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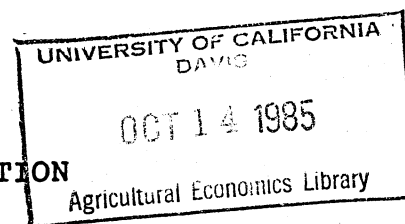
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SPACE, AGRICULTURE, AND ORGANIZATION

Mancur Olson*



Economists discuss differences in capital-intensivity or labor-intensivity very often, but they consider differences in space-intensivity only relatively rarely. Yet differences in the spatial intensivity of economic activities are fully as important. Indeed, I will argue here that the main features that distinguish farming from manufacturing and most other urban economic activity are due to differences in space-intensivity. (For some parts of my argument, it might seem more familiar to use the phrase "land-intensivity" rather than "space-intensivity." But other parts of the argument hinge on transportation, communication, and surveillance costs that depend on the distance between points, whether or not the land between these points is farmed. Thus the phrase "land-intensivity" would not be generally appropriate in this paper.)

The difference in space-intensivity between most types of farming and most types of urban industry is obviously colossal. In the United States, farming accounts for decidedly less than five percent of the national income, but farming, at least if we define it broadly enough to include ranching and forestry, uses decidedly more than ninety five percent of the area that is used by the entire economy. Though there are a few types of farming, such as huge feeding lot operations, that are not space-intensive, and also some types of urban industry that are fairly space intensive, these are clearly the exceptions. It would be commonplace today to find farms of, say, more than 500

acres, that would utilize only one or two or three workers, and produce a total output valued of a few hundred thousands of dollars. It would also be easy to find factories that occupied less than five acres, yet employed several thousands of workers and produced a total output valued in the tens or hundreds of millions of dollars. Thus farming activities can easily be many thousands of times as space-intensive as many types of urban industry. The generalization that most farming is vastly more space-intensive than most urban industry appears to hold for all countries and historical periods in which meaningful urban-rural comparisons can be made.

We cannot explain some of the most important economic realities without taking account of these differences in space-intensivity. And when we do take these differences into account, a number of important puzzles can be solved. One of these puzzles has been attracting attention for quite some time. For example, in 1945 T. W. Schultz observed, in Agriculture in an Unstable Economy, that agriculture and industry tended to react quite differently to general economic fluctuations. Schultz noted that "the prices of farm products reflect quickly a bullish or bearish turn," but the prices of nonfarm products generally do not. Conversely, the quantity of agricultural output in the aggregate "responds slowly, or not at all, to the changes in economic expectations associated with business fluctuations," whereas the "output of industry is highly responsive to changes in economic expectations, with production rising sharply when the outlook turns bright and falling abruptly when it becomes gloomy". (p. 131) This observation was

not, so far as I know, very controversial, for many other economists had observed exactly the same thing, and the pattern in the data is quite clear. The data Schultz presented showed that industrial production in the United States fell by nearly half between 1929 and 1932, whereas agricultural production fell by little more than three percent; over the same period the prices received by farmers fell by more than one half, whereas the prices farmers paid fell by only about a fifth (Tables XV and XVI). The statistics probably understate the reduction in industrial prices to some extent because of secret discounting and possible changes in quality, but this could hardly alter the basic picture. Since Schultz wrote in 1945 there has been no downturn nearly so severe as the great depression of the early 1930's and also nothing comparable to World Wars I and II. Because of this and the increasing role over time of agricultural price supports, the more recent statistics are not so dramatic, but it is still commonplace to observe industrial prices and wages that are unchanged for many months, or even set at predetermined levels for periods of as much as three years, and to observe agricultural prices on auction markets that sometimes change dramatically in a matter of days.

The first question that this address will attempt to answer is why there is this greatly different pattern of price and output variability over the business cycle in agriculture and industry. I will attempt to show that this question cannot be answered without taking differences in the spatial intensity of production into account. The vast differences in spatial intensity between agriculture and industry will also largely

answer the second question in this address, about why there is apparently a systematic treatment of agriculture in the developing and developed countries. I have already explored this difference in the treatment of agriculture in a paper for the 1985 meetings of the International Association of Agricultural Economists. That paper is entitled, "The Exploitation and Subsidization of Agriculture in the Developing Countries," and my statement here of the second question with which this paper deals is merely a reiteration of part of that paper.

II

In most of the less developed countries there are a vast variety of public policies and institutional arrangements that make many agricultural prices lower than they would otherwise be, and in particular often lower than the prices on the world market. In many of the poorest countries agricultural marketing boards are given a monopoly over the right to trade in the main agricultural export commodities and the growers of these commodities receive only a fraction of the price their products fetch on the world market. In some developing countries multiple exchange rates have been used to give growers of agricultural commodities a less favorable exchange rate than is accorded to exporters or importers of other products. In most developing countries the production of manufactured goods and certain other import substitutes produced in cities is heavily subsidized through tariffs and quotas. This not only raises the prices that farmers must pay for these products, but also tends to reduce the prices

that they receive for their exports; restrictions on imports reduce the amount of a country's currency that is supplied to purchase foreign goods, with the result that the value of the country's currency tends to be higher than it would otherwise be and the prices in domestic currency that agricultural exporters receive are correspondingly lower. Many governments in developing countries also provide disproportionate amounts of social overhead capital in major cities and subsidize some types of consumption only in these cities.

The disadvantage of agriculture and rural areas in most developing countries is reflected not only in product prices and in explicit governmental policies, but also in many urban and rural labor markets and in the often extra-governmental and less conspicuous institutions that influence wages in these markets. Though I do not know of any comparable world-wide data on urban-rural or intersectoral wage differences, there appears to be virtually a consensus among observers that in most developing countries the real wage rates in the "modern" sectors of the biggest cities are often vastly higher than they are for comparable labor in the agricultural and traditional sectors. There is important evidence that these real wage differentials exist, and that they are due to combinations and regulations that create above-equilibrium wage rates for employed workers in many sectors of the urban economy, in the exceptionally high unemployment rates in many of the cities in the developing world. So conspicuous are the real wages differentials and the associated unemployment rates that one of the better-known models in development economics -- the "Harris-Todaro model" -- is

devoted to explaining how the flow of labor from rural areas to major metropolitan centers could continue in spite of the low probability of employment in the modern urban sector. W. Arthur Lewis's very famous model of "unlimited supplies of labor" to the modern and mainly urban sectors of the developing economies also explicitly assumes a significantly higher return to comparable labor in the modern sector than is available in the traditional and mainly agricultural sector.

Though references to well-known theories cannot substitute for the systematic and comprehensive international measurements that are needed, it is doubtful that the models I have mentioned would have been so widely used and accepted if the observations of a significant urban-rural real wage differentials were not shared by many students of the developing countries. Substantial real wage differentials for comparable labor and high unemployment rates in the very locations with the highest wages cannot be sustained in an entirely unconstrained and unorganized market. The unemployed and low-wage labors will, of course, have an incentive to offer to fill the jobs of the high-wage workers for somewhat less and the employers will have an incentive to accept such offers. It follows that in some sectors of many of the major cities of the underdeveloped world there must be institutions, such as collusions or cartels of relatively fortunate workers, that generate supra-competitive wage levels partly at the expense of potential entrants from the agricultural sector.

III

In the developed countries, by contrast, agricultural interests are normally among the major beneficiaries of tariffs, quotas, price supports, and other subsidies. In those developed economies that lack comparative advantage in agriculture, such as Japan and most of the highly industrialized nations of Western Europe, the subsidization of agriculture is quite striking, and probably far higher than the levels of subsidies to the many of the principal manufacturing industries in those countries. As T. W. Schultz graphically puts it, many of these countries have carried agricultural protection nearly to the point of "greenhouse agriculture." Masayoshi Honma and Yujiro Hayami¹ have shown convincingly that the level of nominal protection for the major agricultural commodities among the developed nations is greatest in those countries that are the least likely to have a comparative advantage in agriculture. The subsidies to agriculture are usually much less in the developed nations with a comparative advantage in agriculture, such as Australia, Canada, New Zealand, and the United States, and the agricultural interests in these countries (especially in Australia and New Zealand) lose substantially from various forms of protection or subsidy to urban interests in those countries. Nonetheless, agricultural interests in these countries also conspicuously share in the society's subsidies and price-distortions. In the United States, for example, the total government subsidies to agriculture are in many years very large even in relation to total farm income. There are in addition subsidies that do not show up in the government budget. The

producers of some farm products, such as fluid milk, are systematically given supra-competitive prices at the expense of consumers.

Unfortunately, I do not know of any data source or quantitative study that documents this seemingly systematic difference in the treatment of agriculture in developing and developed countries. But there appears again to be nearly a consensus among the experts. As T. W. Schultz puts it, "the political market in a considerable number of high income countries overprices agricultural products at the expense of consumers and taxpayers. In many low-income countries the political market underprices agricultural products."² Kym Anderson and Yujiro Hayami³ similarly conclude that "domestic food prices in Western Europe and Japan are often twice international levels. In many developing countries, on the other hand, agricultural prices are well below those in international markets and manufacturing is the sector protected from international competition."

IV

Interestingly, before the presently developed nations succeeded in industrializing, they tended to have much the same tendency to exploit agriculture and to subsidize urban activity that is characteristic of the developing nations today. The institutions and government policies in Britain and the rest of Europe before the industrial revolution definitely and strongly overpriced many industrial goods and and commercial

services and underpriced many agricultural products. This is evident not only from modern work in economic history, but also from the testimony of one of the most observant economists of all time: Adam Smith.

The government of towns corporate was altogether in the hands of traders and artificers; and it was in the manifest interest of every particular class of them, to prevent the market from being overstocked, as they commonly express it, with their own particular species of industry, which is in reality to keep it always understocked....In their dealings with the country they were all great gainers....Whatever regulations...tend to increase those wages and profits beyond what they would otherwise be, tend to enable the town to purchase, with a smaller quantity of its labour, the produce of a greater quantity of the labour of the country. They give the traders and artificers of the town an advantage over the landlords, farmers, and labourers in the country, and break down the natural equality which would otherwise take place in the commerce which is carried on between them....The industry that is carried on in towns is...more advantageous than that which is carried on in the country...In every country of Europe we find, at least, a hundred people who have acquired great fortunes ...for every one who has done so by...raising of rude produce by the improvement and cultivation of land.⁴

The whole emphasis of the mercantilistic policies of the national

governments, as well as the guild rules of the towns, was to encourage profit from commerce and manufactures at the expense of agriculture and unskilled workers.⁵

V

There is strength in numbers. In democratic countries, the more numerous interests obviously have more votes than the less numerous. Even in nondemocratic countries, the potential physical and social force of more numerous groups should, when other things are equal, give them more power than less numerous groups.

Why, then, is agriculture exploited in countries where farmers or peasants constitute the great bulk of the population? And subsidized in countries where farmers constitute only a tiny minority, and often less than five percent, of the population? This is a question that has also puzzled T. W. Schultz.⁶ Kym Anderson, and also Honma and Hayami⁷ have underlined the paradox by showing that Korea and Taiwan had negative nominal rates of protection for agriculture before their rapid industrialization began in the 1960's, but that they have by now imposed very high levels of agricultural protection. I would add that this change of policy has, of course, occurred during a period when the proportions of their populations in agriculture have declined. Indeed, Honma and Hayami show elsewhere⁸ with a regression analysis that in a substantial sample of the major industrialized countries nominal protection for agriculture increases as the percentage of farmers in the population

declines.

The paradox that has just been described should for some purposes have been posed in a less aggregative way. The extent of price distortions varies from one urban industry to another and there are also great differences in the extent of price distortions from one agricultural commodity to another. Casual observation suggests that in urban industries and occupations as diverse as the steel industry, the taxi industry, and the learned professions of law and medicine there are unusually large distortions. In the manufacture of scientific instruments and plastics, and in the restaurant industry, I would guess, the incentives are usually less perverse. I would also guess that there is more price distortion in most countries (or at least most developed countries) in dairying than in beef production, and more in rice production than in soybeans.

Sadly, these vitally important questions about interindustry, interoccupational, intercommodity, and intergroup differences in the extent of perverse incentives are usually not even asked, so that the data needed to deal with them have not been collected. Eventually I should like to examine these questions of intermarket and intergroup differences in the perversity of incentives in a more detailed and disaggregated way than one can do when one merely contrasts the agricultural and nonagricultural sectors.

Nonetheless, I think there is some interest and utility in a broad comparison of agricultural and nonagricultural activities of the kind I am attempting here. This comparison has some interest to me, partly because of my farm background, and it

should be of professional interest to agricultural economists. The aggregative differences between farming and urban economic activity, moreover, have the most important relationship with space-intensity, and are thus especially pertinent here.

VI

Now I shall attempt to explain the different cyclical behavior of agricultural as compared with industrial prices and quantities that T. W. Schultz and other economists have called to our attention, and also the contrasting treatment of agriculture in the developing and developed countries. Both of these questions can be answered when we take into account the way that spatial intensity interacts with three other matters:

- 1) The difficulties of coordination and supervision within firms;
- 2) The difficulties of coalition formation among firms; and
- 3) The exceptional importance of space and distance when transportation and communication costs are especially high.

The difficulties of coordination and supervision within the enterprise are, as even the elementary textbooks remind us, the source of diseconomies of scale. It is also true that there are limits, for any given level of technological development, to the size of machinery that it is practical to use. If many kinds of farm machinery are made sufficiently large, they become difficult to turn around, or they compact the soil with their weight, or their tires are too wide to be used to cultivate row crops. But these limits to the size of machinery cannot give

rise to diseconomies of scale for the obvious reason that a gigantic firm can choose to employ multiple units of whatever size machines are optimal. As its size increases, the large firm cannot, however, add additional units of "coordination"; it can have only one source of unification or chief executive, and as the size of the firm increases the attention of the single chief executive must be combined with ever larger amounts of other factors of production.

Though the coordinating capacity of the chief executive can be increased by adding managerial staff, this has indirect as well as direct costs. Each subordinate manager has an incentive to conceal the failings and to exaggerate the achievements of the part of the organization for which he is accountable. Oliver Williamson has aptly likened the information flow in a bureaucracy to the game played at children's parties, where the first child whispers a message to the second child, and each child in turn is supposed to repeat the message in a whisper to the next child, with the fun of the game arising from the usually vast difference between the message delivered by the first child and the message received by the last. In addition, both managerial staff and operating employees have an incentive to take such leisure and other on-the-job consumption as will escape detection, and the bigger the enterprise the greater difficulties the chief executive will have in preventing losses from on-the-job consumption.

The considerable costs of coordination and monitoring in large firms are vastly increased if a firm operates over a huge amount of space. A farm that had a value added as great as the

larger manufacturing corporations could not even be contained within a single state. The weather may vary from township to township, and soil conditions may vary from field to field or even with the slope of the land within a given field. Thus a farm as large as the greatest corporations would have to make countless thousands of managerial decisions each working day, and each of these should be based on a knowledge of conditions on the spot. The far-flung bureaucracy that makes these decisions will, as it were, be like the children's whispering game with the chairs spread far apart. The decisions may, of course, be left to the workers, but what incentive will these workers have to make the right decisions, or even to work industriously? In a big hierarchical firm, they will have only such incentives as the firm's system of monitoring and supervision can contrive. In many kinds of crop production today, there could easily be no more than one worker per square mile, so a supervisor with ten subordinates would need to monitor an area of ten square miles, the supervisor's supervisor an area of a hundred square miles, and so on. The costs and inadequacies of this supervision can in many cases leave the really gigantic firm incapable of meeting the competition of farms with little more than a family-sized work force.

My contention that the difficulties of coordination and supervision over huge amounts of space make it uneconomic to have firms in farming that are as large as some of those in manufacturing, does not rest simply on theoretical conjectures: it gets compelling empirical support from the "survivor method"

that is sometimes used in the field of industrial organization to determine the range of optimal sizes of firms or establishments in an industry. In industries in which there is free entry -- and there is normally free entry into agriculture -- the only firms that can survive in the long run will be within the size range that is consistent with production at the lowest possible costs. The surviving firms in most (but not all) lines of farming are relatively small by the standards of modern manufacturing and even by the standards of many other kinds of urban firms. Critics may argue that really large firms have not been tried in farming, but these critics then have to explain why all of the thousands of large firms in the economy have failed to earn the vast profits they could attain by replacing allegedly uneconomic small farms with giant corporations of allegedly greater efficiency. In fact, it is not even true that large firms have not been tried in farming. Even in the nineteenth century, for example, the huge grants of land given to the American railroads were used by some of the wealthiest families in the country as a basis for large-scale "bonanza farms." These farms did not produce bonanzas, but were instead abandoned in the face of competition from largely immigrant homesteaders. There are many other examples. (Though its evidentiary value is gravely limited because of other differences, it is nonetheless worth noting the persistent reliance on very large scale farms in most of the Soviet-type countries and the fact that these countries have performed even less well in agriculture than in most other types of enterprise.) Thus the survivor method confirms that in most types of farming the optimal scale of

enterprise is far smaller than in manufacturing and in most other types of urban industry. Agriculture is not immensely different from most urban industry in capital-intensity, in labor-intensity, or in any other respects that would apparently have great implications for the optimal scale of enterprise. It does differ dramatically from urban industry in space-intensity, and this has obvious implications for the costs of coordination and monitoring. I conclude that differences in space-intensity are the main source of the great differences in the optimal scale of enterprise between most types of agricultural production and most types of urban production.

The relatively small optimal size for most types of farms implies that there will be a vast number of firms producing the typical agricultural commodity. The fact that there are enough firms for a purely competitive market structure in most lines of agriculture is due fundamentally to the spatial intensity of agriculture. When we relate this fact to an analysis of the varying difficulties of coalition formation among firms, we shall have the answer to the first of the two questions this paper poses. When we later consider the significance of exceptionally high costs of transportation and communication as well, we shall have the answer to the second question as well.

VII

The difficulties of coalition formation among firms are due to the difficulties of collective action, especially for large groups. Suppose any group of firms, workers, or farmers should

strive to act collectively to lobby for a tariff, price support, tax loophole, or any other legislation that favors them, or act collectively in the marketplace to restrict supply and thus obtain a supra-competitive price or wage. The benefits of the favorable legislation or the monopoly price or wage would automatically go to everyone in the relevant industry, occupation, or category, whether or not they had borne any of the costs of the lobbying or the output restriction. It follows that in sufficiently large groups, the benefits of collective action offer no inducement to individuals to engage in collective action -- they would get the benefits of any such action whether or not they participated in it, and any typical individual's contribution will have no significant impact. Thus some large groups with common interests, such as the consumers, the taxpayers, the unemployed, and the poor are not organized in any society.

By contrast, the large firms in a concentrated manufacturing industry, where the numbers are small enough so that each firm will get a significant share of the benefit of collective action in the interest of the industry, will usually be able to make a bargain to engage in collective action without exceptional difficulty. In rare cases, the landholdings in a country will be so concentrated that the landowners are also a small group that can organize fairly readily. Large groups will be able to organize for collective action only when they can work out special "selective incentives" that punish or reward individuals in the group that would benefit from collective action according as they do or do not support the collective action. The most conspicuous example of a selective

incentive is the compulsory membership and coercive picket lines of labor unions, but all large groups that are able to organize for sustained collective action have analogous, if often very subtle, selective incentives that mainly account for their membership.

There are often particularly interesting examples of this in the agricultural sectors of the developed economies. In the United States, for example, most of the membership of the major farm organizations arises because membership dues are "checked off" from the patronage dividends of farm cooperatives or added on the premiums of mutual insurance companies associated with the farm organizations. Various tax advantages given to cooperatives and various complementarities between farm organizations and certain types of business organizations can make such arrangements viable even in highly competitive environments. Sometimes farm cooperatives themselves will, in effect, function as lobbying organizations as well as firms.

The logic of collective action, which accounts for the impossibility of collective action in some cases and its varying difficulty in others, is one of the three legs of the stool upon which the argument in this paper rests. Thus the argument in this paper can be completely comprehensible and fully persuasive only to those who have a thorough understanding of it. Unfortunately, a rigorous explanation of this matter would take more space than is available here, so I must hope the reader will find the partial, loose, and intuitive evocation of that logic that I have just offered here suggestive enough to induce him or

her to read my book on The Logic of Collective Action, published in the Harvard Economic Series by the Harvard University Press in 1965.

Because collective action by large groups is inherently difficult to organize, it will emerge only slowly and in favorable conditions. It turns out, for reasons that are explained elsewhere, that most organizations for collective action have incentives to strive to obtain more of society's output for their own clients through distributional struggle, rather than to produce useful outputs themselves, and to persevere in distributional struggle even when the costs to society are very large in relation to the amounts that are won in distributional struggle. In this they are fundamentally different from firms, individuals, and democratic governments in environments free of lobbying organizations. This helps to explain why long-stable societies that have had time to accumulate many of these organizations, such as Great Britain, have in recent times been growing less rapidly than expected. It also helps to explain the economic miracles in Germany, Japan, and Italy after World War II, for totalitarian governments and occupying armies had eliminated or transformed most organizations for collective action. These are again pertinent matters that there is not space enough to go into here, so I must refer readers to my book on The Rise and Decline of Nations published by the Yale University Press in 1982.

VIII

Let us now combine the argument earlier in this paper about

how the exceptional spatial intensity of agriculture is the source of the unusual diseconomies of scale in farming, with the varying difficulties of coalition formation among firms that arise from the logic of collective action. The diseconomies of scale arising from the spatial intensity of agriculture ensure that there are a very large number of firms producing each major agricultural commodity. This normally excludes oligopolistic and monopolistically competitive market structures in agriculture. The optimal size of firm is normally so small in farming that tens or hundreds of thousands of firms produce each major farm commodity.

By itself, this consideration would not rule out monopoly pricing in agriculture, for there is apparently still the logical possibility that the many firms that produce each major farm commodity could form a cartel or collusion that would restrict output and fix prices the way a single firm monopoly could. But this abstract possibility is ruled out by the logic of collective action. We know from this logic that it is incomparably more difficult for large groups than small groups to engage in collective action; large groups can organize for collective action only if they can somehow succeed in the difficult and sometimes impossible task of finding "selective incentives." Even if the selective incentives needed to organize a large group of farmers have been found, a farmers' organization will only be able to lobby the government. Unlike many urban organizations or collusions, it will not be able to fix prices directly through its own power of combination.

This is evident the moment we consider the implications of the spatial intensity of agriculture for the possibility of surveillance of all of the members of a farmers' coalition and for the possibility of effective picketing. When a group of organized workers in a factory or a mine decides to strike, they need only to observe the entrances to the factory or the mine to know whether any of their members are failing to abide by the union's decision to strike. They can also keep anyone inside or outside the union from breaking the strike if they can establish an effective picket line at these entrances. But to determine whether any a farmer was selling his output below any price established by an organization of farmers it would be necessary to have surveillance of all the space that is used to produce the farm commodity, and this is obviously far beyond the resources of any coalition of producers. If such a coalition were to prevent an individual farmer from undercutting a farmer's cartel, it would also need a picket line that essentially covered the whole countryside, and this is obviously unattainable. This is evident not only from the arguments that I have presented here, but also from experience. In this country, the National Farmer's Organizaton and other groups have at times tried to raise farm prices through combination in the marketplace and picketing, and these attempts have been uniformly unsuccessful.

The spatial intensity of agriculture, then, does a good deal more than explain the diseconomies of scale in farming. When we combine this source of the large number of farms producing each major commodity with the special difficulties of collective action for large groups, and then add on top of this the special

difficulties of surveillance and picketing over the vast amounts of space at issue, we have an explanation of the different price and quantity behavior of agriculture and urban industry over the business cycle. As we recall from what T. W. Schultz and others have told us, farm prices have been relatively unstable over the business cycle compared to those of manufactures, and farmers have not had anything like the same tendency to reduce employment and output in depressions that manufacturing and urban industry has had. The reasons that many kinds of urban industry will restrict output and maintain prices during a recession or depression, even when the government does not help them do this, are explained in chapters 3 and 7 of The Rise and Decline of Nations. The reasons why it is manifestly impossible for farmers to behave in a similar way have just been explained. We have now an answer to the first of our two questions.

IX

We have to add the third the three legs that are needed if the theoretical stool that is being constructed here is to stand upright and enable us to reach the answer to the second question. We must add to the argument an account of the significance of exceptionally high costs of transportation and communication. Clearly, organizing for collective action requires that people communicate with and sometimes meet with one another. Thus collective action by large groups will be less likely the higher the costs of transportation and communication. These costs depend on such things as distance and the technology

of transportation and communication. They also depend on the degree of literacy and the quality of education, since literacy and education greatly facilitate communication. Since organizing large groups for collective action takes a lot of time even in favorable circumstances, the likelihood large groups will be organized also depends on the frequency with which organizations are destroyed by the upheavals and repression that are common in unstable societies.

Because farmers and peasants are obviously spread out over more space than people in urban industries, their capacity to organize will be particularly dependent on the costs of communication and transportation. In rural areas of low-income societies without dense, modern networks of transportation and communication, such as Europe before the industrial revolution or many developing countries now, sustained large-scale collective action is normally impossible.⁹ This is especially true if the society is politically unstable, as most developing societies are. The small numbers of firms in manufacturing or major urban activities will, on the other hand, often be able to organize even in the pre-modern economy, because of the advantages of small numbers and proximity to each other in cities. Thus my argument predicts that some urban industries and occupations in the pre-modern economy will be organized to lobby and collude, and that the goods and services they sell will be overpriced, and that the main agricultural industries will by contrast not be organized and their outputs by comparison will be underpriced.

X

As transportation, communication, and the levels of education improve and the political system becomes stable, the great difficulties of collective action will be overcome even in the rural areas. Thus farmers will be among the groups that are organized for collective action. Farmers in such societies will be among the beneficiaries of tariffs and government subsidies.

We now have the main part of the answer to our second question of why there is the exploitation of agriculture in the developing countries at the same time that agriculture is among the industries that are subsidized in the developed countries. We need only add the obvious fact that some highly developed societies, like Japan and most of the countries of Western Europe, have relatively little good land in relation to the sizes of their populations. Thus they do not tend to have comparative advantage in agriculture. It is therefore possible to support agriculture in a major way in such societies with tariffs and quotas. The social costs of the overpriced agricultural products that result from this protection are far less conspicuous than the social costs of open subsidies from the public treasury or compulsory measures to keep productive land idle. Thus developed countries with a pattern of comparative advantage that leads them to export manufactured products and to import farm products will on average greatly overprice agricultural products in comparison with manufactures.

FOOTNOTES

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1. Masayoshi Honma and Yujiro Hayami, "Determinants of Agricultural Production Levels: An Econometric Approach," in Kym Anderson and Yujiro Hayami, eds., The Political Economy of Agricultural Protection (forthcoming, Sydney, Australia: George Allen & Unwin).

2. Portfolio, U.S. Information Agency.

3. Kym Anderson and Yujiro Hayami, op. cit.

4. The Wealth of Nations, Book I, Ch. X, pt. II.

5. Some readers may wonder whether the famous English "Corn Laws" that were repealed in the 1840's call my generalization into question. This matter is analyzed in note 9.

6. Portfolio, op. cit.

7. See Kym Anderson, "Growth of Agricultural Protection in East Asia," Food Policy (November 1983), pp. 327-336, and Honma and Hayami, "Determinants of Agricultural Protection in East Asia in International Perspective," op. cit.

8. Honma and Hayami, "Determinants of Agricultural Protection Levels" op. cit.

For interesting general discussions and ideas on the general issue of what agricultural industries get subsidized or exploited in different types of countries, see Kym Anderson, "On Why Rates of Effective Assistance Differ Between Australia's Rural Industries," Australian Journal of Agricultural Economics, vol. 22, no. 2, pp. 99-114, and "The Political Market for Government Assistance to Industries," Economic Record, vol. 56 (1980), and also R.H. Bates and W. P. Rogerson, "Agriculture in Development: A Coalitional Analysis," Public Choice, vol. 35, no. 5 (1980), pp. 513-28.

9. When the landowning in a country is so concentrated that a relatively small number of families owns a substantial proportion of the land, my argument about the lesser difficulties of organization in small groups implies that there can be considerable collective action on behalf of agriculture even in pre-industrial countries. Thus "landed oligarchies" in pre-industrial countries sometimes succeed in getting policies favorable to agriculture. There is, for example, some evidence of small group action on behalf of agriculture in Prussia and in some Latin American countries in the nineteenth century. To some extent, the landowning aristocracy in Great Britain has in previous centuries also offset the tendency toward mercantilistic policies, and it was a relatively small group with a disproportionate share of the political power. Adam Smith was nonetheless right on balance in giving the name "mercantilism" to

the policies of Britain and most other European governments. It is sometimes supposed that the English "Corn Laws," made so famous by the controversy over their repeal, indicated that agricultural interests were especially favored in Britain until the 1840's. This supposition is not, in my opinion, correct. The main reason is that Britain was not in typical years a grain importer until about the 1770's, so that the import duties on grain had little effect. There were also bounties on grain exports in years of relatively low prices, but exports were prohibited and import duties and bounties suspended in years of relatively high prices. Thus before 1815 the English Corn Laws are generally believed to have had only a small effect on prices, and in years of dearth that effect favored consumers. After about 1815, the growth of population and income because of the industrial revolution made Britain a substantial importer of grain and this unanticipated change made the corn laws far more favorable to agriculture than they would otherwise have been. Urban interests then gave a high priority to the repeal of these laws and they were in due course abolished. (I am thankful to John Wallis and Adolph Weber for most helpful criticisms on this point, but they are not responsible for my interpretation.)