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Theoretical Aspects of the Privatization: Applications to Eastern Europe

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This paper analyzes the central theoretical aspects of privatization, particularly as they apply to the Eastern European countries. The paper reviews the theoretical and empirical arguments concerning the desirability of privatization, including those pertaining to the relative efficiency of government ownership. The implications of the Sappington-Stiglitz theorem, identifying conditions under which privatization could achieve all the objectives that, in principle, government ownership could obtain are drawn out.

The second part of the paper discusses several key issues in the design of the privatization programme, including those associated with the recapitalization of industry and the financial institutions, problems of financing the privatization programme, corporate governance, and the auction process.

Some Theoretical Aspects of the Privatization: Applications to Eastern Europe[1]

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If we were to seek a date at which socialism ceased to be viewed as a viable alternative to capitalism we have to look before the emancipation of the Eastern European countries in 1989. Besides, their rejection of socialism was as much a political statement, a rejection of an economic system which had been forced upon them by an occupier, as it was a statement about a belief in an alternative ideology. We must look, I think, to the privatizations within France beginning in the early 1980s, by an avowedly socialist government, reversing a pattern of nationalization which that government had instituted but a few short years before. There were inklings that the faith in the socialist ideology may have been crumbling in the years before: Papandreou, another avowed socialist, took as one of the main goals of his government the "socialization of the nationalized enterprises," recognizing explicitly that the older view, that nationalizing an enterprise would ensure that the goals of the enterprise would be coincident with "national interest," however that was defined, had no basis in reality, at least in the context of Greece.

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The collapse of socialism as an economic ideology was as remarkable in many ways as the almost contemporaneous collapse of the Soviet bloc. It was an ideology of more than a century's standing. It had withstood the scrutiny of time. Though, to be sure, its premises and conclusions had been widely debated, it included among its adherents some of the greatest minds over a period of more than a hundred years. Even today, the Marxist ideas and ideals which underlay the economic ideology remain alive, not only within the third world, but in other disciplines. A coherent account of the rise, persistence, and partial fall of this set of beliefs would be fascinating, but would take me beyond the scope of this paper. (In my Wicksell lectures [Stiglitz, 1992], I discuss the role played by neoclassical models of the economy in promulgating and perpetuating belief in market socialism as an alternative to capitalism.)

I begin my talk by referring to ideology, because to a large extent, current discussions of privatization within Eastern Europe are as much motivated by ideology as they are by economic science. Advocates of rapid privatization have a mythologized view of market processes. In their view, markets quickly lead to assets being used by those who can deploy them most effectively. Eliminating trade barriers and other barriers to entry rapidly lead to the release of pent up entrepreneurial energies. I have participated in discussions where concerns about the lack of adequate transport to bring farmers' products to markets, the lack of middlemen to purchase farmers goods, either to distribute them directly to markets or to processing plants, and to provide farmers with inputs, such as seed and fertilizer, the lack of credit to finance the purchase of inputs, all of these and other deficiencies would be met "within a matter of weeks" by a quickly grown crop of new entrepreneurs, supplemented, where necessary, by an invasion of foreign entrepreneurs. Concerns about lack of competition and market-created entry barriers--of the kind that have pre-occupied the industrial organization literature during the past ten years--are dismissed out of hand: one doesn't need anti-trust laws, so long as the government itself does not create barriers. Adam Smith simply had it wrong when he wrote....

> "People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices."

This paper focuses on one, albeit a central, aspect of the transition from a socialist to a market economy: privatization. Privitization, it must be borne in mind, is only one aspect of establishing a market economy. Privatization entails the conversion of enterprises formerly controlled by the government into private hands. The creation of new enterprises is no less--and indeed, perhaps more-- important; and the creation of institutions, such as financial markets, which facilitate that creation is also of central importance. (For a discussion of several of the issues involved in establishing viable financial markets, see Stiglitz [1991].) Beyond that, the government must create the legal framework--including bankruptcy laws, and laws that ensure the enforceability of contracts and the viability of competition.

I. ON THE DESIRABILITY OF PRIVATIZATION

Privatization is based on the premise that privately run firms are necessarily more efficient than government-owned enterprises. Recent theoretical and empirical literature has thrown considerable doubt on this underlying premise, at least in so far as it concerns large scale enterprises.[2]

Theoretical Arguments Concerning the Relative Inefficiency of Government

The theoretical literature has focused on the agency problems which arise in such large scale firms.

Managerial Discretion and Control.

More than a half century ago, Berle and Means and Frank Knight drew our attention to the importance of the consequence of the separation of ownership and control associated with the modern corporation. The ensuing literature on managerial capitalism (Marris [1964], Baumol [1959], and March and Simon [1988]) was dismissed as without theoretical foundations: if

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[2]The distinction between small and large scale enterprises played an important role in the debate over markets versus market socialism. At least some of the advocates of market socialism conceded the advantages of markets when technology was such that competition was viable. But they believed that in many sectors of the economy, competition was not viable: it was not a choice between market socialism and purely competitive markets, but between market socialism and monopoly capitalism. See Persky, 1991. The recent industrial organization literature has stressed the variety of barriers to entry which result in markets being characterized by imperfect competition. Markets may be highly non-competitive even when fixed costs are very small, provided those fixed costs are sunk costs. See, e.g. Stiglitz [1988].

firms did not maximize stock market value, they would simply be taken over by someone who did. The recognition in the early 1970s that information was costly, and that the costs of information gave managers considerable discretion[3] provided the beginnings of the missing theoretical foundations. We now understand better why take-over mechanisms work so imperfectly (See Stiglitz [1972, 1975a, 1982], and Grossman and Hart [1980, 1988]), as well as why the other "control mechanisms" such as shareholder voting provide only limited control over managers. We know better how managers' interests and shareholder interests can diverge--how for instance managers may devote their energies and the firms' resources into entrenching themselves, and into promoting their own careers and interests.[4] (See, e.g. Hannaway [1989], Milgrom and Roberts [1988], and Shleifer and Vishny [1990]). Berle [1926] had emphasized banks as alternative control mechanisms--a perspective which, within the information theoretic context, was revived by Stiglitz [1985] and received increasing attention as economists looked more to the success of Japan, where banks seemed to play a particularly visible role.

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[3]See, e.g. Ross [1973], Stiglitz [1974, 1975a], and Jensen and Meckling [1976]

[4]Indeed, when there is an incomplete set of risk markets, there will not be unanimity among shareholders concerning what objectives the firm should pursue. (See, e.g. Grossman and Stiglitz [1980]). When there is a complete set of futures and risk markets, not only will there be unanimity concerning what objective the firm should pursue--maximizing market value--there is also no ambiguity about what that entails. (See Stiglitz, 1972). When these conditions are not satisfied, managerial judgment about what actions will maximize "long run market value" is required, and this provides enormous scope for managerial discretion, making it difficult to ascertain whether the actions being undertaken are being undertaken because of private or organizational objectives.

Weak Role of Traditional Incentives

Though some of the theoretical literature described ways by which "high powered" incentives could be provided to all employees (essentially by making each employee receive the entire value of the output of the firm, but paying a large fixed fee)[5], there were strong assumptions underlying these analyses, such as that each individual was risk neutral[6] and each had sufficient capital to finance his fixed fee.[7] With risk aversion, optimal contracts may entail fairly low powered incentives, depending on the magnitude of the risk. (See, e.g. Stiglitz, 1975b). In practice, incentives of management in large enterprises appear very weak: management typically receives less than .3% of each increment in dollar that its actions garner for the firm. (Jensen and Murphy, 1990). Even these estimates may overstate the role of managerial financial incentives. While stock options are intended to reward management for good performance, typically when the firm goes through a bad period, other forms of compensation are increased, so that total compensation remains relatively insensitive to firm performance.[8] Simon [1991] and Akerlof [1991] have gone

[5] Such schemes have the property that each individual receives the full marginal value of his contribution.

[6] As in all rental contracts, the "renter" bears all the residual risk.

[7] Borrowing does not resolve the agency problems; at most, it shifts them to the lender. See, e.g. Stiglitz and Weiss [1981].

[8] There are other reasons to suspect claims that options are designed to provide management with incentives. Because payments to managers with stock options are not tax deductible by the corporation, and because shareholders only receive a partial tax benefit, through reduced capital gains taxation--from the reduced capital values resulting from the dilution of their ownership claims, at the time they sell the security--options have significant tax disadvantages relative to direct payments, which can be made contingent on the performance of the firm. Moreover, making payments contingent on stock market performance imposes undue risks and unfair

so far as to suggest that to understand managerial behavior, one has to look beyond economic incentives; that the success of firms requires the "identification" of the individual with the firm's objectives; that the individual adopts, in effect, the firms success as his goal.

Decentralization and Markets

While much of the theoretical literature focused on the advantages of decentralization associated with market economies, economists increasingly became aware that there was not a close or necessary connection between "markets" and decentralization.[9] Large enterprises could be organized in a decentralized manner. Indeed, recent years have seen extensive discussion of what Stiglitz [1989] has called the centralization paradox: anything that a decentralized firm can do, a centralized firm can do since it can

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rewards on management--they bear the risk of stock market downturns which have little to do with their own firm, and they bear the reward of upturns which are equally independent of their own efforts. (See Stiglitz, [1987].) Relative performance compensation schemes are preferable, in that they eliminate this source of noise in compensation. (See Nalebuff and Stiglitz [1983], or Holmstrom [1982]). In a meeting a few years ago of personnel officers of major corporations at which the design of executive compensation schemes was discussed, I asked whether they employed stock options because (i) they were unaware of the tax disadvantages--a strong implicit condemnation of their competence; or (ii) they were attempting to hoodwink shareholders, who thought that giving out shares was much like printing money (it cost the company nothing): shareholders were unaware of the consequences of dilution. While the latter has a certain semblance of dishonesty, a better face can be put on it: management sees their responsibility as maximizing share value, and if the market reflects the ignorance of the typical shareholder (the other tax paradoxes, discussed in Stiglitz [1982] provide further evidence on this), then management sees its responsibility as exploiting the market's ignorance. The answer I received was (with one exception): (i) they were indeed unaware of the tax consequences; (ii) but even now that they were aware of these adverse tax consequences they would not change their compensation scheme, since they believed it was still desirable to exploit the uninformed shareholders.

[9] See, for instance, Sah and Stiglitz, 1986.

decentralize itself, even to the extent of employing the same kinds of contracts among its parts that the decentralized firm can.[10] But the centralized firm may have advantages over decentralized markets, in internalizing externalities, coordination in the presence of the failure of pricing mechanisms, etc. While a variety of explanations have been put forward for why establishing separate firms may have advantages[11], there is one explanation closely related to the theme I shall develop more fully below for why privatization is desirable: establishing separate firms is the most effective form of commitment. When one firm owns another, the parent firm finds it difficult not to commit itself to intervene, in certain circumstances, and, relatedly, not to subsidize losses of the subsidiary; the knowledge of the lack of commitment, in turn, effects the behavior of the subsidiary. Though when two firms are separate, intervention is still possible (the former "parent" firm could buy the former "subsidiary" and

[10] A rejoinder sometimes heard is that a centralized firm cannot obtain the market signals for valuation of the success of the subunits that the market provides. These market signals are important for providing managerial incentives and for allocating resources, e.g. investment, as in Tobin's q theory. Earlier, we suggested that the importance of these signals in designing managerial incentives is greatly overrated. By the same token, the signal provided by the market is far too coarse to provide much help in resource allocation. Indeed, Tobin's q theory has met with remarkably mediocre success in empirical testing, and what success it has encountered probably has more to do with spurious correlations than with causation, as Greenwald and Stiglitz contend [1988a]. Moreover, several of the European countries do remarkably well both in providing incentives and allocating resources, in spite of the relative unimportance of equity markets. See Mayer [1988].

Moreover, even centralized firms can, if they think it valuable, sell securities, the returns to which are contingent upon the performance of sub-units, as GM did recently. (At the same time, one must be aware of potential abuses, resulting from transfer pricing. Such abuses can, of course, occur under conventional market relations.)

[11] The most popular perhaps are those based on incomplete contracting; see, e.g. Grossman and Hart [1988].

issue the same commands) the costs of those interventions is larger, and thus the interventions are less likely to occur.[12] [13]

Empirical Evidence

The theoretical "possibility" that management might run the corporation in their interests rather than in the interests of their shareholders has been borne out, all too dramatically, during the last decade. Ironically, much of the take-over wave of the 1980s was motivated more to advance the interests of the managers than those of the shareholders (See Shleifer and Vishny [1989] and Jensen [1986]). While earlier economists had argued that take-overs were the mechanism by which the market ensured that shareholder interest would be pursued through value maximization, in the 1980s take-overs became the mechanism by which management used their inside information to enrich themselves through leverage buy outs. The view that these LBO's helped serve to align incentives, by providing management with more "high powered incentives" since they now owned a larger fraction of the equity was quickly dispelled, as the major activity of the LBO's appears to be divestiture of the assets. Within a few years of the LBO's, most of the firms assets were once again being managed by those with low powered

[12] Of course, typically, the incentive for interventions is also different; but our argument would be valid even if contracts between the two firms imposed similar losses on the "parent" that it would be exposed to from the ownership of the subsidiary.

[13] Sappington and Stiglitz [1987] discuss this "transactions" approach in greater detail. Note that the alternative arrangements can be viewed as implying different levels of sunk costs in the relationships; with such costs, behavior is modified in a variety of ways. The optimal rules for exiting are altered, so that it may in fact be optimal to provide greater subsidies to the subsidiary than in the absence of such sunk costs. See, e.g. Dixit [1991].

incentives. The notion that holding an auction for the firm's assets to ensure that they are sold for the highest value requires high powered incentives seems, on the face of it, not credible, particularly in light of the fact that most of the work involved in the divestiture process was conducted by investment banks, who received high returns for their specialized knowledge. It seems more credible to believe that management took advantage of the asymmetries of information; those with asymmetric information can have very large expected profits, particularly in auctions with relatively few bidders--a point well worth remembering in the context of the privatization of enterprises within Eastern Europe.

The widespread perception of diversion of firm resources to the benefit of management received confirmation in popular books such as Barbarians at the Gate, which documented in the case of RJR-Nabisco a massive misappropriation of resources which, were it not for the fact that under US law it is legal, could hardly be called anything but theft. Golden parachutes, payments to directors that were but thinly disguised bribes, executive compensation that was seemingly unrelated to anything that could be justified by competitive market processes all confirmed the importance of these "agency" concerns.

Beyond these anecdotal pieces of evidence concerning market inefficiency (which can, and usually are, matched with anecdotal pieces of evidence concerning government inefficiency, there are few clear and unambiguous tests providing a comparison of government with large scale enterprises.[14] The most widely cited study, comparing the Canadian National

[14]There are many studies examining relative efficiency in small scale enterprises, such as garbage collection. See, for instance, Savas [1977]. For a partial review of these studies, see Stiglitz [1990].

and Canadian Pacific Railroads[15] showed little difference in efficiency. Many of the French nationalized industries have a reputation for efficiency which matches or exceeds that of private firms in other countries, but I have seen no detailed study ascertaining whether that reputation is deserved.

Thus, the standard theoretical and empirical literature leaves little convincing economic justification for privatization of large enterprises on narrow grounds of efficiency.

The Argument Against Privatization

While the above argument suggests that there is little grounds for privatization-- enterprises like British Petroleum, which (until recently) was 50% state owned, or Canadian National Railroad are as or more efficient than comparable private enterprises (cf. in the case of oil, Texaco, or in the case of railroads, Canadian Pacific)--it does not make a convincing argument against privatization. The problems of managerial discretion arise regardless of ownership.

The Fundamental Privatization Theorem

But there is one argument against privatization. David Sappington and I [1987] asked the question, is it possible for the government to auction off state enterprises in such a way as to ensure that the resulting private firms achieve the same objectives that the state wished to pursue, and which attained for the government all the rents that the government could have achieved. I sometimes refer to the main theorem of that paper, giving

[15]Daves and Christensen, 1980.

conditions under which this can be done, as the Fundamental Privatization Theorem, in analogy to the Fundamental Welfare Theorem of economics. Both theorems state conditions under which the market can do as well as a benevolent government. The former theorem focuses explicitly on conditions in which some assets are owned by the government, and asks under what conditions those assets can be transferred to the private sector in a way which ensures that the objectives of efficiency and equity which the government could ideally carry out will be as effectively pursued by the private purchaser, and at the same time, that the government loses no rents.

In those circumstances in which the best the government can do is no better than what the market can do, there is a strong presumption for market processes. The assumption of a benevolent government is obviously unrealistic, but the theorem establishes conditions under which no matter how good the government it can do no better than the market. But in those cases where the market cannot do as well as the government, we are forced to re-examine the question, to take a more careful look at the government, and on this basis, to arrive at a more balanced view of the role of government.

Thus, the Fundamental Theorems of welfare economics provided the presumption for a reliance on market processes. But when Bruce Greenwald and I proved that whenever markets are incomplete or information is imperfect [1986, 1988b][16]--that is, in all actual market economies--the economy is essentially always constrained Pareto inefficient (the great achievement of Arrow and Debreu was to discover the almost singular set of circumstances in which markets are Pareto efficient) it did not reverse the

[16] I take up the issues involved in the welfare economics of markets with imperfect information at greater length in my Lindahl lectures (forthcoming 1992, Oxford University Press.)

presumption that markets were more efficient than the government; it only made it necessary to re-examine more carefully, as a I have said, the inherent difference between government and the private sector, and from such an analysis, to attempt to delineate the scope of comparative advantage of each.[17]

Without going through here either a full articulation of the assumptions or proofs of the Fundamental Privatization Theorem, let me give the conclusions of our analysis: only under highly stringent conditions can the government be assured that its objectives in efficiency and equity can be carried out and, at the same time, that it acquires full rent.

Positive and Negative Lump Sum Taxes

I want to focus particularly on the latter condition. We are increasingly aware of the distortions associated with taxation. Concerns about the distortionary effects of high tax rates motivated the tax reforms undertaken by some many countries during the 1980s.

Standard tax theory talks about the advantages of lump sum taxes and once and for all capital levies. If the government transfers capital to the private sector, in a manner which does not capture for itself all the (present discounted value of the) rents, then it is equivalent to a negative capital levy, just the opposite of the standard prescription of a century of tax economists. The Theorem argues that even in the best run of auctions (in our paper, we considered an auction of optimal design; real life auctions seldom meet this standard), the government is not going to capture

[17]A task which I began in my little book, The Economic Role of the State (1990a).

all the rents. Of course, many of the Eastern European countries are talking about <u>giving away</u> their enterprises, not even trying to capture the rents--a huge negative capital levy.

Advocates of privatization say that changing ownership will automatically lead to higher profits. Under current ownership, profits are negative. Hence, a share of positive profits is better than all of negative profits. But our earlier theoretical (and empirical analysis) suggested that there was no inherent reason that privatization should increase efficiency.

<u>The ambiguous relationship between profits and efficiency</u>

In spite of this, there are reasons to believe that privatization may lead to an increase in apparent profits: but this increase in profits may or not be the result of improved efficiency. Profits are a measure of efficiency if and only if prices are set correctly. But prices have not been set correctly. Losses are not necessarily an indication of economic inefficiency: the firm may be paying too high wages, but that is a transfer payment; it is not evidence that labor is necessarily incorrectly allocated. Of course, in the process of the transition to a market economy, prices should come to reflect scarcity values, so that in the long run, profits will be an indicator of efficiency. But in the short run, not only are many prices likely not to be set correctly, but in the process of privatization, capital values (both of assets and liabilities) may be set incorrectly, thus obfuscating our ability to judge whether a firm is in fact efficient. We shall return to this point later.

The Argument for Privatization

At least one of the Eastern European countries has suggested explicitly that the economic case for privatization is unconvincing (the Minister for Privatization for Czechoslovakia, at a meeting of IPR/IRIS in Prague, March, 1991). The case for privatization is a political one.

Weakening the Power of the State

One of the bases of the Communist party's strength was not only its monopoly in the political sphere, but its monopoly in the economic. The ability of the Party to provide economic rewards for those who complied with its wishes, and to provide economic punishments for those who crossed it, was a major source of its coercive powers: it could exercise these powers without having to engage in the brutality associated with Stalinism. Decentralization of economic power is an important check on political power, and it is this hard learned lesson of their political experience, as much as anything else, that may motivate their drive for rapid privatization.

Enhanced commitments

Beyond the political concerns, I want to argue here that there is an economic argument for privatization: the government does indeed have a marked disadvantage relative to private firms, but it is not based on differences in managerial incentives, as usually defined. Rather, it is based on the inability of the government to make certain commitments, in particular, the commitment to competition and the commitment not to subsidize. To be sure, even with privatization the government cannot make such commitments. Private enterprises are constantly seeking government assistance, both in attempts to reduce competition and to receive direct subsidies. From time to time, the U.S. government has provided bail-outs of isolated firms, such as Chrysler and Lockheed--and of whole industries, e.g., railroads and the S & L's. The government helped protect the automobile industry from foreign competition, as well as the computer chip industry. Hence, privatization is no panacea, no protection again protection and subsidies.

What privatization does is to increase the "transactions cost," to use the fashionable phrase, of obtaining government subsidies and government protection from competition.

II. THE DESIGN OF PRIVATIZATION

The design of the privatization program must bear in mind the issues which we have just discussed, as well as the broader set of objectives of ensuring economic efficiency while retaining as much "rent" for the government as possible. The following paragraphs describe several aspects of this.

Recapitalization of industry

The enterprises inherit financial debts and assets from the previous regime. Financial relationships under the previous regime bear little resemblance to those under capitalism (see McKinnon [1991], Stiglitz [1991]).

Keeping track of financial positions is important for both incentive and selection reasons. Any society has to know how well each of its units are doing, so that the less efficient may be weeded out, and the more efficient can be allocated more resources to manage. And the carrot and the stick--of being rewarded with more resources or of being "weeded out"--provide strong incentives--organizational incentives that are perhaps as powerful as the profit motive itself.[18]

Unfortunately, inherited financial assets and liabilities provide no information concerning firms' abilities, since they were accumulated under a quite different set of rules. What's worse, these inherited assets and liability will obfuscate the signals provided by the market mechanisms concerning current enterprise performance. Thus, the future success or failure of enterprises may be determined as much by the randomness of the valuation of those claims as by the efficiency of management in running its enterprises. The extensive interfirm lending means that the fortunes of all the enterprises are (unless there is an extensive recapitalization) closely intertwined. Whether firms get repaid their loans may have as much to do with the vagaries of government policy--for instance, whether the government allows government owned enterprises to renege on their loans, and, if it does not, on the speed of privatization, which will affect the likelihood that reneging will occurring (since private enterprises are more likely to default).[19]

The fact that there is such "noise" makes it less likely that the government commitment not to subsidize in the event of a default is credible. After all, if a default occurs through no fault of the

[18]In particular, since organizational objectives have to be translated into individual objectives, individual incentives can be as powerful.

[19]There are a host of other government policies which are likely to affect profitability in an important way, such as the extent of protectionism, competition policy, and the speed of price reforms.

enterprise, but through a default of borrowers from the firm, there is a more persuasive argument for government intervention than if the default is a result of managerial incompetence. And when there are large loans, the government may not be able to distinguish well the source of the default--default on loans will be blamed even when the real reason lies elsewhere.

Moving back one step, the fact that the government commitment not to subsidize will be less credible has in turn real incentive effects.

Moreover, for those enterprises that inherit large amounts of debt--augmented possibly by the debt that was acquired in the process of privatization--a further incentives problem arises: the by now familiar moral hazard problem confronting firms with high debt, the incentives to undertake undue risk, to maximize returns in the non-bankruptcy states at the expense of returns in the bankruptcy state. (See Stiglitz [1972] and Myers [1977]). These problems became all too evident in the case of S & L's within the United States.

Among the dangers is that such enterprises extend credit to others--a form of contagion of soft budget constraints which we discuss in greater detail in the next section.

<u>Recapitalization of the financial system</u>

The problems just discussed are all the more important within the financial sector, the <u>main</u> assets which they inherit being financial assets and liabilities. Kornai has emphasized the debilitating effect of soft budget constraints, and the inability of the government not to commit itself to subsidize enterprises. But we now recognized that soft budget constraints can arise not only from government, but also from the financial system. In the United States, firms were able to borrow huge amounts of money, and borrow to make up for losses, on the enhanced chance that they would subsequently be able to repay those loans[20], partly because banks saw their only hope of getting out of their positions of negative net worth was undertaking large risks. (As Ed Kane has put it, the Zombie institutions--the institutions which, in any real sense, were dead, though they remained among the living--were gambling on resurrection.)

So long as there are some institutions within the society which have the capability of making loans, and which either have an incentive to make large gambles, or believe that any losses they will incur will be made good by the government, then there is an effectively soft budget constraint. The soft budget constraint of one enterprise gets translated into the soft budget constraint of other enterprises. Institutions with soft budget constraints will be "softer" in granting loans to others. Given the importance of interfirm lending, the disease of soft budget constraints--and the resulting softening of incentives--can spread quickly through the economy.

Government retention of a large equity share

We have noted that a major disadvantage of privatization is the loss of potential rents from the government, which the government must recoup with distortionary taxation. A major advantage of privatization (if done properly) is the enhanced commitment of government not to subsidize (the

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[20]There has been a limited theoretical literature concerning this problem of "hooking" onto a lender: once the lender has made an initial loan, he is "forced" to provide additional loans, to recover his initial loan. See Hellwig [1977] and Stiglitz and Weiss [1981].

hardening of the budget constraint) and whatever advantages private management can provide. In balancing these advantages and disadvantages, the optimum is not necessarily a "corner solution" --all private or all public. Rather, there seems little reason for the government not to retain a large minority interest.

There is another strong reason for government retaining a strong minority interest: less finance is required to buy the company, implying that the purchaser is likely to have to undertake less debt. We have already discussed the marked disadvantages of excessive debt. The same argument suggests that the government interest should be an equity interest.

A large minority interest can still exercise considerable control and power. We suggested that one of the motives for privatization was the limiting of government economic power. The question is, how can government maintain a strong equity claim, while limiting its ability to exercise its control.

As Domar and Musgrave pointed out, some fifty years ago, the corporation profits tax represents an equity claim on corporations. It is an equity claim with, however, a few peculiar characteristics. The government-as-partner does not share in the losses, a fact (as Auerbach has emphasized) which causes significant distortions; the government has no commitment as to the share that it will take, a fact too which may give rise to considerable distortion; and the government does not exercise any voting rights over its "share." The government could "replicate" its equity interests by, ex post, imposing a corporate profits tax, but it seems better for the government to commit itself, ex ante, to a share. As a large minority shareholder, the government might be able to exercise its influence to prevent managerial abuse. The question is, how to do this without at the same time opening up the possibility of government abuse? One suggestion is to divide the government interests among different government units--using the checks and balances provided by appropriately designed governmental structures. For instance, some of the shares could be given to the workers' pension fund, some to a county enterprise board, some to a national enterprise board, some to fund the State pension scheme, some to the State hospital system. All of these will have an interest in making sure that the enterprise maximizes profits. Though it is possible that all of these come under the control of a single "party," it is unlikely, and the division of power will work to make it less likely accordingly that the power of government ownership will be abused.

Strong competition and free trade policies

In all countries, there are strong political pressures for protection from competition (as Adam Smith emphasized)--both from competition from abroad and competition within. This is particularly likely to be true in Eastern European countries which have not experience competition before. Some of the disadvantages of competition--such as failing businesses--will become apparent before some of the long run advantages manifest themselves. Moreover, the ideologies under which many of the business and political leaders were brought up, stressing the advantages of coordination within State monopolies and the disadvantages of disorganized markets, are supplemented by popular views of the importance of bigness--these countries, it will be alleged, will need big companies to compete with the big companies of Western Europe, Japan and the United States. Finally, the infant industry arguments for protection will be used to justify "temporary" protection from foreign competition as these countries adapt to the different standards required for trading with the non-Communist countries.

The forces for non-competition will be further enhanced because of the close personal working relationships that may have been established in the days when the entire industry was within a single state monopoly. There will be a natural inclination of some of these individuals, who were socialized into cooperative behavior, now that the parts of the industry for which they are responsible are supposed to compete against each other, to try to organize "more orderly" markets and to undertake "joint ventures of mutual interest" --cover names for collusive behavior. Given the limited check that potential competition[21] and, in the short run, at least in many industries, international competition is likely to play, such collusive behavior may be profit maximizing. As Willig [1991] has emphasized, strong anti-trust laws are required, and it is much easier to implement these laws before the privatization process begins; once it starts, strong vested interests will arise to try to limit the scope for competition.

The consequences of the lack of competition are evident in the case of food processing. Farmers producing perishables are dependent on local

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[21] There is a large literature on the scope of potential competition in ensuring zero profits and economic efficiency. While Baumol, Panzar, and Willig [1982] have tried to argue that potential competition will, in many circumstances, suffice (actual competition is not reburied), we now recognize that even arbitrarily small sunk costs may serve as an effective deterrent to entry. (See Stiglitz [1987]). The failure of competition to work in the one industry which was held out as the example par excellence for the role of potential competition--airlines--has made it clear that these are not just theoretical niceties.

processors (particularly given the limitations on the transportation system), and these can exercise monopsony powers to limit the prices paid to farmers. Monopsony rents, rather than going to the government, accrue instead to the owners of the food processing plants: farmers see little gain from privatization, it is just a change of who receives the rents.

The importance of a commitment not to renationalize, and the implications for the design of privatization

A basic problem facing all governments is the difficulty of making credible commitments. No government can bind its successors. This provides a major disadvantage to the government. One implication of this is that the government cannot really bind itself not to renationalize the firms which are being privatized.

We began with the theme that privatization affects the transactions costs, the costs of government intervention. By the same token, the design of the nationalization program can affect the likelihood of renationalization. For instance, widespread ownership of shares, obtained at below market prices, as in the British privatization, makes it less likely that there will be renationalization; the government has created a strong lobby for remaining private, as each voter sees vividly his potential losses, without the same conviction of a possible gain. The proposed programs of vouchers, with widespread ownership, in several of the Eastern European countries, provides the same credibility.

Selling enterprises to foreigners on the cheap, on the other hand, lays open a real possibility of renationalization in the future, unless other commitments not to do so can be made, e.g. through joining the Common Market.

One of the major ways that Western Europe can help the Eastern European countries is through the commitments that joining the Common Market would provide--commitments with respect to trade and competition policies, taxation, and renationalization.

Financing Privatization

There has been much confusion over the issue of financing privatization. In some cases, concern has been raised about who has the funds to purchase the enterprises. In a perfect capital market, that issue would be irrelevant: the enterprise would be purchased by the individual or group of individuals who would most effectively make use of those assets. No country--let alone the Eastern European Countries--has a perfect capital market, so there is some cause of concern that enterprises will go not to those who are most competent at running them, but to those who have the most capital, or the best access to capital. These are legitimate concerns, but they can be partially alleviated by the government providing finance itself.

Where, it may be asked, does the government receive the funds to make the loans, given the budget stringency under which already is? Such questions show a confusion between the macro-economic roles of government finance and the role of financial accounting. The government will lend the firms money to buy the firm, and then receive the money back again.[22] It is

[22]There are some problems which arise when the enterprise is "owned" by a subunit of the government, so that the money is not received back by the government. Financial arrangements can be designed to ensure that the government receives the money back.

a pure wash, with no direct macro-economic consequence. It has real micro-economic consequences--those that arise from control and ownership.

There are some serious problems with government provided loans, in the absence of adequate equity on the part of the buyer: the kinds of moral hazard problems discussed briefly earlier, which are likely to be particularly severe given the governments' limited ability to screen applicants, to distinguish which of the potential loan applicants see the purchase of the firm with government provided credit basically as an "option". If things turn out worse than they think, they can simply walk away, perhaps having stripped the firm first of its assets.

In some countries with a large monetary overhang, selling enterprises, it has been argued, has a further advantage: it absorbs some of the extra money. Alternative ways, such as monetary reforms and taxation, are likely to be more distortionary or undesirable for other reasons.

For both of these reasons, government loan programs will not provide a perfect substitute for private funds. Those with private funds or access to private funds will be at a marked advantage.

This, in turn, suggests that opening up the auction process to foreigners and encouraging cooperative ventures between nationals and foreigners will be desirable. It will enhance the competition, thus ensuring that the government receives a larger share of the total potential value of the assets. And at the same time, it may provide greater access to foreign managerial skills.

Corporate Governance

We began this essay by emphasizing the potential abuse of managerial prerogatives. This is particularly important in situations where no single shareholder owns a significant fraction of their shares. Financial institutions, such as pension funds, at least until recently, have been reluctant to intervene in the governance process. This presents a real problem for "people's capitalism," a problem which several of the Eastern European countries have recognized, and tried to grapple with in the design of their privatization programs. It has been proposed that control of each company be vested in a holding company, the responsibility of which will be to manage enterprises. Individuals will own shares in holding companies, and holding companies will compete against each other to maximize share market value.

At a theoretical level, the solution seems suspect. RJR-Nabisco could be viewed as a holding company. It was responsible for the management of firms in the tobacco, food, and other industries. There were a large number of separate enterprises. Yet managerial abuse was rife throughout the enterprise. Who monitors the monitor?

One solution that I have proposed elsewhere is "mutual" or "peer" monitoring (see Stiglitz [1985], [1990b], and Arnott and Stiglitz [1991])--an economic version of the old political solution of "checks and balances." In my 1985 Money, Banking, and Credit lecture, I showed how, in spite of the fact that shareholders nominally have control of the firm, in many instances, banks could exercise more effective control.[23] There is an

[23]This was a revival of a theme which Berle had raised more than a half century earlier. I argued that free rider problems meant that shareholders had limited incentives to obtain information required to intervene intelligently, or to bear the costs of those interventions. Management of the enterprise is a public good. For banks, I argued both

extensive literature arguing that Japanese banks perform this role actively, and more effectively than do American banks.

Capital structures in the United States, Japan, and Western Europe differ markedly from each other. There is more than one form of capitalism, and one of the problems that the Eastern European countries face is the choice of the appropriate form. For those countries that see themselves as evolving towards a form of people's capitalism, I see marked advantages in the Japanese main bank system, combined with large ownership shares by the government and an important role for holding companies. Large levels of indebtedness to the bank will give the bank both an incentive to monitor and a means of control--the threat of withdrawing credit is an effective discipline device. It will provide an important check on the abuse of managerial prerogatives, should the holding company not do its job properly. Oversight by the government units which have significant ownership shares will provide further checks.

The question is the delicate balance of maintaining checks on incompetency, without hindering the effective exercise of managerial discretion for taking advantage of profitable opportunities, and without providing the "checkers" with an opportunity of abusing their power to their own advantage. The United States has not yet found that delicate balance in the case of enterprises with widely held share ownership. We should not expect the Eastern European countries to find, at the first try, the right

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that the costs of intervention will be smaller and that the free rider problems will be less severe.

For a more extensive discussion of the limited control of shareholders and the limitations of take-over mechanisms see, e.g. Stiglitz [1972, 1982], Grossman and Hart [1980, 1988].

balance. An awareness of the issue, and a willingness to adapt, is what is most important at this juncture.

The Auction Process

Organizing the sale of enterprises so as to maximize value received has been the subject of extensive discussion--and litigation--within recent years. In virtually every major sale of an American firm, there has been litigation by shareholders that the firm did not receive what it should (could, might) have, had the auction process been run differently. There is widespread consensus that Great Britain, in its privatization program, received far less from its sales than it could have received.

There have been extensive developments in auction theory in recent years, and some of these insights can be brought to bear, and the experiences of firm sales provides us further insight.

One of the key issues raised in all such auctions is the speed with which the auction is carried out. The interim between the time when the sale of the firm is announced and the sale is actually executed turns out to be a trying time. Key employees may leave, and commercial relations may be interrupted.

The Eastern European countries have encountered an additional set of problems. With the decline in control by the central ministries, enterprise managers have gained, in effect, great autonomy. There are a variety of ways in which they can use that autonomy to their own advantage: with limited future horizons, they have every incentive to waste the firms assets, or more accurately, to convert the firms assets into their own. There are a variety of ways (e.g. through transfer pricing) in which this can be done. Many of the Eastern European countries have recognized the problem, and they have tried to set in motion control processes. How effective these will, or can be, remains a question. These concerns provide a rationale for speedy privatization, against which we must set several of the considerations listed earlier (e.g. the importance of recapitalization, including of the financial system, the importance of establishing an effective anti-trust system) which speak for a slower process of privatization.

A second important issue, raised both by the theoretical literature and auction experience, is the importance of asymmetric information. Inside management has more knowledge concerning the true value of the assets, which provides them an inside track. It is not only that this enhances the likelihood that they will win. If other bidders believe that there are important information asymmetries, bidding will be less intensive. The winners' curse raises its head with a vengeance: outside bidders only beat the insider when they have bid too much.[24]

Two of the most important determinants of the success of the bidding process (in terms of sellers' maximizing value) are maintaining a level playing field and enhancing the number of bidders. In the United States, an attempt to level the playing field is provided by a process of due diligence, in which potential buyers are provided access to the company's books, a process which is typically managed by a disinterested outside third

[24]These are just manifestations of the adverse selection-lemons problem. In the case where the original owners are more informed and are selling equity, if buyers were risk neutral, the only equilibrium price for shares would be zero. More generally, equity markets will be thin. See Greenwald, Stiglitz and Weiss [1984] and Myers and Majluf [1984].

party (an investment bank.) The investment bank also has the responsibility of drumming up bidders.

The consequences of the asymmetries of information may be reduced by the object over which bidding occurs. Thus, in oil leases, it can be shown that royalty and net profit bidding succeeding in garnering for the seller a substantially larger fraction of the potential rents than does bonus bidding, with no royalty. While organizing the bidding process as a net profit auction (the fraction of the net profits which accrue to the government) may not be desirable,[25] setting a large pre-assigned share of profits to the government (the equity share discussed earlier) will result in a larger fraction of the total potential rents going to the government in the auction process.

There are several other factors which should briefly be mentioned which are relevant to the sequencing and speed of the privitization process. Bidders are likely to be risk averse. The greater the risks which they perceive, the less they will be willing to bid. The risks which they perceive are likely to be greater if the course of government policy is not clear. Issues of competition, trade, finance, and tax policy all impinge in an important way on firm profitability, and to the extent that they have not been resolved, confront bidders with a high degree of uncertainty. If the government has not engaged in a recapitalization, there is further uncertainty associated with all of the enterprise's financial assets (what it is owed by other firms).

[25]There are severe problems with monitoring net profits. And excessively high royalty rates give rise to large distortions.

One particularly important aspect of government policy is price liberalization. If prices are not at their "equilibrium" level, buyers may buy the firm more to take a speculative position on the price of assets than to enhance the efficiency with which the firm is managed. The winner of the auction may not be the best manager, but the individual who is most optimistic about the future price of those assets. Though this problem arises in the case of the auction of any enterprise, it is particularly acute when prices are very far from equilibrium.

CONCLUDING COMMENTS

The changes in economic structure which Eastern Europe is undertaking are among the most interesting economic experiments to have occurred. We have limited experience with privatizations, and the experiences we have are all within the context of economies which are otherwise dominated by private markets. Unfortunately, these are experiments whose success or failure will touch the lives of millions of people, and so they cannot be approached with a dispassionate perspective. It is all the more important that all that we know from economic science--both theory and practice--be brought to bear, that ideological commitments--such as beliefs that markets always work and work quickly and efficiently--be put to the side. It is also imperative the political judgments be cleanly separated from economic judgments: much of the debate on timing is based on a balance of political judgments concerning the political consequences of an excessively rapid privatization, with consequent unemployment, with the consequences of an excessively slow privatization, with the possibility that in the interim the commitment to privatization and markets may be weakened.

In this paper, I have attempted to set forth some of what I see as the central theoretical considerations. To put what I have said in context, let me make three concluding remarks.

First, I have focused my attention on the privatization of large scale enterprises. Some of the issues that I have discussed also arise in the privatization of small scale enterprises, but by and large, the privatization of small scale enterprises is a far easier task, one which is already well underway. Moreover, privatization itself is only one means of achieving a market economy: establishing new enterprises is the other. Establishing institutions to facilitate that deserves at least as much attention as does the privatization process. In some cases, such as financial institutions, an argument can be made that the countries may be better off starting anew, rather than attempting to reform institutions which were designed with quite different functions in mind than those served by financial institutions in capitalist economies.

Secondly, reforms and policies once undertaken may be difficult to undo. It is important to get things right the first time--or at least, as right as possible. Property rights quickly get established, and any reform is likely to destroy some of this implicit property. Indeed, such property rights, created under the old regime, even now serve as an impediment to the reform process. In some Eastern European countries, such as Rumania, the position in the queue for buying consumer durables (such as a car) at below "free market" prices is an asset which will be destroyed under price liberalization, and is evidently a considerable source of political pressure resisting price liberalization.

At the same time, concern about getting things right can lead to a paralysis: there is no single best way, no single right way. V. Klaus, in a talk at the World Bank ABCDE conference, provided a metaphor--reform was like playing a chess game. No one, not even the best players, can, at the beginning of the game, see all the way to the end. Better players can, however, see more steps into the future than can worse players. It is my hope that my remarks will help those who are engaged in the Real Life Game of economic reform play that game a little better.

And this brings me to my final concluding remark: The "next move" in the game may be dictated as much by political imperatives--for instance, the concern about weakening the power of the state--as by economic judgments. In one sense, the two are intertwined: the loss of strong control by the central authorities, combined with the likely prospect of privatization, provides managers with incentives to grab what rents their current positions afford them while they can; and as a result, delay in privatization may be extremely costly. In some cases, it is these costs of delay, perhaps more than anything else, which may--and should-- be central in determining the speed of privatization.

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