usually hope the entrants will do. The result, of course, is that the high profits of the business segment of the market will soon be forced down by competitive pressure, and the original incumbent will find itself deprived of the source of funds out of which it previously made up for the losses incurred in serving rural firms and households. The cross subsidy must come to an end either by choice of the original incumbent firm or as the result of its bankruptcy. To avoid this, those who set the rules for the operation of nationalized firms, like the regulators in the U.S., found a

variety of reasons for the prohibition of competition and entry. This influence, too, contributed to the high frequency with which candidates for privatization turned out to be monopolies. It is an influence that, as we will see, continues to haunt the process of privatization, and even its sequel, in the West.

The Tendency to Tight Regulation of the Privatized Firms

The result of all this is that when a government enterprise is transferred to private ownership it often finds itself suspect. Its goals are often taken to be exploitation of the public and subversion of competition, and it is widely prejudged to have the power to attain those goals. The forces of the market are deemed, sometimes with good reason, to be too weak to constrain that enterprise adequately. Hence, private it may be permitted to become, but only under the heavy hand of regulation. Individuals are allowed to *own* it but they are given little opportunity to *control* it.

In practice, in Western economies problems at this stage seem to have arisen primarily from inexperience with economic regulation, its pitfalls, and the practices that will keep its social costs within reasonable bounds. The nations that have substantial numbers of nationalized firms to be privatized are obviously those which in the past have chosen nationalization over regulation as the instrument for control of monopoly power. Thus, it is hardly accidental that the privatizing economies are the ones least prepared by experience to institute and carry out a rational regulatory regime. In the process they have tended to want to learn for themselves, many of them possessing a very competent civil service, experienced and effective business managers and a group of highly qualified economists. Yet, in a number of cases, they have simply repeated many of the mistakes of U.S. regulation that it has taken decades to begin to ameliorate.

Perhaps the central error besetting the process has been what amounts to complete distrust of the market on the part of the novice regulators, even those who consider themselves to be avid partisans of the free enterprise system. They do believe that *elsewhere in the economy* the market does a good job of directing business activity in accord with the general welfare, but they seem to feel that the market loses all of those salutary powers to circumscribe the firm under the regulator's oversight. The regulatory agency resists attempts to offer any significant range of discretion to the management of the privatized firm in making its economic decisions.

Prices, accounting methods, perhaps investment and other decisions are constrained closely, so that the firm may be left with less freedom to act and the market may be given hardly more influence over those acts than they possessed when the enterprise was a property of the government. For then the firms were run by bureaucrats whose actions were supposedly driven by devotion to the public interest, while once privatized they are in the hands of individuals believed to be driven only by greed. Thus, the private owners, on this view, must be restricted even more tightly than their public sector predecessors had been. In these circumstances it should cause little surprise that the market provides less of the benefits to that

industry than might have been expected of it, for the market forces have for all practical purposes been exiled from the arena.

Recipes for Misguided Regulation

One encounters in some form in the regulation of the newly privatized enterprises virtually all of what economists consider to be the mistakes that had long plagued regulation in the United States. Thus, the following list of questionable actions will seem familiar to those who have studied American regulatory history. These include (1) prevention or limitation of effective competition, (2) ossification of cross subsidy, (3) use of cartelization and other inefficient devices to protect competitors at the expense of competition, (4) injection of costly and avoidable regulatory risk, (5) restriction of freedom of decision making by management even within limits competitive conditions would permit, (6) use of discredited criteria such as fully distributed cost for regulation of prices. This list is readily extended, but it is already sufficiently long to illustrate the point.

Prevention or Limitation of Effective Competition. One of the central problems that has plagued the adoption of rational regulatory policy has been the conflict between two of its goals — the encouragement of competition and the promotion of "universal service." The desire to nurture competition in the privatized arenas is, of course, the natural consequence of the fear of monopoly power that underlies the decision to regulate. Competition, if it can be introduced and expanded, is the obvious way to put an end to monopoly power and to limit its exercise. But two problems beset this approach. First, the mere introduction of additional firms into the market is no guarantee of effective competition or of any competition at all, either if market or technological conditions such as scale economies impede or preclude it, or if regulatory restrictions all but prevent competition. Second, as we have just seen, effective competition is incompatible with retention of the cross subsidies that are valued so highly by many regulators. This has been known to impel regulators to adopt rules that protect the cross subsidies by undermining or prohibiting competition.

Thus, in a recent report on privatization in the U.K.[1] *The Economist* tells us that

> More subtly, the government has modified its policy. The original plan was to open [rail] passenger services to competition...[with] trains...run by franchised providers, offering competing services on each line....The government is backing away from that. Its fear is that the entrepreneurs would pick the best peak-time services. Off peak services would be left to British Rail, or disappear altogether.
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> So ....Only on a few routes will "open access" (that is, competition) be allowed. Even in those cases, the core service will be provided by one operator who will be eligible for government subsidy. Any other operator running a train on the route will have to compete without subsidy....
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> [Another] big privatization, that of **the Post Office**, could soon get a green light....[But ministers] worry that privatization threatens the universal postal rate, which ensures that it costs the same to post a letter to any part of Britain. [1993, 53]

Ossification of Cross Subsidy. British Rail and the British Post Office are by no means the only organizations for which policymakers have undertaken to preserve the historic cross subsidies. In postal service the uniformity of charges, regardless of distance or cost of delivery, is widely considered sacred, and one can hardly imagine a privatized post office anywhere that stands a good chance of being freed from this restriction. However, it applies to other arenas as well, and in some of these, different approaches have been taken by the regulators. That is, they have not all sought to protect the monopoly or the monopoly power of the private firm, as is at least contemplated for some industries in the U.K.

Thus, in New Zealand, when the telephone company, New Zealand Telecom, was transferred to private hands, a condition of the sale was that the firm taking over the company from the government continue the price advantages the nationalized predecessor firm had offered to residential subscribers. This stipulation, referred to as "the Kiwi Share," is believed to entail losses in the supply of at least some of the residential services. That is, those services are said to bring in revenues at the Kiwi-Share prices that fall short of the incremental costs of the services in question. Profitability of the enterprise then requires a cross subsidy from other customers of New Zealand Telecom, presumably the business subscriber. This has led to litigation with Clear Communications, the new rival of Telecom, as to whether Clear should somehow bear part of the cost burden. More to the point for the current discussion, such enshrined cross subsidies seem to have had marked effects on the prices of services other than those that the universal service goal seeks to promote, and those prices may well have been driven far out of line with those that economic efficiency requires.[2]

Imposed Cartelization. Despite the fact that continued monopoly permits retention of the cross subsidies, the monopolistic character of many of the privatized firms has elicited a schizophrenic reaction from regulators. Since monopoly is accepted as an evil, many of them have undertaken to destroy it by the introduction of competitors into the regulated industry. But apparently driven by a desire, conscious or unconscious, to have it both ways, they have in at least some cases ended up with an arrangement entailing a multiplicity of firms as well as continued cross subsidy. In what *appears* to be a compromise they have carried out what in the U.S. courts has been described as "protecting competitors while undermining competition." This they have done by imposing some form of cartel arrangement upon the industry, one in which continued coexistence of two or more firms is ensured, but none is given the freedom to compete with the others in prices and related matters.

This is sometimes accomplished in subtle ways. For example, the price ceilings imposed on British Telecom have resulted in very low prices on rental of telephone lines for which the company felt forced to make up by means of high prices on

number and duration of calls. Large business customers normally keep their lines very busy with calls, resulting in a high call/line ratio, so that this pricing arrangement made it difficult for British Telecom to compete for business customers with its relatively unregulated rival, Mercury. The call/line ratio pattern is reversed for residential and small business users, so that Telecom found itself with a considerable price advantage in this segment of the market. The result was virtually a split market, with Mercury in effect assigned the large-volume business customers, and there granted near immunity from competition, while Telecom found itself in the same position in the residential market. It was as though Mercury had been assigned an exclusive license for operation in Scotland, and Telecom had received the franchise for Wales.

The net cost to society of imposition of a cartel arrangement is likely to be high. It clearly does little or nothing to curtail monopoly power. In addition, it creates inefficiencies that a monopoly is likely to avoid, for any particular segment of the market may not happen to be assigned to the firm that can serve it at lowest cost. Moreover, in a cartel there may be costly replication of facilities, and facilities that are withdrawn from service by each firm because of the limited market segment assigned to it may not be those that are the most inefficient in the industry. That is, plant *A* of firm *X* that is shut down may be more efficient than firm *Y*'s plant *B* that continues in operation. Yet the regulator whose actions have created such a cartel is likely to congratulate himself for having injected competition into the arena without endangering universal service.

Imposition of Avoidable Regulatory Risk. Risk is costly to firms, and that cost is usually passed on to consumers, at least in part. In addition to the risks that normally face an enterprise, the regulated firm faces the danger that regulators will change their minds unpredictably, causing costly and avoidable errors in the regulated firms' decisions. This is true of all regulation but it affects privatized Western firms in a distinctive way.

An infant-firm argument often leads regulators to extend special protection to an entrant enterprise. The privatized firm — the earlier sole incumbent — may be required to supply services to the entrant at especially low prices, or to offer it other forms of implicit subsidy, or still other forms of protection may be provided. It is usually promised that all of these will be phased out at a suitable time, but normally no date is specified, nor is anyone told the precise circumstances under which that will occur (e.g., when the entrant's sales reach *X* percent of the industry's). No one is told whether subsidies will all be removed at once or whether it will be done gradually, and if the latter, at what rate. This has happened, for example, in the case of Mercury and British Telecom. All this imposes unnecessary uncertainty not only upon the privatized firm, *but also upon its new rival.* And as indicated, much of that cost will be borne by consumers.

Pointless Restriction Upon Management's Freedom of Decision. The large privatized firm is predictably distrusted by the regulator. Even when the latter adopts rules ostensibly designed to reduce restrictions upon management, steps will often be taken to curtail that freedom or eliminate it altogether. For example, regulation has in recent years made use of floors and ceilings upon prices, with the bounding magnitudes based in a rough and ready way upon economic analysis. This suggests that once such limits are determined the privatized firm will be left free to select the intermediate price that best suits its interests and changing market conditions. However, in my presence regulators have more than once expressed shock at the idea that management should be given such unrestricted license. They seek to narrow the firm's options further, or require a waiting period before the proposed prices can be put into effect, or subject the prices adopted to *ex post* review and penalties.

There are at least two costly consequences. First, it restores a feature of traditional regulation which has long been criticized — the delays it imposes on the decisions of the regulated firms and the resulting lag in adaptation of its decisions to evolving market conditions. Second, it all but removes the influence of the market upon the price-setting process, ensuring that privatization does not serve as an effective step toward adoption of the market mechanism as the prime guide of economic activity.

Adoption of Discredited Regulatory Criteria. The privatized firms often find themselves regulated with the aid of accounting conventions, notably *fully-distributed (fully-allocated) costs*, that are universally admitted to be arbitrary, that only by happenstance will bear the slightest resemblance to the costs economic analysis has shown to be pertinent to economically efficient decisions, that undermine incentives for innovation, and that often serve as protectionist devices inhibiting true efficiency.

Fully-allocated costs are the accountant's attempt to provide figures resembling average costs for each of the firm's products in a multi-product enterprise. The results are always arbitrary because there are typically substantial costs fixed and common to two (or more) company products, *A* and *B*, and there is no way based on the pertinent facts to determine what share of those costs is properly attributable to *A*, and what share to *B*. The result is that speciously associated criteria, e.g., the value of the output of *A* relative to that of *B*, or the relative weights of the products, are used to apportion those costs arbitrarily.

Because the resulting figures generally bear no resemblance to marginal costs or any other real and pertinent cost figures, prices based by the regulator on fully-distributed costs will generally lead to outputs, sales, investment levels, etc., that have no resemblance to those required for economic efficiency. Because those prices are set with absolutely no consideration of the different demand conditions faced by the various products, those prices will therefore often prove uncompensatory. Because such prices are "cost plus" in character, they eliminate any incentive for process innovation or other cost cutting efforts. Moreover, because of their arbitrary character, the fully-distributed cost figures lend themselves to manipulation and they have often been used in litigation before regulatory agencies by firms determined to protect themselves from the setting of low prices by more-efficient rivals. All this was experienced in the U.S. for many decades in virtually every regulatory

arena. And much of this is now being reexperienced by the newly privatized enterprises in other countries.

Are More-Promising Regulatory Principles Available?

The New Regulatory Principles. Out of the discussion that has accompanied the period of deregulation in the U.S., the years since the mid-1970s, and the subsequent experience, there has emerged a new body of principles for the guidance of economic regulation. These principles are designed to minimize interference with economic efficiency, to expand the role of the market as far as seems advisable in areas of the economy where the strength of competitive forces is suspected of being inadequate and, incidentally, to reduce litigation. These principles have already been used in the U.S. in regulation of railroad freight rates, and in telecommunications pricing, and they are under discussion elsewhere. There is reason to believe that what may be dubbed "the new regulatory principles" have, at least so far, largely lived up to their promise, and lightened the burden of regulation significantly, while contributing to efficiency. It would appear that those who regulate the newly privatized industries can profit from a study of those principles.

On the Objective of Economic Regulation. This is not the place to lay those principles out in any detail, but they can be summarized rather briefly.[3] The underlying premise is that the sole purpose of economic regulation is to facilitate and encourage effective competition where that is feasible and to provide an effective substitute for competition where competition is not possible, at least for some substantial period. In a later section appropriate means for the encouragement of competition will be considered. Here I focus on the latter regulatory task, that of serving *in loco competitio* — as a substitute for the absent competitive forces.

If it is agreed that this is the proper task of the regulators, then two things follow. First, it is their obligation, in markets where the strength of competition is deemed inadequate, to constrain regulated firms to adopt only such decisions and act only in such ways that effective competition would permit if, contrary to fact, the markets were effectively competitive. Second, the regulators' role as proxy for competition requires that *they must not constrain the firms under their jurisdiction any further than this*, that is, the regulators must accept a self-denying ordinance obligating them never to prevent managements from any action that they could have carried out in an effectively competitive market.

The task of the regulator, then, consists of two parts. First, it must determine which choices competitive markets do and which they do not leave open to firms, and second, it must adopt procedures to ensure that the firms will act in a manner consistent with the competitive standard. The literature of economics provides considerable help in carrying out the first of these tasks, for it contains very substantial discussions of the behavior of competitive industries. Here, one *caveat* applies. The industries containing newly privatized firms will often be characterized by scale economies, at least up to some rather substantial level of output. Hence, a large multiplicity of firms probably will neither be feasible nor desirable, and marginal cost pricing will very likely be incompatible with solvency of the firms. Thus, the competition that serves as the standard for regulators here is not the model of perfect competition. Rather, the equally theoretical concept of perfect contestability, with its totally unimpeded freedom of entry and exit, must serve as the model because it is compatible with the presence of scale economies and the existence of only a small number of firms, and contestability theory does lay out the requirements of economic efficiency in such circumstances.

The New Rules for Price Regulation. We can now summarize very briefly the rules and principles that emerge from the analysis, providing even a short explanation only where it seems necessary:

1. In any market where there is evidence that competition is sufficiently powerful to protect the public interest, regulators should refrain from intervention.

2. In markets in which adequate competition (rather than the mere presence of a multiplicity of non-competing firms) can be stimulated, that should be done.

3. Prices should not be permitted in the long run to exceed the levels that in a perfectly competitive market would make entry profitable, entry that would subsequently drive those prices back down. These price ceilings are referred to in the literature as the "stand-alone costs" of any product or combination of products.

4. Prices should not be permitted to go below those that would be viable for any substantial period in a competitive or contestable market. This generally means that those prices should not fall short of the marginal cost of any product or the per unit incremental cost of the entire output by the firm of any homogeneous product.

5. Because in a contestable market one may encounter prices close to the stand-alone cost ceiling or the marginal-average incremental cost floor, the firm should be left free to adopt any price within these limits, adjusting that choice to current demand conditions in accord with the judgment of management.

6. Price ceilings are not to be adjusted downward immediately to correspond to any reduction in costs the regulated firm is able to achieve. Rather, in accord with the Schumpeterian model of the market's incentives for innovation and enhanced efficiency, price ceilings are to be unchanged for substantial periods, except for a built-in inflation escalator that automatically increases the ceiling in accord with some standard price index such as the consumer price index (CPI), *after subtraction of some number corresponding*

to the industry's past record of rate of reduction of cost per unit of output per year. Thus, an industry with an average record of productivity growth of 2 percent per year would, in a year when the CPI grew 6 percent, find its price ceilings increased by 4 percent, so that it would earn profits exceeding the competitive level if and only if it managed to exceed its past 2 percent productivity growth record. During a grace period of several years the firm is able to keep those profits as its reward for innovation. But, just as competition ensures in an unregulated Schumpeterian world, prices will ultimately be adjusted to eliminate the enhanced profits so that, thereafter, the benefits are passed on to consumers. This is referred to in the regulatory literature as "the price-cap" approach to rate regulation.

7. When inputs are supplied by a regulated firm, both to itself as a component of one of its final products, X, and to a competitor producer of X, then the regulated firm should charge the rival the same price for that input that the former implicitly charges to itself. This rule is called "the parity principle," "the optimal input-pricing rule" or "the profit-imputation rule." The price of the input should equal the (incremental) cost entailed in supplying it, as usual in a competitive or contestable market, *including any associated opportunity cost.* That opportunity cost, in the circumstances under discussion here, includes any profit the regulated firm forgoes by the sale of a unit of input to its rival because that permits the rival to take away some sales of final product X. Thus the price of the input to a rival should include all of the profit contribution the regulated firm obtains from the sale of a unit of final product X.

Note that many of these rules are counterintuitive to the layman. For example, the parity principle (rule 7) requires the price of a widget input, whose direct incremental cost constitutes only 2 percent of the cost of final product X, should nevertheless compensate the widget maker firm for *100 percent* of the profit it forgoes from the sales of X as a result of its supply of widgets to competitors.

These rules call for regulatory behavior very different from that often encountered by privatized firms. Characteristically, in practice less has been left to the control of the market and less freedom has been given to management. Fully distributed cost is often used, sometimes as a price floor, sometimes as a ceiling and sometimes as *the* imposed price, with marginal, incremental and stand-alone costs often mentioned in hearings but often disregarded by the regulator. Input prices, rather than following the parity principle, are often set so as to pass on part of the regulated firm's profits from the final product to its competitor that purchases the input from it. That is, the input price is not permitted to include all of the opportunity cost entailed in the sale of the input. It seems clear that all of these procedures used by regulators of privatized firms offer considerable room for improvement from the point of view of economic efficiency and utilization of the market mechanism.

IS COMPETITION REALLY POSSIBLE?

None of what has been said is intended to impugn the good intentions of those who regulate the privatized firms. Thus, when entry of a new firm has been facilitated or even elicited by the regulators, they are undoubtedly convinced that they have thereby contributed to competition, even in cases where this has occurred through the imposition of a cartel arrangement that shields the entrant from effective competitive pressures. Once entry has occurred, the regulators' dedication to competition is adjoined to their natural predisposition to ensure the survival of every enterprise under their jurisdiction, no matter how inefficient and costly to the public.

Though these views are critical, it must be conceded that those regulators do have a valid point. If it is ever to be appropriate to free the privatized firms from regulation, and thrust them, unfettered, into the free market, true competition must somehow be made viable in the arena. One is led naturally to ask, then, is this really possible? More specifically, in cases where one cannot be confident that competition will evolve by itself, or there are good grounds to fear that it will do so on too modest a scale or too slow a pace, what measures are suitable for its facilitation and encouragement? The comments that follow are offered only as provisional and rather abstract ruminations, because the evidence on these matters has not really been explored.

One can hardly dispute the standard conclusion that in fields in which scale economies are strong, universal and prevalent through all of the relevant ranges of output quantities, monopoly is "natural." That is, in these circumstances, it is unlikely that a multiplicity of firms will be able to survive, and it is, moreover, probable that their survival is undesirable. The reasons are well-known and need no repetition here.

Casual observation suggests, however, that such cases may be rare. The evidence indicates that scale economies do arise in a considerable number of industries, but that evidence relates only to a narrow range of output levels in the neighborhood of current output vectors. The econometric studies, quite understandably, provide little evidence about the range of outputs over which economies of scale and scope prevail, and offer no indication of the points at which they are exhausted. But one does notice that while oligopoly is a fairly common phenomenon, monopoly that has not been imposed by government seems rather rare. Indeed, outside a few public utilities, it is difficult to think of examples.

This would seem consistent with what empirical studies indicate — that in a number of industries scale economies are substantial, that they prevail over a considerable range of outputs, but that beyond some output levels they are replaced by approximately constant returns to scale that themselves hold over significant output ranges. This is the equivalent of the observation for the (theoretical) single-product firm that the average cost curve is more realistically taken to be flat-bottomed rather than U-shaped.

The hypothesis implicit in the preceding paragraph, then, is that among privatized industries the multiproduct equivalent of flat-bottomed average cost curves is common, but that the flat-bottomed range follows only after a considerable interval of substantial scale economies. If this hypothesis proves correct, it has implications for the prospects for competition in the privatized industries that are not necessarily in conflict with the views of regulators described earlier in this section. First, it follows that at least oligopolistic competition is very possible in these industries and that such competition can be expected to endure. Second, it suggests that successful entry is likely to require the assembly of large quantities of capital and other resources, because only firms of considerable scale will be able to compete successfully. Third, it suggests, because of the considerable region of constant returns to scale, that the successful firms in the industry need not be of similar size, and that relatively large and *relatively* small firms may be able to coexist. Finally, it follows that even the smallest firms in a long-run equilibrium in such an industry may prove to be effective competitors, able to exert a very effective constraining influence upon the pricing of the larger enterprises in the same market.

In such privatized industries it follows that at least some degree of competition can be achieved and that the eventual presence of a number of competing firms can be hoped for. If collusion can be prevented or is inherently unlikely, the prospect, even with a small number of rivals, is that the firms will compete vigorously and effectively, though such competition may make use of strategic courses of action that yield public benefits short of those expected from a perfectly competitive or contestable industry. Yet, particularly where entry requires substantial sunk investments, one cannot be fully confident that one will experience the establishment of the new firms requisite for transformation of the market into one that is highly competitive or at least highly rivalrous.

Experience suggests that such entry will in fact often take place. For example, the establishment of MCI, Sprint and other carriers in U.S. telecommunications so soon after entry was permitted suggests that private initiative will often suffice to carry out the task. Still, there are at least three reasons why it may not happen, even in arenas in which it is called for by the public interest. All of them relate to the impossibility of successful entry on a small scale in our scenario.

First, in the scenario under discussion successful entry requires the establishment, in one initial step, of a firm already sufficiently large to be able to compete effectively in the scale-economies industry. But the entry of a full-blown second or third supplier into the particular industry in question may well entail types of activity that go well beyond anything experienced in the industry before. In that case, private investors may have as little accurate information about an entrant's prospects as does any government agency seeking to encourage entry into the field. Either of these is consequently apt to overlook a promising entry opportunity or to overvalue an opportunity whose prospects are really modest or worse.

Second, entry may be desirable to society even though it is unable to attract sufficient private investment, because the risk to the latter is considerably greater than the risk to society. There are many reasons why this may be so. Most notably, there is the possibility that the new enterprise may become insolvent and be lost to the original investors, but that it will then undergo reorganization under new ownership and continue to yield benefits to the economy. Where this scenario is a possibility it follows that, other things being equal, the expected payoff to society will be greater than that to private investors, so that the undertaking may be worthwhile socially, but not to any private group. A particular variant of this problem arises when there is any likelihood of successful strategic countermoves to entry by the earlier incumbent. If entry requires sunk outlays, that possibility will increase the risk facing the new firm and is likely to raise the cost of funds to the entrant, though its assets may continue to serve society even if the strategy of the predecessor firm is successful.

Finally, there is the possibility that externalities, perhaps the most usual cause of market failure, will be present — that the act of entry will yield socially beneficial spillovers from which the investors do not profit. The most obvious form that this can take occurs when entry frees the economy from the costly burdens of regulation in this arena. If the presence of a multiplicity of firms is deemed to render regulation redundant in the industry in question then that may benefit both the earlier incumbent and the body of customers, a benefit that is not reflected in the earnings of the entrant. Once again, it follows that entry may be unprofitable even if it is socially beneficial.

All of these observations can constitute justification for some public sector intervention to facilitate the entry of new firms and encourage their growth. In general, the externalities problem aside, it is to be expected that the danger to survival against which they should be protected will be temporary, for otherwise there is a real question as to whether their presence will ever constitute a significant contribution to competition, or any contribution at all. The issue, then, is a variation on the infant industry theme. Enough has been written on this subject to make redundant any further discussion of the validity of the infant industry argument and its implications. There are, however, some observations that may be illuminating that grow out of experience of attempts by regulators of privatized firms to provide protection to infant entrants.

There are forms of protection that are extremely and unnecessarily costly to society. For example, rules that force the incumbent firm's prices substantially higher than is called for by its costs are sources of inefficiency because they reduce the incentive for the entrant to invest in productivity growth. Similarly, the imposition of a cartel arrangement for the purpose, in the manner described in an earlier section, clearly impedes efficiency, beside contributing little or nothing to competition. Yet both of these devices are apt to recommend themselves to the regulatory agency in its well-intentioned attempt to foster competition.

The discussion in earlier paragraphs of this section of the reasons the market may fail to elicit all the entry that is socially desirable also suggests more efficient ways to provide public sector encouragement to the entrants. As we have seen, the difficulty seems to have two primary sources: excessive private cost of the capital required for entry and externalities deriving from the presence of the entrant. But externalities and differences between private and social costs more generally are well understood by economists, and efficient remedies for them are described even in

the elementary texts. In the case under discussion what is clearly called for is a Pigouvian subsidy for the entrant's borrowing. Ideally, of course, it should be financed by the public treasury, but that is unlikely to be feasible politically. In practice, it has proven far easier to impose such burdens on the incumbent privatized firm for whom it is hoped to elicit new competitors. Economic analysis indicates that such a required subsidy of the entrant by the incumbent has efficiency costs of its own. However, if there is no alternative, it is surely least damaging to require the incumbent to establish a capital subsidization fund for the entrant, without constraining the incumbent to employ governmentally specified sources of funding, e.g., uneconomically-high prices for particular products. The flexibility called for here is directly analogous to the flexibility permitted by Pigouvian charges as compared to the use of direct controls as means to control pollution, with the superiority of the Pigouvian approach deriving in good part from the freedom that it gives to polluting firms to seek low cost ways to reduce emissions.

One final point is appropriate here. If governmental assistance to entrants is to be a temporary affair there is much to be gained if the time path of reduction of such assistance is made as clear as possible in advance, and the date at which it is scheduled for elimination or the circumstances in which it will be terminated announced well in advance, as a commitment of the regulator. Such precommitment offers three clear benefits. First, it eliminates the well-recognized danger that the infant firm will never be deemed to have grown up and that its protection will be continued indefinitely. Second, it eliminates unnecessary uncertainty, reducing this source of substantial cost for incumbent and entrant alike. Finally, it provides an added incentive for the entrant to prepare itself for the rigors that will be entailed in having to fend for itself in a competitive market place, and thereby encourages the entrant to invest in efficiency and strengthening of its competitive position.

ON PRIVATIZATION IN FORMERLY CENTRALLY-DIRECTED ECONOMIES[4]

I turn finally to privatization in the former Soviet countries, where I have no direct experience, and must rely on the reports of others for my observations. My remarks will, consequently, be relatively brief.

Privatization in Eastern Europe is beset by problems that make those in the West seem minor and tractable by comparison. In each country there are many thousands of firms in the hands of the governments, and it is proposed to privatize a very substantial proportion of them. Thus, the number of candidate enterprises swamps the small number of firms that have been transferred to the private sector in Western countries. In addition, there is no functioning capital market, little experience with the working of the market mechanism and no cadre of entrepreneurs trained by experience to pursue profit through the promotion of industry. All this is well-known, but Eastern privatization programs also face difficulties that are less familiar. Most of those that are now recognized by students of the subject are not matters of post-privatization regulatory oversight, as in the West. Rather, they arise at an earlier stage — the very process of transfer of the properties from public to private hands. The essence of the matter is that Eastern governments have found that it just is not easy to rid themselves of the assets.

There are at least six problems that occur at this stage:

1. ***Valuation of the Assets.*** If government firms are to be sold it is necessary to set a price or at least to have some idea of an appropriate price with which one can bargain or one can decide whether an offer is worth considering. However, in the Eastern countries, firms have not been sold for a very long time, so there is no experience on which to base an estimate of market value, and there are no well-organized securities exchanges where the firms can be valued on the basis of the prices of their stocks.

2. ***Obsolete and Deteriorated Plant.*** The problem of valuation is exacerbated by the fact that plant and equipment is typically obsolete and seems often to be worth little more than its value as scrap. It is difficult for ministers responsible for the sales to reconcile themselves to such a low valuation. Much more valuable, apparently, is the land on which the firm is located, but Eastern governments have shown some reluctance to part with the land and have sometimes agreed only to offer a short-term lease to prospective owners of the firms, thereby ensuring lower bids and the likelihood of even further deterioration of the assets because investment in repair and maintenance, let alone upgrading and modernization, are thereby rendered extremely risky.

3. ***Unavailability of Domestic Purchasing Power.*** Even if a reasonable estimate of appropriate price can be obtained, it is generally difficult to find buyers among citizens of the country in question for anything near that price, at least for larger firms that are candidates for privatization. The requisite purchasing power simply is not available. Sometimes willing purchasers can be found, but these are usually foreigners. For the usual reasons, the Eastern governments fear that it is dangerous to sell off any substantial share of the nation's assets to foreigners.

4. ***Viable Procedures for Giveaway of Assets.*** An alternative to sale of the assets — one that has frequently been adopted as a partial solution, is to give away ownership of the properties. Such a transfer, clearly, has to be carried out in an egalitarian manner, excluding no group of adult citizens. But it is impractical to divide up each and every factory among the millions of citizens of the country, and so a way has to be found to keep numbers manageable, without discriminating against anyone. The manner in which this has been done will be discussed presently.

5. ***Arrangement for Oversight of Management.*** Even with the giveaway programs that have been adopted, unavoidably the number of shareholders in each firm has been large, with the danger that none of them will hold any substantial proportion of the equity. The result that is thereby threatened is that no owner or organized set of owners of the privatized firm will be in a position to exercise any control over the actions of management. In the older capitalist economies, the resulting principal-agent problem is very familiar, particularly after the takeover wars of the 1980s. Managements may turn out to be incompetent, or they may simply pursue their own interests at the stockholders' expense. In the former Soviet bloc, the problem is even more serious. For management is often in the hands of the bureaucrats who formerly ran the firms and who have not yet been replaced. Experienced in dealing with the hierarchy of the party and the planning apparatus, these individuals generally have little familiarity with market pressures, with forces driving the firm constantly toward adoption of the latest or the most efficient technology and toward energetic pursuit of customers. It therefore becomes urgent to devise arrangements that will prevent the old line management from performing in its accustomed manner and that will provide the power to replace management if that is called for.

6. ***Vested Managerial Interests.*** The old managements have frequently been active in trying to protect their vested interests. They have often tried to arrange to purchase their firms themselves, and to do so at giveaway prices. For example, assets have been sold to them at book value in Russia, with book value expressed in rubles unadjusted for inflation. Since the country is experiencing something close to hyperinflation, this means the properties were made available virtually free. The old managements have also been known to favor having a very large body of tiny stockholders, presumably to ensure that the body of equity owners is powerless to control or influence management.

All of these matters will obviously have to be dealt with effectively if privatization is not to prove disappointing or even disastrous. A good deal of progress has occurred here, at least in principle, though there is still a long way to go before execution is completed. There is a sharp distinction between what has happened to the smaller firms such as farms and retail establishments, and what has been accomplished for the larger enterprises.

Privatization of the small firms has reportedly been handled with considerable success. Stanley Fischer tells us that there are now nearly 200,000 private farms in Russia and that 40 percent of all small enterprises have applied for privatization [*New York Times,* 6 April 1993, A23]. In Hungary there are "66,000 small private firms and 180,000 one-man firms [which] account for 40% of output" [*The Economist,* 1993].

> Poland has succeeded in leasing or selling more than 40,000 shops to private operators by mid-1991. It is estimated that as a result of this 'small-scale privatization' as well as the rapid growth of new private firms in the service sector, roughly 80 percent of retail trade is now carried out by the private sector! Privatization has also been very rapid in trucking, construction, and small industrial units, where privatization has occurred in part by auctions, and in part by leasing the enterprises to the workforce. [Sachs, 1992, 6]

The small enterprise conversion has been easier for several reasons. First, because so many new owners benefited, the program was favored by a fairly large constituency. Second, there was little need to worry about monopoly or market power in the case of these enterprises. Third, the capital requirements for the process were modest. Finally, because they are generally owner-managed and are, in any event, easily subject to owner oversight, they did not raise the difficult problems of control that beset large-enterprise transfers to the private sector.

> Part of the reason why "small privatization" has been a relative success in some countries is that it raises few of the hugely complex corporate governance problems endemic in all efforts to reform larger industries. The privatized shops and service outlets are usually owner-managed, and the low capitalization requirements make for a potentially lively secondary market which is able to correct for many mistakes in the initial allocation. For this reason, it may not be particularly important whether the state withdraws from running small businesses in favor of workers employed by them (as is commonly the case) or whether it sells them to the highest bidder in an open competitive process (as was the case in Czechoslovakia), so long as there are no crippling transferability restrictions on the privatized assets. [Frydman and Rapaczynski, 1993, 4]

Still, even here there were obstacles, partially avoidable; for example,

> [In most] stores and service outlets in Eastern Europe...constant shortages meant that their inventory was not worth very much, and their substandard services did not make for a great amount of valuable "goodwill". What these stores and outlets did have was their very valuable premises that needed to be reallocated to better uses. In this context, it is interesting to note that, in most cases, the "privatization" of the retail sector did not entail a transfer of the ownership right to the premises; instead, the state retained the title and the premises have been most often merely leased for relatively

> short periods of time, often with no secure right to renew and a number of burdensome restrictions. [ibid., 3]

This is the arena in which privatization has, by all accounts, been relatively successful. "Unfortunately, privatization of large industrial enterprises has proceeded much more slowly, indeed far too slowly" [Sachs, 1992, 6]. With the apparent exception of the Czech Republic this experience seems to be universal.

> ...in the case of larger industries, where privatization encounters very serious technical and political obstacles [the] initial difficulty ... [is] the need to find and empower new owners. The first instinct of East European policymakers ... was to follow well known precedents, such as British style privatizations, involving a sale of shares to the public or to a selected number of private investors ... [but] the attempts to emulate Western privatizations were, by and large, a failure. With a few notable exceptions of sales to foreign investors ... the unattractiveness of investment in East European state enterprises, the slowness of the process, the problems of valuation, the shortage of domestic capital, and the unwillingness of foreign investors to enter at a large enough scale account for the fact that very few East European [large] enterprises have in fact been sold to outside private investors. [Frydman and Rapaczynski, 1993, 4-5]

There have been a number of arrangements that have been devised to deal with some of the problems posed by the task of transfer of ownership of a large nationalized firm and its subsequent governance. These plans follow approaches that naturally recommend themselves to economists[5] and, while not or at least not yet universally adopted, they have been considered with surprising rapidity in a surprising number of countries, and have actually been put into practice in the Czech Republic. The key elements of these programs are the use of vouchers and the role assigned to financial intermediaries.

In order to solve the problems entailed in division of ownership of the large firms among the entire population, it was proposed to offer for sale sets of vouchers at minimal prices, with the vouchers usable by the purchaser to acquire an equity interest through bidding at auction in any of the large state enterprise that had been declared eligible for this process. The first of such auctions, held in the Czech Republic in December of 1992, is reported to have transferred 2,000 firms with a book value of $7 billion to the public [*The Economist,* 1993, 14]. At first, sales of the vouchers to the public were slow, but when the low prices and favorable conditions of the transfers were publicized demand picked up rapidly. Similar procedures have been proposed in Poland and Russia, but the parliaments have so far frustrated these attempts.

In order to prevent excessive diffusion of ownership and to provide for the presence of some stockholders possessing equity sufficient to give them some power to control management, another provision was proposed. It was suggested that incentives be provided to have the securities purchased with the vouchers held by financial intermediaries, that is, quasi mutual funds, in which the stocks bought with vouchers could be deposited. This has been proposed in Poland, and actually put into practice in the Czech Republic. There,

> ...spurred by rather irresponsible promises of spectacular returns on the part of many investment funds, over 70 per cent of the voucher recipients decided to place their vouchers with the funds. As a result, while the choice of the voucher route of privatization led to a very speedy transfer of title, the plan also produced a significant concentration of ownership, giving rise to a hope that the new owners will exercise effective control over the management of the privatized enterprises. [Frydman and Rapaczynski, 1993, 7]

Thus, the problems of transfer of ownership to the private sector that have been mentioned are clearly not beyond solution. It is yet possible that many of these transfers will be carried out in a manner that effectively promotes the public interest. Yet so far, lack of resources, inexperience with markets, fear of the unknown and political considerations have led to a host of problems. Thus, one pair of observers note several such difficulties that have appeared during the first three years of the privatization process in Eastern Europe:

> First, ... Instead of the expected clarification of property rights and the establishment of a system of economic incentives characteristic of capitalist society, the intended privatization process has so far resulted in many countries in a maze of complicated economic and legal relations that may sometimes even impede a speedy transition to a system in which the rights of capital are clearly delineated and protected.
>
> Second, the conflict between the interests of insiders, intent on retaining authority over their enterprises, and the right of outside investors to acquire control has often overlooked consequences....insider control and barriers to the entry of outsiders may also retard the development of a system of property rights, including the rights of the insiders as owners of capital. [ibid., 13]

In addition to all this there remain dangers that threaten to bring the entire process to a halt. The illusion on the part of the public that transition to a market system can bring prosperity overnight when the process required decades even in the miracle economies in the Far East and the equally illusory belief that a market mechanism can work without the promise of generous and enviable financial rewards to those who are successful may yet lead to disillusionment and unwillingness to proceed with the privatization process. Even if that does not happen, the Eastern

European economies will later undoubtedly run into the difficult regulatory problems of privatization in Western Europe that have already been described. But these are difficulties only for the future.

NOTES

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1. For a fuller and very illuminating discussion of the privatization process in the U.K. see Johnson [1991, Chapter 5]
2. In the U.S., adherence to the goal of "universal service," with its accompanying cross subsidies, has eroded as deregulation spread. It eventually became clear in telecommunications, for example, that as entry occurred the cross subsidies would become unsustainable. Yet even here, as in a number of public utility arenas, some vestigial cross subsidy was retained. The suppliers, ostensibly voluntarily, agreed to supply what are called "lifeline services," that offer the elderly or the impoverished, or the residents of slum areas some basic services, with all luxury enhancements eliminated, at highly reduced prices. Because the magnitude of the cross subsidy is kept to moderate levels by this approach, and because several, if not all, of the suppliers of the services in question have more or less voluntarily followed it, it does not appear to have led regulators to try to restrict entry, and it apparently has not greatly affected the prices of other services. Still, political pressures have not permitted an end to regulatory intervention to preserve popular cross subsidies.
3. For a fuller discussion see the forthcoming monograph, by Gregory Sidak and myself [1993].
4. For details on the process in the different countries see the excellent treatment in Frydman, Rapaczynski and Earle [1993].
5. Indeed, the proposals were formulated and introduced by economists. The ideas were initially formulated by Frydman and Rapaczynski [1991], though similar proposals may well have been made independently by other Western economist advisers to the East European countries and by other economists in those countries.

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