Credible Liberalization:
Beyond the three theorems of neoclassical welfare economics

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1. Introduction

The world economy is undergoing startling change. Almost every country has been moving toward freer markets and extensions of the private enterprise capitalist system. Of late the process has been most marked, I suppose, in China during the early 80's and more recently in the amazing transformation of the formerly Communist nations of Eastern Europe. But nations belonging to the Organization of Economic Cooperation and Development have also privatized state-owned industries, de-regulated private industry, freed international trade and capital movements, and seem intent on further liberalizations. Meanwhile, the aid, loans, and debt relief to developing countries provided by the World Bank, the International Monetary Fund, or other lending agencies appear to be tied more and more to schemes that extend the influence of competition in world markets upon each nation's economic system.

This drive toward global economic liberalization is not without its good features. The world economy probably has much to gain from the increased efficiency that is being brought about. Yet there are important limits to what market systems can achieve on their own. By themselves they do not guarantee distributive justice, and can even exacerbate extreme poverty. By themselves market systems will not protect us from any adverse effects of global warming, industrial pollution, or other ecological hazards. It is far from clear that market systems by themselves will provide future generations with good economic prospects, or even ensure adequate old-age pensions for many of those currently alive. And in the United States, which still clings to the myth of a free market for the provision of medical care and

health insurance, the result is increasingly being regarded as both unduly expensive and appallingly inadequate. In fact, not only do markets on their own fail to resolve some of these economic problems satisfactorily, but they may also make it harder to create alternative non-market institutions which could resolve them.

So the effectiveness of markets as good allocators of resources remains an issue worth discussing. As a theorist, I shall try to provide a picture of what economic theory currently has to say about this topic. A surprisingly large proportion of the relevant writing turns out to be based upon the two "basic theorems of classical welfare economics" (Arrow, 1951). Accordingly, Section 2 begins by reviewing very briefly the first of these two theorems. This is the remarkably robust result telling us that complete perfectly competitive markets produce Pareto efficient allocations.

Yet efficiency does not preclude extreme injustice or poverty. From an ethical viewpoint, therefore, the second theorem set out in Section 3 is actually more interesting. It says that any Pareto efficient allocation, including any that is also distributively just, can be achieved through complete perfectly competitive markets. Unfortunately this theorem is much less robust, so it is important to understand something of the conditions under which it is not true, and when the invisible hand of a market system may need a more visible helping hand.

Complete perfectly competitive markets are likely to remain for ever as an unattainable theoretical ideal. Liberalizing policies are intended to make the market system less incomplete and less imperfectly competitive by removing some restrictions on free trade and competition. The desirability of such policies is the topic of the third theorem of neoclassical welfare economics, concerning the gains from trade and other forms of liberalization. This is the subject of Section 4. The theorem claims that liberalization makes Pareto improvements possible, but they cannot be guaranteed unless those directly harmed by liberalization are suitably compensated.

The most serious problems in applying the three theorems arise when there is private information, as discussed in Section 5. In particular, it is noted how workers' private information regarding their true skill levels makes it almost impossible to achieve fully optimal allocations, or to ensure classical "lump-sum" compensation for those who lose from a liberalizing reform. The reason is that private information creates "incentive constraints"

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limiting what allocations are truly feasible. Moreover, Section 5 argues that expanding markets, as in a liberalizing reform, can tighten these incentive constraints and so lead to inferior allocations.

Even though private information does create severe incentive constraints, there is still a remarkably general case to be made for having production be arranged efficiently. For, as Diamond and Mirrlees (1971) observed, there are circumstances allowing production gains to be converted into gains for everybody, even if lump-sum compensation of losers is incentive incompatible, or impracticable for other reasons. Their argument is reviewed and somewhat extended in Section 6. It creates a "second best" case for liberalization. But only a weak case, since it rests on an extremely judicious and implausible choice of other policy instruments in order to ensure that the losers from liberalization get compensated.

So it is hard to arrange that everybody gains from liberalization, despite the claims of the third theorem. Nor is it necessarily desirable that all should gain even if that were possible. Many economic systems are bedevilled by greedy and powerful people who have consumed excessively in the past and retain undue wealth to this day. A reform that makes them worse off in order that others who have suffered past deprivation should experience moderate gains seems preferable to a reform bringing small benefits to all, whether they are deserving or not. So the case for liberalization depends on being able to find accompanying reforms in which individual gains outweigh individual losses, taking into account what the different gainers and losers each deserve. This is the topic of Section 7, which argues that for economic liberalization to remain credible as a desirable reform strategy, careful consideration must be given to any adverse effects and to what should be done in order to mitigate them.

2. The First Theorem: Efficiency of the Invisible Hand

As remarked in the introduction, the first theorem says that equilibrium allocations are Pareto efficient provided that markets are complete and perfectly competitive. Actually, this is only true under the additional mild assumption that consumers' preferences are locally non-satiated — otherwise equilibrium allocations are only *weakly* Pareto efficient in the sense that it is impossible to make *all* consumers better off. In addition, the first theorem is generally false in certain "overlapping generations economies" having an infinite number of individuals and an infinite number of goods, as Samuelson (1958) pointed out.

Many advocates of free markets appear to understand this first theorem, and invoke it as justification for liberalizing economic systems. Yet it is important to understand what the theorem does *not* say, as well as what it does. It does not say that markets will produce ethically acceptable allocations. One obvious reason is that what consumers prefer is not always ethically desirable, as in the case of teenage drug or alcohol abuse, or the desire to buy firearms for personal misuse. Another reason is that the Pareto efficiency criterion says nothing about distributive justice or the avoidance of poverty. It can be Pareto efficient for a cruel dictator to run the whole economy for his own personal benefit, with all other individuals functioning as slaves and only allowed to survive as long as the dictator benefits more from their work than is lost from providing for their basic needs. This dictatorship would be Pareto inefficient only if: (i) either the dictator could be made even better off; or (ii) some slave's lot could be made less miserable without making the dictator worse off. And such a dictatorial allocation would result from a perfectly competitive market system in which all wealth is owned by the dictator, provided such a system admits an equilibrium.[1]

Gross inequality and extreme poverty are, I presume, not ethically acceptable to most of us. Yet they abound in market economies, both now and in the past. Pareto efficiency on its own is not an adequate ethical criterion. It is also quite wrong to try to separate efficiency from distributional issues. Once the latter are recognized as important, what role should we give to market systems, and what value should we attach to liberalization?

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[1] Bergstrom (1971) shows how perfect market allocations exist and are Pareto efficient in a slave owning economy. Coles and Hammond (1991) prove similar results when it is not required that all individuals survive, even in equilibrium.

3.   The Second Theorem: Optimal Allocations

The first theorem concerns allocations that emerge from markets where no explicit attention is paid to distribution, and shows that they are Pareto efficient. The second theorem concerns the converse: that any Pareto efficient allocation can be brought about through perfect markets. In particular, under conditions to be discussed below, this will be true of any allocation which distributes goods justly, as long as it also meets the test of Pareto efficiency.

That is the claim. Yet some very significant assumptions have to be met before this second theorem is valid, either in its first general modern version due to Arrow (1951), or in one of its many later refinements such as Hildenbrand (1974), Coles and Hammond (1991), or Hammond (1992, 1993). For example, consumers must have preferences which are not only locally non-satiated, as defined in Section 2, but are also continuous. There also has to be enough convexity, either because consumers and producers are both small and very numerous, or because they have convex preferences and feasible sets anyway. Finally, Arrow's (1951) "exceptional case" needs to be ruled out.

Even when all these extra assumptions are satisfied, however, there still remains one more extremely important qualification. Obviously, markets are only compatible with distributive justice if there is an appropriate distribution of purchasing power in the market economy. Such a distribution typically requires transfers from those who are going to do well in the market economy to those who would be excessively poor if they had no additional source of wealth provided for them. These transfers should be *lump-sum* in the sense of being independent of market transactions. This is important because transfers that depend on transactions are like commodity subsidies (or taxes) that face traders with distorted price ratios and so destroy Pareto efficiency, in most cases at least. Lump-sum redistribution plays a large role in the ensuing theoretical discussion. And the second theorem only has practical or ethical significance to the extent that one can rely upon lump-sum redistribution to bring about distributive justice.

In the end it may seem ironic that, as Barone (1908) first pointed out, an optimally functioning planned economy would produce the same allocations as a perfect market economy. Yet obviously both optimal planning and perfect markets, with ideal redistribution, are unattainable ideals. Is there really no better case for economic liberalization?

4. The Third Theorem: Gains from Liberalization

The first theorem shows that perfect markets generate Pareto efficient allocations. Under several important qualifications, the second theorem shows that any particular Pareto efficient allocation can be achieved through perfect and complete competitive markets with appropriate lump-sum redistribution of wealth. Yet in practice it appears that, rather than strive for unattainable full Pareto efficiency, we would do better by being content with Pareto improvements. By definition, these make every consumer better off. But they do not necessarily reach the Pareto (efficiency) "frontier." If we can find such Pareto improvements, then we should all be willing to agree to what benefits us all, right?

There are in fact some serious ethical problems with Pareto improvements.[2] For suppose that the status quo is distributively unjust, with some relatively needy individuals who should ideally be given more, even if this can only be done at the expense of some other prosperous individuals who should ideally be given less. Now suppose that a Pareto improvement is put into effect which greatly benefits those who are already prosperous, but benefits the needy only a little. Such a reform would seem to create even more distributive injustice. If all further reforms also have to be Pareto improvements, then the economy will be committed to that even more unjust distribution of resources, which further Pareto improvements may only be able to correct very slowly over time. So it is important to allow some reforms that are not Pareto improvements, provided that those who lose are less needy than those who gain, on the whole.

Nevertheless, the generally accepted rationale for liberalizing reforms appears to be that they allow Pareto improvements, which is what the third theorem is all about. Suppose that the economic system initially generates some feasible allocation of resources. Of course, if the allocation is already Pareto efficient, then no Pareto improvement is possible. But if it is Pareto inefficient, then the third theorem claims that it is possible to reform the original economic system by having more extensive perfectly competitive markets, and to do so in a way which generates an equilibrium allocation that is Pareto superior to the original allocation.

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[2] Starrett (1988, p. 10), for instance, has an interesting recent discussion of the ethical issues surrounding the use of the Pareto criterion.

As stated above, the third theorem is almost an easy corollary of the second. For if there is one Pareto superior allocation, then there is typically also another Pareto superior allocation that is on the Pareto frontier and so Pareto efficient. In order to move to this efficient and superior allocation, institute the perfect market system that produces it, assuming that the conditions of the second theorem are all met so that such a system does exist. The only thing that has to be shown is that there really is a Pareto efficient allocation which is Pareto superior to the original allocation.

One problem with this version of the third theorem is its unrealistic presumption that liberalization will result in the economy being steered to some Pareto efficient allocation. This is the same presumption that was criticized above in connection with the second theorem. A partial remedy is suggested by Grandmont and McFadden's (1972) discussion of the gains from international trade. They provide an ingenious sufficient condition which ensures that, no matter what equilibrium results from free trade, the result is an allocation which, even if not a Pareto improvement, at least leaves no consumer worse off. For this they require that the wealth distribution be adjusted as prices move toward equilibrium so that all consumers can always afford whatever goods and services they enjoyed individually in the original economic system, provided that they each supply the same labour services, etc. Of course, at the prices which rule in the liberalized market economy, consumers may well exercise their option to change their allocation by moving within the budget set of allocations that they can afford. Grandmont and McFadden gave sufficient conditions for the existence of a market equilibrium in such a liberalized system. And the system of redistribution that they had devised at least gives all consumers the option to stay where they were before the reform, so that nobody is forced to become worse off. With any slack in the original system, moreover, it is typically possible to arrange a strict Pareto improvement.

Though Grandmont and McFadden considered specifically the gains from international trade, in Hammond and Sempere (1992) we show how similar arguments apply to rather general liberalizing reforms. At first, therefore, the case for liberalization may appear strong. But in fact formidable difficulties remain. The usual convexity and continuity assumptions must be met to ensure that the liberalized market economy has a general equilibrium — indeed, it is also necessary (but entirely reasonable) to assume that there

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are enough bounds on what allocations are possible so that there are no unbounded Pareto improvements. Otherwise, if equilibrium does not exist, the third theorem is invalid and, more seriously, our theoretical model of liberalized markets is unable to make any prediction of what will happen. Of course, liberalization could still bring benefits even if economic theory is unable to explain why, but then the theory needs to be improved.

A more serious practical problem, however, concerns the ingenious redistribution mechanism that Grandmont and McFadden devised. It requires knowing, in principle, what allocations would have gone to each consumer in the unreformed economic system, so that any losers from liberalization can be duly compensated. In particular, the original lifetime career plans of displaced workers must be known, since their appropriate amount of compensation depends upon what they would have earned for as long as they were going to remain in their existing jobs, and in any jobs they were planning to move on to next, etc. Also relevant are their original lifetime plans to buy food, drink, clothing and shelter, to receive health care, to send their children to school, etc. Of course, nobody knows even their own lifetime plans completely, thus making it practically impossible to determine what compensation is appropriate to consumers who are forced to change their plans.[3]

5.   Private Information and Incentives

The three theorems set out above are significant intellectual accomplishments. In various simplified versions, they have been widely taught to economics students — especially in nations with free enterprise economic systems, for obvious reasons. And they underlie a great deal of contemporary economic policy analysis. Yet they are also widely misinterpreted, and thought to be more widely applicable than is true in practice.

It has been seen that the first theorem by itself pays no attention to extremes of poverty or inequality. And that the second and third theorems rely on suitable mechanisms for lump-sum redistribution of wealth: either (i) to achieve a desirable Pareto allocation, as in the second theorem; or (ii) to have the gainers from a liberalization policy compensate the losers, as in the third theorem. Yet can such redistribution be put into practice? And is liberalization desirable if compensation is not paid to the losers (whether it can be or not)?

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[3] See Feenstra and Lewis (1991) for other work on the difficulty of arranging lump-sum compensation for those who lose from trade liberalization.

Mainstream economists have paid far too little attention to these fundamental questions, in my view.

In the case of the second theorem it is effectively presumed that limitless redistribution is possible, should it be desirable. So, in order to reach a Pareto efficient allocation without poverty, the economic system is required to pay lump-sum subsidies to those who would be unduly poor without them. And to finance those subsidies by means of lump-sum taxes on those who can most afford to pay them. The problem, however, comes in identifying those who would inevitably be poor in the absence of subsidies. Many of the poor are disadvantaged in various ways beyond their control and so clearly deserve support. Yet it is a fact of human nature that at least a few among the poor will exploit whatever scheme of support they may be eligible for in order to avoid work they find unpleasant, to become or remain alcoholics or drug addicts, or to be irresponsible in other ways. What is worse, as more adequate schemes of support are provided for the truly disadvantaged, this strengthens the temptation which others face to appear disadvantaged so that they can also receive support. It turns out that, apart from the most obvious unfortunate cases where people are physically unable to work, the status of being truly disadvantaged is not easy to observe. It is an instance of *private information*. So is the inherent ability to pay tax of those who are better off. Moreover, the more obvious methods of unmasking such private information are all too likely to involve unwarranted intrusions into personal life together with violations of civil rights.

For these reasons, if one tries to institute lump-sum redistribution from those who appear able to pay taxes to those who appear in real need of subsidies, the economic system will become distorted. The taxes on the rich will not be truly lump-sum, but will become taxes on labour income and on the acquisition of useful skills. The subsidies to the needy will also discourage work effort and skill acquisition, since they will be reduced if earned income starts to rise. Incentives inevitably become blunted.

In fact, truly feasible economic systems must be *incentive compatible* in a more technical sense — they can only make use of private information like true ability if they do not make individuals who reveal such information think that they are worse off than they would be by concealing that information. The unfortunate characteristic of progressive redistribution from the well endowed to the poorly endowed is precisely that the quality of a person's

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endowment is typically private information. Too much redistribution will damage people's incentives to use their endowments fully. The Marxian prescription, "From each according to their ability, to each according to their need," cannot be carried out in practice because both ability and need depend on private information.

Many economists appear to understand the essence of this incentive argument, yet manage to draw entirely the wrong conclusion from it. For it is too often claimed that there should be no redistribution at all. This does not follow. Incentives certainly make most redistribution costly. But not so costly that all attempts to redistribute are futile, or even inefficient, in the relevant sense. Of course, incentive problems do restrict the instruments that can be used to redistribute. Lump-sum taxes and subsidies are generally not possible. But progressive income taxes which finance income subsidies for those below a certain poverty line really are possible, since we see them in most economically advanced countries. Such taxes create mild disincentives for the rich — or incentives to work unduly hard for individuals whose labour supply curves are backward bending, perhaps because they have already committed a large fraction of their earned income to fixed expenditures like mortgage repayments. It is true that poorly devised schemes of income support create "poverty traps," making it hard for the able poor to earn more income without excessive reductions in their combined income from both earnings and welfare payments. Better schemes could help avoid such traps, however. And anybody who views poverty as a valid ethical concern will surely think it right for society to incur some costs so that the most deserving can be helped.

A somewhat ironic feature of markets is how they can limit the scope of redistribution through progressive income tax, or through commodity taxes on goods mostly consumed by the well off which are used to subsidize goods that the poor really need. To see this, note that in markets buyers and sellers come together in order to arrange mutually beneficial trades. One obvious way of increasing the mutual benefit, at the expense of the tax authorities, is to evade the tax system. Thus, many casual workers are willing to receive a lower payment in cash, with no records kept. Street traders can afford to sell their wares at lower prices to the extent that they avoid taxes, not to mention the cost of maintaining a shop, etc. An undesirable extreme is one in which the tax base disappears entirely in a complete black

market system.[4] In any case, an important extra cost of any taxation scheme is the need to maintain clerks or bureaucrats to administer it, as well as tax collectors, police, lawyers, and even prisons to enforce it. In devising taxation schemes, it is important to keep such costs as low as possible.

6.   The "Second Best" Case for Liberalization

The third welfare theorem discussed in Section 4 makes the "first best" case for liberalization. That case is weak because of the problems in arranging the appropriate lump-sum compensation which is typically needed to achieve Pareto superiority.

Beyond the third theorem, however, is a much more interesting "second best" case for liberalization. This is based on ideas originally due to Diamond and Mirrlees (1971) on optimal taxation, as well as work by Little and Mirrlees (1968, 1974) on cost benefit analysis, and by Mirrlees (1969) on measuring national income. The argument relies on being able to use liberalization in order to generate Pareto gains, or other welfare improvements, even in the absence of lump-sum compensation. In the context of international trade, these theoretical possibilities have been discussed by Dixit and Norman (1980, 1986) and Dixit (1987) in particular. For the most general "second best" version of the third theorem that I know, see Hammond and Sempere (1992). Jaime Sempere is also working on further extensions for his Ph.D. thesis at the European University Institute.

Diamond and Mirrlees argued as follows for the desirability of any reform which would achieve production efficiency. If the economy is inside its aggregate production frontier, then there must be a reform which allows the economy to produce more of every output using less of every input. In other words, the *net output* of each good can be increased. Then the issue is whether these extra net outputs of each good make possible Pareto or other welfare improvements. The claim was that they sometimes would, in an economy permitting unrestricted commodity taxation. For suppose that commodity tax rates are first varied in order to hold consumer prices constant even while producer prices vary. Suppose too that, secondly, the tax rate on some good which every consumer buys is not held fixed, but allowed to decrease slightly. Then every consumer would be slightly better off, since the

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[4] Some theoretical results along these lines are presented in Hammond (1987) and in Blackorby and Donaldson (1988).

only consumer price change is a small decrease in the price of a good which everybody buys. Assuming that aggregate demand is continuous, it would change only slightly too. So, for a small enough change in that consumer price, the extra net outputs of every good would be enough to meet the slightly changed demands, and any surpluses could be thrown away. Alternatively, if there is some good such as labour which every consumer sells, then the tax rate on it could be slightly decreased, and the same argument would work. Or, perhaps better, all consumer prices could be frozen, and a small poll subsidy or allowance paid out to each consumer.

This claim of Diamond and Mirrlees sparked some immediate controversy. In fact, Mirrlees (1972) himself produced an early interesting counter example in which achieving production efficiency would entail a change in the distribution of dividend income, with owners of a less efficient firm losing while owners of a more efficient firm gain. In that example, attempts to compensate the owners of the inefficient firm through commodity tax changes alone could not work because they had similar tastes to the owners of the efficient firm, and there were insufficient overall gains to permit all to benefit. To avoid this kind of example, Sempere and I have considered the implications of supplementing a freeze on consumer prices and after tax wages with an additional freeze on after-tax dividends, before any further adjustments are made in order to allow a Pareto improvement.

Another problem with the Diamond/Mirrlees argument is its reliance on free disposal. This is clearly an untenable assumption when we start to include some kinds of public good or environmental variables in the commodity space — as we need to when discussing externalities, for instance.[5] It is also problematic even if only desirable goods need to be thrown away, since that is itself a costly activity, in general. Also, allowing surpluses to leak onto markets instead has side-effects which may not always be desirable. Think, for example, of how selling off European Community stocks of excess food appears to be hurting some farmers in many other countries. In fact, the paper with Sempere shows how to avoid the assumption of free disposal. Lowering producer prices for EC agriculture while subsidizing farmers' after tax incomes directly, if carried far enough, would eliminate

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[5] See Hammond (1993) for just one of many discussions of the first two efficiency theorems with externalities and public goods. The third theorem with externalities and public goods remains to be covered in future work.

surplus production. Indeed, this is the direction that overdue reform of the EC's contentious Common Agricultural Policy is currently planned to take, roughly speaking.

So, for the moment, there is a *prima facie* case for production efficiency. Can this be translated into a case for liberalization? The answer is a highly qualified "Yes". Suppose that a liberalizing reform takes an economy toward its aggregate production frontier by making the allocation of production activity more efficient. Then a Pareto improvement can be brought about, even in the absence of lump-sum compensation for those who would otherwise lose from liberalization. Instead, it is enough to freeze consumers' after tax prices, wages and dividends, and to use the efficiency gains to pay out a uniform poll subsidy to all consumers. All consumers will clearly benefit if this change can be made feasible. In fact, feasibility can be assured by allowing producer prices to vary freely so as to clear (perfectly competitive) markets in the usual way. Then there will actually be efficiency gains in production which can finance such a poll subsidy provided that firms in the aggregate earn more profit than they would have done, at the new producer prices, by ignoring producer price changes and remaining with their prior production plans and resulting net output vectors. This is the general result that we prove under rather standard "neoclassical" assumptions, such as continuity of demands and supplies, overall convexity, etc. Gains from international trade or market integration are one special case, in which trade serves to improve efficiency in the international distribution of production activities through exploitation of comparative advantage. Another special case is when a project passes a cost benefit test at post-project producer prices. For traded goods in a small country unable to affect its terms of trade, these producer prices will be equal to border prices.

Our argument works only for liberalizations of the "supply side" of the economy, however — i.e., only for reforms which increase production efficiency without directly affecting consumption. Many economists have argued for other liberalization policies such as abolishing food or wage subsidies, or harmonizing or reducing consumption taxes. The argument is that distortions are lowered by aligning consumer prices closer to producer prices. This has some theoretical merit in a "first best" world where lump-sum compensation is possible — e.g., for those who would otherwise starve if they had to pay the full market price for their food. Such liberalization may also have merit in a second best world, but *only* if

other forms of compensation for deserving losers are arranged — for example, an adequate universal basic income paid to *all*, regardless of economic or social situation, and financed by taxes on those whom the fiscal authorities can identify as truly able to pay.

Recently, liberalization in many national economies has included privatization of some enterprises that were previously wholly or partly owned by the state. The obvious change of ownership has many effects that depend on factors such as whether the firm was originally profitable, the terms under which shares are created and then sold, the rates at which profits are either paid out as dividends or re-invested, both the corporate and individual income tax systems, regulatory policies, etc. There is no reason to believe that merely changing ownership will produce a Pareto or even a welfare improvement, however. Of course, to the extent that privatization also brings in new managers who really do make the enterprises work more efficiently, we have a supply side or efficiency enhancing liberalization of the kind discussed already in this section. But some instances of privatization merely replace one inefficient monopolist that happened to be publicly owned with a new one that happens to have become privately owned. Then there is no efficiency gain whatsoever. Moreover, the chance to arrange a much better reform may even have been lost for an extended period, until the next major crisis provokes a reconsideration.[6]

7.   Credible Liberalization

Those economists whose advice is most sought nowadays generally seem to be in favour of liberalizing policies. Their recommendations are affecting not only the reform process in what were the command economies, but also international trade negotiations, and the terms under which international organizations offer loans or aid to national governments. These economic advisers are probably quite right in claiming that considerable efficiency gains can be realized from the policies they advocate. In some cases, they may even be right to discuss *only* those efficiency gains, at the present time, for a little while, so that the message they convey is more effective because of its simplicity.

Yet there are enormous risks in focussing only on efficiency gains, without apparent concern for distribution. In the short run, there is a danger of causing too much unnecessary

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[6] Inevitably, this one paragraph discussion of privatization remains very superficial. For a much more thorough analysis, see especially Bös (1988, 1991) and Vickers and Yarrow(1988), as well as the other works reviewed by Sawkins (1992).

suffering if no systematic thought is given to the problem of how to compensate those who are least able to protect themselves from liberalization's adverse effects — the pensioners, the sick, those workers with only very specific skills who have devoted themselves to careers in industries that the reform makes uncompetitive, as well as public employees in hospitals, schools and other services who rely on government funding in order to carry out the essential jobs they are asked to perform. In practice these groups too often lose out from liberalization, it seems. And when they do, they will naturally blame the liberalizing reform process for making their lives miserable. Those reforms then become harder to implement in the fact of threats of revolt, riot, or strikes affecting essential public services. The general population may also sympathize with those who choose to protest. And if military leaders see their positions as unduly threatened, there is even risk of a *coup d'état.* At best there will be a sullen group of people who, even if liberalizing reforms are mutely accepted, come to distrust the promises of the politicians who advocate them. Some potential benefits of liberalization get thrown away as people lose patience and demand that the process be slowed or even reversed.

Thus can the credibility of market economics become easily tarnished. So can that of economists. Bungled liberalization may lead voters to choose different political leaders. And new leaders may well be less receptive to the standard advice on offer by most contemporary economists. International organizations may still be able to dictate policy to the desperate, but should not expect to be admired for doing so.

In fact there has been some recent work on important issues in making reforms credible. Calvo and Frankel (1991, p. 143) tell us that "a credible transformation program is likely to result in short-term hardships." But then (p. 147) they write: "if political support is insufficient to provide credibility for a first-best reform program, it may not be desirable to undertake it, since the lack of credibility amounts to a distortion" (see also Calvo, 1989). Rodrik (1991, p. 2) writes: "It is not trade liberalization *per se* but *credible* trade liberalization that is the source of efficiency benefits." Their work largely neglects distributional questions, however. Rodrik (1991, pp. 7–8) does mention redistributive effects of trade liberalization, but under the title "Anticipated Political Costs Due to Redistribution." Later, Rodrik (1992, p. 91) writes of the possibility that "workers and students riot in the streets of the capital." So, while much of their analysis is surely correct, it is also seriously incom-

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plete. For there is no discussion whatsoever of how judiciously adding policies to alleviate hardship can make such a transformation more credible and increase political support for it, even if this forces us to contemplate a "second-best" reform.

Looking once more toward the future, the 1990s could even be the decade that determines whether we make an almost irreversible move to an appropriately liberalized and much more integrated world economy, or toward some other system that would almost surely be much less desirable. That is how much appears to be at stake. The liberalizers will need a lot of help if they are to prevail peacefully, without too many disasters on the way.

What they do not need are outdated doctrines based on the classical theorems of welfare economics. That is how they have been misled into neglecting the distributional questions associated with economic reform. The theorems are elegant. The liberalizing policies they suggest may even raise gross domestic product in many cases. But often they also cause needless suffering, and not just because of protest action by those who are the first to become clearly worse off. Of course, it does not help if world lay opinion feels entitled to regard such protests as not only excusable, but an entirely proper reaction to needlessly harsh and unjust policies.

Advocates of liberalization also do not need the second best case which I discussed in Section 6. That depends on impractical policies like freezing the intertemporal path of consumer prices, take-home pay, and after-tax dividends at levels which they would have had in the absence of the liberalizing reform. What economist could even tell us with confidence what this path would have been? An alternative would be to have faith in governments' ability and political will to set optimally differential tax rates on all commodities, types of labour, and dividend income. But clearly this is not viable, at least for the foreseeable future.

It is very proper to object that my theoretical discussion omits many factors of great practical relevance. Time, externalities, public goods, private information, and imperfect competition have been mentioned only very peripherally, risk and uncertainty not at all. More systematic work is needed to understand how these affect the arguments for and against liberalization. I do not believe, however, that such complications will make the case

for liberalization much stronger — indeed, they typically bring new reasons for other forms of government intervention to accompany any liberalizing reforms.

Ultimately, therefore, liberalization by itself is a blunt policy instrument. In some forms it can be useful, especially when it concentrates on enhancing the aggregate efficiency of production. However, that usefulness depends on there being accompanying policy measures designed to protect the economically weak. And some liberalizing reforms definitely seem harmful, especially those seeking to remove so-called distortions involving consumers, such as subsidies on goods which are consumed proportionately more by the deserving poor. As for privatizing state owned enterprises, the only reason for doing so is if it really will lead to aggregate efficiency gains in production. Private ownership by itself confers no particular benefits.

Where does this leave an economic theorist like myself? Unable to draw general theoretical conclusions that are practically relevant, of course. Once impractical "first best" theory confronts reality, especially in the form of private information and the consequent need to respect incentive constraints, the wonderful and elegant generality of the three classical theorems almost entirely disappears. Yet a theorist can still suggest where to look for desirable policy changes, as I have done here by discussing when liberalization is most likely to be beneficial. In the end, however, identifying good policy changes requires careful empirical study of whom they benefit, whom they harm, and by how much. At this stage the theorist can suggest what should be measured and perhaps even how to make the measurements, but then has to remain silent — or become an empirical economist.

Acknowledgements

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