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EAST EUROPEAN AGRICULTURE:
A TRIP REPORT

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NOTE

This report on problems and measures to privatize agriculture in Eastern Europe is an incidental product of the Council research project identified on the face page, and is submitted for its timeliness. A Final Report will be distributed separately at a later date.
Executive Summary

This report covers a ten-week trip from March 31 to June 9, 1990, to Bulgaria, Czechoslovakia, East and West-Germany, and Hungary. I was investigating a series of questions concerning decollectivization of agriculture in order to complete a book on the organization of agriculture in Marxist regimes. To this end I interviewed 110 people and, in addition, visited 11 farms, several greenhouses, and a slaughterhouse. Organizational changes in five areas are currently occurring:

1. **Property.** Although all four of the East European countries I visited have passed laws allowing farmers to take their former land out of the collectives and set up private farming, relatively few farmers are exercising this option. None of the four countries has yet decided how former owners not living on the farm will be treated, i.e., whether they will be allowed to collect rent on their land, whether they will be highly taxed in order to induce them to sell the land to the farmers, or whether they will be allowed any ownership claims.

2. **Prices.** In all four countries agriculture and food products are heavily subsidized and taxed so that prices are highly distorted. Last year in Hungary, however, the net subsidy
(subsidy minus taxes) was roughly zero; in Czechoslovakia and East Germany, the net subsidy was positive; and in Bulgaria the situation was not clear. It was expected that after July 2 food prices in East Germany would be roughly the same as in West Germany; in Czechoslovakia and Hungary major food subsidies have been or will be soon eliminated. Finally, decisions about continuing the subsidies to unproductive farms have not been made in any of the four countries.

3. **Competitive Environment.** East Germany and Hungary have taken the most rapid steps to create a system of competition among sellers of agricultural inputs and buyers of agricultural outputs. Although the Czechoslovak government is aware of the problem, the measures they have taken are insufficient; and Bulgaria has hardly taken any steps in this direction.

4. **Managerial Aspects.** The various countries are taking a combination of the following policies: (a) breakup of the farms into smaller units; (2) establishment of profit centers and leasing systems, rearrangement of ways in which private and collective work are combined, and other devices to tie income more closely to performance; and (c) diversification of production into non-farm activities.

5. **Production Changes.** Given the changes in prices and environment, farms are changing their production patterns, use of land, and technologies to respond to the new conditions.
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A. Property Reform
B. Price Reforms
C. Reorganization of the Economic Environment of the Farm
D. Reorganization and Reform of Farm Management
E. Restructuring Production
F. Concluding Remarks

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ORGANIZATIONAL CHANGES IN EAST EUROPEAN AGRICULTURE: A TRIP REPORT

This report covers a ten week trip from March 31 to June 9, 1990 to Bulgaria, Czechoslovakia, East and West Germany and Hungary. Financed by the National Council for Soviet and East European Research, this trip occurred at a unique period when the former Marxist regimes in East and Central Europe (in this discussion I exclude the USSR) had, or were preparing to have, their first free elections in more than four decades and were also taking important steps toward economic reform.¹

Since the fall of 1989 when the political changes were set in motion, movement has been rapid. In all four countries full freedom of expression of political ideas now exists; parties and newspapers in opposition to the communists are flourishing (and, indeed, non-Marxist parties have won elections in Czechoslovakia, East Germany, Hungary, and Poland); and new ideas are taking hold. How long such conditions will persist, especially in Bulgaria and Romania, is unclear. Generalizations for the region as a whole are also difficult to make because of other differences in the political constellations: For instance, public opinion data for Bulgaria in April revealed that the Bulgarian Socialist Party (as the Communist party renamed itself) received its least support from blue collar workers and the most from management personnel (a startling confirmation of Djilas' concept of the "new class"); on the other hand, weaker evidence for Czechoslovakia suggests that the Communist Party received its greatest support from workers in the industrial areas outside of the capital city.

Most political parties pronounced themselves in favor of achieving a market economy. Nevertheless, the leading political parties in each of the four countries had vague and often quite similar platforms with regard to how such a goal should be achieved, so that it was difficult to distinguish between them. Although variations could be detected in the approaches of particular candidates concerning the desired degree of dirigism, the speed of liberalization, and the seriousness with which they viewed the structural economic problems (which, in turn, influenced their ideas about social policy), such differences were blurred in the party platforms, in part because many of the leading parties were split into several factions. As a result, it is unclear exactly what political and economic policies will finally be proposed and implemented by the winning coalitions.

The explosion of freedom has been accompanied by strong feelings of personal insecurity among large segments of the population, caused, of course, by their uncertainties about jobs, social benefits, and the future. Such anxieties have brought about contradictory responses. In the social realm some have withdrawn into private life (and mental illness), while others have begun to form interest groups, clubs, tenant organizations, boy scouts, and other private support groups in order to take control of their lives again, i.e., civil society has, in a limited fashion, been reborn. In the economic realm some are paralyzed into inactivity in the face of enormous risks, while others are hustling to take advantage of the new economic opportunities. Since social and economic reality in these nations has rushed ahead of the ability to monitor it, generalizations must be treated with extreme caution; even well-placed observers living in these countries do not understand exactly what is happening.

The purpose of my trip was to investigate a series of questions concerning decollectivization of agriculture in order to complete a book on the organization of agriculture in Marxist regimes. For this reason I interviewed 110 people and, in addition, visited 11 farms, several greenhouses, and a slaughterhouse. In this report I attempt to synthesize what I learned, not only about the countries I visited but also about other East European countries.² In the following pages I raise, but do not discuss at length, a number of analytical issues; the primary purpose of this report is to organize the relevant descriptive materials into some type of coherent whole in order to
determine what are the critical analytical questions to ask.

At the time of my visit none of the four countries I visited had yet implemented a significant bundle of agricultural reforms, although all had taken important preliminary steps. All four had passed legislation allowing collective farm members to take out the land they brought into the collective and farm it privately. Romania is also considering such a measure; and Poland has no need for such a step since it decollectivized in 1956. Bulgaria and Romania had expanded the area allotted by collective farms to individual household plots. Hungary has allowed most agricultural prices to float; Bulgaria has relaxed price controls on a few foodstuffs; Romania allowed the prices of agricultural foodstuffs sold privately to float (and raised the fixed prices offered by state buying agencies); Czechoslovakia was in the process of raising agricultural price to eliminate some food subsidies in order to prepare for the abolishment of agricultural price controls in six months; and East Germany was preparing to allow all agricultural prices to float, subject to EC regulations, on July 1. All of the nations I visited were in the process of preparing or passing legislation for the establishment of the legal framework within which private enterprises would function in a market economy. In most countries they were also drawing up new social legislation, in particular unemployment insurance schemes for city workers and social insurance for individual farmers, to meet the exigencies of a market economy. In the case of East Germany this institutional reordering involved the wholesale copying of West German laws; the rest did not have this advantage.

The intense debates and preparations for the agricultural reforms revealed different approaches in the four countries, in some measure due to their dissimilar initial conditions. Hungary had a headstart on the path of reform, since most of the direct links between the agricultural sector and the state bureaucracy had been cut after the mid 1960s; moreover, during this period the government had introduced a number of semi-competitive mechanisms in agriculture. Czechoslovakia, during previous two years, had begun a far reaching economic reform, which had a certain impact on the agricultural sector. Bulgaria, during the final months of the Zhivkov government, had completed a major reorganization of agriculture, and had also passed legislation for organizational reforms in the industrial and banking sectors. Only East Germany had not yet begun significant economic reforms before the political changes in the fall of 1989.3

The reforms of the agricultural sector can be divided into five major groups, each of which is discussed below. For each I discuss some of the major analytical issues and then indicate the different ways in which such issues have been approached. This report does not cover changes in governmental macro-policies toward agriculture such as changes in the relative prices between agriculture and industry, changes in the volume and direction of investment flows into the sector, introduction of small-scale agricultural equipment, and so forth, which are just as important as the organizational changes in developing a flourishing agricultural sector.

A. PROPERTY REFORMS

For many people in agriculture with whom I spoke, property reforms are the most contentious now facing policy makers. As argued below, I do not expect many people to leave the collectives and begin farming privately. For this reason the importance of the property issue lies in its effect on the distribution of wealth, rather than production per se, and on the funds available for investment in agriculture. Nevertheless, given the economic uncertainties accompanying the introduction of a market system, the possession of wealth reduces personal insecurities and is thus a key political issue.

In Bulgaria, Czechoslovakia, East Germany, and Hungary, the government has announced its intention of assigned ownership to every parcel of land so that responsibilities for such land are unambiguous. Several distinct problems have arisen: Whose interests in the land should be given
the most weight? How should farm debts be treated? And how should the privatization of the land proceed?

1. The Weighing of Interests

Five distinct sets of interest must be taken into account in resolving the many conflicts about ownership of the land: those of the former land owners, the workers on the farms, the citizens, the farm itself, and the state. The first three are individual rights; the last two are corporate rights. In none of the four countries has the weighing of these five interests been resolved; the solutions will require hard political bargaining. In Czechoslovakia I was informed that the government had deliberately postponed discussion of these problems until after the election; in Bulgaria alternative versions of these laws had been prepared, the selection of which awaited the election results. Public discussion in the various countries has weighed the importance of these various interests in quite different ways:

a. Rights of the previous land owners. In none of the East European nations was the land nationalized; and in Bulgaria, Czechoslovakia, East Germany, and Hungary, any person or his heirs who live on the farm can now withdraw the land brought into the collective in order to establish private farms. If such land lies in the middle of a collective field or has buildings constructed on it, then equivalent land or compensation must be provided by the collective farm. In the negotiations in Germany for an appendix to the Inter-Governmental Contract, the West Germans originally insisted that the actual land be returned, rather than compensation, in order to lay the groundwork for a land market; but according to newspaper reports, the East Germans resisted and the West Germans gave way on this issue. In Bulgaria a number of parties within the Union of Democratic Forces (UDF) such as the Nikola Petkov Agrarian Union are insisting 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 will 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, a position also argued with vigor in Hungary. In East Germany and Czechoslovakia the notion of absentee owners renting agricultural land to farmers has not generated such political passion. In Romania the issue has not yet arisen.

The date existing land ownership claims will be recognized is a much more difficult political question and has not been finally resolved in any of the four countries I visited. Both East and West Germans appear ready to accept the land reform of 1945 and to draw the line for recognizing land claims at 1949, when the GDR government was first established, although "legal" land transfers after that date will be accepted. In Bulgaria certain parties such as the Nikola Petkov Agrarian Union and the Social Democrats have insisted that the line be drawn at December 31, 1944 so that the 1945–6 land reforms would not be recognized; given the victory of the Bulgarian Socialist Party, however, such a program is unlikely to be implemented. It is unclear, however, where the Bulgarian Socialist Party will draw the line although some party members suggested to me that the line 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 claim more than 50 to 100 hectares. This line was drawn in such a fashion because most Hungarians believe the land to have been too unequally distributed before the 1945–6 reform; such a line also prevents Jewish landlords, whose lands were expropriated by the Germans during the war, from advancing their land claims. In Czechoslovakia some groups have spoken about recognizing the land reforms of 1945 (directed against the Germans) and 1947 (the bourgeois reform directed against large land holders), but not the communist reform of 1948. According to
an April memorandum on land reform prepared by the transition government headed by the Civic Forum, the 1948 land reform will be recognized.

Before leaving this theme, it should be noted that relatively few farmers will probably take advantage of the opportunity to take their land and become private farmers, so that large collective and state farms will remain part of the landscape in East and Central Europe for some time. In part this is because the majority of farm workers on the collectives in some of the countries, particularly East Germany and Czechoslovakia, have no claims on the land: it was the formerly landed farmers and more entrepreneurially minded who migrated to the cities, and either the landless or their heirs who remained on the farms. In part this is because those wishing to farm privately lack the equipment and the variety of skills necessary to be successful. In part this is because the linkage between the land and those in the rural sector has been ruptured: they are agricultural workers, rather than farmers.

According to surveys cited to me in East Germany and Czechoslovakia, less than 5 percent of the workers on collective farms in the former country and less than 10 percent of the workers in the latter country plan to take their land out of the collective and farm privately. None of the collective farm directors in these two countries with whom I spoke indicated that any more than 1 percent of the workers planned to withdraw their land. In Bulgaria and Hungary, I was told of surveys estimating that between 20 and 30 percent of the rural population planned to become independent farmers; however, the relation between plans and reality is unclear, especially given the highly uncertain conditions, difficulties in obtaining inputs and marketing output, and the other problems mentioned above, so that the actual proportion becoming private farmers may turn out to be lower, at least in the short run.6

b. Rights of the farm workers. A proposal advanced in Bulgaria, Czechoslovakia, East Germany and Hungary is to convert the collective farms into corporations, where the stock would be issued according to the land brought into the collective and the number of years worked on the farm. 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, little credit would be given) and the position of responsibility held by the person. An issue which is less frequently discussed and currently unresolved in the four countries is the degree to which such shares would be transferable, especially to those outside the farm.

In the Soviet Union, China, and Vietnam, where land was nationalized, the interests of the previous land owners or their heirs have not been taken into account at all, and almost all attention has been paid to the rights of the farm workers. In China and Vietnam, the land has been divided among the members either on a per family or per family worker basis. In the Soviet Union workers on the farm have a right to lease parts of the collective farm lands in an amount agreed upon between the farm director and the farmer.

c. Rights of the citizens. An interesting proposal by the Czechoslovak Minister of Finance, Václav Klaus, is to distribute to all citizens a wealth voucher which could be exchanged for a certain amount of wealth now held by the government. For instance, the citizens could use these shares to purchase their apartment, or a part of the store or company where they worked, or a part of a new start-up company (in this case, the shares would be converted into buildings and machinery). In the agricultural sector the property involved would be the state farms (rather than the collectives which, in the four countries, are technically owned by the members).

Opponents have raised four major objections against this idea: i) Problems of arbitrary valuation of state property would be severe and could lead to unfair windfall gains or losses; ii) 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, enticing signs advertise articles in both Czech and Hungarian languages); iii) This distribution would be unfair since children would receive the same share as adults who have worked in the system all their lives; iv) 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.\(^7\)

Although this plan, which would allow the state farms and firms to be privatized, received attention in both East Germany and Czechoslovakia, the West Germans vetoed the idea for the Inter-Governmental contract, fearing that West Germany would receive all the debts of the state farms and firms, while East Germany would receive all the assets. The idea appears to have received little interest in Bulgaria and Hungary, and seems only alive in Czechoslovakia. In this latter country, however, this approach has met fierce opposition and, if implemented, will cover only a fraction of the total value of the state farms and firms.\(^8\)

d. Rights of the farm enterprise. Many of the 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 a 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.

The first two problems can be discouraged by having a state trustee approve all land sales; the last problem can be stopped only by selling 33 percent of the farm for 50 percent of the value of the assets in order to take this capital gains effect into account. Another 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.

e. Rights of the state. 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.
2. Farm Debts

If the farm assets are to be divided, what will happen to the farm debts? On this question, opinions differ considerably and, before discussing briefly what each country is doing, several general remarks are in order.

In many cases farm debt arises from government pricing policy or a government demand for some product unsuitable for the conditions of the particular farm. For such reasons many farm debts are not due to the decisions or actions of the farm managers. Moreover, in all of these countries the bankruptcy laws are not very specific and have seldom been applied; so that in effect the country can be said to be without procedures for such event.9 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.

In Bulgaria, all farm debts to the state bank were cancelled during the farm reorganization. Such a policy was justified on the argument that the new farm units were financially quite fragile and would have a better chance of survival without the necessity of amortizing their debt. This policy was, of course, highly advantageous to those farms which had borrowed considerably and, as a result of the greater capital equipment, had higher labor productivity. In the Soviet Union farm debts to the state were reduced in proportion to the share of the labor force taking out private leases so that the leaseholders had no share of the total farm debt.

In East Germany, a law passed in March 1990 stated that those farm debts would be cancelled which were the result of farms having to take on unprofitable activities which were forced upon them by the government. The logic behind the law should be evident; implementing it is difficult because farms will try to claim that all their debts fell in this category.

In Czechoslovakia and Hungary, economists told me that such a debt cancellation was "undiscussable," and that if collective farms were divided, each member must assume his share of the debt. In Czechoslovakia, however, a government memorandum proposed easing the payback conditions for those debts incurred in order to fulfill unprofitable state tasks; moreover, in this country I was told that farm debts are not large, in contrast to Hungary. It should be added that farm debts are often the fault of the government in pricing agricultural products too low so that farms are forced to borrow.

3. The Phasing of Decollectivization

Although relatively few people will currently leave the collective to set private farms, it is useful to consider for a moment the manner in which a decollectivization could be carried out in the long run.

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) and if the central authorities had the will and the ability to apply pressure to all of the rural cadre at the same time to dissolve the collective farms, then the government 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, an approach, however, with 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.10 (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. Such smaller ownership and accounting units must, however, be given decision-making autonomy and have the right to turn down proffered tasks; 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 and, moreover, to reduce the size of any such group.

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). Although both Bulgaria and Romania increased the size of the private plots in early 1990, Eastern Europe does not seem to be following this strategy of total decollectivization. As a Hungarian farm manager explained to me when I raised this possibility, such an approach would probably imply some type of part-time work arrangement on the collective farm which would be difficult to police and would result in a considerable reduction of work effort on the part of the farmers on the collective.

If only some of the rural households are capable of farming individually or if the central political authorities are not unified in purpose or do not have the power to pressure all rural cadre simultaneously, then a piecemeal decollectivization is possible so that the farm sector features institutional pluralism. Again, this can be carried out in several ways. (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, as noted above, by the 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 (Jachne, 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 of line in the farm.
B. PRICE REFORMS

Until recently price controls in the East European nations were extensive. As a result, in all countries relative prices were highly distorted; 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 funds they had been forced to save. A crucial step toward a market system is the freeing of prices to respond to the forces of supply and demand; the crucial question is how this can be achieved without creating chaos or very high social costs.

Price reforms can be carried out before a property reform although, of course, such a reform may not be fully effective unless the productive units have almost complete decision-making autonomy (which does not occur if plan goals in quantitative terms are still specified by central authorities), unless incomes of key decision-makers are tied to profits, and unless the state or collective productive units are held responsible for their debts. A property reform carried out before a price reform has little purpose 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. Price reforms, of course, also imply reforms in the systems of subsidies and taxes.

1. Price Shocks

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 (Keller, 1990). It is difficult to know the accuracy of this assessment, and whether it will continue if the store shelves are relatively empty for several years. It should be added that in the four East European nations I visited, I was repeatedly informed that people had quite different opinions and that they wanted a market so that the shops would be full.

A major dispute in East Europe is the speed at which market prices will be introduced. Advocates of a price shock, or big-bang, argue that piecemeal price reforms can never be completed because entrenched interests are too strong and that letting all prices float allows fewer "exceptions" and is thus much more consistent. Opponents of such an approach point to the unnecessary economic disruptions and general chaos, which increases uncertainty, raises information costs, and reduces both investment and the ability to obtain additional inputs in order to increase production. They generally advocate a phased liberalization: the first phase would be a resetting of fixed prices to eliminate subsidies and to take account of either a value-added tax or a unified turnover tax; the second phase would be a floating of prices in those sectors where competition is assured (agriculture, services, light industry); and the third phase would involve a floating of all other prices, generally after the currency has become convertible so as to permit foreign competition to influence price setting of domestic oligopolies.

a. Poland: In the first half of 1990, only Poland undertook a through-going marketization and price reform, a big-bang in which wages were held constant while almost all prices (including the exchange rate) were allowed to float according to the forces of supply and demand. A number of economic and political reasons can be offered to explain why such a radical reform policy could be implemented: Most Poles were fully aware that their economy was in desperate shape and that the previous reform drives aimed at improving the administered economy had not worked. The non-communist government also had a great deal of popular support and the church supplied an additional unifying element. The Polish nation is also relatively homogeneous so that ethnic tensions are not important; and to a certain degree the economic pain of the reform could also be blamed on the Soviet Union.
b. East Germany: In mid 1990 East Germany was in the process of undertaking a different type of big-bang. In this case the shock will be provided by the introduction of the West German mark (DM) on July 2, 1990, so that after this date prices should converge rapidly toward West German levels. Such a process is similar to that occurring when a small open economy sets a fixed exchange rate (probably overvalued, if a number of West German estimates are to be believed) and opens its economy to the outside world. Domestic price changes will not reflect domestic forces of supply and demand but rather market forces of all Germany. This means that quantity adjustments will be more important, and that unemployment will be considerably higher than in the Polish case. For instance, even before the DM introduction, unemployment more than quadrupled in East Germany and reached about 2.5 percent of the labor force; and I have seen estimates for unemployment at the end of the year reaching one quarter of the labor force. Such a shock is politically acceptable only because of an implicit offer made by the West German C.D.U. during the election: German economic unity as quickly as possible and, although this will be economically painful, West Germany will provide a social net to ease the transition. Most of the other East German parties in the March election had much more vague political platforms; and the East German electorate entered into this agreement, fearful but with its eyes open. The rapid signing of the inter-governmental contract for currency, economic, and social union in May, 1990, an arrangement first discussed publicly by Chancellor Kohl about a month before the East German election, was the first fruit of this implicit agreement.

c. Bulgaria. Andrei Lukanov, the reformed communist serving as Prime Minister, called for a "quick, radical, and comprehensive reform," but excluded any type of "shock therapy" on the grounds of an insufficient social support system for the poor who might be made poorer, or for those made unemployed (Kohler, 1990). In April his government backed away from its plan to float prices of about 40 percent of all goods, vaguely promising to carry out a similar measure "at the end of the year." Although it fixed consumer and producer prices for 13 major agricultural products, it did allow other food prices to float. The fixed prices, however, covered the bulk of consumer food purchases, so that the impact of such a price float appears minimal.

According to Bulgarian observers the government rescinded the general price float because it feared not only repercussions at the ballot box in June but also considerable inflation. Although estimates of the monetary overhang varied enormously, the fact that the government had been running a serious deficit for several years gave grounds for such pessimism. It is noteworthy that the Union of Democratic Forces, which originally stressed the necessity of a price shock, began to tone down such calls more than a month before the June election when it became apparent to them that they were losing votes.

Although serious discussions of price reform had actually begun in 1988 and included consideration of combining such changes with a transition to a VAT type of tax scheme, during my visit to Bulgaria I was unable to ascertain exactly what type of price reform the government was planning for the future, the speed at which it would proceed, or the sectors it would cover. Although all major parties to the election professed support for an ultimate introduction of a market system, none seemed willing to discuss specific proposals of how this would be accomplished, at least during the pre-election period.

d. Hungary: A minor price shock had occurred in Hungary before the election. The consumer price index had already jumped about 30 percent in the first three months of 1990 as a result of the freeing of most retail and producer prices in agriculture (several important commodities still have either fixed prices or ceiling prices), as well as raising the prices of agricultural inputs. During the election campaign the Democratic Forum claimed that the economic problems of Hungary were short-term so that a big bang was not necessary, while the Free Democrats argued that the economic problems were structural and long term so that a major price shock
would be crucial for economic revitalization. Many analysts in Hungary have attributed the victory of the Democratic Forum over the Free Democrats because the former reassured the population, while the latter scared them. Although such an interpretation is controversial, it does not seem likely that at the present time the Hungarian population is ready for a big bang. The plans of the new government toward price reform have not been announced; given the current government budget deficit, this macro-economic source of inflation must also be resolved along with the price problem.

e. Czechoslovakia: In early 1989 a reform of producer prices had been promulgated, which, with some notable exceptions (especially agriculture), brought these prices more in alignment with costs. This has simplified further price changes. Changes in consumer prices will occur in 1990; the government plan, endorsed by the Civic Forum, foresees selected retail and wholesale price increases in food, transportation, building materials, and other product groups so that most important retail subsidies are totally eliminated by the end of the year. The food price increase, however, will also be completely compensated by increasing wages and salaries of each worker by 140 koruny a month.

The transition to a market economy is not completely clear. Although all major parties declared their ultimate goal to be a market economy, they were quite vague about how this would be achieved. According to the current government plan, on January 1, 1991 when major prices will be free of subsidies and, it is assumed, close to equilibrium (there is relatively little queueing for goods), most prices will be allowed to float. Up to now, however, the government has been undecided about the exchange rate and whether to permit a devaluation at the time of the price release or only to slowly liberalize; a recent cabinet vote on the issue resulted in a rough tie. Another unresolved issue concerns subsidy policies during the transition to the market. Except for the compensation for the food price increase, I also could not receive exact information on wage policies that will be pursued when price controls are abandoned. Some evidence exists that the monetary overhang in Czechoslovakia is not very great; if this is true, then the transition to market price should not be accompanied by as great a shock as in Poland, where this was a serious problem.

f. Romania. The Romanians have allowed prices of agricultural products sold privately, as well as products of privately owned small enterprises and products of joint ventures to float. In the near future they plan to allow products in relatively competitive industries to float and to establish ceiling prices for most other products which will gradually be eliminated in future years, so that only prices for raw materials, fuels, and "strategic" products will remained fixed. At the same time they have taken steps to devalue the currency, to unify the multiple exchange rates, and to take steps toward making the currency convertible. The timing of these measures is not, however, known.

2. Tax and Subsidy Policies

Prices are, of course, considerably influenced by the tax and subsidy system. The four countries I visited are at quite different stages of development with regard to these policies.

East Germany is rapidly moving toward a tax system that is similar to that existing in West Germany; the process is being aided by West German finance technicians working in the East German Ministry of Finance. In the last few years Hungary has carried out a tax reform based on the West European model with a value-added tax serving as a major revenue source, so that important changes in the tax structure are not foreseen in the near future. In Czechoslovakia, the government will carry out a tax reform at the same time as the price reform to unify the turnover tax and to make the company taxes more appropriate to a market economy. This reform was being
prepared last year before the political changes. In the mid 1990s it is planned that a totally new tax system based on the West European model will be introduced. In Bulgaria, at least before the election, there was little public discussion on changes in the tax system, although ideas about a value-added tax have been floated for several years.

Subsidy policies are a much more controversial issue. Some proponents of the big bang have proposed a quick elimination of all major subsidies. Those fearing political unrest have proposed various schemes distinguishing industries which will be competitive if transitional subsidies are granted from those industries which are not salvageable under any conditions. Moreover, according to some of these proposals, subsidies must be explicitly requested and subjected to ministerial review; moreover, these subsidies would automatically decrease in amount over a five year period and could not be renewed except under special circumstances. In none of the countries was the final shape of the subsidy program clear at the time of my visit.

3. Some Special Problems of Agricultural Prices

In all four countries the government has expressed its desire to reduce agricultural subsidies. A quantitative appraisal raises problems because detailed data on the various types of subsidies are now lacking; the major subsidies include those given directly to the farm, those given to food processors to bridge the differences between the low retail prices and higher producer prices ("negative turnover taxes") and those given for inputs and credits to agriculture (these data are often lacking).

One useful statistic is the ratio of direct subsidies (both to the farms and to the food processors) to total net material product in agriculture and forestry plus direct subsidies. For the late 1980s some very rough comparisons can be made: This ratio amounted to about 25 percent in Bulgaria, 29 percent in Poland, 34 percent in Hungary, 53 percent in East Germany and 62 percent in Czechoslovakia. If subsidies for agricultural inputs are taken into account and the ratio recalculated, the ratio would rise in Poland from 29 to about 34 percent; and in East Germany, from about 53 to 56 percent. In Czechoslovakia, opinions differed about the degree of subsidization (or taxes) on agricultural inputs and I could not find any data on the problem.

Of course, measuring subsidies alone is only one aspect of price distortions. As a percentage of total subsidies, taxes flowing out of agriculture amounted, in East Germany, to about 40 percent; in Czechoslovakia, about 50 percent; and in Hungary, about 100 percent.

Although such data reveal important price distortions, they are less helpful in determining the final level of agricultural prices when subsidies are removed, taxes rationalized, and price controls are ended. Such a calculation is important to determine how the relative prices between agricultural and other sectors will change and whether the higher agricultural incomes in Czechoslovakia (where farm workers average more salary than industrial workers) and East Germany will continue. Such a calculation is not a problem for East Germany, where the prices will approximate those of West Germany; and it is estimated that without farm subsidies, farm incomes will fall and about one third of all farms will go bankrupt. For other countries such as Czechoslovakia, the farms barely break even in their food production, even with the enormous subsidies, so that the matter is of considerable concern and the calculation is more difficult to make.

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 conditions, so that the impact of an elimination of price con-
trols for food might be different, so that it is 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.

The problem of determining future farm incomes and the changes in the terms of trade between agriculture and other sectors really requires the solution of a general equilibrium problem, a problem further complicated by the necessity of taking the new tax and subsidy policies into account. 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).

For clarity on this problem it is necessary to wait until the end of this year, when the results of the first year of the Polish and Hungarian agricultural changes become known. Current estimates are hazardous but, for what it is worth, farm chairmen 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.

C. REORGANIZATION OF THE ECONOMIC ENVIRONMENT OF THE FARM

For a competitive agricultural sector to emerge, it is necessary for farm to obtain agricultural inputs and other services from competing suppliers and to be able to sell their outputs to competing buyers, i.e., to face a competitive economic environment. In most East European nations, the buyers of the produce have been monopsonistic state agencies and the suppliers of inputs have either been the farms themselves or monopolistic sellers. The necessity of a competitive economic environment is a commonplace in the West, but does not seem well understood by many policy makers, especially in Bulgaria and Czechoslovakia.

A fully marketized agriculture also requires, of course, a wide variety of other institutions and changes. These include not only product standards, packaging regulations, a system of contract enforcement, publication of price information, an exchanges for staples, competing sources of credit, and so forth, but also a change in attitudes and values. In Bulgaria, for instance, a public opinion poll carried out early in 1990 revealed that 64 percent of the respondents agreed with the statement that maximum incomes should be no more than three times the minimum income, an attitude hardly congruent with a free enterprise economy. Other types of social infrastructure such as farm youth organizations or social agencies for agriculture are also not in place in any of the four countries and have received relatively little discussion.

Each of the four countries I visited is approaching the problem of creating a competitive economic environment for the farms in a different manner, depending upon their initial conditions. East Germany and Hungary appear to be solving the problem most expeditiously.

1. East Germany: The creation of a competitive environment is emerging rapidly because of
the peculiar organization of the agricultural sector during the previous years. Each collective or state farm is a member or holds an ownership interest in a number of inter-farm enterprises. Some of these enterprises represent joint production efforts, e.g., fattening of livestock; others provide particular services to farms such as sale of fertilizers and pesticides, construction, or storage; and still others are engaged in early forms of food processing. In the months following the political changes 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. West German, Dutch, and Danish companies supplying agricultural inputs or purchasing agricultural outputs are also entering the market so that further competition is provided. Other institutions are springing up to supply credit, technical aid, market research, training and other special services.

2. **Hungary**: The government has been trying to stimulate a competitive economic environment in agriculture for the last two decades in two different ways. (a) They have encouraged the growth of technical operating production systems (TOPS), where one farm sells an economic-technology package for a particular crop to another. Such a package includes not only information on new technologies, but also inputs, equipment, seeds, training of workers, and sometimes marketing services. Since for major crops there are competing TOPS, any individual farm can purchase inputs either from these or from state suppliers of inputs. (b) The government has also encouraged farms to build their own food processing plants so that a farm can process the produce by itself, or sell its produce either to a state company or to another farm for processing. Of course, such an institutional environment is oriented primarily toward large farms. Individual farmers have little choice from whom they purchase their inputs; and their marketing decisions 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 have been fixed, competition revolves 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.

3. **Czechoslovakia**: The sellers of inputs and buyers or output have primarily been monopolistic state-owned commercial units operating under various ministries; interfarm enterprises were much less frequent than in East Germany. The current approach of the new government is 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. a) The establishment will have little incentive to separate from the larger enterprise, especially if its participation in the enterprise allows them to obtain their share of the monopoly profits by maintaining high prices for selling inputs or low prices for buying agricultural outputs. b) 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 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 vertically 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). Some have also integrated vertically backwards (e.g., pelletizing fertilizers or providing breeding services) or are trying to make plans in this direction.

Bulgaria: At the present time Bulgaria has made the least progress in creating a competitive economic environment in agriculture. In the 1980s Bulgarian farms (called agro-industrial complexes) were the largest in Europe; for instance, one which I visited formerly had over 9000 workers. These farms supplied many of their own services and, as the farms were broken up last year, such 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 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 farms were very dissatisfied with the low prices at which they were forced to sell their produce to the monopsonistic state purchasing agencies and 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 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.

D. REORGANIZATION AND REFORM OF FARM MANAGEMENT

In Bulgaria, Czechoslovakia, and East Germany, formal and informal governmental regulation and party resolutions have played an important role in determining the organization and the management of the farms. All over East Europe farms were hastily amalgamated into unmanageable units. Furthermore, 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 director was often overruled; in other nations such as Czechoslovakia, East Germany and Hungary, such daily party guidance was less important or minor.

In the four nations I visited, the governmental role in organizational matters is much reduced and the party role has now disappeared. The farms have much greater decision-making autonomy and can organize themselves and their management procedures in the most appropriate ways. In these four countries farm directors also feel the necessity of reorienting farm activities toward the emerging market, and are responding in four quite different ways: by changing the size of the farm; by changing their management techniques; and by diversifying the farm's economic activities.

1. Changes in the Size of Farms

It is difficult to specify the optimal size of farms in East Europe because this depends so
much on local conditions. The studies on this problem which I was able to see usually approached the problem from a technocratic, rather than an economic point of view. Those studies focusing on costs or productivity had, of course, to accept the distorted price systems and the supply system by which very large farms were often able to obtain inputs more easily than small farms.

Nevertheless, many farms in East Europe have more than several thousand hectares and 500 workers; for most crops, this undoubtedly exceeds the optimal scale. 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.

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 had been carried out by different farms. Currently, these farms are combining and then, in many cases, are being divided so that one farm corresponds to 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. Given the urgency of responding quickly to the challenge of the introduction of the DM on July 2, this reorganization process is sometimes rather brutal, with farm chairmen being voted out of office, mini-revolutions on the farm as it were.

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 in the 18th 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 both monopolistic input sellers and monopsonistic purchasers of their produce. 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. In East Germany, where a competitive economic infrastructure in agriculture is likely to emerge, the reduction of farm size
makes considerable economic sense.

2. Changes in Farm Management

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 are not currently a problem, at least as long as the government maintains price controls; of course, the situation becomes more complicated when such controls are abolished. One collective farm manager explained to me 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). 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 had been his dream for a quarter of a century but had been prevented in past years by the Ministry.19

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. Chayannov 70 years ago in the discussions in the USSR about the future of Soviet agriculture (Solomon, 1977; Cox, 1986). The Hungarians seem to place little emphasis on the leasing of land, which is the current Soviet approach, except where 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, indeed, are discussing various methods of taxing the land returned to the previous owners so as to minimize absentee landlordship and land leasing in the future when land is returned to the previous owners.

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.

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 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; and in this regard, it is useful to contrast the operation of greenhouses producing cut flowers in three countries, for they illustrated different philosophies of management and compensation.

a. An Adam Smith Greenhouse in Hungary. One greenhouse close to Budapest gives each worker a certain amount of space for planting; supplies fertilizer, pesticides, and other inputs; allows the worker to select the particular flowers to be grown; and pays him with a certain percent of gross sales as his salary, transferring the rest of the profits to the collective farm. The collective farm varies the percent of receipts given to the worker so that the space requested by farm workers in the greenhouse space is equal to the amount of space available. In this sharecropping arrangement the farm bears the risk of the cost of the inputs and the farm and the worker share the market risks. The contract with the workers is such as to encourage them to study carefully the Budapest flower market in order to select those plants yielding the highest returns both to them and the farm.

b. A Frederick Taylor Greenhouse in Bulgaria. A greenhouse close to Sofia produces roses and carnations and, up to now, has had a monopoly of these products for sale in Sofia. Now flower prices are floating. The greenhouse supplies each worker with one tenth of a hectare of land, fertilizer and other inputs, as well as seedlings. The workers have no choice in what they plant, but receive a certain amount of money for each flower of a given quality. Such a piece rate arrangement places all of the market risks on the greenhouse which shares its profits (in a manner not clear to me) with the collective farm of which it was a "daughter enterprise." The managers of the greenhouse, I should add, were unable to explain to me why they did not change their mix of roses and carnations in order to maximize their profits, which suggested that they are not yet prepared to function in the newly opened free market for cut flowers in Bulgaria.

c. A Josef Stalin Greenhouse in Czechoslovakia. A greenhouse in Prague, which is part of a larger city-owned enterprise servicing all florists and parks in that city, receives a detailed plan every year specifying how many of each of 50 flowers should be produced and in what month they must be delivered to the parent enterprise. Workers are paid on an hourly basis and all profits are sent back to the center which, for this highly profitable operation, has invested almost nothing in the greenhouse in the last 20 years. Although the manager expressed great interest to me in leasing the greenhouse and going into business for himself, he said that he would not make application until three conditions could be met: i) that he be able to obtain agricultural inputs, pots, and glass in a simple fashion; ii) that he be able to set wages and working conditions of his workers in a manner he saw appropriate; iii) that he be able to deal directly with the florists so that they would receive his flowers on the same day they were cut, rather than three days later which has been the current procedure for the last decade or so.21 Such a competitive environment conditions is, of course, essential for the commercial success of the operation.

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.
3. Diversification of Farm Activities

Diversification can take 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 economies of scale, rather than relying on an uncertain market either to obtain such inputs or to sell such inputs to other farms.

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. 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. It is now in the process of arranging to buy used cars in Hamburg, repairing them in their tractor work shop, and reselling them to East Germans. It is also preparing to supply transportation and taxi services with its excess vehicles. The same farm had also based all of its plans on prices which it collected in West German prices. Unfortunately, the degree to which such a response is now taking place is difficult to determine since many farms are not implementing such plans until after the East German price reform takes place.

E. 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.

In 1990 neither Bulgarian nor East German farms have had to fulfill a state plan. In Czechoslovakia, the farms received such plans only for grains and meat; and for 1991 these plans will also be scrapped.

At the present time 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 such plans 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 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.

F. CONCLUDING REMARKS

To achieve their goal of a market economy, the different countries will have to solve a
series of other economic problems as well. I have not discussed the special economic problems facing the individual countries, e.g., the foreign debt problems of Bulgaria and Hungary; the budgetary deficit and hidden inflation problems of Bulgaria and Hungary; the crumbling infrastructure in all of these countries; the problems of reunification in East Germany; the ecological problems which are serious in all but Hungary; the provision to private farmers of small-scale agricultural equipment, which is sorely lacking in all countries; and so forth. Rather, I have focused almost exclusively on institutional changes, which was the focus of my trip.

A market is about to emerge in the agricultural sector in East and Central Europe. In the spring and summer of 1990, the most important steps were the creation of the proper legal environment and the structuring of property relations for the functioning of market farming. In East Germany the process was most speedy because of the rapid copying of West German laws and institutions, an advantage the other countries did not have. In most countries organizations on the national level were being established to serve as political pressure groups for rural interests; or to supply legal help, technical aid, and marketing advice to the farms. Agricultural price reforms were either carried out (Hungary and East Germany) or in the planning stage (Czechoslovakia) or being discussed (Bulgaria). At a micro level many serious problems about property ownership have not yet been resolved, and after the legislation is finally passed, considerable uncertainties are bound to exist for some time. As indicated above, the size distribution of farms, the industrial organization of the suppliers of agricultural inputs and the buyers of agricultural outputs, and the internal management procedures of the farms are undergoing rapid change.

Prediction of the future is hazardous because the new governments of Central and East Europe are fragile and their new leaders are inexperienced. 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. It took 15 years to set the present organization of agriculture in place in the region; the required time to dismantle the system is not yet known.
BIBLIOGRAPHY


FOOTNOTES

1. In East Germany the election was held on March 18, and the new cabinet was appointed only one week before I arrived. In Hungary the elections of March 25 and April 8 had not yielded a cabinet until a few days before I left. In Czechoslovakia and Bulgaria the elections were held respectively on June 8 and June 10, i.e., after my trip to these two countries had ended.

2. Some bibliographical references are appended at the end of this report. For Romania I have relied in part on a set of untitled working documents on the stages of the reform which were given to the Hoover Institution by a group of visiting Romanian economists.


4. This issue is more complicated than it appears because 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. Nevertheless, some West Germans have succeeded in getting such judgments reversed on grounds that they were forced to flee for political reasons. The question of what land transfers were "forced" is a difficult legal issue. 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).

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

6. In several countries I was told that the urban population is more interested in privatization of land than the rural population, in part because the former obtain compensation for the land in which they have rights without incurring the effort or the risks of actually farming the land.

7. 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.

8. I spoke with the Czechoslovak expert in charge of drawing up the plan for privatization of state assets, who was criticizing the Klaus plan and praising an alternative plan whereby a trustee would sell shares of the state-owned enterprises and farms to private groups (either to be paid immediately to the government, or else to be paid over a longer period so that the group could invest its own funds into the enterprise or farm in order to revive it). In the middle of his explanation he received a telephone call instructing him to combine the Klaus and the alternative plan and to present a combined plan within a week. Clearly the shape of the government program was rapidly evolving and can not be easily predicted.

9. In Bulgaria and East Germany my respondents were unaware of any bankruptcy laws at the current time which were applicable to cooperatives or state-owned enterprises. In Hungary, several respondents noted the looseness of such laws; and in Czechoslovakia several mentioned that such laws would have to be changed.
10. An interesting illustration of this is provided in a study of a Czech village where the anthropologist (Salzmann, 1983, p. 63) notes that farmers did not greatly protest when a large share of their private plots were replaced by a joint private plot which was conveniently plowed and harvested using mechanical equipment by the collective farm, which the individual farmers lacked and would have had to rent. Although he does not explain why the farmers simply didn't buy such equipment for their private plots, several reasons appear likely: Such equipment was not easily available; if available, facilities for servicing such machines were not accessible; and, in addition, they would have experienced considerable difficulties in obtaining spare parts, gasoline, and other inputs for the machines. In sum, the returns for such investments, given the risks of owning small-scale mechanical equipment were probably lower than the riskless returns for letting the collective farm plough the private plots.

11. For instance, during the television debate on economic matters between the various parties on June 3, only the Civic Forum (represented by the current Minister of Planning) pronounced itself in favor of a rapid move toward market prices, while representatives of the other parties did not address the issue. Only the representative of the Friends of Beer Party declared himself in favor of opening up the economy so that domestic firms (of course, he specified only the breweries) would be stimulated to produce better products by the force of foreign competition; such an approach would, presumably bring internal prices in Czechoslovakia close to world market prices.

12. Although shortages exist, one does not see evidence of queuing in the major cities. Moreover, although food price increases were announced for July, the grocery shops have not been stripped as in the USSR; and, when I was in Prague in early June, the only major foodstuff in short supply was sugar (an ingredient needed for the upcoming summer canning of fruit).

13. Data on net material production in agriculture for the four countries comes from U.N. (1989), extrapolated from 1986 to later years by information from the national statistical yearbook and other sources. For each country, the data refer only to one year. For Bulgaria data on subsidies in 1988 come from interviews. For Czechoslovakia I relied on subsidy information for 1989 from the budget given to me by František Záhlava and tax data supplied by the Ministry of Agriculture and Nutrition. For East Germany the 1987 data come from German Democratic Republic, Zentralverwaltung für Statistik (1988), pp. 264 ff; and for Poland, the 1986 data come from World Bank (1989). For Hungary I started with 1986 data on subsidies as a percentage of agriculture and food processing from Varga (1990), calculated the absolute amounts using net material product data from U.N. (1989), and then recalculated the ratios in terms of agricultural production alone. Since all of these data are rough estimates, only their orders of magnitude are important.

14. This information was provided by Andrei Reichev, the director of a public opinion research group operated by the State Council.

15. One farm director enthusiastically told me of his plans to export eco-chickens (ecologically raised chickens) to West Germans. 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.

16. Several Czech specialists mentioned to me a study showing that internal transportation costs rose 1.3 percent for every 1.0 percent increase in farm size. One farm I visited was 31 kilometers (19 miles) long from one end to another and operated its own bus service to transport workers from
one work site to another.

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

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

19. 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.

20. The degree of centralization is not typical for most farms in Czechoslovakia, which have received relatively few plan indicators in the since the early 1980s.

21. When I expressed surprise at this delay, I was shown a telephone book in which several column inches were devoted to the telephone numbers of the 30 or so greenhouses comprising the enterprise, while the rest of the page was taken up with the telephone numbers of personnel of the central organization that supervised these greenhouses.

22. Czechoslovakia's most famous agricultural cooperative, Slušovice, produces computers, has a textile mill, a race track, and many other non-agricultural activities (Cuba 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, 1990). 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.

23. A Yugoslav economist informed me that although the collectivization drive in his country lasted only 5 years and never included more than 30 percent of the land before decollectivization occurred, law suits about ownership rights resulting from such changes lasted for 15 years thereafter.