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FROM COMMUNISM TO MARKET DEMOCRACY: WHY IS ECONOMIC PERFORMANCE EVEN WORSE AFTER COMMUNISM IS ABANDONED?

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From Communism to Market Democracy: Why Is Economic Performance Even Worse after Communism Is Abandoned?

If the government controls everything, the economy does not work. To have a successful economy, a society needs to give the market a larger role — and government a smaller role — than the communist countries did. This view is now generally accepted in the East as well as the West. The peoples of the formerly communist countries have accordingly decided in favor of capitalism as well as democracy and are cutting back the economic role of government.

As new markets have emerged and the role of government has been scaled down, economic performance in the Soviet-type societies should have improved. In fact, it has often become even worse — in the former Soviet Union, much worse. Though the deterioration in economic performance after the collapse of the communist regimes is frequently exaggerated (and in one or two of the formerly communist countries may not have occurred at all), there can be no doubt that many of the formerly communist countries have suffered significant — and sometimes very severe — reductions in real output.

Why has this happened? If too much government control of the economy brought about the failure of the communist economies, why did not economic performance improve as communism was abandoned and government control cut back?

Many people have come to suppose that a transition from one set of economic arrangements to another necessarily reduces output, but in fact it does not. The economic liberalization that Deng introduced in China not long after the death of Mao promptly generated large increases in production. After the defeat of the right-wing dictatorships of World War II, it was almost universally assumed that the German and Japanese economies would take decades to recover from wartime devastation, changed boundaries, and totalitarian controls, yet they soon enjoyed economic miracles. Even the Soviet-imposed tran-

Remark: I am grateful to the U.S. Agency for International Development for support of this research through my center on Institutional Reform and the Informal Sector (IRIS).

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sition *to* communism in East-Central Europe, for all its tragedy and brutality, was apparently not associated with any protracted reduction in output.

At a loss to explain the severity of the economic problems after the collapse of communism, many seek refuge in metaphors: "It is easy enough to make fish stew out of an aquarium, but you cannot make an aquarium out of fish stew." But why should a transition from communism to a market economy be more difficult than the transition the other way? The conventional wisdom is that markets do not need to be painstakingly constructed by government — they emerge spontaneously and thrive under laissez-faire. Certainly the markets of early times, like the market economies that gave rise to the industrialization of Western Europe and North America, were not the outcomes of any government plan to establish market economies. To create a communist economy, by contrast, detailed plans and extensive bureaucracies must be put in place.

Thus neither the familiar assumptions about the spontaneous emergence of market economies nor the new metaphors will do. Just as Marxist ideas were not able to make communism work, so familiar Western ideas have not been able to explain the difficulties of the transition to a market economy.

1. Why Did Soviet-Type Societies Do as Well as They Did?

Since an economy in transition from a communist to a market economy contains many of the mechanisms of the old regime as well as new markets, its performance depends both on what is left from the past as well as on the markets that have been introduced. To understand the transition, then, we not only need to understand why markets work as well as they do, but also why central planning and state enterprises produced whatever amounts they produced. Most discussions in both the East and the West now emphasize, appropriately, the obviously unsatisfactory character of Soviet-type arrangements and the superiority of market-oriented democracies.

But we will not understand why the level of output has actually fallen in virtually all of the societies undergoing transition to a market economy, nor be able to improve performance during the transition, unless we also understand why the centrally planned economies were ever able to survive and even, at times, to grow reasonably rapidly. After all, the Soviet Union survived as a planned economy for nearly three quarters of a century. It was productive enough to become — or at least to appear to be — a superpower. Though even the best available statistics on the Soviet-type economies are dubious, they suggest that during the 1950s and early 1960s these economies grew approximately as rapidly as West European economies at comparable levels of development, and they undoubtedly did then grow substantially. Why did this growth

occur? Why did these regimes that once grew rapidly — and appeared to pose a long-term threat to the survival of the market democracies — fall into a steepening decline and finally collapse? The answers to these questions will put the choices facing the economies in transition in a new light.

Though economists have a relatively well-developed theory of why markets work, neither they nor specialists in any other discipline have any satisfactory explanation of why Soviet-type economies worked at all. Economic theory shows that markets can make major contributions to social welfare in a wide variety of situations. Even though the conditions needed for perfect competition or Pareto-efficiency are not achieved in practice, it is easy to show, for example, that there are gains from trade — and thus from markets — in a vast variety of circumstances. The same economic theory also explains the conditions in which markets will tend to fail — for example, why *laissez-faire* will often generate excessive amounts of pollution. It also explains various pathologies that should be expected in Soviet-type economies, such as long queues.

By contrast, no one, whether using economic theory or any other tool of thought, has been able to explain why the Soviet-type economies were able to produce what they produced and to last as long as they lasted. The closest thing there is to such a theory is Oskar Lange's model of a hypothetical socialism that mimics, and tries to improve upon, the markets of capitalism. In addition to other difficulties, this theory does not describe the actual policies that most of the Soviet-type economies followed. Thus the intellectual challenge is not to explain why the market economies outperformed the Soviet-type economies, but to explain why the latter managed to get by as long as they did. One cannot understand the combination of the old and the new that makes up the economy in transition until this challenge is met.

2. The Collective Choice Approach to Autocracy

To obtain a good theory of why the Soviet Union produced and mobilized the vast amount of resources to become an envied superpower (yet was not able to survive indefinitely), we need to use not only the standard neoclassical economic analysis of markets but also the modern theory of collective choice. The theory of collective choice — which is sometimes called public choice, social choice, or neoclassical political economy — has in the last couple of decades succeeded in illuminating certain aspects of economic and political life in democratic countries, but it has only in the last couple of years been applied to dictatorial societies in general or to communist dictatorships in particular.

I will attempt to show here that when the new collective choice theory of dictatorship is applied to the Soviet-type regimes, we immediately obtain one

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insight into why these regimes — as strong, stable, and absolutist dictatorships — became as important and powerful as they became. When we then elaborate the general theory of autocratic government to accommodate certain autocratic innovations pioneered by Joseph Stalin, we can also see why the Soviet Union and Communist China were so much more powerful than other autocracies. The same theory also shows why the Soviet-type regimes with central planning gradually decay over time. Once we understand the motive power behind the production and resource mobilization of the communist autocracies — and why it weakened over time — we can also understand why economic performance is even worse after communism is abandoned. This, in turn, points the way to new strategies for the economies in transition.

The Soviet Union and its satellites were, at least until their last years, certainly absolutist dictatorships[1] rather than democracies. Of course, many of the autocracies of the world do not have centrally planned economies, and no regime of any kind had such an economy before Stalin consolidated his power and ended the "New Economic Policy" at the end of the 1920s. But the general theory comes before the special case, and the general theory of autocracy immediately provides an elementary insight into the productivity and power achieved by the Soviet-type societies. Thus it is very important that we should first analyze autocracy in general, and only later elaborate this model to account for Stalin's extraordinary autocratic entrepreneurship.

3. The Incentive to Produce in Strong and Stable Dictatorships

One part of the general approach to autocracy that will be used here came to me by chance when reading about a Chinese warlord (Sheridan, 1966). In the 1920s China was in large part under the control of various warlords. They were men who led some armed band with which they conquered some territory and who then appointed themselves lords of that territory. They taxed the population heavily and pocketed much of the proceeds. The warlord Feng Yu-hsiang was noted for the exceptional extent to which he used his army for suppressing bandits and for his defeat of the relatively substantial army of the roving bandit

[1] In the later stages of communism, but definitely not in Stalin's time, some of the Soviet-type regimes were to some degree tiny "politburo" oligarchies, but the number who shared power was always so small, at least until Gorbachev's time, that they could engage in small group optimization of the kind described in my 1965 book.

named White Wolf. Apparently, most people in Feng's domain found him much preferable to the roving bandits.

At first, this seems puzzling: why should warlords who were stationary bandits continuously stealing from a given group of victims be preferred, by those victims, to roving bandits who soon departed? The warlords had no claim to legitimacy and their thefts were distinguished from those of roving bandits only because they took the form of continuing taxation rather than occasional plunder.

In fact, if a roving bandit settles down and takes his theft in the form of regular taxation, and at the same time maintains a monopoly on theft in his domain, then those from whom he exacts taxes will have an incentive to produce that they lack when confronted by continual random plunder. The rational stationary bandit will take only a *part* of income in taxes, because he will be able to exact a larger total amount of income from his subjects if he leaves them with an incentive to generate income that he can tax.

If the stationary bandit successfully monopolizes the theft in his domain, then his victims do not need to worry about theft by others. If he steals only through regular taxation, then his subjects know that they can keep whatever proportion of their output is left after they have paid their taxes. Since all of the settled bandit's victims are for him a source of tax payments, he also has an incentive to prohibit the murder or maiming of his subjects. With the rational monopolization of theft, in contrast to uncoordinated competitive theft, the victims of the theft can expect to retain whatever capital they accumulate out of after-tax income and therefore also have an incentive to save and to invest, thereby increasing future income and tax receipts. The monopolization of theft and the protection of the tax-generating subjects thereby eliminates anarchy. Since the warlord takes a part of total production in the form of tax-theft, it will also pay him to provide other public goods whenever the provision of these goods increases taxable income sufficiently.

In a world of roving banditry there is little or no incentive for anyone to produce or accumulate anything that may be stolen and thus little for bandits to steal. Bandit rationality accordingly induces the bandit leader to seize a given domain, to make himself the ruler of that domain, and to provide a peaceful order and other public goods for its inhabitants, thereby obtaining more in tax-theft than he could have obtained from migratory plunder. Thus we have "the first blessing of the invisible hand" — the rational, self-interested leader of a band of roving bandits is led, as though by an invisible hand, to settle down, to wear a crown, and to replace anarchy with government. The gigantic increase in output that normally arises from the provision of a peaceful order and other public goods gives the stationary bandit a far larger take than he could obtain if he did not provide government.

Thus government for groups larger than tribes normally arises, not because of social contracts or voluntary transactions of any kind, but rather because of rational self-interest among those who can organize the greatest capacity for violence. These violent entrepreneurs naturally do not call themselves bandits, but on the contrary give themselves and their descendants exalted titles. They sometimes even claim to rule by divine right. Since history is written by the winners, the origins of ruling dynasties are, of course, conventionally explained in terms of lofty motives rather than by self-interest. Autocrats of all kinds usually claim that their subjects want them to rule and thereby nourish the unhistorical assumption that government arose out of some kind of voluntary choice.

Any individual who has autocratic control over a country will provide public goods to that country because he has what my book on *The Rise and Decline of Nations* (1982) defined as an "encompassing interest" in the country. The extent of the encompassing interest of an officeholder, political party, interest group, monarch, or any other partial or total "owner" of a society, varies with the size of the stake in the society. The larger or more encompassing the stake an organization or individual has in a society, the greater the incentive the organization or individual has to take action to provide public goods for the society. If an autocrat received one-third of any increase in the income of his domain in increased tax collections, he would then get one-third of the benefits of the public goods he provided. He would then have an incentive to provide public goods up to the point where the national income rose by the reciprocal of one-third, or three, from his last unit of public good expenditure. Though the society's income and welfare would obviously be greater from a larger expenditure on public goods, the gains to society from the public goods that a rational self-interested autocrat provides are nonetheless often colossal. Consider, for example, the gains from replacing a violent anarchy with a minimal degree of public order.

From history, we know that the encompassing interest of the tax-collecting autocrat permits a considerable development of civilization. From not long after the first development of settled agriculture until, say, about the time of the French Revolution, the overwhelming majority of mankind was subject to autocracy and tax theft. History until relatively recent times has been mostly a story of the gradual progress of civilization under stationary bandits interrupted by occasional episodes of roving banditry. From about the time that Sargon's conquests created the empire of Akkad in ancient Mesopotamia until, say, the time of Louis XVI and Voltaire, there was an impressive development of civilization that occurred in large part under stationary banditry.[2]

2 Many of the more remarkable advances in civilization even in historic times took place in somewhat democratic or nondictatorial societies such as ancient Athens, the Roman Republic, the North Italian city states, the Netherlands in the seventeenth century, and in Great Britain, at least after 1689. The explanation for the disproportionate representation of nonautocratic jurisdictions in human progress is presented later in the article.

4. Straightforward Autocratic Maximization

Though an autocrat is analogous to the owner of any productive asset in the sense that he has an encompassing interest in the productivity of that asset, he is also a monopolistic owner, and a monopolistic owner of *all* the wealth, tangible *and human*, in a country. The autocrat does indeed have an incentive to maintain and increase the productivity of everything and everyone in his domain, and his subjects will gain from this. But he also has an incentive to charge a *monopoly* rent, and to levy this monopoly charge on *everything*, including human labor.

In other words, the autocratic ruler has an incentive to extract the maximum possible surplus from the whole society and to use it for his own purposes. Exactly the *same* rational self-interest that makes a roving bandit settle down and provide government for his subjects also makes him extract the maximum possible amount from the society for himself. He will use his monopoly of coercive power to obtain the maximum take in taxes and other exactions.

The consumption of an autocratic ruler is, moreover, not limited by his personal capacities to use food, shelter, or clothing. Though the pyramids, the palace of Versailles, the Taj Mahal, and even Imelda Marcos's 3,000 pairs of shoes were expensive, the social costs of autocratic leaders arise mostly out of their appetites for military power, international prestige, and larger domains. Hitler, for example, ultimately used up a large proportion of the total output of Germany to serve his personal ambitions.

Though the forms that stationary banditry has taken over the course of history are diverse, all straightforward (i.e., non-Soviet) autocracies can be analyzed by assuming that the autocrat gets all of his receipts in the form of explicit and uniform taxation. The rational autocrat will devote some of the resources he obtains through taxation to public goods, but will impose far higher tax rates than are needed to pay for the public goods since he also uses tax collections to maximize his net surplus. The higher the level of provision of public goods, given the tax rate, the higher the society's income and the yield from this tax rate. At the same time, the higher the tax rate, given the level of public good provision, the lower the income of society, since taxes distort incentives.

So what tax rate and what level of public good provision will the rational self-interested autocrat choose? Assume for the moment that the autocrat's level of public good expenditure is given. As Joseph Schumpeter lucidly

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pointed out, and as Ibn Kalduhn sensed much earlier,[3] tax receipts will (if we start with low taxation) increase as tax rates increase, but after the revenue-maximizing rate is reached higher tax rates distort incentives and reduce income so much that tax collections fall. The rational self-interested autocrat chooses the revenue-maximizing tax rate.

Though the amount collected at any tax rate will vary with the level of public good provision, the revenue maximizing tax *rate* for the autocrat should not. This optimal tax rate determines exactly how encompassing the interest of the autocrat in the society is; that is, it determines what share of any increase in the national income he receives. He will then spend money on public goods up to the point where his last dollar of expenditure on public goods generates a dollar's increase in his *share* of the national income. At this point the gain to society will be the reciprocal of his share. (A mathematical and geometric statement of the optimization conditions facing a rational dictator, and various other types of ruling interests, is available on request from the author.)

Though the subjects of the autocrat are better off than they would be under anarchy, they must endure taxes or other impositions so high that, if they were increased further, income would fall by so much that even the autocrat, who absorbs only a portion of the fall in income in the form of lower tax collections, would be worse off.

There is no lack of historical examples in which autocrats for their own political and military purposes collected as much revenue as they possibly could. Consider the largest autocratic jurisdictions in Western history. The Bourbon kings of France were (especially on the eve of the French revolution) collecting all they could in taxes. The Hapsburg kings of Spain did the same. The Roman Empire ultimately pushed its tax rates at least to the revenue-maximizing level.

5. Stalin Outdoes the Tsars

Stalin obviously had an encompassing interest in his domain. The more productive the Soviet empire was, especially in heavy industry that was important for military might, the greater the likelihood that Stalin could keep — even expand — his domain. The greater the productive power, scientific prowess, and military potential of the Soviet empire, the taller Stalin could stand on the world stage. The faster the Soviet economy grew, the more people would be con-

3 Schumpeter's (1991) analysis is in his essay on "The Crisis of the Tax State" written in the highly taxed Austria-Hungarian empire late in World War I; Ibn Kalduhn's (1967) is in his classic, *The Muqaddimah*.

vinced by his claim that the societies following his system would ultimately triumph and that capitalism was headed for the dustbin of history.

It is obviously better to be the dictator of a superpower than of a less formidable country. This requires that the dictator should make his domain produce the vast amounts of resources that are required for superpower status and that he succeed in mobilizing these resources to serve his ambitions. Thus part of the explanation of why the Soviet Union produced enough to become a superpower is already evident from the foregoing general argument about autocracy: the incentive behind the productivity of the Soviet Union, in the period when it was unambiguously dictatorial, was the encompassing interest of the dictator.

But we are obviously not home yet: there have been countless dictators — even secure and strong dictators — who did not create the material basis for great power status — much less for a superpower status. The tsarist autocracy, presiding over much the same domain and the same peoples as Stalin, never achieved a comparable status.

In the Crimean War the British and French, without needing serious mobilization, defeated tsarist Russia. In 1904–1905, even the then-backward Japanese, barely a couple of decades into the process of modernization, defeated Imperial Russia. In World War I, moreover, the empire of the tsars was defeated, essentially only by the armies of Germany,[4] even though the German army had its hands full fighting on a second front against the French and British from the beginning of the War.

Now let us compare what happened in World War I when the tsarist leadership was in charge with what happened in World War II against Stalin's regime. At the outset of World War II, the Soviet Union was a trifle smaller than Imperial Russia had been at the outset of World War I, and it had the same enemy, Germany. In World War II, the Soviet Union military problem was made incomparably greater because there was no "second front" until less than a year before the end of the War. Whereas in World War I, Germany defeated Imperial Russia, in World War II, Stalin's Soviet Union was not only victorious, but played much the largest role in defeating the Nazi armies. Somehow something had happened in Soviet Russia that made the Stalinist regime more formidable in World War II than would have been ever expected on the basis of prior experience. And whatever interpretation may be offered for the fortunes of the different Russian empires in World Wars I and II, there can be no doubt that after World War II the Soviet Union was universally accorded a superpower status that the tsarist autocracy had never achieved. The tsarist autocracy also never

4 The army of the Austro Hungarian Empire was also used against tsarist Russia, but this army was often said to be poorer than that of any other combatant country in World War I, and it did not play an impressive role in the defeat of Russia.

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succeeded in any undertaking comparable to the Soviet Union's initiating of flight in outer space.

We must in the same vein take note of Communist North Vietnam's extraordinary feat in forcing the United States to concede in the Vietnamese war. Similarly, why was precommunist China, which proved to be so impotent when confronted by the Western powers and by Japan, able (with North Korea) to fight the United States and its many allies to a draw in the Korean war?

So the type of economic and political system pioneered by Stalin and copied by Mao achieved an extraordinary degree of military power, international prestige, and political influence. It managed these achievements, moreover, with territory, natural resources, and peoples that prior autocracies had not been able to mobilize with anything like the same effectiveness.

Why did Stalinist autocracies succeed in something that other autocracies failed to achieve? Above all, why did the Stalinist regimes succeed in producing and mobilizing such formidable power without making appropriate use of the market — the main device that economists have found usually generates most economic efficiency and innovation?[5] And why, after some great achievements, did the Soviet-type systems decline and ultimately collapse?

6. Confiscation and Capital Formation

What limits the amount of resources that a typical autocrat can extract from his society? As was shown earlier, the rational autocrat chooses the revenue-maximizing tax rate. Is there anything he can do to obtain still more? One possibility to consider is the confiscation of the capital of his subjects, or at least those large holdings of capital that can be expropriated without much administrative expense. Another possibility is that the autocrat can start taxing real money balances by printing money for his own use in such amounts that unexpected inflation results. Another possibility is that he can borrow money and then refuse to pay it back.

Whenever any autocrat has a short enough time horizon, all of these possibilities can make sense. For example, whenever a dictator has a time horizon that is short enough that the tax yield of an asset is less than its value, it pays him to confiscate that asset. This sort of thing happens quite often. Much of the

[5] Elsewhere (1992, pp. 61-64), I argue that the Soviet-type societies did use the market much more, and gain much more from it, than is usually understood, and that this must be taken into account in explaining why they produced as much (and lasted as long) as they did. It is still the case that the Soviet societies used markets less than other societies, so the paradox remains.

dictatorship we observe is more nearly roving than stationary banditry. The account of autocratic optimization earlier in this essay implicitly assumed that the autocrat had a Barro-infinite time horizon. When the autocrat does not have a long planning horizon, his subjects are worse off than they are under the steady-state revenue-maximizing tax rate. (It's no accident that "Long live the King" was the preferred form of toast by a King's subjects, or that dynasties were thought desirable.)

Still, any dictator who expects to be around a long time will lose from confiscation, inflation, and repudiation of his debts. I hypothesize that Stalin, at least after he consolidated his power in the late 1920s, expected to be in office (as he was) until he died a natural death. For the most part, he did not engage in highly inflationary methods to obtain resources and he scrupulously and promptly paid off the sums he borrowed from Western firms. In these respects, he was typical of intelligent autocrats who are secure enough to have a long time horizon. Intelligent and secure autocrats usually also do not confiscate capital goods, for the obvious reason that this means that there will be less investment and less income, and therefore also smaller tax receipts, in the future. So, it *appears* that expropriation of capital goods cannot increase the receipts of an autocrat over the long run because it reduces future investment, income, and tax receipts.

Appearances are deceiving. Stalin confiscated all of the farmland and natural resources of the Soviet Union, and all of the commercial and industrial property that had been privately held in the period of the New Economic Policy, and *the rates of saving and investment increased substantially*. In general, the Soviet Union after Stalin's innovations, and the other societies on which the Stalinist system was imposed, had far higher rates of saving and investment than most other societies. Stalin's innovation was to take almost the total natural and tangible capital stock of the country through a 100 percent wealth tax, i.e., an expropriation, and then to use these resources to produce a mix of output that was much more intensive in capital goods, and other goods Stalin wanted, than would otherwise have been produced. *By determining himself how much of the nation's resources would be used to produce consumer goods, and keeping this proportion much smaller than it was in most other societies, Stalin gave the Soviet Union an extraordinarily high rate of capital accumulation at the same time that he augmented his annual tax receipts by an amount approximately equal to all nonlabor income.* In the long history of stationary banditry, no other autocrat seems to have managed this extraordinary innovation, nor succeeded in claiming so large a part of the social output while at the same time greatly increasing savings, investment, and the level of output.[6]

7. Tax-Price Discrimination

Stalin also had a second innovative idea about how to expand the autocratic budget constraint. No doubt the idea was only intuitive and probably derived inductively from the trials and errors of the Bolsheviks, but it is so important to the communist and once-communist societies that it needs to be stated explicitly.

This second idea was that if an autocrat has different tax schedules for individuals of different abilities, he can collect much more tax revenue. In the typical modern democracy, high-income people confront higher tax brackets than low-income people do, but everyone faces the same tax law or *schedule*.

The fact that everyone faces the same tax schedule means that it is impossible to tax people more on their *first* hours of work than on their *marginal* hours of work and also to have very high tax rates. Obviously, if each of us was taxed more on the first four hours a day of work, less on the next two, and not at all on hours after that, then we'd have an incentive to work a lot more. We would have a strong incentive to work because, if we were taxed heavily enough on the first few hours of work, we would be poorer and the income effect of taxation would make us work more. If we were *not* taxed on later hours of work, we would also have a greater posttax reward for additional work, so a larger substitution effect would make us work more. Economic efficiency would also increase. So in some sense the Western democracies would be more efficient and productive if somehow it were possible for us to be taxed more on our first hours of work in any day, but not taxed on our last or marginal hours of work.

But that's not a real possibility when we all face the same tax schedule. Suppose that the U.S. decided to tax the *first* $5,000 a person makes a year at 99 percent, the next $5,000 at 98 percent, etc., and to tax what each person makes above a certain level at 0 percent. This method — reversing the usual progression and regressively taxing lower incomes at much higher rates than higher incomes — would create a situation where the least productive people would not have even enough money to survive. So there is no way — so long

6 In the very short run, just after the collectivization of agriculture and other productive assets, there was apparently a period of "indigestion" and confusion when output may have significantly declined. But for most of the rest of Stalin's reign, the output that Stalin cared about was far higher than it had been before he imposed Stalinization on the USSR.

as we confront everyone in the society with the same tax schedule and have high tax rates — that we can tax people more on their first hours of work and less on their last hours of work. The productivity- and efficiency-enhancing policy of taxing people more on their first hours of work — or, more generally, on their inframarginal income — but not taxing their marginal income, is practically infeasible as well as morally repugnant in any society where everyone faces the same tax schedule or law — it is impossible in any society with the same rule of law for everyone.

There is, however, a way that a sufficiently innovative and utterly uninhibited autocrat can tax inframarginal income at far higher rates than marginal income, and obtain great increases in both tax collections and national output as a result. Somehow, at a time when his treasury was pinched, Stalin hit upon this method. The method is basically to set the salaries and wages of everyone in the society with the idea that you want to collect the maximum for your regime from every individual in the economy.

One thing that Stalin did was to set wages and salaries very low, so that when people went to work they didn't get very much income so they couldn't afford much leisure. But then there was a system of very high bonuses, rewards for people who were Stakhanovites or model workers, and *progressive piece rates* — that is, piece rates that increase with the amount that the person has already produced.

There is piece work in market economies, but we usually do not observe *progressive* piece rates in a market economy. If you're picking fruit or selling insurance policies, you might be paid by the bushel picked or by the policy sold. But you are not paid progressively higher rates for higher amounts for the obvious reason that that usually would not be an efficient contract for a typical employer and a typical employee to make.[7] But progressive piece rates are what Stalin imposed, and I hypothesize that he rationally served his interests by doing so. His combination of bonuses, progressive piece rates, special perquisites for especially hard workers, and prizes for Stakhanovites was a system that provided people with a large proportion of the marginal output that they produced, but at the same time implicitly taxed them very highly indeed on the first or inframarginal hours of work.

This could be done in essence because the system implicitly had separate tax *schedules* — not simply a different tax rate — for different individuals. In effect, Stalin's system of wage and salary setting had the effect of *implicitly con-*

7 There are special cases, such as fixed costs of each employee, or the transactions costs for employers in hiring temporary employees, that sometimes generate such things as higher rates for overtime and the like in a market economy. But these considerations are presumably not of much relevance here.

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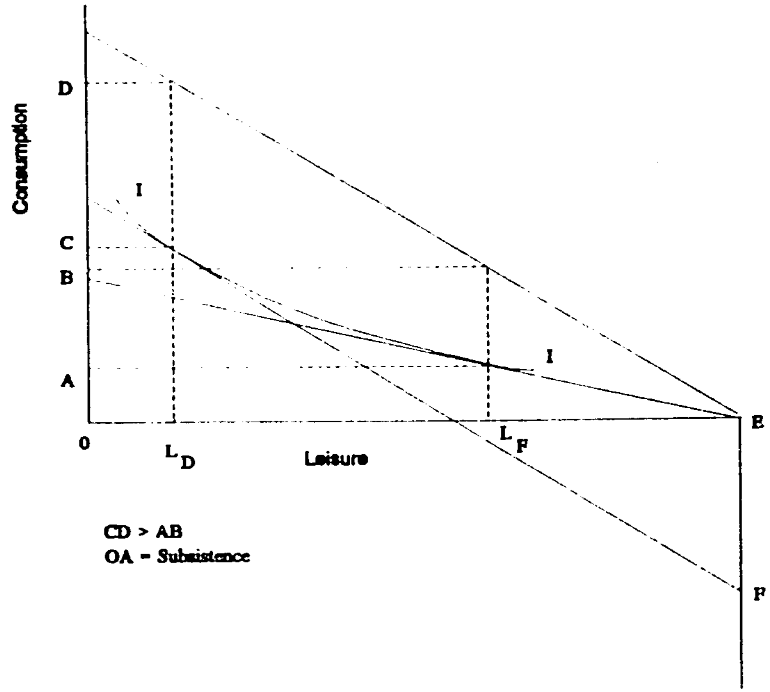
fronting individuals in different jobs or with different ability levels with a different tax schedule. This made it possible to impose higher average tax rates on the more able individuals who could produce a larger surplus over subsistence, yet at the same time taxing the first hours of work very severely and the last hours only lightly.

Let us illustrate these points with two very simple figures in which leisure is measured along the horizontal axis and consumption on the vertical axis. Let's first suppose for simplicity that we have a flat tax and that the rate of this tax has been set on traditional autocratic principles at the revenue-maximizing rate. The total output of the individual is given by the pretax wage curve in Figure 1. Instead of getting the full value of his or her output, the individual gets the much lower revenue-maximizing posttax wage depicted in Figure 1. In the case shown, the individual chooses the amount of leisure OL_F and he or she obtains OA of money income. The autocrat obtains amount AB as tax receipts. Of course, since the revenue-maximizing tax rate has been assumed, the indifference map of this individual (or the opportunities he or she has in the informal economy) must be such that if the flat tax were raised a trifle, the individual would reduce taxable work time just enough so that the autocrat's tax receipts are unchanged.

How did Stalin improve on this simple and straightforward autocratic optimum? He set the person's wage or salary at very low levels and captured most of the value of the individual's output during the ordinary working day in implicit taxation — by keeping the profits of all enterprises, which were made far higher than they would otherwise have been because wages were set so low. In addition, he used progressive piece rates and bonuses, and gave vacations, apartments, and other perquisites to the individual only if he or she had been observed to work exceptionally hard. If taken to the polar extreme, this means, in effect, the person is faced with a lump sum tax of amount CD, but that the person is not taxed on marginal income. Then the same individual will, of course, take much less leisure. The person now cannot afford much leisure because of the high tax rate, and in addition the person has a greater reward for additional hours of work because there is no taxation of marginal income. This individual under the Stalinist mode of taxation will take an amount of leisure OL_D, which will lead to much higher output. In this case, the state will obtain CD of output — much more than was obtained at by ordinary autocratic taxation at the revenue-maximizing rate. The individual gets the same level of utility as before (and more consumption), but the dictator gets much more revenue; CD is much larger than AB.

Figure 1 — Autocratic Maximization with Lump-Sum Taxation



Let us now further suppose that OA is the subsistence level. If Stalin's system of making inframarginal tax rates higher and marginal tax rates lower (or zero) is used, it's possible to take still more than CD in taxes, and the person still will remain above the subsistence level.

An essential feature of this system is tax-price discrimination: the same tax law cannot apply to everyone, or the regime would confront the problem that was described earlier in the context of a Western democracy: the efficiency gains from a system so regressive that it taxed everyone's first hours of work, but nobody's marginal income, would mean that with high taxes the least productive would not have enough posttax income to survive. The Stalinist system of taxation recognized, whether explicitly or implicitly, that everyone has about the same subsistence level, but that the most able people can produce many times their subsistence levels whereas others can produce only a moderate

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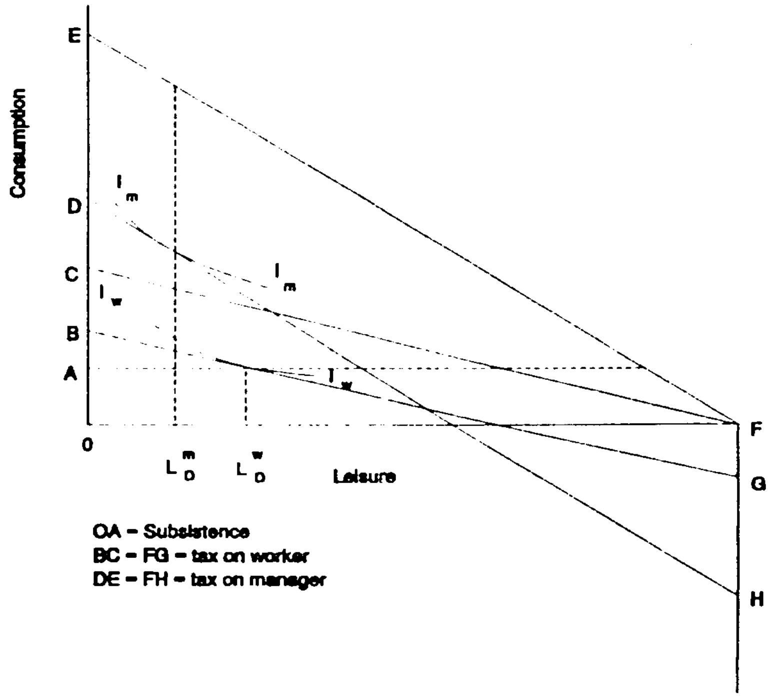
amount in excess of what they must consume to survive and reproduce. The implicit tax-price system exploits the fact that the more able person will generate more of a surplus above his subsistence level than will the less able person.

So the more able person is confronted with what in a rule-of-law democracy would be called a different tax law with a special tax schedule, and what in the Stalinist system is simply a different administrative decision about wage and salary levels. The basic or inframarginal salaries of the most able people who are chosen to be, say, factory managers are set only a little higher than the wages of unskilled workers, since they can generate a larger taxable surplus. The small differentials in base pay across occupations could be said to be favorable to the working class. But the egalitarian rhetoric was completely set aside to maximize the incentive to produce — Stalin could not have been more explicit and emphatic about this. So the indispensable extra effort of the most able people in the most important and demanding jobs was elicited by having very low taxes on their marginal income — the bonuses, the allocation of housing, the distribution of scarce consumption goods at the workplace, the prizes for Stakhanovites, etc., were taxed at low rates (in the USSR for quite a time, at a maximum rate of 13 percent). If an egalitarian or socialist ethic had been driving the system, there would not have been progressive piece rates and other devices that make marginal income especially unequal.

Suppose, as in Figure 2, that we have one individual who is less talented and whose total social output is given by the curve *FC*. This person needs *OA* for subsistence. Now suppose that there is another person who has this high level of productivity *FE* but who still only needs *OA* for subsistence. If the regime, by making every foreman and manager also (in effect) a tax collector, or by setting low basic pay differentials for occupations requiring different ability levels, can recognize the different ability levels and adjust the implicit inframarginal tax to them, it will put a low tax of *FG* on the less able individual, leaving him above subsistence and with a high incentive to work, and extracting about as much as it is possible to extract from him. The autocrat, by putting a much higher tax of *FH* on the more able person, obtains very much more from him. Only imperfect information about abilities and subsistence levels keeps the autocrat who engages in tax-price discrimination from obtaining all of the social income beyond that required for the survival of the population.

So the system of taxation that collects the most is one that meets two conditions: first, it confronts more able people with different tax schedules or laws than those applied to less able people. Second, given that it does this, it is also able (even with very high tax rates) to tax inframarginal income more highly than marginal income. Note that the familiar Western progressive income tax does not operate in this way at all, and that for all practical purposes the Soviet regimes did not have a progressive income tax.

Figure 2 — Autocratic Tax-Price Discrimination



In a market economy, the relative wage of the factory manager and the unskilled worker would be approximated by the difference in their marginal productivities. But in the system of the kind that Stalin created, he set a differential that was quite small. At the same time, he was aware of the overwhelming importance of giving the factory manager, especially, a strong incentive to produce. If the factory manager, because he is taxed too much, works only half the day, the losses from that are very great, much greater than if the worker only works half a day. That is, I hypothesize, why the bonus system was especially significant for factory managers and others with greater responsibilities and abilities. Note that this system will lead the factory managers to work very hard, because the reward for extra work — the substitution effect — will be greater for the more able person than the less able one. In this system, the fac-

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tory manager will end up working longer than will the unskilled worker. If anyone gets much leisure, Stalin would not want it to be the most able.

Thus we have explained the paradox that the degree of income inequality of the Stalinist system was restricted, but the incentive to work was often still very strong. This paradox can now be explained, since these conditions are precisely those that maximize the tax collections for the totalitarian leader.

The proportion of income in the Soviet Union in the time of Stalin that was devoted to personal consumption was lower than anywhere in the West, lower than in the Third World, and that is exactly what this theory would predict. Stalin was able to get a larger proportion of the national output than any other dictator in history, and more of course than democratic governments obtained.

8. What Makes Collective Farms Collective

The origins of Stalin's innovative system of tax collection showed up most starkly in agriculture. The Soviet Union was mainly an agricultural country when the Bolsheviks took over in 1917. Most of the national income was produced in agriculture, and especially by the "kulaks" — who had the relatively larger farms. This posed a major problem for the Bolsheviks. They had to have a surplus of grain to feed their cadre and their supporters, who were mainly in the cities. They also needed more people in the cities to man factories and produce steel and armaments, and more people in the military and government bureaucracy to do the work of the regime. All these people needed food and this food was produced by the kulaks and the peasants. In order to have the resources needed to build heavy industry and produce armaments, and to supply the party cadre and the army, the Bolsheviks first offered low prices to food producers, thereby implicitly putting a high tax on the kulaks and the peasants. Of course, the response of the farmers was to produce less, or to consume what they produced at home, or to try to sell it privately or illegally.

So the only way the Bolsheviks could get the food they needed would be to pay the farmers enough, after taxes, to give them an incentive to produce more. But that would have used up much of the social surplus that the regime wanted to devote to industrialization, to the military, and to political and prestige projects. So the Bolsheviks had to work out a collection system that would get more of a taxable surplus out of the agricultural sector that was then the main part of the Soviet economy. Before Stalin consolidated his power, some of the more "radical" Bolsheviks argued that the Soviet Union needed "primitive socialist accumulation." This was the socialist analogue to Marx's "primitive capitalist accumulation" — the initial thefts and windfalls to which Marx had attributed the capitalists' initial accumulation of capital. In other words, some

of the more radical Bolsheviks argued, on grounds of Marxian economic theory, that there was no alternative but to steal the initial capital needed for industrialization and the establishment of socialism from the peasants and most especially the kulaks. Though Stalin at first aligned himself with the more moderate Bolsheviks who hoped eventually to persuade the peasantry of the virtues of Marxism, he adopted the radical program as soon as he had consolidated his power.

He then confiscated the agricultural land, livestock, and machinery of the country, imposing extraordinarily severe punishments on peasants who hid any grain or livestock, and dealt especially harshly with the kulaks who had the greatest reason to resist this. Those assigned to each collective farm were made responsible for providing a given amount of grain or other foodstuffs to the state. Stalin set up a system in which there was a large enough number of people that collusion among them was difficult, yet monitoring was facilitated so that the implicit taxes could not usually be evaded. He set up a system in which it was relatively easy to determine the amount that people had to supply to the state and thus to tax them as much as they were capable of being taxed.

I submit that the collective farm was mainly an instrument of tax collection, not something that was ideologically required. The ideologically preferred system of organization was the "state farm," where the workers were paid a wage and the state was the owner or residual claimant. This meant that, at least in bad years, much of the output of the state farms was taken up in wages paid to the workers. But the regime wanted food and other resources even in bad years, so Stalin chose collective farms instead of state farms, and made the members of the collective farm responsible for supplying the amounts (the theoretical "biological yield") he demanded, even in bad years: they could not keep the resources needed to pay state-farm wages to their members. The collective farm, unlike the state farm, was especially set up to facilitate tax collection. The whole range of policies that Stalin worked out in the 1920s and 1930s had the property that they always put lots of incentives before the individual to get the individual to produce more and at the same time to maximize Stalin's take from the citizens and keep their level of consumption very low.

By the time that this system had been perfected, it really did mean that the Soviet Union had more resources for the purposes of the leadership than any other society in history. I hypothesize that this is the main reason that the Soviet Union was able to mobilize a far larger share of the society's resources for the dictator's purposes than the tsars had ever obtained. It was in large part this wondrously effective system of tax collection that helped to make the Soviet Union a nuclear superpower and the first society to reach outer space. When the Stalinist system was applied in China, Vietnam, and North Korea it again

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made the communist autocracies incomparably more powerful militarily than any prior noncommunist regimes, however autocratic, had been.

Though ideology undoubtedly played some role, the hypothesis here is that Stalin was not blinded by — or even faithful to — what had, before his system was created and extolled by his propagandists, been called Marxism. Just as his many cunning shifts of policy and his extraordinary brutality cannot be explained in terms of Marxist-Leninist principles, neither can the most important features of the system of society he created be explained by any prior ideology. Explaining Stalinism and the evolution of the Soviet-type societies solely in terms of ideology is, in my opinion, as futile as trying to build a macroeconomic theory on the assumption that the human race has an ineradicable money illusion that will survive any set of macroeconomic and monetary policies.

Stalin was more nearly a great innovator among autocrats in tax collection. This hypothesis is consistent with the detailed characteristics of his policies, but *prior* Marxist-Leninist ideology is not (the distinctive new ideology formulated by Stalin's propagandists, which has since then often been taken to be communist ideology, is not an independent explanatory force). If Stalin had been a sincere ideologue he wouldn't have done many of the things he did, like kill off all of the people who had participated with him as initial leaders of the Bolshevik revolution, or have purged those Bolsheviks who dared to speak up for the initial Marxist-Leninist vision.

9. Bureaucratic Competition

If the same general theory that has been informally sketched out here can, without losing its simplicity and parsimony, also explain why the Soviet-type system eventually collapsed, that will increase the probability that it is valid.

The key to the gradual decay of Stalin's system under his successors was its total dependence on countless thousands of bureaucrats. The centralization of the decisions about consumption and investment that gave the Soviet societies extraordinarily high investment rates and (in the early decades) unusually high growth rates required a substantial bureaucracy: the agents of the autocrat had to set the level of production of consumption goods as well as investment goods. The Stalinist scheme of tax-price discrimination with perhaps hundreds of different tax schedules was also dependent on a huge bureaucracy — in essence, it required that all relative wages and salaries should be determined by agents of the autocracy and also that different pay rates should be set for marginal and inframarginal earnings. In a sense, every foreman and manager was also a tax collector for the regime. Administrators have to have some measure

of discretion to accomplish the tasks they are given, so a Stalinist system is inevitably highly dependent on them.

Thus we must consider how the leader of a centrally planned economy can solve the administrative problem of obtaining a coherent allocation of resources while at the same time socializing the level of saving and investment and engaging in a complex system of tax-price discrimination. If we momentarily abstract from well-known difficulties, we can say that the leader of a communist society could have enterprise managers and other subordinates estimate all of the relevant production functions and then, with this information and the leader's objective function, economic planners could calculate the optimal allocation of resources. Given the leader's interest in growth, technology, and investment, this optimum allocation would devote a high level of resources to technological advance and investment. The leader should then have subordinates impose this optimal allocation on society, reallocating resources between sectors as is necessary over time.

The leader, however, cannot obtain or process all of the information needed to put an optimal allocation into practice. Of course, a centrally planned economy does not have to be optimal to match the imperfect market economies of the real world. Yet, to function effectively, a planned economy must not only obtain a vast amount of information, but also process at the center information about enterprise production functions that, in a market economy, would only have been needed by the relevant firms. The information obtained from the monitoring of performance and the experience of actual conditions becomes evident only at the front line of the production processes and this information has to be passed up layer after layer of bureaucracy to the top. The orders worked out in the light of this information also have to passed through all of these layers of officials on the way down. When, as in agriculture and retail distribution, the economic activity takes place over large amounts of space, the gathering and transmission of information is made more difficult by the distances involved. The information losses also increase with the size of a bureaucracy, since misunderstandings at each layer of the hierarchy are normally passed on to all successive layers, even with the best efforts of all concerned.

For fundamental reasons, the best efforts of all concerned are not usually available. A manager's chances of promotion or bonuses are lowered if a superior learns of mistakes. Subordinates, therefore, have an incentive to hide all those shortcomings of their performance that can be successfully concealed from a superior. There is also an incentive to overstate the difficulties faced and to understate potential production. The incentives to distort the information supply operate and cumulate at every level of a hierarchy, so they increase nonlinearly with the size of the bureaucracy and are bound to be exceptionally serious in a centrally planned economy. The more one reflects about these problems, the clearer it becomes that there must be a countervailing factor, or the centrally planned economies would not have survived even for a time.

Competition among bureaucrats is such a countervailing factor. The large incentive for production and growth facing the leader of a Soviet-type society can at times be translated into actual performance because of the constraint on subordinate misrepresentation that arises because of each subordinate's bureaucratic competitors. Just as bureaucrats have an incentive to conceal their own failures and underreport the potential of the resources allocated to them, so they also gain when their colleagues' mistakes, and the full potential of the resources allocated to them, becomes known. When there is bureaucratic competition, each official must also be cautious in underreporting the potential productivity of the resources allocated to him, not only because he might be caught, but also because bureaucratic rivals may have been allocated some identical resources. Understating the productive capacity of resources of this type may make rivals look better than they are. An astute superior can accordingly use competition among subordinates to exploit their more detailed knowledge and to draw out better estimates of potential production than would otherwise be obtained.

Independent communist party representatives in enterprises, as distinguished from the official administrators of the enterprises, augmented the regular bureaucratic competition and further improved the information available to the leadership. The party representatives in a factory operated to some extent in the way the inspectorate or "censorial system" in imperial China worked, increasing the effectiveness of bureaucratic competition in controlling the incentives of subordinates to submit biased information.

To understand the importance of bureaucratic competition and to see, as we will later, the consequences of collusion, it is useful to distinguish between industry-wide changes and enterprise-specific changes in conditions. An example of the former is an improvement arising in technologies useful for an industry or a change in the supply of some input needed by all enterprises in the industry. An example of the latter is an addition to its capital stock or a shortage of some repair part or other input that only this enterprise happens to need. To obtain a correct measure of the output to be expected of each establishment, the leadership needs to know both a base period potential and the changes in output expected from both the industry-wide and the enterprise-specific changes occurring since the base period.[8]

8 This phrasing of the planners' problem corresponds closely to "planning from the achieved level," which seems to be the basis of much of the practical methodology of planning in centrally planned economies.

Bureaucratic competition among subordinates gives the manager of an industry a basis for estimating the potential increases in production from industry-wide changes in the opportunity set. If a subordinate understates the value of such changes, competitors might look better. This competition will not, however, necessarily give the industry manager a basis for calculating enterprise-specific changes in potential productivity, since this information is located within the enterprise and the subordinate has an incentive to conceal or misrepresent whenever this can be safely done. But, at the enterprise level, the use of party officials as an inspectorate might reduce these problems as long as the party's local officials are responsive only to the party hierarchy.

It will probably be difficult for the central leadership to judge the performance of an industry as a whole, however, since the economy-wide change in productivity poorly predicts the increase in output that should be expected from a particular industry. Here any help a Soviet-type economy may get in overcoming its information problems may only come from such factors as ideological zeal, which induces administrators to be honest about their productive potential, and from judgments made by drawing on an industry's performance and relative prices in the pre-Soviet period. This help is likely to be important only in the early years of central planning.

Even if leaders obtain reasonably accurate information through this process of bureaucratic competition and monitoring, another condition must be satisfied before growth results. The reallocations resulting from new information must be accomplished quickly. The relocation of workers, the shutting of plants, and the dismissal of managers must all be undertaken by the central administrators. When there is a powerful leader, the society has a well-accepted sustaining ideology, and there is no organization, even informal, that is unsanctioned by the leader, the necessary measures to reallocate resources can be accomplished quickly, however harsh they might be.

With these two countervailing forces — bureaucratic competition to reveal information and a strong unchallenged leadership to accomplish reallocation — it seems plausible that tolerably coherent decisions could be reached and then implemented. Thus the bureaucracy might, indeed, process enough information so that, with the stimulus of the leaders' incentive to increase growth in these societies, centrally planned economies might exploit growth opportunities to a tolerable degree.

10. The Forces of Slowdown

The preceding argument has implicitly assumed that collusion of subordinates does not in any way constrain or mitigate bureaucratic competition or reduce

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the power of top economic administrators. For the early period of a planned economy (or a period after a purge, cultural revolution, or other total shake-up of a society), this is an approximately realistic assumption. It is clear from analysis of the logic of collective action (Olson, 1965) that the gain from collusion is a collective good for those benefiting from the collective action: those who do not bear the costs reap the gain from the good as much as those who do. Thus it often pays to be a free rider. In small groups continued bargaining is required to get group-optimal levels of collective action, since the group must work out agreements whereby each will act in the collective interest. In larger groups the even more difficult task of working out "selective incentives" must be overcome before collective action can occur. The enterprise managers in many industries in a centrally planned economy are a small group, and this means that they can organize in less time than if the numbers were large. On the other hand, the restraints on independent organization in a communist society — especially organization that must weaken the control of the leader of the society — require inconspicuous and informal, if not secret, collusion, and this makes collective action emerge more slowly than it otherwise would.

As time goes on in a communist society, there will have been an opportunity for some groups — especially small groups of fairly high-ranking and middle-level administrators and enterprise managers in particular industries — to organize informally. Given the very nature of such societies, it is difficult to obtain systematic evidence of such collusion. Nevertheless, there is every indication of the occurrence of processes analogous to those in Western societies, although much more discreet. For example, Hough and Fainsod (1979, pp. 446–448) describe the workings of the Soviet Union's upper levels in the following manner:

> Despite the frequent conflicts between the Central Committee officials and those that they supervise, westerners clearly should be giving more attention to the cooperative side of the ambivalent relationship between supervisors and supervised. . . . By appointing personnel with specialized knowledge and experience to the posts in [the top party and governmental bodies], the leadership evidently hoped to obtain independent advisers with sufficient expertise to judge the ministerial reports and proposals and hence to give themselves the ability to judge performance accurately and to decide policy for each branch on the basis of real freedom of choice.
>
> Yet, the question arises whether the use of specialized personnel in the Central Committee Secretariat and apparatus has not meant the penetration of the values of the specialized elite into the political leadership as much or more than the enhancement of political control over the policy process — that is, whether the familiar pattern of the regulated coming to dominate the regulators has not developed in the Soviet Union as well as the West.

Similarly, Montias (1982, pp. 12–14) describes the effects of a comparable process that took place in Polish society — a process that was largely instrumental in producing the economic collapse of the late 1970s:

> The "ministerial lobbies", as they are now called, successfully pressed for more investments and more imports for the enterprises under their direction long after it had become obvious that increases in either would have nefarious consequences for the economy. . . . It may be objected that it was up to the Planning Commission to countervail these many-cornered pressures. But the Commission, staffed for the most part with professional economists without a political base, had little authority. There is growing evidence that crucial decisions were made without its participation or in the face of its disagreement. . . . There was the thesis, first spread by the lobbies and later taken up by the political authorities, that all major projects can only be realized — in part if not in whole — on the basis of cooperation with capitalist enterprises. Reinforcing this thesis were motives of self-interest. Representatives of foreign-trade corporations, production ministries, and associations, according to an article in the house organ of the Ministry of Foreign Trade, "vied with each other in the quest for attractive trips abroad."

Similarly, Szalai's (1991) paper describes the process by which the collective action of the large enterprises in Hungary became a dominant, and detrimental, force in the setting of policy.

Given that collusions occur among small groups of fairly high-ranking and middle-level administrators and enterprise managers, how, if at all, could such officials gain from colluding? And who would lose from their collusion? In this paper, there will not be an opportunity to describe the myriad ways that collusion could eventually operate to slow down a centrally planned economy. But one illustration will serve to establish a framework within which other examples can be placed.

Consider advances in knowledge that can increase the productive potential of a whole industry. If the leader of the country knows how much extra production could be obtained because of these advances, then quotas could be increased accordingly and resources reallocated in order to reap the maximum gain from the advance. But the leader of the society and central planners cannot have full knowledge of the technological improvements available in each period to every industry. They are dependent on the experts and managers in the industry itself. It is in the collective interest of the managers of enterprises in the industry, and of the manager of the industry as a whole, that the productive potential of these advances should be underestimated by the central leadership.

So long as the extra production that the industry leaders and enterprise managers are required to obtain from additional resources is not in fact the maxi-

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mum obtainable (and only they, if anyone, know this maximum), then it will also be in the collective interest of them all to receive more resources, because these resources can also be used in part to secure personal objectives. These resources might be used to supplement the income or the leisure of the management or the workers of enterprises. Or the resources might be critical in maintaining some of the existing employment, including managerial employment, in this industry. Thus, when collusion becomes commonplace, the managers of the establishments in an industry, whether separately or in league with the leader of the industry, have an incentive to act as a lobby that monopolizes the information on the extra output obtainable from allocated resources. They also have a collective incentive to resist the resource reallocation that inevitably results from changes in output potential. The better the managers are able to collude, the stronger these tendencies will be. Ultimately, this devolution reaches the point where the total income of an industry or sector is divided among all of the enterprises, with those that are simply a drain on the society getting almost as much as those that generate a surplus — there is a "soft budget constraint." New investment does not go to where it would be most productive, but is allocated across enterprises in rough proportion to their bureaucratic influence.

By an analogous argument, it is clear that enterprise managers, as a group, could also gain from conspiring to lower the expectations of output change due to the aggregate of enterprise-specific investments and changes. In this respect, however, they have a conflict-of-interest with their industry manager, since the industry will get more output (and thus free resources) at no cost to itself if it can prevent the collusion that hides information on enterprise-specific changes. There is also an analogous process at the level of colluding workers in individual work groups, though the amount of information on which workers have a monopoly is relatively small and therefore less significant.

The foregoing illustration is not sufficient to spell out the character of the many-faceted process of sclerosis that appears to characterize the centrally planned economies as well as the market societies. Nevertheless, implications of this illustration make it clear that the argument is not only consistent with the tendency for these economies to fall further behind their potential as time goes on, but also with other features of the evolution of these societies. Consider, for example, the puzzling growth over time of perquisites and privileges for middle- and upper-level administrators and functionaries. This growth uses up some of the autocrat's surplus. Yet over time, the middle- and upper-level nomenklatura obtained more privileges, just as the argument here predicts.

This vision of the devolution of a Soviet-type society also makes testable predictions about the sources of demand for market-oriented reforms in Eastern Europe. If it were not for the problems described here and the evolution of the losses from them, the top leaders would tend to be extremely conservative. If

they own a society that serves their interests ideally, they would have no interest in reforms. Their personal staffs and the intellectuals who advise them would, to some extent, also be cautious about reform.

But, even before Gorbachev, there were substantial interests by leaders of some of the centrally planned economies in market reform (though, of course, not usually in democracy). As Winiecki (1990) has pointed out, there were many proposals for reform that were sabotaged, especially by administrators at upper-middle and middle levels. Once the people in each industry or sector at these levels have colluded, they (and the planning officers) will be the major losers from competitive market reforms in a centrally planned society. It would be the leader and the consumers who are the gainers.

11. Devolution, National Breakdown, and Democracy

If the analysis in this paper is correct, a centrally planned economy cannot be productive, even in the limited sense in which the Soviet-type societies were once productive, without a strong and harsh dictatorship. The encompassing interest of the autocrat, who will have more tax receipts at his disposal if the economy is more productive, is the only motive force that can make a centrally planned economy work. With the passage of time, power naturally devolves even in the most centralized autocracies: the encompassing interest of the autocrat is ultimately dissipated through a process of bureaucratic devolution. Thus even well-established totalitarian regimes cannot make central planning survive indefinitely. I hypothesize that a centrally planned economy and democracy cannot coexist even for a moderate period of time, among other reasons because a democratic polity would not be able to make a planned economy work, even in the sense that the Soviet-type societies once worked.

Indeed, I conclude that, unless they have unusually encompassing institutions and other exceptionally favorable conditions, democracies cannot even succeed in obtaining any net benefit out of most the large state-owned enterprises in the societies in transition. They normally cannot even require such enterprises to adapt effectively to new circumstances. Neither are they capable of carrying out any efficient sequence of gradual reforms over a period of several years.

For the most part, the new democracies in the formerly communist countries do not have encompassing institutions. When the communist governments collapsed, they were in most cases replaced by relatively fractionalized democracies — in the last Polish election, for example, the most successful party got less than 14 percent of the vote. In some formerly communist countries, such as the Soviet Union, the democratic or popular forces that prevailed were so fractionalized that the political system divided into many smaller countries. Thus the encompassing interest of the center has virtually disappeared in most of the societies in transition. The capacity to extract much economic value from the state-owned economy has naturally vanished with it.

The large state enterprises, by contrast, continue to be organized and politically powerful. Indeed, under democracy they can lobby more openly than before and their workers can strike as well. As part of the government, the managements and workers of the state enterprises are still on the inside, and they claim entitlements to public funds akin to those claimed by civil servants and pensioners. So there is virtually no force to impose coherent plans upon or to extract output from the state sectors of the societies in transition. The belief that democratic governments in the societies in transition will be able to work out efficient and gradual sequences of reforms is, in my opinion, mistaken. As my argument predicts, performance in the state-owned sectors of the societies in transition is even worse than it was in the last years of communism.

The single most important economic advantage of democracy is that it protects individual rights — including individual rights to property and to contract enforcement. It is mainly because of the security of individual rights they enjoy that the secure and stable democracies are the richest nations in the world. It is because of these secure individual rights that they frequently are the beneficiaries of capital flight from the sometimes autocratic societies of the second and third worlds.

Most of the societies in transition have yet to provide their own citizens, much less foreign firms and investors, secure individual rights. Thus property rights and contract enforcement rights are ambiguous and insecure. This greatly limits the amount of investment and growth that results from the new markets that have emerged after the collapse of communism.

In sum, the large state-owned enterprises can work, even in the weak sense in which they worked in the salad days of communism, only when the encompassing interest of a harsh dictator leads him to extract the maximum output from them, and these dictatorships have, fortunately, collapsed. In a democracy, the large state enterprises are as much lobbies as firms, and they more often dissipate than augment the surplus of the society in transition. The new markets provide new output and new gains from trade, but the lack of secure and well-defined rights limits the gains from these markets. The ambiguity and uncertainty of individual rights, in all of the societies in transition except for eastern Germany, severely limits foreign investment. Thus economic performance in most of these societies is even worse after communism is abandoned.

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