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NCSEER NOTE

This is the second of three papers based on the last three chapters (X, XI, XII) of the author's book on collectivized agriculture in some 30 countries. These three deal with the issues of decollectivization, and are being distributed by the Council (and paginated) sequentially to preserve the line of logic. The rapid course of events, especially in the USSR area, has overtaken the text but only in minor particulars while most of the critical issues and the analysis still obtain. The book, THE RED AND THE GREEN: The Rise and Fall (?) of Collectivized Agriculture in Marxist Regimes, Frederic L. Pryor, Princeton University Press, is forthcoming.

ABSTRACT

Chapter XI: Reforms of Agriculture: Sectoral Issues

Property Reforms
Marketization
Farm Management Changes
Concluding Remarks

A successful reform of the agricultural sector requires reforms in both the agricultural sector per se and in the economy as a whole; this chapter focuses on the former. The author starts with a review of difficulties of converting state into private property, especially how the property is to be valued, the mechanisms for distribution, the treatment of land claims by non-farmers, and the treatment of debts. The author then looks at the various strategies to expand the private agricultural sector, to restructure property relations, and to "strengthen" property rights, which means to eliminate petty directions and interference on the part of governmental authorities. Marketization of agriculture requires, among other things, the development of competitive industries supplying farms with inputs and processing their outputs. The development of such a structure is, in certain measure, dependent upon the manner in which the farm sector is currently structured and the role of inter-farm enterprises. The author also discusses a number of problems of phasing of price changes in order to introduce competition into the choice of crops and production techniques by the farms. Finally, the author examines some of the crucial changes in the management and internal structure of the farms so that they can meet the challenge of the market.
Chapter XI

REFORMS OF AGRICULTURE: SECTORAL ISSUES

For Marxist regimes with collectivized agriculture, it is useful to distinguish three types of organizational changes:

**Restructuring of property relations** can represent, in its extreme form, the elimination of the collective farms, the type of reforms instituted by China during the early 1980s. Such changes in the property right system can, in a less radical form, include changes in ownership or the "strengthening" of property rights so as to make the collective farms more autonomous decision-making units, a type of reform underway in the early 1990s in all East European nations except Albania.

**Marketization** requires the elimination of central planning of agricultural production and the creation of new institutions and mechanisms so that farms can buy inputs and sell their outputs in a competitive environment where prices are sensitive to changes in the forces of supply and demand. The first step has occurred in a number of countries: Hungary eliminated central planning of agriculture in the mid 1960s; China, in the early 1980s; and most East European nations, in the early 1990s. By mid 1990, however, only China, East Germany, Hungary, Poland, and Yugoslavia had moved a significant degree toward the introduction of the competitive environment with market prices.

**Management streamlining** includes such measures as changing the internal structure of collective farm, the system of compensation of farm workers, or the decision-making structure of the farm. Such changes can occur in a variety of economic environments and does not necessarily signify that fundamental changes are occurring.

Only significant property restructuring and marketization measures deserve the label of "reform" and these furnish the focus of discussion in this chapter. The administrative changes are discussed only in the context of introducing a market economy. I review the range of reforms that have taken place in China and in several East European nations over the past two decades in order to analyze the various possibilities of change, rather than to outline all of the specific organizational changes in any given country. I pay particular attention to the reforms in Bulgaria, Czechoslovakia, East Germany and Hungary, countries which I visited during the spring of 1990 to gather materials for this book. In Research Note C I present a brief survey of agricultural reforms in China, Hungary, and the Soviet Union so that the relations between different parts of the reforms can be seen for a single country.
PROPERTY REFORMS

Property rights cover many different types of privileges: ownership refers to the right to receive income from the property and ultimately to dispose of that property; control refers to the right to utilize that property for some purpose. With a given ownership pattern control rights can be structured in a variety of ways that influence production, the distribution of wealth, or other important economic success criteria. In the discussion below I consider three types of property reforms: changes in the ownership of the land; expansion of the sector of individual farming; and the "strengthening" of property rights in general so that the farms have greater decision-making autonomy.

Ownership

In East Europe except for the Soviet Union, the land was never nationalized and it technically belongs to its original members or their heirs. In 1990, for instance, Bulgaria, Czechoslovakia, East Germany, and Hungary passed legislation allowing those owners to withdraw either their old land from the collective or, if this land lay in the middle of a field or had buildings constructed upon it, to take an equivalent amount of land in order to begin farming as private farmers. The governments of these four nations also announced their intention of assigning ownership to every parcel of land so that responsibility for the use and maintenance of the land could be established. At the same time the new Romanian government was considering such an approach although enabling legislation was not passed. Since Poland and Yugoslavia had relatively little collectivized land, such a measure was not necessary. China paid no attention to such legal niceties and maintained public ownership of the land, even as it decollectivized control and leased individual plots to families.

At this point, however, policy problems begin to multiply, because five quite distinct sets of interests must be taken into account in resolving the many conflicts about ownership: those of the previous owners of the land; those of the worker; those of the citizens of the country; those of the farm itself as a unit; and those of the government. Governments must also devise measures to assign ownership in a quick and unambiguous fashion so as to reduce uncertainty so that investment can be encouraged. The last issue is crucial: although collectivization of agriculture in Yugoslavia lasted only about five years in the early 1950s and covered about one quarter of the land, law suits about ownership lasted for 15 years after decollectivization.¹

How is Property for Privatization to be Valued?

In a fully functioning market economy the value of an asset is the discounted value of its stream
of future earnings. Where market prices, including a discount rate and a price of land, have yet to be established by the market, rather arbitrary valuations methods must be employed which may lead to windfall gains or losses for the purchasers. Although various rough indicators of land fertility can and are being used, such indicators do not take into account other crucial factors such as quality of the nearby transportation infrastructure; accessibility to labor, credit, and other inputs; and similar factors that influence the profitability of a farm.

Some have argued that for the proper incentives to be established, the land must be sold back to the farmers. There are historical precedents for giving away the land without ill effects: in the homesteading acts of the 19th century the U.S. government gave away half a continent.

**How and When are Land Claims to be Recognized?**

A process returning land to the previous owners can function only if the country had some type of land registration process before collectivization; if the land was never nationalized so that it still belongs in a formal sense to private owners; or if the process occurs sufficiently close in time that previous land claims can still be remembered. Otherwise some system to divide the land either on a per capita basis (as in China) or a per worker basis (as in Vietnam) is preferable.

In past years in many Marxist regimes, members of cooperatives had the formal right to withdrawn their land and initiate private farming (Wädekin, 1982). In practice, this right did not exist. In early 1990 in a number of East European countries, governments passed additional legislation so that such rights became a reality.

It is also crucial for a government to designate a specific date at which it will recognize land ownership claims so as to reduce uncertainty about ownership. Such a date is, of course, a hot political question and some of the complications can be seen by reviewing some manifestations of the problem in four countries:

* In East Germany during most of the negotiation about ownership issues, both East and West German officials appeared ready to accept the land reform of 1945 and to draw the line for recognizing land claims at 1949, when the East German government was first established. At the last moment before signing the first inter-state agreement establishing an economic union between the two Germanies, this consensus was overturned and, as a result, legal problems in reassigning ownership multiplied; the second inter-state agreement, however, appeared to approach the original concept.

* In Bulgaria certain parties such as the Nikola Petkov Agrarian Union and the Social
Democrats have argued that the crucial date should be December 31, 1944, so that the 1945-6 land reforms would not be recognized. Given the election victory of the Bulgarian Socialist Party (BSP), however, such a program will not be implemented; it is unclear, however, how the BSP will handle the problem although some party members suggested to me that it should be drawn at 1948 before forced collectivization was accelerated.

* In Hungary the Agrarian Party, which is a member of the ruling coalition, has insisted that the line be drawn at January 1947, i.e., after the major "bourgeois" land reforms, but before the "communist" land reforms; some factions of this party have also insisted that no land holder can own more than 50 to 100 hectares. They justify this position because most Hungarians believe the land to have been too unequally distributed before the 1945-6 reform; such a cutoff date also prevents Jewish landlords, whose lands were expropriated by the Germans during the war, from advancing their land claims.

* In Czechoslovakia in 1990 political groups have formed around recognition of land claims after several different dates: 1939, 1945 (the reform directed against the Germans), 1947 (the reform directed against large land holders), and 1948 (the "communist reforms" directed against kulaks). In the summer of 1990 the government passed legislation that seemed to recognize the 1948 reforms.

**How Are Land Claims of Non-Members to be Treated?**

Major aspects of the problem can be seen in microcosm in Bulgaria. During the 1990 election in Bulgaria a number of parties within the Union of Democratic Forces (UDF) such as the Nikola Petkov Agrarian Union insisted that if the owner does not intend to farm the land himself, he must sell it to someone who will, so that an extensive system of rented or leased agricultural land would not arise. Other parties in the UDF are arguing that an owner has the right to do anything he wishes with the land, but that land not directly farmed by the owner should be highly taxed so that he will be induced to sell it. Other groups argued that those not actually working the land would have no claims on any land of their ancestors, so that a system of absentee ownership, combined with a system of tenant farmers and non-landed rural workers would not arise. In Czechoslovakia, land legislation placed high taxes on land not farmed by the owners, so as to forestall development of a system of land renting and absentee ownership.

By way of contrast, in East Germany the notion of absentee owners renting agricultural land to farmers has not generated such political passion. Moreover, in the negotiation of the inter-state treaty, West Germany insisted that all land claims be recognized.
At the time this is being written, this battle is still raging in other countries such as Hungary. In a brilliant empirical study Szelenyi (1991) shows that urban households would become much greater gainers than rural households if all land were returned to the 1947 land-ownership pattern and that almost half of the rural household heads would be landless. The political problems surrounding this issue should be readily apparent.

**How are the Other Collective Farm Assets to be Distributed?**

In some countries such as East Germany, Hungary, and Czechoslovakia, considerable discussion has centered on the problem of how the collective farms could be turned into corporations, with shares issued according to the land brought into the collective and also the number of years in which a family worked on the collective farm, so as to recognize an ownership interest created by labor. In Czechoslovakia one farm director told me that in the distribution of shares on his farm, he would also like to take into account which years the person worked (in those years where the farm made a loss, no ownership shares would be given) and also the position of responsibility held by the person (a criterion which would give the chairman more stock!). An issue which is less frequently discussed and currently unresolved in the four countries is the degree to which such shares could be sold, especially to those outside the farm. Since an active capital market does not exist in any of these nations, transferability of such shares can not easily occur at the present time; and the lack of such transferability means that the workers will have an incentive to inflate current wages at the expense of investment, a practice occurring in self-managed firms in Yugoslavia. Other East European countries, as well as the Soviet Union, have given this problem less attention and seem content to allow the collective farm to retain its present structure.

**How are Farm Debts to be Handled?**

As noted in the previous chapter the various countries have handled farm debt in quite different ways, ranging from full cancellation in Bulgaria and Romania to partial cancellation in the USSR and East Germany, to no cancellation in Czechoslovakia and Hungary. Such collective farm debts are not large in Czechoslovakia, but are important in Hungary. Since many such farm debts were due to the manipulated price structure or irrational demands placed upon the farms by the central authorities, the criteria on which these decisions about the debt were made are not clear. Further, much of the farm debt is uncollectible so that it makes little real difference whether such debts are eliminated or not; a bankruptcy merely removes the debt more quickly from the books of the state banks without changing much else since the problems of the farm still remain.
How are State Farm Land and Assets to be Treated?

In East Europe many of the collective farms use land or assets belonging to the state. And in the Soviet Union and some of the other Marxist regimes, all land and assets have been nationalized. It is not necessary for such wealth to be disposed of by the national government; as a preliminary step, according to one Hungarian proposal, much of this wealth could be transferred to local governmental organs for disposal. Whether privatization is carried out by state or local governments, several schemes have been proposed to facilitate the process:

* The government or the farm itself would sell such assets to the highest bidder in order to increase their revenues. Those actually farming the land might have the opportunity to purchase it at a reduced price. Given the fact that few citizens have very large bank accounts to purchase such land, except by obtaining credit which is generally not available, it is unclear who would actually buy such land except, perhaps, for foreigners.

* Giving each citizen wealth vouchers whose face value amounts to a certain share of the total assets owned by the state and then allowing them to use these vouchers to bid for land, their houses, the stores in which they work, or corporations. Given the fact that the accumulated savings of the population is generally only a small fraction of the value of the state wealth, the voucher plan has some obvious advantages. Such a scheme, which appears to go back to a proposal by the Hungarian economist Tibor Liška, has been strongly backed by Václav Klaus, the Finance Minister of Czechoslovakia. As of late summer 1990, this plan did not seem politically viable in either country; nevertheless, the Polish legislature began to pass the first laws to implement such a system (New York Times, July 14, 1990).

* Giving the land away to any family showing the interest and ability to farm it, a system which the Yeltsin government in the Russian Republic was proposing in the summer of 1990 (New York Times, July 25, 1990). In China and Vietnam, where the land was effectively (but not de jure) nationalized, it was leased by dividing it among the members either on a per family or per family worker basis.

What Rights will the Collective Farm Retain?

Many of the collective farms are highly integrated enterprises which have achieved considerable economies of scale in some of their activities. In order to protect such facilities from dismemberment, many East Europeans have argued that certain powers must be given to the farm as a unit. In the Soviet Union, for instance, it is the farm director who decides the land any person requesting a leasehold shall get and who also sets out the contract governing the rent and other conditions of the lease. Since farm
directors have little interest in losing their power, many potential leaseholders have complained of the barriers placed in their way in obtaining such land.

Many of the collective and state farms are in need of new capital and this raises an additional problem. If shares in the farm are sold by the government, the firm or farm receives no funds for investment. If, as in Hungary and Poland, the state firm or farm can sell a certain fraction of itself to obtain such outside capital, several problems arise. i) The farm director can sell assets or land to himself or his friends at low prices; ii) Or he can make a sweetheart deal with an outside buyer and offer a low price in return for a lucrative "management contract" (converting his status in the nomenklatura into property rights); iii) Or if the buyer purchases 50 percent of the stock of the farm from the farm, then farm assets are worth 150% of the original (since the additional funds are added to the balance sheet) and the buyer gets an instant capital gain by obtaining 50 percent of the assets for only 33 percent of their value. 5

What Rights will the State Retain?

Such rights include the right to tax and to set certain parameters of farm activity which, for instance, force the farm to take into account the ecological impact of their activities. In China, for instance, these rights were not well worked out in the reforms beginning in the early 1980s. As a result, the irrigation infrastructure has deteriorated, forests have been cut down, and certain communal responsibilities in the field of health and education have been neglected.

Expansion of the Private Sector

Although a total decollectivization may be infeasible, as indicated in the previous chapter, a number of East European nations are discussing a partial decollectivization through an expansion of the private sector. Nevertheless, it is useful to consider for a paragraph, how such a total decollectivization might occur.

If a large majority of rural households were capable and wished to carry out individual farming (which is probably the case only in highly labor intensive agricultural systems), political authorities might decide to decollectivize the entire country simultaneously. Short of carrying out the operation at a single stroke, which hardly seems possible, several possibilities are open: (a) The government could gradually expand the size of the private plots on all of the state and collective farms; this approach, however, has a number of disadvantages, especially if the farmers do not have the equipment to farm such plots alone and believe it too risky to contract plowing and all other services. (b) Or the government could
gradually change the organization of farms, either reducing the size of the collective and state farms into increasingly smaller units or, more simply, changing the unit of ownership and accounting from the farm to the brigade to the team to the link (sub-team). Such smaller ownership and accounting units must, however, be given decision-making autonomy and have the right to turn down tasks offered to them if they believe them unprofitable; otherwise, such an organizational change represents merely the introduction of a payment-by-result compensation system. (c) Or the government could gradually change the nature of the agreements between the farm and the households so as to reduce the scope of group responsibilities. China carried out a combination of all three measures over a four year period, increasing the private plots in 1979; encouraging the reduction of the decision-making unit from the team to the link (called the "group") during the period from 1980 through 1982; and changing the nature of the agreements between the farm and the households, especially from 1981 on (Riskin, 1987, pp. 286 - 90).

Partial decollectivization is on the reform agendas of various countries. One type has occurred in both Bulgaria and Romania, which in 1990 increased the size of the individual plots of the collective farmers. In Romania, for instance, personal, private, and individual plots increased from 13 percent of total arable land to about 28 percent. When I raised the possibility of a progressive widening of these individual plots over a period of years in order to give workers the opportunity to learn to be private farmers, a Hungarian farm manager argued to me that such an approach would probably imply some type of part-time work arrangement on the collective farm which would be difficult to monitor and would result in a considerable reduction of work effort on the part of the farmers on the collective (a formal demonstration of this proposition is presented in Chapter VII). Clearly a major source of opposition to such a path toward decollectivization would be the collective farm managers, so that the initiative for an increase in personal land would have to come from, and be enforced by, the central government.

Other types of partial decollectivization, which are politically more palatable, are conceivable. (a) The government could decollectivize only those state or collective farms where a majority of members vote for such a change, allowing these farms to reorganize in a manner the members see as most suitable. (b) Or, as in the USSR, the government could give any household working on a collective or state farm a sufficient piece of land from that estate to farm individually if application is made. If such a path is taken, then a critical factor is whether the collective farm chairman or an independent government official assigns the land; if it is the farm manager, he can sabotage the entire program by assigning poor and scattered pieces of land so that the collective farm remains essentially intact.
(c) Or the government could create private farms only on selected collective and state farms; these might be those farms with the greatest losses (although in such circumstances it might be difficult to obtain the cooperation of the farmers involved) or the farms might be in special areas, e.g. mountainous areas or areas close to the cities (an approach followed by Romania in early 1990). If the special area is far away, then the decollectivization program would have to be combined with a farm resettlement program (which could be quite costly). (d) Or the decollectivization could apply only to farms producing particular types of products, e.g., labor intensive crops such as grapes or vegetables and those animal products where economies of scale are not important.

Finally, the distribution of land can be made by a variety of parties. As noted above, in the Soviet Union it is made by the farm chairman; but it can also be decided by the members in some type of assembly, as in China. Indeed, such a distribution can also be carried out by force by some of its members or by outsiders, a process occurring on some farms in Romania during the early part of 1990 (Jaehne, 1990). To a considerable extent the manner in which the decollectivization is carried out depends upon the manner in which the collective or state farm is organized. If the major administrative components are particular areas of land, each farmed by a separate group, the dismemberment can be more easily carried out by the individual groups than if the farm is organized according to individual products grown in various parts of the farm or according to particular types of work so that an individual worker may carry out his particular specialty on various plots in the farm.

The Restructuring of Property

Although the breakup of the collective and state farms into individual farms may be unwise in many cases, a strong argument has been made that these farms should be broken up into much smaller units, each centering around a single village. Such a policy would strengthen the village community as a social and political unit, transfer power from the technicians managing the huge farms to the village, and reduce any diseconomies of scale resulting from too large a farm for a manager to retain an overview. The major losers with such a policy are the current farm directors; such a policy of dismemberment would, therefore, have to be guided and enforced by the center.

If private farms are to be created, how should the distribution be restructured? Creation of a few large private farms which hire a large number of workers would not solve the worker incentive problem; sharecropping attenuates worker incentives since the share given to the owner represents an equivalent tax; and a straight rental contract places all the risk on the renter which, in the
lack of a developed credit system, is very high. From such considerations it can be argued (e.g., Stiglitz, 1990) that the more egalitarian the distribution of land, the better the incentive structure of the society.

The Strengthening of Property Rights

In a situation with "strong" property, property rights are carefully delineated and only slowly changed; the limits of direct political intervention into decision-making are narrow; and the framework of taxes, subsidies, and legal duties constraining decision-making are stable. For a market to function effectively, individual property rights and governmental regulations of productive activities must be sufficiently stable that individual producers can make plans without facing undue risks and high transaction costs. This means a drastic reduction in required plan tasks for the farm to fulfil; it means that the central or local governments can not drown the individual producers in a sea of changing regulations (a problem occurring in the USSR); and it means that the rules governing the behavior of public agencies dealing with agriculture must be structured so that their own successes are not measured by a particular volume or assortment of agricultural products, which would induce them to intervene in farm operations.

The strengthening of property rights requires the government, in addition, actively to develop objective mechanisms for dispute resolution and contract regulation. It must also provide a clearly defined social framework, e.g., laws on product quality, payment of labor; on usages of particular technologies or chemicals, plus a objective mechanism of enforcement, so that farms need not rely on political authorities interpreting vague directives from the central government (a problem arising in China according to Nee, 1989).

In a classical Soviet-type economy the manager of a cooperative farm has only weak property rights over the assets of the farm, even though they are formally owned by members of the farm. Since he must use those assets to fulfil a plan handed to him by the state, his decisions are subject to constant review and revision by state and party authorities, and the rules which he must follow are constantly changing. Clearly the strengthening of property of the farm implies a reduction of required plan indicators.

Between a strict planned economy (hierarchy) and a market, a number of other coordination systems can exist including various types of "dual dependencies" (Kornai, 1989), that is, coordination by horizontal relations without flexible prices. This means that farms produce and sell what they want at fixed prices and differences between supply and demand are met by imports and by "occasional" direct orders from the government. Or the farms can be relieved of formal production goals and be burdened by "informal" goals. As Hungarian agriculture has demonstrated over the last two decades, even without
a production plan political authorities have a hundred different ways of interfering with farm decision-making. Another example is the Soviet Union, where the 1988 Law on Cooperatives abolished planned targets for collective farms. As many Soviet commentators have noted (e.g., Agangebyan, 1989, p. 115; Shmelev and Popov, 1989, p. 255) the "administrative tyranny" of the various local party and government (e.g., RAPO) authorities over the state and collective farms was not abolished. As a result, the farms had little additional decision-making autonomy.

Although by 1990 most of the East European nations had abolished most of the governmentally set production goals of collective farms, it is unclear how long such a situation will last, especially if production does not increase or an assortment of agricultural products deemed "incorrect" by the government is produced. For instance, China, which abolished the central agricultural plan in 1985, began to reimpose production goals on a number of agricultural products in the late 1980s as production stagnated. Although in 1990 the governments of the East European nations were hard at work in creating a new legal structure to sustain a market economy and to strengthen property rights. Bankruptcy laws, laws for the formation of joint stock companies, laws on contract enforcement, and a wide range of other measures were all on the agenda. Whether these measures will take hold and will be enforced, whether the legal mechanisms for farms to defend their newly gained property rights will be effective, and whether the governments can be restrained from their decade-long habit of interfering in decision-making of the farms can not, at this early date, be determined.

The strengthening of property is, I believe, considerably more important than resolving the problems of ownership because it lies at the heart of problems of individual risk and responsibility. Although property rights can be strengthened without creating private ownership, the fact that government officials may be judged for promotion on the economic performance of the units in their territory creates irresistible desires on the part of such officials to intervene if production problems arise. With the creation of private ownership and effective mechanisms for enforcing these rights, the chances of such direct intervention are reduced.

MARKETIZATION

Marketization requires two important steps: the creation of a competitive economic environment among the institutions selling inputs to the farms and buying farm outputs; and the introduction of a price system for agricultural inputs and outputs reflecting the forces of supply and demand.

A Competitive Infrastructure
The major structural problem in moving to a competitive infrastructure in agriculture is noted in Chapter VI: in the late 1980s in almost all East European nations, vertical relations in agriculture were relatively few and, as a result, the farms had few options of suppliers of their inputs or purchasers of their outputs. A price reform unaccompanied by structural changes would, in many cases, leave the farms facing monopsonist purchasers of their products and monopolistic sellers of inputs. Although the economic environment for agriculture in many market economies is far from competitive, particularly in the EC, a farmer faces many more options on both sides of the market and the diversity of marketing channels is considerable.

The policy problems in creating a more competitive economic environment depend considerably on how vertical relations in agriculture were previously structured. For this reason, it is useful to group the problems according to the three models previously discussed in Chapter VI and to provide examples from various East European nations.

Decentralized Vertical Structures

The problems arising from this arrangement depend very much on whether the decentralized vertical structures are inter-farm enterprises or the farm itself.

The Inter-farm Enterprise as the Vertical Unit

This structuring of vertical relations permits the fastest transformation to a market economy and, in this regard, the East German example is instructive.

In the months following the political turning point in East Germany these inter-farm enterprises were becoming independent economic units ready to carry out business with any farm. Such units were being formed either as joint-stock companies with some shares held by the various member farms and other shares sold to raise additional capital; or else as cooperatives associated with the West German Raiffeisen Association, which is an umbrella organization for cooperatives providing them with market research, legal service, advice on accounting, and other services. These buying or selling units are relatively small and provide the potential for considerable competition against each other. They can, moreover, more easily develop contacts with different supplies of farm inputs, particularly from abroad, or different purchasers of outputs than individual farms because they can deal in bulk.

Because of East Germany’s location and special political ties, West German, Dutch, and Danish companies supplying agricultural inputs have also been entering the market; and in this respect East Germany has an advantage over other central and east European nations. Thus further competition from
the input side is being provided to the new East German supply cooperative and corporations, all to the benefit of the East German farms.

The marketing of farm outputs has been a much more difficult problem. East German collective and state farms have found it difficult to sell their produce either in East or West Germany, in part because their produce did not meet Western standards, in part because they were producing the wrong crops (many farm directors made their decisions on the basis of East German prices and in the summer of 1990 were stuck with mounds of produce such as cucumbers which sold for a fraction of the former East German price), in part because the crop processors had plenty of sources in West Europe and new East German processors emerging from the inter-farm enterprises were inexperienced in competing against them.

Nevertheless, a competitive structure has been in the making. Given the relatively short time of 15 weeks between the election in March 1990 and the currency, economic, and social union, a wide variety of national-level institutions began to spring up to supply credit, technical aid, market research, training and other special services to farmers. Such a rapid development occurred because in many cases these new institutions were simply replicas of West German institutions of a similar nature; in other cases, they represented a resuscitation of institutions which had existed before World War II; and in a few cases they were quite new institutions that were founded to meet a perceived need. Of course, given the fact that their economic survival was at stake, such speed is quite understandable; whether these new institutions survive remains to be seen.

The Farm Enterprise as the Vertical Unit

This situation is more problematical and depends in good measure on whether the non-farm production units on a given farm serviced just that farm or whether such services were sold to other farms as well. These two situations are exemplified by Bulgaria and Hungary, and each deserves brief examination.

* Hungary

A nation like Hungary with farms selling inputs or processing outputs to other farms has relatively few major problems in creating a competitive economic environment, especially when coupled with a liberalization which allows these farm/firms to compete on the basis of price. The Hungarian TOPS system and the encouragement of farm processing units has had several decades to develop and to create commercial bonds with individual farms, so that much of the commercial
infrastructure already exists. The transition to a functioning market economy in agriculture should be relatively straightforward.

One problem is that such an environment is oriented primarily toward large farms; and individual farmers have been almost completely cut off from this network. For instance, according to one Hungarian evaluation in the late 1980s, the markets for inputs were still "rudimentary" (Sipos and Halmai, 1988) so that individual farmers had almost no choice from whom they purchase their inputs. Moreover, the processing plants were not greatly interested in buying products in small lots and, as a result, the marketing decisions of small farmers generally revolved around selling their outputs on farmers markets, or to state-owned monopoly food processors or wholesalers, or to a large farm. Since most prices were fixed, competition revolved only around minor issues such as auxiliary services supplied or quality determination.

In the period 1988 to 1990 large farms in Hungary were given more freedom to export their crops or purchase imported inputs. In 1990 the government also promised to give greater support to private food wholesalers; and a private group was trying to reestablish the Hangya ("Ant"), a system of farmer cooperatives which would sell inputs such as fertilizers and small machines and which would also purchase crops for selling in bulk.

* Bulgaria

In Bulgaria the former industrial-agricultural complexes, as well as the agro-industrial complexes (APKs) supplied many of their own services, and carried out a certain amount of production of inputs or processing of agricultural outputs. The orientation of these activities was only for the farm itself, and there seemed to be little contracting with other farms. When these large complexes were broken up in late 1989, such non-agricultural production units were often spun off as semi-independent enterprises selling services (e.g., transportation, storage, foreign trade marketing) to the farm units into which the agro-industrial complexes were divided. Theoretically, the individual farm units could purchase such services from any enterprise, but this did not seem the way it was working out in practice, especially since certain inputs were scarce and were still selling at officially set prices. The newly constituted farms were a captive market for these new commercial units which, however, distributed their profits to individual farms which were their stockholders.

The newly created commercial units have had the same difficulties in obtaining farm inputs as they had before. Moreover, they have been dissatisfied with the prices at which they were forced to sell their
produce to the monopsonistic state purchasing agencies. Indeed, in the summer of 1990 some were responding by refusing to sign contracts with these agencies and by preparing to store their own crops until they were offered higher prices, a strategy certain to work only by creating a food crisis in the cities in the fall of 1990. Of course, such a strategy was based on the assumption that the Ministry would not reverse its policy of granting the farms much greater autonomy by intervening and forcing them to sell their crops at the official price. Whether such an assumption was accurate remains to be seen.

Clearly the break-up of the large agricultural complexes, while a necessary step, did nothing to create a competitive environment for farm production. At the time of writing, the Bulgarians have done little to resolve the latter problem.

The Standard Ministry/Production Model

The problems arising from this kind of structure are exemplified by Czechoslovakia, where the sellers of inputs and buyers of output have primarily been monopolistic state-owned commercial units operating under various ministries; interfarm enterprises were much less frequent than in East Germany. The approach of the new government in 1990 was to separate such units from direct state supervision, divide them into their constituent factories or stores, turn each into a corporation, and have them operate as competitive units. In some cases the government has forcibly separated the units; in other cases establishments operating under one of these monopolistic enterprises can petition the respective ministry to become an independent unit. Such an approach has two major difficulties. i) The establishment will have little incentive to separate from the larger enterprise, especially if its participation in the enterprise allows it to obtain their share of the monopoly profits by maintaining high prices for selling inputs or low prices for buying agricultural outputs. ii) The mechanical break up of certain state monopolistic enterprises does not automatically guarantee competition, especially if the newly established enterprises limit the major part of their activities to the district in which they are located since this would merely replace a state-wide monopoly with a district-wide monopoly. Although officials of the Ministry assured me that farms in one district could deal with enterprises in other districts, they seemed uninterested in my suggestion of publishing the prices offered by each of these enterprises in the newspaper so as to simplify such inter-district transactions for the farms and create an embryonic commodity exchange. Although the Union of Cooperatives has begun to distribute price information to its members (a phenomenon also occurring in East Germany and Hungary, where the "official" cooperative associations are scrambling to take on new functions in order to retain their membership), such information is still quite primitive; the newly
emerging free press has, at least up to now, shown little interest in publishing such information.

Although officials in the Czechoslovak Ministry of Agriculture and Nutrition, as well as specialists at the Institute of Agricultural Economics and the Institute of Economics with whom I discussed the problem were not greatly worried about the structure of markets supplying agricultural inputs and purchasing outputs, every one of the collective farm chairmen with whom I spoke expressed anxiety about the matter. Most are making plans to integrate forward, either by themselves (e.g., setting up stores in various cities to sell their products directly to the consumer, or starting up export operations) or in combination with other farms (e.g., establishing a cooperative grain mill to sell flour to bakeries). At first glance such downstream diversification appears a reasonable response, but it is economically viable only if the minimum efficient plant sizes in these processing industries are relatively small. Unfortunately, world trends of moving food processing from rural to urban areas in order to take advantage of economies of scale from new technologies suggests that this is not the case (UNIDO, 1981). Some farms have also integrated upstream (e.g., pelletizing fertilizers or providing breeding services) or are trying to make plans in this direction.

The Supra-Farm Vertical Integration Model

From the viewpoint of the farm, the supra-farm vertical integration model provides few problems in the transition to a competitive environment in agriculture that are different from the standard ministerial/production model. The farms must still sell to large monopolies and buy from large monopsonist, albeit these monopolies and monopsonies are organized differently.

The Soviet Union provides an instructive example of this organizational model, because its response has been so curious. After the dismemberment of Gosagroprom and the RAPO’s in 1989, the government began in two ways to move away from the creation of a more competitive environment for agriculture, despite Gorbachev’s statements about wishing to introduce more competition. First, in restructuring vertical relations they appear in good measure to have moved back to the standard ministerial/production model, albeit giving the production enterprises more freedom of manoeuver. Second, they have been encouraging new forms of large vertically organized enterprises (agrokombinat and agrofirms) and large horizontally integrated farms (agro-industrial association). The competition problem does not seem to have been seriously addressed.

Price Changes

Until recently governmental price controls in the East European nations were extensive. As a result,
in all countries relative prices did not reflect the forces of supply and demand; and in some countries the
general level of prices was also below what it might have been if people could find goods upon which
to spend the income they had been forced to save. A crucial step toward a market system is the freeing
of prices to respond to the market forces; the crucial question is how this can be achieved without creating
chaos or very high social costs. Price reforms, of course, also imply reforms in the systems of subsidies
and taxes.

To the extent that a price reform involves higher prices of necessities, which have been subsidized,
is the population ready for such a reform? Gorbachev's personal economic advisor, Nikolai Y. Petrakov,
has discussed public opinion polls showing that people prefer low prices of goods, rationing, and queues
(especially during work time) to high prices and full stores. It is difficult to know the accuracy of this
assessment; in their May 1990 survey of Soviet and American attitudes toward free markets, Shiller and
others (1990) found no evidence to support this view. Moreover, even if it did reflect reality at a
particular time, it does not seem likely to continue if the store shelves are relatively bare for several
years. Finally, it might be noted that in the four East European nations I visited in 1990, I was repeatedly
informed that their citizens had quite different opinions; that they wanted a market so that the shops would
be full; and they recognized that a price reform would be necessary. Several special issues deserve brief
consideration.

The Timing of Property and Price Reforms

The strengthening of property rights through the creation of such a legal framework for the
productive units and the operation of the market is, of course, a crucial step for economic reform. It must,
be
however, also closely tied to a general price reform. Price reforms can be carried out before
a property reform although, of course, with weak property such a reform is almost meaningless unless
incomes of key decision-makers are tied to profits, and unless the state or collective productive units are
held responsible for their actions (which can not be properly done without strong property). A proper-
ty reform carried out before a price reform also runs dangers since the success or failure of the newly
established productive units may well depend not upon their own efforts but rather upon arbitrary pricing
decisions by the government. Much of the high income of the urban "cooperatives" (actually private
enterprises) in the USSR and much of the resentment against them arises because they are able to supply
goods and services in short supply because governmental price policies discourage such production by
state firms.
If such property measures as the reduction of plan indicators and of direct governmental intervention are not taken simultaneously with the increase in the role of market prices, the changes are not likely to last since three adverse effects may occur. (a) The farmers may not have a great incentive to increase production, a situation which appears to have arisen in the first half of the 1980s in Vietnam, which tried to allow individual agriculture greater scope without significantly increasing the role of market forces. (b) Or else, the governments may find it difficult to set market-clearing agricultural prices centrally to avoid shortages and surpluses so that it must step in again to guide production. (c) Or public agencies, both government and party, may find it difficult to restrain from their old behavior rules and from intervening in farm operations so as to “improve” their own success. For instance, in 1982 Czechoslovakia attempted to increase decision-making powers of the farms by reducing the number of centrally issued indicators to only two: grain output and meat output, regulating the remaining production by contracts between the suppliers and consumers (Hajda, 1990). Because prices were not liberated and the rules of behavior of government agencies were not greatly changed, the reform did not last. By way of contrast, at the beginning of their reforms the Chinese communist party deliberately forbade intervention into decision-making by the team (Riskin, 1987, p. 285).

A quite different matter is the phasing of marketization (or price reforms) and decollectivization reforms. The two types of reforms can occur simultaneously. Marketization can also occur first, as in Hungary in early 1990 when the provisional government announced a full floating of agricultural prices, while taking only very preliminary steps toward decollectivization. Or changes in property rights can precede marketization, as in the USSR in the late 1980s and early 1990s; but for such an approach to work, all participants must realize that an irreversible price reform will follow shortly. The phasing can also be staged, as in China in the late 1970s and early 1980s when a certain degree of marketization occurred simultaneously with the decollectivization, while more important measures occurred immediately after the decollectivization had been consolidated.

One other problem must be noted: as Brooks (1991) has argued, combining a new property rights regime with a system with high levels of price fluctuations, brought about either by changing domestic agricultural prices or changes in the exchange rate, may mean that too much risk is involved, especially if access to credit is limited. Thus credit availability plays a critical role.

The necessity of tying property and price reforms closely together seemed to be understood in most East European nations (a possible exception was, perhaps, Bulgaria). Until recently, however, Soviet
reformers had not learned this lesson, as Gorbachev ruefully noted in analyzing the political resistance to governmental plans to raise prices.  

Multiple Prices as a Transitional Measure

In 1985 the Chinese government abandoned the system of government production goals and substituted a contract system, by which farms could either sell their produce in markets or sign long term contracts to sell their produce to the government at a pre-specified price. This led to four different price systems for farm produce (quota prices; above-quota prices; negotiated prices; free market prices). Such a system was cumbersome and, moreover, the government continued to impose some "sales obligations" or mandatory contracts on grain (Wiens, 1987; Sicular, 1988b). Such a mixed system is unstable and in late 1988, the government formally reintroduced grain quotas.

The Problem of Subsidies

A contentious question is how long farm subsidies should be continued. Some proponents of a price shock or "big bang" approach have proposed a quick elimination of all major subsidies including those to farmers. Those fearing such consequences as massive bankruptcies and political unrest have proposed various schemes for a phased reduction and have noted that all Western industrial nations grant massive subsidies to the farm sector as well. In this discussion many economists in East Europe make a distinction between subsidies to the food processing industry and direct subsidies to the farms, proposing to eliminate the former but not the latter. Both, of course, constitute parts of a wedge between the price paid by consumers and received by farmers and ultimately act as subsidies to agriculture; they differ primarily in their distributional impact to various groups of farmers since more of the direct subsidies go to farms with poor conditions.

The data presented in Table 8-1 show that subsidies to agriculture in some Marxist regimes, particularly in East Europe, are high. This means that if massive and immediate bankruptcies within the farm sector are to be avoided when subsidies are removed, either the terms of trade between agriculture and other sectors will have to turn markedly in favor of the former, or else the subsidies must be eliminated only over a long-run period so that there will be time to find alternative employment opportunities for workers in unprofitable farms. Such data also suggest that relative agricultural prices are highly distorted since the subsidy rates (and, I should add, the differential turnover tax rates as well) are quite different for various foodstuffs.

If all prices in these economies were allowed to float, what would happen to relative agricultural
prices (the terms of trade between agriculture and other sectors)? This, of course, was not a problem for East Germany, where the prices began to approximate those of West Germany after the currency, economic, and social union of July 1, 1990. In East Germany some economists whom I interviewed estimated that without farm subsidies, farm incomes would fall rapidly and that about one third of all farms would go bankrupt within a year.

Determining what will happen to relative terms of trade between agriculture and other sectors in the other countries is more difficult. Under a normal market situation, if subsidies to agriculture are removed, the retail price of food will rise and the producer price will fall, so that the future difference between them will represent only the retail margins and the costs of processing. Such "normal" conditions do not seem to hold in most of the East European nations, so that determining even the direction of the impact of an elimination of price controls for food might be different; indeed, it is even possible for producer prices to rise as well. Some examples are in order.

In some of the countries such as Bulgaria, there is a disequilibrium in the retail markets for food, as manifested by shortages and by much higher free market prices for foods; so that floating food prices might result in both higher retail and producer prices of food. In other countries such as Hungary, producer prices had been held artificially low so that an elimination of price controls resulted in a rise in both producer and retail prices. In other countries such as Czechoslovakia, it seems likely that producer prices will fall at the same time as consumer prices rise unless the currency is considerably devalued, which could possibly raise both producer and retail prices of food if farms begin to export. Let me add that in 1989 the farms barely broke even in their food production even taking into account the enormous subsidies they receive; in those farms which I visited, the greatest profits came from non-agricultural activities. Clearly the problem of relative agricultural prices is of primary importance to the economic health of these farms.

The estimation of relative agricultural prices can only really be solved by taking a general equilibrium approach, which is impossible because of the lack of information and also of a clear picture about what the tax and subsidy system of the future will look like. This problem is particularly difficult to solve for some of these countries such as Bulgaria and Poland, where retail prices of almost all commodities are subsidized. A general release of price controls might result in higher or lower relative prices for agriculture, depending upon the relevant price and income elasticities (which are not known).

A very rough first approximation can, however, be made by taking advantage of Engels law, i.e.,
the observation that real expenditures on food rise more slowly than total real consumption expenditures. If, in a given country, the two variables increased at roughly the same rate, it seems likely that consumers will switch expenditures from food to other goods when they become available so that relative food prices will fall; if, on the other hand, total consumption increased considerably faster than food consumption, then the reverse is true. For East Europe such a calculation (assuming the "normal" income elasticity of food consumption to be 0.75 shows that relative agricultural prices are likely to rise in Bulgaria, Poland, and the USSR; fall in Czechoslovakia, East Germany, and perhaps Hungary; and remain roughly the same in Yugoslavia. This kind of approximation is not, however, infallible and in some cases such as Poland, it leads to erroneous results.

Another approach to the problem is to find out how collective farm chairmen view the problem. For what it is worth, such production leaders in Hungary do not expect much change in their net income since the prices of both their inputs and their products seem to be increasing. Farm directors in the other countries seem more fearful, but with regard to prices one seldom meets an optimistic farmer in any country.

The Principles of Price Setting. Although a number of East European nations adopted a system of setting producer and consumer prices of agricultural goods such that a certain share of prices were fixed, another share had maximum prices, and the remainder were floating, in all instances the share of foodstuffs with floating prices was relatively small. In Hungary, for instance, roughly 10 percent of foodstuffs had floating prices in 1968 and this percentage was roughly the same in 1988 (Csikós-Nagy, 1969; Richet, 1985, p. 240). Although such a system was also supposed to reduce price distortions and to move producer and consumer prices of foodstuffs closer together, these goals were also not achieved (Sipos and Halmai, 1988; Kornai, 1989). Only in January 1990 did a significant price reform occur when most retail and producer prices of agricultural goods were allowed to float. One serious problem was that the prices of the agricultural inputs supplied by state monopolies also rose so that farm profit margins were somewhat squeezed. At this time the state continued to provide direct subsidies to unprofitable farms in areas not considered favorable for agriculture.

Complementary Policies

In discussing marketization issues above, I have neglected a wide variety of other important policies, institutions, and procedures: These include creation of a suitable infrastructure for agriculture: physical (e.g., roads and communications), economic (e.g., credit institutions), and legal (e.g., provi-
sions for property registration, development of a suitable contract law and mechanisms for quick resolution of contract disputes, or implementation of bankruptcy laws). But such policies also include establishment of special exchange markets for staples; publication of price information; product quality standards; packaging regulations; legislating labor laws and structuring labor markets; establishing a social safety network; and the like. They also include the establishment of national policies to prevent local governments from dampening competition; in Yugoslavia, for instance, republic governments have introduced various kinds of measures protecting their farmers from competition in other republics.

Some of these complementary problems are particularly intractable. The development of a network of farm credit has proven difficult in many countries, no matter what the system (Braverman and Guasch, 1991). Other problems are more linked to the economic system, arising in the case of the quality of foodstuffs, because of long years of neglect of consumer wants. For instance, after the currency union with West Germany manufacturers of many processed East German foodstuffs found it difficult to compete against West German products, no matter how low they set the price, because their goods had an unshakable reputation for low quality.

**FARM MANAGEMENT CHANGES**

To create a viable and competitive farm sector in a market economy the farms must be independent decision-makers striving to maximize profits. Up to 1990 in most East European nations formal and informal governmental regulation and party resolutions played an important role in determining the organization and the management of the farms. Moreover, in some of the countries such as the USSR and Bulgaria, the communist-party also played a major role in day-to-day farm management so that the technically trained farm directors were often overruled; in other nations such as Czechoslovakia, East Germany and Hungary, such daily party guidance was less important or minor. It was such central direction, for instance, that resulted in the hasty amalgamation of collective farms into unmanageably large units in the late 1960s or early 1970s.

With the strengthening of property rights the farms have much greater decision-making autonomy and can organize themselves and their management procedures in the most appropriate ways. These state and collective farms have responded to the emerging market in five quite different ways: by changing top personnel, by changing the size of the farm; by changing their management techniques; by diversifying the farm's economic activities; and by rearranging production. In this discussion I use as examples the changes in Bulgaria, Czechoslovakia, East Germany and Hungary.
Changing Personnel

Only in Czechoslovakia and East Germany did I meet a sufficient number of farm directors or personnel to be able to make any generalizations. A number of entrepreneurial directors I spoke with had been newly elected to their post by the membership of the cooperative farms, replacing older and more bureaucratically oriented or politically connected directors. Several entrepreneurial middle managers I spoke with were campaigning hard in order to unseat the current conservative farm directors. These mini-revolutions on the farm are, of course, necessary for the emergence of a new entrepreneurial class; the process is brutal because it must occur quickly if the particular farms are to survive; and resentments building up over several decades are coming to light. If my highly limited sample of respondents is representative, which is difficult to determine, I would say that the new entrepreneurial class in the countryside consists primarily of men between the ages of 35 and 55 who are technically trained and who are rapidly developing commercial skills. I met few older directors and no women farm middle managers who were responding in a manner appropriate to a market.

Changes in the Size of Farms

The empirical investigation in Chapter VI of horizontal integration of the agricultural sector suggests that most East European farms undoubtedly exceed the optimal size. Although such farms have large-scale facilities and employ technologies designed for large-scale farming, considerable leeway in the choice of farm size is still permitted. Farm dismemberment, however, seemed to be occurring on a significant scale only in Bulgaria and East Germany; and in Bulgaria the resulting farms are still very large (4,000 hectares or so).

In Bulgaria, as noted above, a breakup of the very large agro-industrial complexes into smaller units in 1988-9 was not a spontaneous movement but had been ordered from above, encouraged by a series of contradictory decrees, policy declarations, and model statutes which probably had the effect of allowing the farm chairmen to do almost anything they pleased. Along with a reduction in plan goals and the granting of more decision-making autonomy, it was part of a package of the Zhivkov government to introduce more market elements into agriculture, to raise farm incomes, and to reverse the flight from the land which had left many villages depopulated and an aged agricultural labor force. Although the farm units are still quite large, they now embrace only one to three villages. From what I was able to determine, the farm dismemberment was carried out in an intelligent manner to take into account special local conditions, so that within a single agro-industrial complex, the stronger farms were given more auxiliary
services to handle by themselves (e.g., transportation), while the weaker farms rented such services from a central servicing unit and focused their attention primarily on farming activities.

In East Germany a more complex reorganization is underway. For the last two decades plant and animal production were carried out by different farms. Currently, these farms are combining and then, in many cases, are being divided so that one collective farm includes only the lands around one village. Such a reorganization is often being forced from below and resisted by the farm chairmen, who are loath to give up their power over a large farm; it has the advantage of encouraging a revival of the village into a functioning economic and political unit.

In Czechoslovakia and Hungary I saw much less evidence of such changes in farm size. In this regard it must be noted that the development of a competitive economic environment in the agricultural sector has an important implication for farm size. This can best be seen by looking at an historical parallel in Germany beginning in the 15th and 16th century and lasting up to the 20th century, where large agricultural estates in the eastern part of the country were administered as single units (Gutsherrschaft), while they were divided into individual farms and rented out (Grundherrschaft) in the western part of the country. In the west there were many towns and the farmers renting such land could easily obtain both farm inputs and markets for their outputs. In the east there were few towns and farmers had to face monopsonistic purchasers of their produce for long distance trade. Only the large farms had the countervailing economic power to counter such forces of monopoly.

Turning to the present situation, if East European farms are forced to integrate vertically both forward and backward in order to offset such monopoly power, they are destined to remain large. Another aspect of the same problem is the fear on the part of many farms that they will be unable to obtain inputs and, therefore, must remain large in order to centralize purchasing; I found this justification for not reducing farm size any further in Bulgaria and Czechoslovakia. In East Germany, where a competitive economic infrastructure in agriculture is likely to emerge, the reduction of farm size makes considerable economic sense.

**Changes in Farm Management Techniques**

Farm directors are trying to change their management techniques so as to respond more appropriately to market signals. Major changes in farm management include decentralization of particular activities and tying the income of workers much more closely to results.

In Czechoslovakia this has meant the introduction or the strengthening of a system of profit centers
within the farms and basing wages on the economic results of the profit centers. Transfer prices between profit centers were not originally a problem, as long as the government maintained price controls; of course, the situation has become more complicated as such controls are being abolished. One collective farm manager explained to me that such a restructuring was an attempt to increase the role of individual initiative and to raise productivity without having to dismember the farm into smaller units, although he also indicated that he saw considerable merit in the one-farm, one-village arrangement as a means to resusitate village life. For certain activities such as transportation, the farm leased trucks to individual drivers who had to find a certain amount of work outside the farm if they were to have satisfactory incomes. The farm director added that such a reorganization of the farm into profit centers had been his dream for a quarter of a century but had been prevented in past years by the Ministry.15

In Hungary many farms were responding to the new conditions by accelerating their drive to lease particular facilities (e.g., pig sties, chicken coops, storage barns) to individuals or groups; to strengthen the system of contracting out particularly labor-intensive activities to individuals (e.g., raising piglets up to a certain weight, where they would be sold back to the farm); and to concentrate managerial efforts on capital-intensive activities where economies of scale could be achieved. Such an approach unwittingly follows the theoretical blueprint laid out by A.V. Chayanov 70 years ago in the discussions in the USSR about the future of Soviet agriculture (Solomon, 1977; Cox, 1986). In some countries such a process is called "privatizing without decollectivizing," a misleading descriptions to make the process politically palatable.

I have little doubt that such decentralization will also be occurring in Bulgaria and East Germany. At the time of my trip, however, they seem to be focusing their major efforts on problems resulting from the change in the farm size; and I could not obtain sufficiently detailed information on other types of management changes.

What is unusual about these attempts at decentralization is that they have little in common with the current Soviet approach of leasing land to farmers who wish to take up such a contract (discussed in Research Note B) or of setting up "collective contracts," which are essentially group piecework contracts. The new arrangements in East Europe are designed by the managers themselves, rather than imposed from above. The Hungarians do have some land leasing, but primarily where highly labor intensive crops are produced. The Bulgarians, who have tried over the last few years to implement a simple land leasing scheme, have reported little interest in such arrangements by farm workers and, as noted above, are
discussing various methods of land renting in the future when ownership claims of previous owners begin to be recognized.

Another way in which farms were trying to tie effort and reward more closely involved a restructuring of relations between private and collective activities. None of the four countries under review featured the Soviet arrangement whereby members of the cooperative farms also farmed individual plots in a manner totally unrelated to the plans of the farm and then sold their produce on farmer's markets in the city. In East Germany, for instance, a large part of the individual plots were generally farmed by the cooperative farm, which distributed either the produce for family consumption or the receipts from sales to the members. Given the high degree of subsidization of foodstuffs, farmers selling fruits and vegetables usually received higher prices from the state than from individual consumers, except for meat products. Roughly the same situation existed in Czechoslovakia. In Bulgaria and Hungary, although some private selling of fruits and vegetables on farmer markets occurred, the individual plots were highly integrated into the production of the entire cooperative. In Hungary this meant, for instance, that farmers would receive piglets and fodder from the farm, raise them, and then sell them back to the farm after the weight reached 20 kilos. In Bulgaria the farm would carry out plowing and other capital intensive processes, while the individuals would carry out weeding and other labor intensive activities, and then sell the produce back to the farm.

Systems of compensation of farm labor were also being changed, but in rather different ways in the four countries. Bulgaria has been developing its system of piecework, which had been introduced during the Zhivkov era, and which was considerably more successful than a similar system in Romania where the piece rates kept being raised. Hungary has been experimenting with certain types of sharecropping arrangements; such a compensation scheme is even being used in some greenhouses, an experimental practice which is practically unknown in greenhouses in the capitalist world. Again, these attempts are quite different from the experiments with collective contracts in the Soviet Union (Brooks, 1990; Van Atta, 1990).

Given the varied conditions for producing different crops or for using different technologies, it is not possible to specify a standard method of paying agricultural labor if the proper incentive structure is to be maintained. Until the recent political changes, however, these incentive problems did not receive the attention they deserved; and in the future it is likely that the individual farm managers will engage in considerable experimentation in this direction.
Diversification and Spin-off of Farm Activities

Diversification has taken several forms. One form, which has already occurred in Hungary and is evolving to a certain extent in Czechoslovakia and East Germany, is vertical integration in both forward and backward directions. Several of the farms I visited which are responding in this fashion are also planning on absorbing neighboring farms and becoming bigger, not smaller, so that a considerable share of the inputs will come from farm enterprises producing such inputs in sufficient quantity to achieve some economies of scale, rather than relying on an uncertain market either to obtain such inputs or to sell such inputs to other farms. Such a development, I should emphasize, runs counter to world trends of moving food processing from rural to urban areas in order to take advantage of economies of scale (U.N., 1981).

Another form of diversification is into activities totally unrelated to agriculture, an approach most advanced in Czechoslovakia and Hungary, where the profits from such activities often support the farming activities.16 For instance, one cooperative farm I visited in East Germany realized that it would have excess capacity in its repair shop once it started to use Western machinery. To maintain employment it arranged to buy used cars in Hamburg, to repair them in its tractor workshop, and to resell them to East Germans. It also began to supply transportation and taxi services with its excess vehicles. The same farm, I should add, also based all of its 1990 production plans on prices which it collected in West Germany during the winter, another indication of the entrepreneurial spirit guiding decision-making. These farm managers certainly needed no lessons from westerners on how to hustle. In China, after the agricultural reforms in the early 1980s, industrial activity increased dramatically in the countryside, mostly steered by the local governmental authorities or the rump of the remaining collective farm. By the late 1980s, the value of non-food production in rural areas actually exceeded the value of foodstuffs production.

Spin-offs of unprofitable activities are also occurring. One East German farm manager told me of his joy in spinning off the collective farm cafeteria which he claimed had taken more of his time than some major farming activities because of his inability to find anyone who could manage it properly. More significant spin-offs will undoubtedly occur when the managers determine what activities are profitable under the newly emerging prices.

Restructuring Production

Until 1990 in Bulgaria, Czechoslovakia, and East Germany, the farms have had relatively little choice in what they produced and the land they used; and because of foreign exchange restrictions they were limited in the countries from which they could import agricultural equipment and technologies. Only
in Hungary did the farm managers have greater decision-making autonomy; for two decades state and cooperative farms in Hungary have not had to fulfill detailed state production plans.

At the present time many of the farm managers in all the countries are reconsidering their production mix, the lands they use in production, and the technologies they will employ. Most of the farm managers I spoke with in East Germany told of their intentions of importing West German technologies and reducing the farm labor force by 50 percent in the next five years.

The major difficulties in carrying out a restructuring of production was a lack of knowledge about input and output prices. Although some East German farms were already basing their production plans on West German prices, this easy option was not available for farms in the other nations. Farm managers in these other countries expressed their frustrations to me in being unable to determine what will be most profitable and to make production plans because of such price uncertainties.

If these nations are to have a functioning market system it is, of course, essential for producers to adjust their production plan in order to focus on the most profitable products. A review of these matters would provide little analytical illumination on the organizational problems discussed in this report and are not further pursued.

CONCLUDING REMARKS

Reforming the agricultural sector requires not only organizational and institutional changes, which have been the focus of this chapter, but also a series of changes in macro-policies toward agriculture as well, e.g., to repair the crumbling farm infrastructure in many of these countries; to attack the ecological problems which are serious in most East European nations; to equip private farmers with small-scale agricultural equipment, which is sorely lacking in all countries; and so forth.

Predictions of the future are also hazardous because the new governments of Central and East Europe are fragile and their new leaders are inexperienced. Moreover, in all countries the "politics of anger" are very important, as long time resentments lead to political demonstrations which make both maintenance of the present situation and any reforms difficult. Indeed, in Hungary where the Agrarian Party holds a key role in the governing coalition and has advocated some relatively extreme changes in the ownership of agricultural property, the government may collapse on such farm issues. In Bulgaria the resignation of the popular President of the country in early July because of political mistakes committed in the previous December is an indicator that no matter whether a party received roughly half of the votes, its leaders are still vulnerable.
The economic processes under examination which have the aim of creating a market economy in several years have few parallels with the birth of the market in West Europe, which took place over centuries. Nevertheless, the institutional processes I have outlined appear promising: the strengthening of property, the liberalization of prices, the creation of a competitive environment, and the reorganization of management toward profit maximization. Much remains to be done; and much must be carried out simultaneously; otherwise, inconsistencies between different parts of the system will lead to production or distribution difficulties, not to mention social and political unrest, which may weaken governmental resolve for introducing a market economy. It is these larger issues of economic reform that are the subject of the next chapter.
FOOTNOTES

1. This information was supplied in an interview with a Yugoslav agricultural economist. Part of the problem in Yugoslavia was that the extended family system in the country was breaking up, so that many of these ownership disputes were intra-family quarrels brought about by decollectivization. The decollectivization in Poland in 1956 occurred more smoothly. In both cases, however, former property boundaries were still clear and relatively little large-scale investment on the farm had occurred.

2. At the last minute in the negotiations between the East and West German governments (Frankfurter Allgemeine Zeitung, June 18, 1990) for the Inter-State Contract establishing the currency, economic, and social union, the Free Democratic Party of West Germany managed to slip in a clause recognizing land claims between 1945 and 1949 for property not nationalized under orders of the Soviet military government. The phrasing of the paragraph in the contract makes it difficult to determine how much of the 1945 land reform will still remain; but later discussion makes it appear that only a small amount of the reform will survive. In any case, these few additional words in the agreement will greatly increase the difficulties in resolving the ownership claims. The major economic consequence is that the risks facing Germans interested in investing in land melioration are much greater, so that modernization will undoubtedly proceed more slowly.

Many East German citizens who fled to West Germany were sentenced in absentia for "flight from the Republic" and lost their claims in a "legal" fashion; in the Inter-State Agreement, this law was nullified so that such claims will be recognized. Other problems arise because in the 1945 land reform in some Länder, farmers were issued land conditional upon use, while in other Länder the recipients of the land reform obtained much stronger property rights (this information was gathered by reading land deeds from the reform period in various agricultural museums).

The return to the original conception of recognizing only claims occurring after the 1949 formation of the East German state occurred in the second inter-state agreement and, in September, 1990, was challenged in the courts (Frankfurter Allgemeine Zeitung, September 1, 1990).

3. The cutoff point was not mentioned in the platforms of either party, but was quite clear in the conversations I had with various party members.

4. Opponents have raised four major objections against this idea: (a) Problems of arbitrary valuation
of state property would be severe and could lead to unfair windfall gains or losses; (b) Citizens have little experience in holding stock and might sell these vouchers for low prices to foreigners in order to obtain foreign currency to purchase consumer goods abroad (in many electronic stores in Vienna, I saw enticing signs advertise articles in both Czech and Hungarian languages); (c) This distribution would be unfair since children would receive the same share as adults who have worked in the system all their lives; (d) The enterprises would not receive any new infusion of capital for their renewal. None of these four objections is, I believe, fatal to the plan and can be met by suitable structuring of the program. For instance, the problem of valuation is met by a bidding system for state property proposed by Thomas Gale Moore (1990). Children need not be given the same number of vouchers as adults. And use of the vouchers can be forbidden to foreigners and usable only to obtain title to other property or capital assets.

The plan received some attention in East Germany, but the West Germans vetoed the idea for the Inter-State contract, fearing that West Germany would receive all the debts of the state farms and firms, while East Germany would receive all the assets. It also appears to have received little interest in Bulgaria and Hungary; I find it curious that some eminent Hungarian economists such as János Kornai (1990) dismiss the idea without serious discussion.

5. The first two problems can be discouraged by having a state trustee approve all land sales, although this is not as simple as it seems; the last problem can be also circumvented in a simple fashion. One solution, which is being pursued in Yugoslavia, is for the group obtaining the farm or enterprise to issue securities equal in value to the assets at the time of purchase, which must be repaid in full to the state over a certain length of time. This would allow an infusion of new capital and yet assure that the state would receive the full value of the enterprise. The danger of such an approach is that the group obtaining use of the assets would plunder the firm to enrich themselves, and then declare bankruptcy so as not to have to repay the securities.

6. The distinction between "strong" and "weak" property comes from Wittfogel (1957). János Kornai's (1986) distinction of "hard" and "soft" budget constraints is narrower and refers more to subsidies, loans, and other financial transactions between the government and enterprises. Some scholars of socialist economies such as John Litwack have discussed some issues of strong and weak property under the label of "the commitment problem," i.e., whether the government is willing to follow its own rules for a long period so that individuals can make economic plans with a certain security.
A serious problem in the Soviet Union is that no one believes the government will abide by its new regulations or that contracts will be inviolable. Bekker (1990), for instance, describes an agricultural engineer who leased a farm greenhouse, only to find a) It was turned over to him several months after the contract stipulated; b) He was not allowed to use planting methods he felt were appropriate, but had to follow government instructions instead; c) He was forced to renegotiate the contract for the greenhouse when the collective farm leader decided that the contract, which followed government regulations was "unfair."; d) The farm delivered different inputs to him than the contract had specified; e) The farm director nullified the contract when he decided that the leaser made too much money. Apparently the engineer had no legal recourse to redress these contract violations, in part because those in a position to aid him were also beholden to the same authorities who were violating the engineer's contract and therefore feared reprisals.

7. One Czech farm director enthusiastically told me of his plans to export eco-chickens (ecologically raised chickens) to West Germany, where they sell for more than regular chickens. He seemed unaware, however, that eco-chickens require a biodegradable wrapping (an eco-wrapping) if Western consumers in this interesting niche market are going to buy them. The effects of the previous barriers preventing direct contact with foreign markets will take some time to overcome.

8. Butterfield (1990) has some interesting remarks about the new institutional developments.

9. The report of Petrakov's remarks (Keller, 1990) does not indicate the source of this survey, but it is quite likely that of S.I. Rukavishnikov (1989).

10. In the summer of 1988 São Tomé also began a very preliminary type of decollectivization by leasing particular parts of the state farms to private individuals, before a significant marketization had occurred. Such an attempt raised many problems and was quickly abandoned under pressure by the World Bank.

11. In his initial speech at the 28th Party Congress in July 1990, Gorbachev proclaimed: "I would like to stress, however, that revision of retail prices cannot begin without thoroughly considered mechanisms of social protection and, to be sure, the transition to a market economy cannot start with price hikes. This is absurd...When going over to a market economy we must single out the measures that come first. Even today nothing prevents us from beginning to turn state enterprises into joint stock companies, for granting real freedom of enterprise, from leasing small enterprises and shops, and putting up housing,

12. A discussion of these calculations is presented in Pryor (1990). The data come from Alton and others (1989) and, for the U.S.S.R., from U.S. Congress, Joint Economic Committee (1982) and also various issues of U.S. Congress, Joint Economic Committee (annual). Such calculations also assume that the relative degree of agriculture is roughly the same as in the other sectors.

In the summer of 1990 Poland farmers were organizing mass demonstrations because of a fall in relative producer prices in agriculture. A number of explanations have been offered for the relative decline in Polish agricultural prices: the demand for food fell as urban incomes fell at the same time that agriculture production declined less; the agricultural terms of trade was higher domestically than internationally (to which prices were tending); profits of intermediaries rose and the retail price increased were not passed on to the farmers.

13. The contradictory nature of these reforms are analyzed in an extremely useful survey by Davidova (1990).

14. I would like to thank Karl-Eugen Wädekin for drawing my attention to this parallel.

15. Although this charge was vociferously denied by officials in the Ministry, with whom I later spoke, it seems most likely that the truth lay on the side of the farm chairman.

16. Czechoslovakia's most famous agricultural cooperative, Slušovice, produces computers, has a textile mill, a race track, and many other non-agricultural activities (Čuba and Divila, 1989); it has also come in for considerable criticism that much of the success of this farm was due to political connections and massive subsidies (Hénard, 1990b). For an outsider it is impossible to determine what exactly is the truth about this specific farm, but the diversification of farm production into other areas is undeniable. For instance, one farm which I visited invented and produced a machine for testing metallic impurities in oil, manufactured parts for computers and fax machines, produced pastries for Prague bakeries with the eggs from its poultry house which were too small to sell, and provided diverse services for hire including painting lines on rural highways and constructing homes and small buildings in urban areas.