

DISECONOMIES OF SCALE AND DEVELOPMENT

Mancur Olson

Introduction

Those readers who are not only familiar with Lord Bauer's work but also have some acquaintance with my writings probably would not have expected that I would be among the contributors to this Festschrift. Many people know that Lord Bauer's work has been distinguished by its high scientific quality, as well as by a steadfast adherence to a somewhat conservative (or at least classical-liberal) point of view. A few readers may also know that my writings are not inspired by quite the same conviction; I believe that neither left-wing nor right-wing ideologies provide an adequate understanding of the problems of our time. I have even gone so far in some recent essays as to argue that the ideological debate that occupies many leading economists and other intellectuals often confuses rather than clarifies our thinking.¹

The familiar ideological categories are not, of course, well defined; in any complete analysis, the terms "conservative" and "classical liberal" would have to be sharply distinguished. None of these ideological categories in any case captures the undoubtedly scientific and uncommonly observant character of Lord Bauer's writings. Still, these categories do in a loose sense capture a significant if secondary aspect of his writing and reputation.

Since, to some extent, Lord Bauer's writings fall in one of the ideological categories I oppose, why am I so quick to honor and publicize his writings? It is not enough to say that, like most other economists, I often admire and profit from writings with which I

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¹See, for example, Olson (1986).

partly or wholly disagree. My admiration for Lord Bauer's scientific achievements has other sources as well.

The particular source of my admiration of Lord Bauer's writings that is most relevant to this essay is rooted in his focus on the economic development of the poor or developing areas of the world. It is sometimes supposed that the case for a competitive market economy is stronger for the prosperous capitalistic countries than it is for those very different societies that have yet to develop. Developing countries, it is sometimes said, are less suited to a market economy for cultural reasons, in that their peoples allegedly do not have the same rational and maximizing habits of mind that are usually assumed in the economic theory that has emerged in the economically advanced countries of the West. The less developed countries are also thought to need higher levels of protection of manufactures, in part on "infant industry" grounds, than the already developed nations require. Moreover, poorer countries are also supposed to be especially susceptible to exploitation by multinational corporations and foreign capital, and perhaps to have a special need for economic planning.

In this essay I offer a reason why I believe Lord Bauer's general policy recommendations are of *greater* pertinence and value to developing countries than to developed ones.² The argument that competitive markets will greatly help to solve the problems of underdeveloped countries is, in my opinion, far stronger than the contention that advanced countries should rely on such markets; the poverty problem that still afflicts a small but significant minority of individuals in the most developed nations is, for example, a better candidate for activist governmental programs than is the problem of promoting economic growth in societies that have so far failed to develop economically. The optimal role for government is actually smaller in developing countries than in advanced ones.

²The argument in this essay was first presented at academic gatherings in the mid-sixties. (For example, at a session of the Midwestern Economic Association in Chicago on 17 April 1964, and at a seminar at Columbia University. The presentation was then entitled "Economic Growth and Structural Change.") My argument was not at that time well received. Accordingly, I decided not to submit it for publication until I could somehow make the argument clearer and more persuasive, or until the *Zeitgeist* should become more receptive to it. Probably it was mainly the inadequacies of my evidence, or the shortcomings of the way I presented it, that explained the negative reaction in the 1960s. Still, there has been a considerable change in professional thinking about economic development since then, so perhaps my argument now will be received more indulgently. This argument, moreover, probably resonates more with Lord Bauer's writings than anything else I can do. Thus, I hope that the improvements I have made in my argument and the change in susceptibilities since the 1960s will make this essay an appropriate tribute to Lord Bauer.

The optimal roles of the market and the government in developing as compared with developed countries depend, as we shall see, on what has most delayed or prevented development of the poor countries. What missing factor or input has been most important in keeping those undeveloped areas from developing? Are the cultures or other attributes of underdeveloped areas such that markets will not work very well? Or are these areas especially lacking those things needed to make governments, enterprises, and planning agencies work? It is helpful in this connection to look at various factors or shortages that in the past have been thought to have prevented development of poorer countries.

Traditional Explanations of Underdevelopment

When the study of economic development first became a standard specialty in economics departments shortly after World War II, the most popular explanation of the continued poverty of the poor nations was their lack of capital. Capital at the time meant mainly machinery and other tangible capital rather than human capital. Ragnar Nurkse's book *Problems of Capital Formation in Underdeveloped Countries* (1953) is typical of the best of the literature that looked on a shortage of physical capital as the main problem of the less developed parts of the world. Very poor people cannot be expected to survive if they use a large proportion of their incomes for investment, but rich people are not correspondingly constrained, and this fact made it natural to focus on shortages of capital in poor countries.

Though the significance of the size of the capital stock for any nation's output cannot be denied,³ the notion that a shortage of capital is the main cause of poverty in developing nations has come to be questioned on all sides. In most countries, for example, there is some capital, such as private holdings of gold and silver ornaments, that is not productively used. A second and more important objection is that if there were not other difficulties (such as political instability, economic nationalism, or poor management), capital could always be borrowed from prosperous countries; if capital had in fact been in particularly scarce supply in the poor country, its "marginal productivity" and so the profitability of its use ought to be greater than in the prosperous countries. The low growth rates of many countries that received nonnegligible amounts of foreign aid and the low pro-

³Strictly speaking, there is no altogether satisfactory way of defining the stock of capital, and thus its marginal productivity, independent of the interest rate, in a completely aggregative analysis. With a poor country that is too small to affect the "world" interest rate, though, there can be no objection to the formulation in the text.

ductivity of some modern factories that were built in poor countries have further lessened the credibility of the "scarcity of capital" explanation of underdevelopment.

Somewhat later there were many advocates of the view that the missing ingredients in most poor countries were skilled manpower or educational systems that could impart needed skills. This view, naturally enough, drew strength from economists' emphasis in the early 1960s on the theory of human capital. A large stock of human capital can, of course, be profoundly important to a country's development. As a general explanation of the failure of most poor countries to develop, however, the emphasis on human capital will not do. Many of the poor countries today have far higher proportions of educated people in the labor force than the now-developed nations had when they were developing. Although India may have, as is alleged, more trained engineers than the United States, it is nevertheless true that there are high unemployment rates among well-educated people in India and other poor countries. Developing countries as a whole are also net exporters of highly educated manpower. If a shortage of skilled manpower were the only major obstacle to development, the marginal products and the wages of scarce skilled workers would be higher in the poor countries than the rich ones, and this net export of educated talent would not occur.

A poor country that is lacking people trained or experienced in a particular specialty can hire the relevant specialists abroad, albeit usually only by paying somewhat more than the standard wage for such labor in Europe or North America. Thus, important as human capital presumably is in the development process, it cannot serve as a general explanation of why most poor countries are failing to catch up with developed nations.

Other writers, especially noneconomists, have wondered whether the cultures in most of the poor countries were incompatible with economic development, or at least with the market institutions under which development proceeded in the West. The calculating, acquisitive, and impersonal behavior that is often thought necessary for the effective operation of markets and capitalistic systems is alleged to be lacking in many poor societies, with the result that rational responses to market incentives, and especially entrepreneurial initiatives, are not forthcoming.

Although this essay calls attention to the significance of culture and social mores in another context, the bulk of the evidence seems to me to run counter to the notion that cultural resistance to market incentives is an overwhelming obstacle to the development of poor areas. The propensity to trade, and to seek an advantageous bargain

when doing so, seems to be more striking in Middle Eastern bazaars than in American supermarkets. The preference for large incomes over small incomes is dramatically evident in nearly every poor country—even the decisions of governmental officials are sometimes for sale. The hypothesis that the peasants or tribesmen of various poor areas would not respond to market prices has been contradicted by several econometric studies of agricultural supply responses in areas such as Pakistan, Thailand, and East Africa. Theodore W. Schultz's (1964) research on Indian agriculture revealed that Indian peasants often come closer to satisfying the marginal conditions for an individual economic optimum than do American farmers, largely because the peasants confront slower rates of technical change and have accordingly had more time to adjust to the relevant production functions and relative prices.

To say that most people in most cultures on which there is available information appear to respond to market incentives in the predicted way does not, of course, deny that some cultural groups may be better prepared than others to respond to these incentives or that in other contexts cultural factors could have a profound significance. At a minimum, an advanced culture must bequeath a considerable amount of human capital to those who are raised in such a culture. One hypothesis of this essay, moreover, is that in one crucial extramarket context, culture is critically important, as will be evident from the constructive argument that follows.

A Nonimportable Requirement for Development

One problem with the once prevalent explanations of underdevelopment is that they overlook the possibility that any single factor of production whose scarcity prevents development usually can be imported. Both tangible capital and highly educated manpower can be imported. If the productive factor is especially scarce, it should—if the institutions, organizational structure, and policies of the country are appropriate—bring exceptionally high returns simply because it is so scarce. Thus it should be surprising if any single factor (or any pair or triplet of factors) that can readily be imported would by itself prevent economic growth. It is to factors of production or growth-causing forces that cannot be imported that we should look for the fundamental difficulties of development.

Cultural habits are not so readily imported as physical capital or educated specialists. There is admittedly some tendency for societies to imitate cultures that are deemed to be successful, and thus a certain amount of cultural importation occurs. But it is more often the super-

ficial and less subtle cultural characteristics of successful countries that are imported initially; acquisition of the subtler features of an alien culture can take a very long time as well as considerable investments in learning. Earlier in this paper I suggested that individuals in practically all cultures respond in broadly similar ways to the obvious and powerful incentives in markets. Culture, however, can still play a crucial role in extramarket contexts.

The one political attitude that most uniformly categorizes developing countries in recent times is “anti-imperialism.” Although the expression often is used loosely, and sometimes means opposition to any relationship with a more developed country, its initial and core meaning is resistance to being governed by citizens of another country—to taking orders from foreigners. Virtually without exception, the people of poor areas (no less than rich ones) have wanted “independence.” Independence in this context is not synonymous with “freedom”; resistance to various home-grown autocracies has not in general been so widespread as the opposition to foreign administration. Although subordination to a foreign government is the main concern, some loosely define imperialism to include direct investment by foreign or multinational firms, or foreign control of universities, schools, and other major institutions. Opposition to ideas and products that originate abroad may also surface, but this is counter-vailed by the imitativeness and readiness for cultural change mentioned above. Thus, control by a foreign government is almost always ruled out in modern developing countries.⁴

It follows that one of the elements needed for economic development— a stable government that reliably provides law and order, impartially protects private property, and enforces contracts—usually is not being “imported” into or imposed upon developing countries, and ordinarily could not be without at least profound and violent resistance. Such “importation” is defined as imperialism and is ruled out, and (in my opinion) usually for good reasons. Moreover, no evidence or promise of high “marginal productivity” from better government will normally overcome resistance to imperialism—better government is a “factor of production” that will not be obtained from abroad even when importing it could bring a considerable increase in income.

⁴To refer to this constraint and to emphasize its intensity and generality is not, of course, to attack the constraint. Subordination of a country to a foreign government in which the colonial people have no voting rights not only opens up the possibility that the imperial power will be used exploitatively, but it also may perpetuate feelings of self-hate, inferiority, and bitterness on the part of the subordinate group.

There is also today considerable resistance in less developed countries to admitting multinational firms, even though foreign firms are not inherently a form of imperialism. A foreign firm that can only obtain labor and other inputs by paying enough for the owners of these resources to sell them voluntarily, and that can only sell its product to willing buyers on a free market, cannot be coercive. Such a firm should therefore not be equated with a colonial government that rules by force. Nonetheless, most developing countries discriminate more against foreign-owned firms (if they allow them to enter at all) than do most developed nations. Thus, in practice, large foreign-controlled corporate hierarchies are also relatively rare in the poorer countries.

The Special Difficulties of Large-Scale Organizations in Underdeveloped Areas

The objection to importation of foreign hierarchies suggests that *developing countries will be especially short of effective large-scale organizations*—unless this factor of production is something they would have in relatively great supply because of their indigenous characteristics (that is, unless it was a factor of production in which they were intensive, so that under conditions of free trade they would tend to export products for which this factor was especially important). This essay attempts to show that the indigenous characteristics of poor countries are strikingly inhospitable to effective large-scale organization, especially to large-scale organizations that have to operate (as governments do) over a large geographical area. This is true both of poor countries today and preindustrial Western nations.

There are several reasons why the indigenous characteristics of underdeveloped areas are unfavorable to effective large-scale organization. One reason is that capital is relatively scarce in poor countries. This scarcity is not, as was argued earlier, a sufficient explanation of underdevelopment, because in the absence of other problems the needed capital would be imported. Nonetheless, the wage-rental ratio in most poor countries tends to reflect their relatively low rate of savings and their enmity toward foreign capital. A scarcity of capital tends to prevent large-scale production; it is often machines and other capital goods that come in large, indivisible units that give rise to economies of large-scale production, not land or labor.⁵

⁵Industries with no capital goods (apart from inventories) would be less likely to achieve economies of large-scale production; there might be some gain from increasing specialization of labor as an enterprise grew larger, but it would be hard to think of a marketable product, made without the use of extensive capital equipment, that would

A primitive level of technology also tends to prevent large-scale production, because simple methods, even when they are capital intensive, normally offer no incentive for large-scale production. The development of steam power and the invention of new textile machinery that could not be powered by hand gave rise to the first modern factories. Factories are relatively large-scale establishments, and they became a general and important way of organizing industrial production only during the Industrial Revolution (Ashton 1948, pp. 71–77). Small-scale, or “cottage,” industry prevailed when textile machinery was hand powered. It is difficult to think of many types of capital equipment embodying primitive technology that must for efficiency be used in large, indivisible units, and which would therefore give rise to significant economies of large-scale production. Some irrigation works, mining operations, and transport canals in primitive societies were relatively large scale because of the size of the rivers involved or other geological and geographical conditions, but these were exceptional. In most cases, primitive technologies have been associated with relatively small-scale operations.

The low level of per capita income in poor countries also tends to foster small-scale enterprise. The lower the level of per capita income, other things being equal, the smaller the size of the market. Advocates of balanced growth, such as Rosenstein-Rodan and Nurkse, based their case mainly on the fact that in poor countries the small size of the market limits the inducement to invest. But the small market also limits the scale of the enterprise, because when the market is small the demand will not be great enough to sustain a large enterprise even if the shape of the average cost curve is such that it gives a larger enterprise lower costs.

Market size depends not only on the level of per capita income but also on the costs of transportation and communication. The costs of transportation and communication will, however, be closely associated with the level of per capita income. The same shortcomings that keep a poor country from having a modern, low-cost manufacturing sector will usually keep it from having modern, low-cost transportation and communication systems. Obviously, many underdeveloped nations today have imported some modern transportation and communication devices from advanced societies. Most underdeveloped countries have a few modern roads and railroads linking major cities,

involve so many separate operations that a very large work force would be needed to exhaust the gains from the division of labor. There can also be economies of scale in distribution and marketing, but these economies are usually not as important in developing countries with their poor systems of transportation and communication.

but transportation systems in rural areas still are often quite primitive. The cost of modern transportation in poor countries is so great that it cannot be provided to the mass of the population. This is also basically true of such modern communication devices as the telephone and television. Many of the people simply cannot afford them.

Such emphasis on the relative backwardness of the transportation and communication systems of poor countries may seem unnecessary, since this backwardness would perhaps nowhere be denied. If it is accepted, however, two further reasons why poor countries should be expected to have relatively little experience with large-scale organization follow inexorably from it. First, poor transportation and communication tend to force a firm to rely mainly on local factors of production. When a firm's scale increases, it will have to go farther afield to obtain factors of production, and the poorer the transportation and communication systems the faster these factor costs will rise with expanding output.

The second and more important reason why poor transportation and communication systems work against effective large-scale enterprise is that they make it far more difficult to coordinate such enterprises effectively. This is particularly true for large-scale enterprises whose activities are relatively far-flung or space-intensive. A large retail establishment, for example, will have a chain of stores scattered over a wide area. And a large manufacturing organization, even if it has but one factory, will often need to be represented throughout the wide area in which it must buy factors of production and sell its product.

The difficulties of communication and transportation in the relatively larger enterprises that did exist in preindustrial periods in Europe are shown by the autonomous authority granted to those in the lower levels of command. In the age of sailing ships, for example, it was common for the ship's owner to give its captain the authority to change his route whenever he decided and to stay away from home port as long as he wanted, because there was no way in which the owner could know of the possibilities of profitable transactions in distant ports. The success of the Rothschild family's financial empire, in part, is credited to unusual family loyalty and to successive generations with large numbers of sons. Only a large and cohesive family could keep the various national branches of the empire from going entirely different ways. These are only isolated examples, but they illustrate the special difficulties large organizations must face in coordinating their activities when transportation and communication are poor.

Culture and Organizational Size

If the foregoing reasons why large-scale organizations have usually been uneconomical in poor societies with primitive technologies are valid, we should expect that large-scale organizations would not have been as common in either contemporary developing countries or in historical times as they are in rich countries today. To the extent that market forces operated, these forces would make it difficult and disadvantageous for most firms to expand. Resource scarcities would tend to limit somewhat the size of organizations even in the absence of markets.

A systematic survey is needed before we can be certain, but my reading and observation suggest that, as the foregoing arguments would predict, the average size of productive enterprise has been far smaller in poor than in prosperous societies. In each country that has industrialized, moreover, the average size of enterprise appears to have increased enormously since industrialization began.

If small-scale enterprise has been indigenous and generally optimal in less developed societies, and large-scale enterprise has not, we would expect the skills, attitudes, and expectations of most people in these societies to be derived from and geared to small institutions rather than large ones. Since the adaptation to small-scale activities presumably goes back to the beginning of social life, and any experience with large-scale organizations is relatively recent in developing areas, we would expect that the cultural attitudes in these areas would be appropriate only to small-scale enterprise. In addition, because low per capita incomes and primitive transportation and communication also foster smaller markets, and (as Adam Smith first showed) the "division of labour is limited by the extent of the market,"⁶ we would also expect less specialization—and cultural characteristics less suited to detailed specialization—in poor societies.

If the above is true, we should expect that the characteristic institutions of traditional societies would be both small and unspecialized. The prevalence of extended families,⁷ tribes, clans, manors, and communal village organization tentatively suggests that this prediction is correct. As Joseph Schumpeter (1954) pointed out, even a separate and specialized government financed by taxes is a post-medieval development. The cultures of underdeveloped societies,

⁶This is, strictly speaking, true only if there is some range of decreasing average costs of production, but a somewhat U-shaped unit cost curve is likely for most types of production, or at least for enough to make the generalization in the text true.

⁷"Extended family" does not necessarily entail "multifamily household," as the works of Peter Laslett and others have shown. See Laslett (1972).

including Western societies in preindustrial times, would again presumably also be adapted to these institutions rather than to the specialized and large-scale enterprise of modern developed countries.

We should, for example, expect that the cultures of poor societies would not produce the "organization man," but rather the "extended family man" or the "tribal man." I hypothesize that such cultures would produce far more loyalty to relatives outside the nuclear family, and more "tribal" loyalty, than is evident in developed countries. On the other hand, we also would predict more nepotism and other forms of corruption in those few large-scale organizations that do exist in poor countries than among corresponding organizations in rich countries. These predictions appear to be true.⁸

It should not be surprising that cultural forces should be more significant in large-scale bureaucracies than in individual behavior in markets. Except possibly when the degree of uncertainty is extraordinarily great, the incentives facing the individual in the market are relatively clear-cut and obvious. No extensive indoctrination or particular ethic is needed to convince the peasant that if he can produce a larger output at the same cost, or the same output at lower cost, he will get more money to spend in the local market. The incentives facing a bureaucrat in a large organization may not be so easily discerned. One's superior must be appeased, of course, but often it is not simply effective work in the interest of the organization as a whole that will best achieve this result. The leader of a large bureaucracy cannot know what each individual is doing and therefore cannot reward precisely the behavior he wants to encourage.

Characteristically, in the underdeveloped societies of today as well as in the preindustrial West, leaders of large organizations have been unable to prevent corruption by their underlings. As the great Indian sage, Kautalya, put it more than 2,000 years ago: "Just as the fish moving under water cannot possibly be found out either as drinking or not drinking water, so government servants employed in government work cannot be found out while taking money for themselves" (*Arthashastra* [1967, 2d book, p. 71]). Thus, that subtle complex of ethics, customs, habits, rules of thumb, and expectations of what others will do, which is often called culture, may have greater significance in the large-scale bureaucracy than for individual behavior in the market.

⁸See, for example, Wraith and Simpkins (1974).

The Exceptional Difficulties Facing Large Governments in Poor Societies

In any country, the largest organization is usually the government. Would the foregoing arguments apply to it? Most of them clearly ought to, but there may be reservations in some quarters about whether the diseconomies of very large-scale activities that seem to be present in firms in poor countries would also apply to governments. It would, however, be a serious methodological error to allow the conclusions about government to rest on a mere analogy with firms producing marketable goods. It is therefore necessary to consider governments explicitly.

Governments are differentiated from firms and firmlike institutions in developing countries above all by the fact that they produce the collective or public goods that the private sector characteristically cannot produce in optimal quantities. In most cases, public goods have two properties. First, if the good goes to anyone in some area or group, it goes to everyone in that area or group. Second, consumption is largely nonrivalrous, in that additional consumers can enjoy the good without substantially diminishing the consumption of those who are already consuming the good.⁹ Defense, pollution control, and law and order are classical examples of public goods that have these properties.

One implication of the nonrivalness characteristic of public goods that seems to have been neglected in the literature is that this feature—when combined with the absence of diseconomies of scale—would lead to ever-larger countries, until in the end there would be only a single world empire. Yet the absence of world government now, or even a government that includes as much as half of the world's population, suggests that something must countervail the public goods logic that leads to even more inclusive governments.

This logic can be seen most simply by asking what is the per capita cost of an army or military force of a given size for countries of different sizes. Suppose, for example, that countries A and B have the same measured per capita income, but that country B is twice as populous. In order to abstract from the conceptually distinct question of what size army each country could raise internally, and to show that the argument being made holds even with the least favorable assumption, let us suppose that mercenary soldiers are available in

⁹Strictly speaking, what is required for the present argument is that the marginal cost of provision to an additional person is less than the average cost per person of providing it. Public goods in this case have both the "nonexclusion" property and the "nonexhaustion" property.

third countries without limit and that mercenaries are as good as or better than soldiers from the home country. This means that the smaller country can, if it is willing and able to pay enough, raise an army as large as the larger country. Even in this situation, however, citizens of the larger country will tend to be better off than those of the smaller country; and in the absence of both an (historically somewhat exceptional) unwillingness to be imperialistic and the difficulties for large-scale organizations adumbrated above, the larger nation will normally have an incentive through threats or use of force to absorb and exploit the citizens of the small country. This is because the large nation gets just as much per capita strength out of X divisions as the smaller country does (an increased population in a country would not require a larger army), but will have a lower per capita cost. Thus if the measured per capita incomes and values or preference orderings are the same in the two countries, then the larger country will spend more absolutely on military strength than the small one.

Suppose the small country spends half of its national income, and takes half of each citizen's income, to hire a large army of X divisions. The large country (with identical citizens but twice as many) can hire $1.5X$ divisions and still have decidedly lower taxes than its small neighbor. We must then explain why the two nations do not always merge, in which case each citizen could enjoy the benefits of an army of $2X$ divisions and also lower taxes than before. Or why the large country does not simply take over the small country and exploit the conquered.

Mergers do occasionally happen (for example, the 13 states that formed the United States) partly for this very reason, and aggression or imperialist expansion by large countries against smaller ones has indeed happened often. Nevertheless, there are enormous difficulties (especially in developing areas) in controlling and administering large territories. These difficulties can be so great that large jurisdictions on occasion break into smaller parts. Indeed, every ancient empire without exception has collapsed and been succeeded by smaller sovereignties, such as feudal fiefdoms or tribal chiefs.

I hypothesize that governments are not only naturally affected by the general difficulties facing large-scale organizations in developing countries,¹⁰ but are even more seriously affected than the average large-scale enterprise, for two distinct and cumulative reasons.

First, governments govern territory, and (as was argued earlier) activities that take place over large areas are particularly difficult to

¹⁰The view that effective large-scale government is unlikely in poor countries is not

coordinate, especially without modern transportation and communication. It is likely that the small scale of most agricultural enterprises (except in Soviet-type countries) is largely due, even in the most developed countries, to the difficulties of coordination over large areas. If one worker per square mile is required, a farm with 1,000 employees—not many by the standards of modern industry—would, of course, have to coordinate its activities over 1,000 square miles. It is therefore not surprising that the large corporate structure typical in manufacturing has not also spread to farming, or that the big “bonanza farms” of the late 19th-century Great Plains, and the huge collective farms of the Soviet bloc countries, have been failures.

In underdeveloped societies with poor transportation and communication, the problems of coordinating activities over wide areas are far worse. By governmental standards, moreover, 1,000 square miles is merely a microstate or manorial domain. Thus a government in a developing area that has typical modern dimensions and wants to insure that common policies are followed in all parts of its domain must have tens or hundreds of thousands of functionaries, many of whom are in locations that have only tenuous transportation and communication connections with the national capital. Governments of developing countries thus face problems akin to those of the monarchs who aspired to control the “nations” of medieval Europe. As Marc Bloch (1961, pp. 62–65), the great medievalist, put it, “the only effective authority was one on the spot. Forced constantly to take the gravest steps . . . every local representative of a great potentate tended only too naturally . . . to transform himself into an independent ruler.”

The second reason why governments are particularly disabled by the problem of large-scale organization in poor countries is that their single most important function is providing public goods, and it is far more difficult to assess the performance of bureaucracies (and bureaucrats) who provide collective goods than of organizations of equal size that produce market outputs. The greater difficulty of measuring outputs of public goods, and of estimating the social production functions that would determine how much output ought to be attainable from given value of inputs, derives in turn partly from the fact that experiments or experiences with the production of collective goods are inevitably on a “group scale,” so that experiments are more costly and the experience per unit of time is less informative.

new. It would take some searching to determine when and how the notion first took shape. One important and stimulating statement of this view is in the paragraphs on the “administrative revolution” in Hicks (1969). I put the notion forth in Olson (1965), especially pp. 551–54, and in the mid-1960s paper out of which this presentation grew. Very probably the point was first made long ago.

This difficulty reduces the technical efficiency of public goods production.¹¹ Though the special problems of assessing performance and attaining technical efficiency hold in both developed and developing countries, limited information about performance is a far more troublesome problem when cultural attitudes (which especially affect “unobserved” actions) are unsuited to large organizations and when transportation and communication costs limit a leader’s access even to such information as is available on the spot.

The fact that the per-capita cost of providing a given level of military capacity would fall as the number of people receiving the public good increased would (as indicated above) tend to make governments expand to the point of world government. The hypothesis that, in poor and primitive societies, the cost of providing law and order and administering common policies rises with the size of the area governed, however, tends to set severe limits on the amount of “government” an underdeveloped government can provide. These limits must restrict either the total area governed or the quality of public goods provided for a given area. Thus, in poor and truly underdeveloped areas, the government must usually be either very small (as were medieval governments of individual manors or the governments of various primitive tribes) or else relatively ineffective, corrupt, or even merely nominal, as many governments in underdeveloped regions now appear to be.

Political Instability and Guerrilla Warfare

The prevalence of corruption, nepotism, and manifest ineffectiveness in large-scale organizations and especially in governments, both in developing countries today and in the West before the 19th century,¹² is surely consistent with the argument offered here. Evidence from World Bank reports and other sources also confirms that the comprehensive economic planning that developing countries often want usually results at best in a publication, rather than in a series of actions that are in fact implemented. So, too, is the evidence that public services are extremely poor in most developing countries: mail often fails to reach its destination, government schools and universities often do not conduct honest examinations, telephones and electric power systems do not work well, and so on.

¹¹See Olson (1973, pp. 355–409). This paper is not as formal as it might be, and a rigorous proof of this contention will be available in a book-length manuscript I am now completing.

¹²See Pollard (1965) on the breathtaking corruption in Britain before the mid-19th century, and Karl Von Vorys (1965) for an example of the limited power of leaders of poor countries. See also Wraith and Simpkins (1974).

Political instability and the failure of governments to prevent guerrilla warfare also provide evidence for my argument. If governments of poor countries are not effectively administered and the rural areas are governed only nominally, then those who plan a coup are less likely to be caught, and guerrillas have a good chance of operating in the rural areas. The instability of governments in underdeveloped areas is well known, but the striking facts of guerrilla warfare have been overlooked.

Though terrorism of a newsworthy kind has been common, there has not yet been a successful, or even a significant and sustained, guerrilla movement—one that could control and tax significant areas, even temporarily—in a highly developed country, even when the regime imposed upon a people was profoundly repugnant to the subject population. In the relatively developed and urbanized areas conquered by the Nazis in World War II, the subject peoples usually hated the Nazi occupation, which combined political insensitivity with brutality. But despite the depth of this hatred, despite the fact that most of the German Army was fully occupied at the front lines, despite the fact that for much of the war Germany appeared to be a likely loser, despite the outside support available from the Allies, and despite the gallantry of the resistance movements, the Nazis confronted no large-scale guerrilla movements in their occupied territories until the very eve of their departure. Only in backward, rural, and mountainous Yugoslavia were guerrillas able to capture and hold any large areas.

Similarly, the Soviet Union has not been highly regarded by many of the peoples upon whom it has imposed Soviet-style governments. Notwithstanding the resentment revealed by the riots or intervals of free expression in East Germany, Poland, Hungary, and Czechoslovakia, the rebels have not captured any areas from Soviet or satellite troops, or even maintained any sustained guerrilla warfare. The Hungarian insurrection suggested an especially intense resentment of Soviet hegemony, but it was quickly and easily put down by a few divisions of the Red Army. The success of the Nazi and Soviet regimes in controlling conquered nations, despite the hatred and nationalism of the captive peoples, suggests that in highly developed areas it is not possible to overthrow an established and resolute government.

But in other parts of the world, governments are overthrown by internal violence every year. Many of those that have survived cannot suppress the guerrilla warfare within their borders. Guerrilla activity has been sustained for long periods since World War II, not only in colonies or recently created countries such as Algeria, Angola, Burma, Cambodia, Iraq, Kenya, Laos, Malaya, Pakistan, the Philippines, the

Sudan, Vietnam, and Yemen, but also in relatively established countries such as Afghanistan, China, Colombia, Cuba, Ethiopia, Greece, and Venezuela. Some of these guerrilla wars have persisted against governments that were indigenous and somewhat responsive to their peoples. In Burma, for example, guerrilla warfare has continued for more than 30 years, and for a time nine independent rebel organizations were reportedly engaging in guerrilla warfare in that country. Successful guerrilla warfare has been conducted by anticommunist and conservative forces as well as by Communist or nationalist movements, as when the Yemeni royalists triumphed over the Egyptian and Republican troops supported by Nasser, and presently in Angola and Afghanistan.

Why is it that in some cases the most despised of regimes can silence all opposition, whereas in other cases even relatively responsive governments cannot avoid guerrilla warfare for years on end? If the Soviet Union could subdue Hungary in a matter of days, why could the United States not pacify South Vietnam even over a longer period? It would be morally gratifying to suppose that the explanation is simply that some governments are ruthless and others are gentle. But this could hardly be the whole story. Batista and Diem were anything but gentle, but they could not prevent guerrilla warfare; the French tortured prisoners in Algeria, yet they lost; the American effort in Vietnam took a toll even among women and children, yet the Vietcong and Hanoi ultimately triumphed.

A better explanation of these anomalies is that guerrilla warfare is not feasible in economically advanced nations with established and purposeful governments. Such warfare is, however, often politically profitable in rural areas of economically backward societies. Successful guerrilla movements usually start in the most rural areas and attack the more modern areas only if they have raised a stronger army than the incumbents, or have cut the cities off from reinforcements or supplies. As the Algerian and Vietnamese experiences suggest, the incumbent power, however badly it fares in the rural areas, can hold the large cities indefinitely if it can supply them and is willing and able to maintain a larger army than the rebels can muster.

Some Policy Implications

If the argument in this essay is correct, it follows that the current policies of most international organizations of most countries giving foreign aid are questionable. Most countries giving aid and most international lenders encourage patterns of development that are relatively intensive in large-scale organization, both in the public

and the private sectors. If large-scale organizational capacity is relatively scarce in developing areas, and it is not feasible or desirable to import this particular input, then this scarcity should affect both the composition of output and the factor proportions used in producing particular products. There is also a greater need for investment in large-scale organizational capacity than is generally recognized. If a crucial factor needed for development is especially scarce, alleviation of this scarcity will be especially valuable. There is a need for better training and exchange programs for managers in both the private and public sectors, more training in accounting and other techniques of administrative oversight for the development of decentralized and self-policing incentive systems, and for better communication and transportation systems.

Most notably, the argument offered here, if it is right, should affect the policies of the developing countries themselves, and in a way that reminds us of Lord Bauer's writings. I have already noted that many people have assumed that the economic theory that emerged in advanced capitalistic countries of the West, showing that markets do allocate resources efficiently, is not applicable to the very different cultures and conditions of developing countries. These countries are allegedly better served by economic planning and protection against imports of industrial goods and against exploitation by multinational companies. Lord Bauer, by contrast, has long emphasized that the underdeveloped countries as well as the developed ones should rely on market mechanisms, both domestically and in international trade.

The general principles that I believe should inspire decisions about the appropriate role for the market and for government in any society are those provided by modern economic theory, which includes the theory of collective choice. Modern economic theory illuminates the circumstances in which markets are the most efficient form of economic organization and also the circumstances in which markets will fail to generate rational results. Some ideologically inspired popularizations of economic theory leave the impression that market failure is relatively rare, if it occurs at all. This impression does not survive a careful scrutiny of either the theoretical or the empirical results: market failure is commonplace, and perfect markets are the exception rather than the rule.

Yet market failure does not necessarily imply that government action would be better: we know from the study of collective choice that governments are also imperfect, and that governments, whatever the institutions and voting rules, will produce optimal allocations only in special circumstances. Those who suppose that, because a market is imperfect, it should be supplanted by government action

are (as George Stigler has pointed out) like the Roman emperor judging a musical contest with two contestants and who, having heard only the first, gave the prize to the second. In practice, societies must choose between imperfect markets and imperfect governments. Which instrumentality is the better in a particular situation depends on the circumstances: it depends on how badly the market fails and on whether the government at issue will fail to a lesser extent.

This essay has argued that individuals from different cultural backgrounds are broadly similar in response to unambiguous market incentives: behavior in the bazaars and market squares of the developing world is not vastly different from behavior in the markets of the economically advanced nations. Tangible capital and certain kinds of education are rarer in developing countries, which implies that if institutions and government policies are appropriate, these factors of production will fetch a higher price in developing than in developed areas. This relative price will influence not only the pattern of comparative advantage and trade, but also generate a flow of these factors of production as needed to underdeveloped areas. Thus neither shortages of tangible nor human capital need prevent rapid economic development.

Importing large-scale organization in the form of "government" is, by contrast, impossible without imperialism. The poor countries of the world today, like European countries in preindustrial times, are especially lacking in capable large-scale organizations, and especially those bureaucracies that supply public goods effectively over large amounts of territory. The inferior transportation and communication systems and other obvious features of preindustrial countries make effective large-scale organization especially difficult in these societies. These difficulties have made relatively small-scale and unspecialized institutions the norm in these societies. This in turn means that the cultural habits of peoples in preindustrial areas are better suited to small and intimate organizations than to large bureaucracies.

In large bureaucracies, and especially in large bureaucracies providing public goods, the incentives facing individuals are not obvious and clear-cut; behavior depends on what James Coleman has called "the ecology of expectations." Cultural loyalty to institutions such as the extended family and the tribe and the absence of such traditions as that of the "organization man" make governmental bureaucracies work especially badly in most developing countries, and often make them nepotistic kleptocracies as well. These problems often keep governments of developing countries from exercising effective control in rural areas and can even keep them from preventing guerrilla

warfare in these areas. If these problems were not overwhelming, history would (because of the economies of scale inherent in nonrival public goods) have been largely a succession of universal empires.

Government planning, nationalized industries, and public regulation will, accordingly, usually work less well in developing than in developed countries. Whatever the optimal role of government may be in developed nations, it is smaller in developing countries.

Law and order are needed for economic progress under any system of economic organization. It is evident that at least in rural areas some governments of underdeveloped countries find it difficult to provide even this elemental public service. If a country's full economic potential is to be realized, it must enforce contracts and adjudicate disputes about property rights in impartial and predictable ways. Even in some parts of Europe, such as southern Italy, government has not been able to perform these functions adequately. In some developing countries, even property rights in land are often ambiguous, and squatters, who do not have secure, marketable, and mortgageable rights needed for efficient development, are commonplace. In such circumstances, governments should devote such capacity as they can muster to providing law and order. If they have any effectiveness left over, it should be devoted to the most glaring externalities. Overambitious economic planning and detailed regulation are not likely to be coherently carried out. The wide-ranging governmental intervention that is compatible with high standards of living in some countries of Western Europe should not be expected to work (and has never worked) in any preindustrial society.

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DISECONOMIES OF SCALE

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