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Decollectivization and the Agricultural Transition in Eastern and Central Europe

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An agricultural transition when demand is constrained is more difficult to manage than when the fruits of institutional change and productivity growth find ready outlets. Any progress on the demand side — by increasing domestic demand or improving performance in export markets — will give a major impetus to the institutional changes needed on the supply side.

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The agricultural transition in Eastern and Central Europe is about a year and a half old, if we date its start from the Polish big bang of January 1990. Like many a recalcitrant toddler, it refuses to behave as expected.

The agricultural transition is an essential part of stabilization and adjustment in Eastern and Central Europe because agricultural sectors are large and food is important. But the transition is not the storybook variety. Agricultural producers cannot spin collectivized straw into market-oriented gold and deliver it in the morning to the minister of finance. The supply response that many within and outside the region expected to emerge early and expeditiously is complicated by the removal of consumer subsidies and constrained export demand.

In an atmosphere of acute economic uncertainty and declining farm incomes, the distribution of agricultural land is proceeding. Brooks traces the liberalization of food prices and the distribution of agricultural land to date. A detailed exposition of the general framework for the agricultural transition describes the context in which price liberalization and the distribution of land can be understood. Changes in land tenure and use in Eastern and Central Europe in 1991 cannot be properly understood out of context. The essence of the agricultural transition is the state's withdrawal from its traditional role as residual claimant of (positive and negative) rents for the use of agricultural resources. This role will pass in stages to owners of land. A discussion of the new land laws and distribution of land would be incomprehensible without attention to conditions that shape the value of land and the income that owners can earn from it.

The countries of Eastern and Central Europe operated under a common ideology in the past, but within bounds set by that ideology they exhibited significant differences in agricultural policy and farm organization. To draw lessons that transcend those particularities, Brooks creates a stylized country with the general features of each and the uniqueness of none. She takes that stylized country though an agricultural transition, indicating how the initial conditions affect the path of transition.

She concludes that an agricultural transition when demand is constrained is more difficult to manage than one in which the fruits of institutional change and productivity growth find ready outlets. Moreover, although price movements are not yet clear, it appears that removing subsidies on feed, credit, fertilizer, machinery, and energy will move the terms of trade against agriculture — particularly against the large livestock sector. The need to increase productivity will thus be even greater than in the past.

Productivity growth will be difficult to achieve if demand is constrained. Any progress on the demand side — by increasing domestic demand or improving performance in export markets — will thus give a major impetus to the institutional changes needed on the supply side.

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DECOLLECTIVIZATION AND THE AGRICULTURAL TRANSITION IN EAST CENTRAL EUROPE

The agricultural transition is approximately a year and a half old, if we date its start from the Polish big bang of January, 1990. Like many a recalcitrant toddler, it refuses to behave as expected.

A properly behaved agricultural transition is a cornerstone of the framework of stabilization and structural adjustment in East/Central Europe. The agricultural "supply response" should be an early bright spot in an otherwise bleak picture of slow and costly industrial restructuring and deteriorating real incomes. Man may not live by bread alone, but more bread is very welcome when there is less of so much else. The supply response is to result from better incentives for producers of food, achieved largely by giving them ownership of land. The distribution of agricultural land is viewed as simple compared to the complexity of industrial privatization and restructuring. Once rural people have possession of their land, they are to welcome their unemployed relatives dismissed from defunct factories.

Agriculture is thus expected to defy the laws of gravity that pull down production in other sectors. It is to absorb unemployment while contributing to an improved trade balance. These feats are to be accomplished largely on the strength of the land reform, and the improved efficiency that new land ownership brings. The foreign community assists this process by encouraging the land reform, lending to the "emerging private sector," providing newly private farmers appropriate machinery and access to better processing, and offering temporary food aid.

This is the agricultural transition that many people expect, but it is not the one that we have. Rural people produce less, rather than more food, and have increasing difficulty selling their products. The land reform does not produce many individual private farmers, because few individual farmers can survive the harsh economic realities of the early transition. Consumers would like to have more food, but cannot afford to buy what is available. Donated food aid sits in warehouses unless it is priced significantly lower than international trading prices, raising uncomtortable questions of fair trade practices.

These are not the attributes of a conventionally well behaved transition, but they are fully consistent with the economic logic underlying the process. The supply response needed throughout East/Central European agriculture is a contraction coupled with restructuring to increase efficiency. Both within and outside the country the need for greater efficiency is recognized, and the resources of the donor community are targeted toward this goal. Recognition of the needed contraction has been slow to come, yet its logic is inescapable. Domestic average disposition of food in each of the countries has been close to that of Western Europe, although real incomes are much lower. Price liberalization raises the relative price of food and reduces domestic demand. Intraregional trade in food has collapsed, and access to world markets is poor. Traditional collectivized agriculture was enticed into capital intensive production practices by negative real interest rates. The combination of declining domestic demand, poor export prospects, positive real interest rates, and discriminatory partial price liberalization overwhelms any positive response that might come from land reform. The contraction is in progress, and in some places it is severe.

Throughout the region the agricultural transition has brought excess supply for food at the current price and income structure. The domestic policy community has had so little past experience with excess supply that the problem is not properly recognized;

how can there be excess supply when production is falling, producers want to sell, and consumers want to buy? Foreign observers looking for a repeat of China's experience are similarly blinkered. Attention focuses on subsidiary problems; e.g., incomplete price liberalization, continued monopoly in processing and marketing, and closed export markets.

These exacerbate, but do not create the fundamental problem. Centrally planned economies channeled an inordinate proportion of resources into food production. In a perverse economic triumph they managed, despite inefficiency, to deliver a better diet than consumers could afford in the long run, or would choose to buy at unsubsidized prices.

In the medium and longer term domestic demand for food will recover along with the economy more generally, but economic growth will have to be quite substantial before domestic consumers buy the amount of food they formerly bought at subsidized prices. If the Soviet economy turns around, the USSR can resume its position as a major buyer of East/Central European food. Both the Middle East and Western Europe are potential customers for East/Central European food, depending on economic growth and trade restrictions. Significant progress in libralization of agricultural trade and reduction of policy-induced surpluses in world trade would improve export markets for East/Central European products. With favorable developments in export markets the traditional supply response; i.e., more food produced more efficiently, would be good for the sector and the economies as a whole. At present, however, both domestic and export markets are depressed, and will remain so throughout much of the transition.

The contraction is already underway, particularly in the livestock sector, and it is very painful for rural people, especially the fully exposed newly private farmers.

Prior to price liberalization, the lack of economic infrastructure supportive of small scale private farming was enough to keep all but a few producers within the cooperative (Brooks 1990). Now that the contraction has begun, life as an independent producer is even grimmer. Private producers report that they cannot sell their animals because with declining demand processors can get adequate quantities from the cooperatives. As interest rates rise demand for agricultural credit has fallen. This factual statement inadequately conveys agricultural producers' astonishment and apprehension as they observe the impact of decontrolled interest rates on the capital intensive farming practices they were encouraged to adopt in the past. The cooperatives have inherited capital assets and a potential to grow their own animal feed, and are thus better able to wait out transitory spikes in nominal interest rates. Most private producers do not have that capacity.

In the current economic stress, an agricultural sector is emerging in the formerly collectivized countries that is private in name, but largely collective in fact. Genuine private producers will be squeezed out by the economically stronger cooperatives. Households will receive their land rights, and sign them over to managers of voluntary "private" producers' cooperatives. These cooperatives will be private in the sense that they will be required to pay dividends to their owners and will operate without automatic state subsidy. They will nonetheless have the conflicts between collective and individual incentives that have impeded the competitiveness and long term economic viability of agricultural producer cooperatives throughout the world.

These cooperatives, moreover, will not represent a clear enough break with the institutions of the past to bring new behavior. The problem is not primarily that retrograde managers will cling to their powers and thwart the independence of members;

many managers are skilled and conscientious and welcome the new order. The greater problem is that new managers will end up acting much like the old; assigning workers, counting hours, and cross-subsidizing activities. The new cooperatives will resemble collective farms of East/Central Europe in the early period after collectivization, when they were relatively small, still paid rent for land, and had a greater degree of managerial autonomy and financial independence than they retained later.

These may be the necessary institutions of the transition; forced decollectivization should not be pushed on rural people. The new producers' cooperatives are surely not the foundation of a competitive market oriented agriculture in the future. As new producers' cooperatives appear through the land distribution, many observers both within and outside the countries mistake them for the private voluntary marketing cooperatives that have served agriculture well in many economic settings. As long as the new cooperatives have major activities in agricultural production, they should not be grouped with that loose agglomeration of firms called "the emerging private sector." They should be sympathetically recognized for what they are, "the receding collective sector." Their divestiture of collective production and transformation into marketing and service cooperatives should be assisted.

Many rural households in East/Central Europe throughout the socialist era retained formal property rights to their land, even though these rights were meaningless. Reconstructing and redistributing those rights at great cost will be a tragic-comic exercise in futility if rational producers have little choice but voluntarily to sign them over to the cooperatives again, and those cooperatives do not speedily deconstruct into genuinely private farms. One is reminded of the vodka trucks that used to follow the paymaster in Soviet factory towns to collect and recycle the cash on payday. If the international community fails clearly to understand the new cooperatives and their role in the transition, donated and borrowed dollars will fuel the recycling of property rights.

It is in this atmosphere of acute economic uncertainty and declining farm incomes that the distribution of agricultural land is proceeding. Romania leads with swift implementation of a land law passed in February, 1991. Many owners expect to take possession of their land after the harvest in fall of 1991, although few will thereafter farm individually. The Bulgarian land law was also passed in February of 1991, but implementation has been delayed and the approach taken implies a more lengthy process. Land laws in Hungary and Czechoslovakia were passed in April and May, respectively, of 1991.

The following paragraphs trace the progress of liberalization of food prices and distribution of agricultural land to date. A detailed exposition of the general framework for the agricultural transition describes the context in which price liberalization and the distribution of land can be understood. Many readers would undoubtedly prefer to go directly to the main issues without the more general view. Land is, after all, the central agricultural resource, and one should be able to discuss changes in land tenure and in price policy without reviewing the agricultural transition in its entirety.

In 1991 in East/Central Europe, however, changes in land tenure and use cannot be properly understood out of context. The essence of the agricultural transition is the state's withdrawal from its traditional role as residual claimant of (positive and negative) rents to use of agricultural resources. That role will pass in stages to owners of land, where it ordinarily resides in a market economy. A discussion of the new land laws and distribution of land would be incomprehensible without attention to conditions that shape the value of land and the income that owners can earn from it.

A FRAMEWORK FOR THE AGRICULTURAL TRANSITION[1]

Initial Conditions at the Outset of the Transition

The countries of Eastern and Central Europe comprise a large and diverse agricultural region even if the Soviet Union is excluded. In the northern tier, in Poland, the Czech and Slovak Federal Republic, and the former GDR grains (except for maize), roots, and specialty crops dominate the field crops, and imports augment domestic production of feed to sustain a large livestock industry. In Hungary, Romania, and northern Yugoslavia moisture and warmth are adequate for maize and oilseeds, and mixed grain/livestock farming predominates. Farther south in Yugoslavia and Bulgaria irrigation becomes more important, as do viticulture, orchards, and tobacco production. If the Soviet Union is included, the agroclimatic range of Eastern and Central Europe is replicated, and augmented by the largest area of irrigated agriculture in the world, in Soviet Central Asia.

The countries of the region operated under a common ideology in the past, but within bounds set by that ideology, exhibited significant differences in agricultural policy and farm organization. The greatest difference is between those that collectivized (GDR, Czechoslovakia, Hungary, Romania, Bulgaria, Albania, the USSR) and those that did not (Poland, Yugoslavia). Each faces a unique set of tasks and constraints during the transition. In order to draw lessons that transcend the particularities of the individual countries, we create in the following paragraphs a stylized country with the general features of each, but the particular uniqueness of none. We take the stylized country

[1] This section draws on material in Brooks et al., JEP, 1991.

through an agricultural transition, indicating how the initial conditions affect the path of transition.

Agricultural production in the stylized country was collectivized. Approximately one third of farms were state farms, and two thirds were collective farms (cooperatives), but there was in practice little difference between the two. State farms specialized in agricultural production. On these farms, workers were salaried employees of the state, and the state owned all farm assets, including much of the land. Collective farms were also large, and had diversified processing and sideline activities in addition to agricultural production. Many members of collective farms in theory retained title to collectively managed land, but ownership rights in the past were so attenuated as to be meaningless. For various reasons, some private owners deeded their land to the collective. Lands managed by the collective farms were thus owned by individuals and by the collective, but rarely by the state. The exception to this pattern is the USSR, where all land was nationalized. On both state and collective farms, workers had a high degree of job and wage security, little responsibility for the financial performance of the farm, and little incentive to improve productivity. Both farms were protected from bankruptcy by a soft budget constraint.

Farm employees managed a household plot of about one half hectare in addition to their work on the large farm. In this small area they used inputs provided or purchased from the large farm plus family labor to produce food for their own use or for the market. The structure of production was thus dual, with very large units of 2,000 and 3,000 hectares plus many mini-farms of one half hectare. The private and socialist sectors were intimately linked in one agricultural system, and interacted symbiotically. Each would have faced significantly higher costs of production if forced to function independently of the other. The large farms contracted out some of the more labor intensive tasks, such as caring for very young animals, to the mini-farms. Private producers, in turn, depended on the large farms for inputs and services not available elsewhere since markets for them did not exist.

This dual structure and the constraints on private landholding that produced it had the greatest impact on the livestock sector. The highest value that many households could receive from their tiny plots was in livestock products, but they could not grow feed on a half hectare. The large farms rarely had the flexibility or incentive to make high quality pasture available for private use, and the livestock sector, both collective and private, became dependent on concentrate feed. Private animals tethered for grazing on highway rights-of-way and even median strips in full view of poorly tended collective pastures provided vivid testimony of the constraints on management of the livestock sector.

Agriculture employed 25 percent of the work force, and produced 20 percent of GNP. In developed market economies, agriculture is capital intensive and the share of agriculture in the labor force is smaller than its contribution to GNP. In our stylized country, capital investment in agricultural production has also been substantial. This investment was in part necessitated by the political decision to replace small scale private agriculture by large scale collective agriculture, with the resulting need for land reclamation, large buildings, and large machines. In part the investment implemented the pursuit of higher output and increased domestic self sufficiency in food. Rarely was investment guided by calculus of economic returns.

As a consequence the high rates of investment did not release as much labor as in market economies. Accumulated investment per unit land was quite high, although high rates of depreciation of buildings and machinery reduced the value of the physical capital stock. The retained labor force in agriculture was higher still, and ratios of capital per worker were lower than in Western Europe and North America where the natural endowment resembles that of East/Central Europe.

In this curious defiance of conventional economic measures, East/Central European agriculture was and is both capital and labor intensive. The point has important implications for investment policy during the transition. In countries that lag in restructuring state and collective farms (the USSR and perhaps Czechoslovakia) budgetary inertia buttressed by powerful agricultural lobbies can continue to channel large amounts of money into land reclamation, large buildings, and large machines of dubious long term value. If the new cooperatives of Hungary, Romania, and Bulgaria are mistaken for private firms and offered subsidized credit, the pattern of investment will continue. In debates about whether to subsidize agricultural credit or not, one often hears that agriculture has wasted so much money in the past that now it can fend for itself. Creation of a policy environment and financial institutions (e.g., full price liberalization, demonopolization of marketing, tax reform, and mobilization of rural savings) that allow agriculture to fend for itself is an essential task of the transition. It is not enough simply to cut agriculture out of the budget.

Poor incentives and relatively low capital stock per worker in the stylized economy reduced labor productivity. Severe price distortions complicate measurement of labor productivity and the contribution of agriculture to GNP, but it is likely that labor productivity was lower than in industry. Agricultural wages were in rough parity with those of other sectors. When earnings from private plots were taken into account, agricultural incomes exceeded those of other workers on average. High wages were sustained by regular increases in controlled purchase prices for agricultural products plus recurrent loans and grants to farms.8

Yields of grains and field crops were not as high as in Western Europe, where farmers receive the support of the Common Agricultural Policy, but they equaled yields of major commercial exporters in other parts of the world. Fertilizer use per hectare was lower than in Western Europe, but higher than in North America. Use of other agricultural chemicals was quite low, but poor storage and management practices resulted in environmental damage and health problems even at low levels of application. Technical productivity in the livestock sector was lower than in crops. Lags in breeding and protein deficient feed rations reduced productivity. Milk yields per cow lagged those of Western Europe by about one third. The institutional constraints of collectivized agriculture hit the livestock sector harder than the crop sector, and it is in livestock production that the most substantial adjustment will have to take place.

Use of labor, fertilizer, and feed grain was high per unit output, and agricultural costs of production were high and rising just prior to the beginning of the transition. With the drastic realignment of exchange rates at the outset of the transition, costs of production and farm purchase prices no longer look high by comparison with world trading prices. With the increased ability to compare domestic prices to world trading prices that a reasonable and unified exchange rate brings, it appears that agricultural producers are substantially discriminated against, since semi-controlled producer prices lag world prices. For example, most Romanian wheat will be purchased this season at $35 per ton at the market and interbank exchange rate of 200 lei to the dollar. (The official exchange rate is still 60 lei to the dollar.) Bulgarian producers are locked into a semi-controlled producer price structure based on seven leva to the dollar, while the official and market rate is between eighteen and twenty leva to the dollar.[2]

These costs and prices, however, still embody distortions in input prices, since fertilizer, energy, and machinery are not yet priced at world trading prices. Part of the distress of the early transition is caused by the more rapid approach of input prices to world levels and slower adjustment of producer prices. As the economies make their ways in fits and starts to a price structure more consistent with world trading prices, it appears that agricultural incomes will increase less than the general price level. This is not necessarily a manifestation of a textbook type of urban bias, although some of the instruments for restraining agricultural earnings, such as Bulgaria's ban on the export of some food products, are standard tools for the transfer of income from rural to urban people. Falling farm incomes now are a symptom of partial liberalization, but they also signal the needed longer term adjustment; more efficient production of products for which domestic and foreign demand exists under the new price structure.

Agroindustry was highly concentrated, and food processing, distribution, and input supply were managed by several large state monopolies. With pervasive excess demand for food, processors paid little regard for product definition and quality. Moreover, processing technology was outdated and technological constraints reduced the efficiency and quality of processing. Since retail prices were controlled at low levels, investment in better processing equipment could not be recovered on a commercial basis, and modernization of food processing was dependent on direct budgetary allocations. With the fiscal burden of the direct food subsidy rising, the agricultural sector did not

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[2] This paper reports on events up to June, 1991. Exchange rates and price policy are volatile.

compete successfully for additional budgetary funds to modernize processing. Moreover, food processing was considered light industry, and as such was not given high priority. The processing and retailing infrastructure inherited from the past is very primitive. The former long lines in meat stores were due only in part to excess demand at subsidized prices. Part of the wait was simply while the butcher took his axe to a carcass.

The stylized country was a middle income country, with per capita GNP of about $6,000 using the purchasing power parity methodology, and $2,500 using the exchange rate methodology. In recent years the country sustained aggregate consumption despite declining aggregate growth by borrowing heavily abroad. Agriculture's contribution to the growth in net foreign indebtedness derived from increased demand for imported feed grains, and diversion of food from export markets to (subsidized) domestic consumption.

Per capita consumption of food was comparable to countries with income levels considerably higher. Caloric consumption was the same as that in market economies with higher levels of income, and consumption of meat exceeded that in many more prosperous market economies. This consumption pattern was a result of food subsidies, particularly for livestock products. Retail food prices changed little in nominal terms for several decades, despite growth in nominal incomes. Real food prices (at official prices) thus declined. Since markets did not clear at these official prices, the actual prices that people paid were higher than official prices. Consumers' expectations about what they should be able to purchase, however, were formed on the basis of official prices.

The most highly subsidized food items were meat and dairy products, and official prices for these products were approximately half the cost of delivery. Subsidization of items with low income elasticities is often considered to benefit poorer people, but the most highly subsidized items in the stylized economy were those with high income elasticities. The food price subsidy delivered more benefits to the wealthier groups who consumed more of the most highly subsidized products, and fewer benefits to poorer people.

Each country camouflaged the growing gap between costs of consumption and production by passing the costs to the state through subsidies, and increasing imports or reducing exports of food. The increase in consumption of food and other goods that came with the post-Stalin thaw was one that the underlying productive economies could not deliver on a sustained basis. The degree of subsidization varied by country and its impact on the macroeconomy also varied, but in each case the burden of food subsidies was very high. Subsidized sausage for the relatively wealthy cut into budgetary funds available for investment in education, health care, physical infrastructure, and environmental protection.

The damage done by the food subsidies and more general price distortions transcended their very considerable contribution to destruction of macroeconomic balance. Those who emphasize the importance of "getting prices right" are often accused of a shallow understanding of the subtle institutional complexity of successful development. Yet in the centrally planned economies where the institutional apparatus should have muted the damage done by price distortions, the distortions were still tremendously destructive. Energy and raw materials were wasted, depleting non-renewable resources and degrading the environment. The wastage was built into the capital stock, making remedies even more costly. Distorted consumer prices were damaging even though quantity controls regulated the flow of consumer goods. The official prices, not implicit shadow prices, appear to be the ones that consumers used in evaluating the performance of the system. Perhaps ordinary citizens were the only ones who took overvalued official exchange rates seriously, and then wondered why, if they were so rich, they lived so poorly? Quantitative controls were not adequate to counter the impact of price distortions in the real economy.

The distortions were an economic component of a multi-dimensional disjunction between what actually was; i.e., what people experienced with their own lives, and what was publicly presented; i.e., the official line. The disjunction recurred in politics, culture, personal life, and scientific inquiry. The narrow economic cost of price distortions was large. The costs of the larger distortion, of which cheap energy and sausage lines were a small part, is even greater. This larger distortion; the attempt to override reality and resulting confusion about what is real, has been the central subject of the distinctive East/Central European literature, art, film, and music of dissent, and it remains an important component of the legacy. Economists are now forced to confront this distortion in the less aesthetically appealing medium of enterprise balance sheets and national accounts; we do not actually know the worth of a firm or a nation when we have no instruments for measurement. Those who emphasize the importance of "getting prices right" are, within the confines of our admittedly narrow discipline, simply arguing for telling the truth.

AGRICULTURE AND THE LARGER LEGACY: POLITICS, ECOLOGY, AND GENDER

The Politics of Dysfunctional Development

That politics and economic growth are linked is clear, yet the search for a formulaic prescription for the politics of successful development has not gone far (Ruttan, 1991). Casual observation shows authoritarian regimes with rapid economic growth and democratically elected governments with disastrous economic programs, plus all possible combinations. Lack of political democracy did not cause the economic program of Soviet style central planning to fail, but once it began to fail, authoritarianism and suppression of dissent delayed the day of reckoning, and hence increased the costs. A degree of public transparency about economic policy and protection of political pluralism and dissent would seem to be necessary checks on economic policy and institutions gone wrong.

Rights of expression and political association are defended now as basic human rights. Support for these rights could be bolstered by designating them basic instruments of economic development, for they are one safeguard against massive waste of world resources earmarked for development. If these rights are basic to the development process, then their protection could be made a condition for receipt of development assistance from the international community. It would not be appropriate for the international community to mandate a particular form of government, and including protection of rights of expression and association in the conditionality for assistance would be far from interference in domestic politics. The disastrous legacy of East and Central Europe and the USSR is not just a domestic problem for the people of the region. When the costs of undoing economic damage are to be shared by the world community, the community defends its best interest by empowering citizens who can warn of and perhaps slow the damage.

Had the rights of expression of rural people been protected, the sector might have been spared some of the more damaging campaigns. It would be naive to argue that protection of dissent is sufficient to secure good policy. It can nonetheless be very important for those who best know the likely impact of a policy to inform society more generally of the costs ahead.

The Environment

The degree of environmental damage in East/Central Europe and the USSR is not fully known, but it is clearly substantial. To clean the air, soil, and water of contaminants would be so costly that it cannot be done. Emissions will be reduced by raising the prices of formerly subsidized pollutants, such as energy and fertilizer, by using cleaner technology in new investments, and by adding some emissions control to existing plants.

Many environmental problems that affect agriculture originate outside the sector; e.g., soil contamination with industrial pollutants, and the impact of airborne particles on crop yields. Others originate in agriculture and affect both the sector and the economy more generally; overutilization of water for irrigation in arid areas, contamination of ground water with fertilizer and animal wastes, and degradation of soil quality by improper rotations and excessively heavy machinery. A full assessment of the degradation of agriculture's natural resource base has not yet been undertaken. It appears that anecdotal reports of compromised food safety due to environmental problems are exaggerated, but problems in some localities have been documented.

The ecology of Eastern Europe and the USSR is graphic evidence that market failure is not the only way to foul a nest. Theoretically, the state should have included the full social cost of environmental degradation in the planning process, since the state would ultimately have to clean up the residue. If the state, however, was unable to impose the full cost of a sausage upon the user, it is not surprising that the costs of environmental degradation were not internalized. Moreover, a centrist state must clean up the environment only if citizens are empowered to demand that it do so.

Women and Development

Equal opportunity for women and non-discrimination by sex were central to the official ideology of the socialist countries of East/Central Europe and the USSR. There has been some success in remedying traditional discrimination against women and many failures. Despite the official formal commitment to equal opportunity, structural characteristics of central planning made these societies particularly burdensome for women. The suppression of private household based economic activity is a clear case in point, and one particularly relevant for agriculture.

The suppression of the household sector and constraints on direct marketed activities between households hit women hardest and put them at a disadvantage in the formal labor market. Many women in poor countries and particularly in rural areas engage in household based petty manufacturing and trade in goods and services. When this sector is wiped out by regulations against private activity, women are forced into wage work where they earn little return to entrepreneurial talents. They must still buy food, clothing, and household services, but the costs of these items have been increased by the requirement that they originate in the formal sector and pass through state monopolies. Substitutes for household based child care are of lower quality for comparable cost, and even with large state investment in day care, the welfare of children declines when women are denied part time work and home based private day care. Since traditional family roles change with a lag, if at all, the high costs that suppression of the private household sector impose on family life fall most on women. Women's economic opportunities are constricted and their economic burdens increased when private activities between households are banned.

The wage structure on collective and state farms was highly discriminatory in practice. The highest wages were reserved for the "mechanizers," men who drove machines, and the bigger the machine the higher the wage. Women worked almost exclusively in livestock, manual field work, and clerical positions. Of these, the highest paying jobs were in livestock, but the work had long hours incompatible with caring well for young children, and was physically very taxing.

Rural women provided much of the labor for the household plot, and shared in the marketing of produce. Prices they received for food on the free market were increased by subsidies and excess demand for food in the state market. Women's activities in private production and sale of food constituted a very primitive level of entrepreneurship, however, and many activities that had high value added and high earnings were foreclosed to the household sector. The resurgence of the household as an economic unit in the countryside and the demise of the official wage structure for agricultural work is likely to have an important and beneficial impact on economic opportunities for women.

A counter concern has been raised by some observers of the early stages of increased private agriculture in the poorest and most backward parts of the region, particularly in Soviet Central Asia. There the fear is that girls will be kept home from school in order to work on larger private family holdings, and that women's obligations to cultivate larger fields will increase their already considerable domestic burdens. This could in fact result if collective farms continue to exist and serve as a conduit for subsidized wages to underemployed men so plentifully evident in tea shops throughout the working day. The particular problems of Soviet Central Asia, with its extreme resource constraint, high population density, and unique cultural tradition differ from those of the European countries.

The Transition

The agricultural sector on the eve of the transition is characterized by:

(a) Large inefficient farms with high input use (primarily fertilizer, labor, and feed)

(b) High levels of food consumption relative to market economies of comparable prosperity

(c) Subsidized food prices

(d) Excess demand for food at those prices

(e) Macroeconomic imbalance, including budget deficit and foreign debt

(f) Pervasive monopoly in food processing and distribution

The macroeconomic imbalance in the stylized country is substantial, and the transition is initiated by a program of stabilization (see Blanchard et al., 1990). Fiscal outlays are reduced, the money supply tightened, and the overvalued currency devalued.

The macroeconomic stabilization affects the agricultural sector in several ways. The food subsidy is the most visible target for significant fiscal savings. Although food is not the only subsidized item, it is the largest one that appears directly in the budget. Moreover, at about five percent of GNP it represents a significant chunk of the budget deficit. Retention of the food subsidy is inconsistent with macroeconomic stabilization, and the subsidy is removed. It is replaced by a program of partial direct income compensation.

Without the subsidy, meat prices approximately double, and food prices rise on average by 50 percent. Demand for food declines, but the fall in demand is moderated by the ability of wealthier consumers to draw savings out of the monetary overhang and maintain expenditures on food. All consumers, both rich and poor, spend more on food. The impact on other consumer goods depends critically on the magnitude and form of compensation. The price increase does not reduce caloric intake on average, but does induce shifts away from more expensive foods, particularly meat and cheese.

The price liberalization frees processors with market power to act like monopolists, and many respond by raising prices to consumers and pressuring producer prices. The price increase that accompanies liberalization is thus in part due to removal of subsidies, and in part due to the exercise of market power by those who have it.

The price liberalization does not raise prices that producers receive. In an open market economy, devaluation will raise agricultural producers' prices, since most food and fiber is tradeable. The stylized economy is not fully open yet, and transmission of changes in world prices and exchange rates is weak. Moreover, producer prices in the past exceeded retail prices by the amount of the subsidy. The increase in retail prices removes the wedge that formerly divided them from producer prices without appreciably affecting farm level prices. In a world of partial price liberalization, the formal freeing of retail food prices is sometimes accompanied by retention of controls at the wholesale level, as governments try to insure themselves against too rapid a rise in food prices. Processors' market power allows them to pass controls back to producers. This partial decontrol is very evident and damaging in Romania and Bulgaria, and observers praising the "liberalization" of retail prices have failed to check farther back in the food chain.

Producers are unable to push the former volume of production through markets at lower prices, since for products requiring processing, they cannot bypass the processing monopolies. Producers are thus hostage to the pace of change in the processing, marketing, and distribution of food and fiber. The hope of a quick improvement in agriculture that will facilitate change in other sectors is illusory unless a concerted effort to increase competition and the technological performance of food processing and marketing brings early results.

Excess supply appears at the farm level. Some of this can be exported, and it is more competitive than in the past due to the devaluation. Institutional linkage between producers and international markets, however, is weak, and product definitions and quality are not conducive to quick switching between domestic and export markets. Producers face higher costs for fertilizer and imported animal feed, and the combination of higher costs and reduced demand puts pressure on farm income.

The crucial variables in determining the impact of macroeconomic stabilization on the agricultural sector are the relative magnitude of the food subsidy, the amount of excess demand for food ante-liberalization, and the degree of concentration in processing. If the food subsidy is small, if its removal approximately absorbs excess demand, and if processors have limited market power, the adjustment process will be less disruptive for producers. If, however, the shock to the demand side is large and the economy shifts abruptly from excess demand to excess supply, producers will face a substantial adjustment.

Problems in food processing are apparent even prior to the transition, and many participants in the food economy have argued for increased investment to modernize food processing. The investment is sought both from domestic and external sources, and the goal of the investment is usually construction of new plants and/or purchase of more modern equipment. A visitor assessing the "needs" of food processors of East/Central Europe can amass requests amounting to several billion dollars in a few weeks in the field.

Few of these, when viewed as commercial investments rather than "basic needs," pass careful scrutiny. Unless price liberalization is well underway and changes in food demand are better understood, new investment in food processing is likely to respond to the wrong signals. It will be devoted to the wrong commodities, placed in the wrong locations, and purchase technology inappropriate for the post-transition factor costs.

Some kinds of food processing stand out as particularly poor targets for investment in the early period. Plants that operate wholly or in part with imported raw materials but sell their products on the domestic market, such as oilseed crushers, will be particularly hard hit as foreign exchange risk is passed to them but domestic prices lag world prices. Meat processors and dairy plants in areas dependent on subsidized imported feed are poor targets. Investment in simple packaging technology and materials for products with export markets can be relatively safe and productive. The focus of change in food processing in the early period of the transition should be deconcentration of existing plants, and introduction of competition through expansion of small scale private transport and other means. New investment should promote competition rather than simply expand or modernize processing capacity. After the price liberalization has settled down alternative investments in food processing will be easier to assess.

If producers have poor access to markets because reorganization of processing and distribution is stalled, they will demand direct government subsidies to forestall declines in farm income. Governments will be pressured to embark upon programs of price support that they can ill afford. Tariffs are costless to the budget, but have obvious implications for inflation. Moreover, if producers' difficulties stem in part from lack of domestic competition in processing and marketing, tariffs will not address the basic problem, and may worsen it. Poland, which has led in many aspects of the economic transition, issued agricultural tariffs in May, 1991, designed to protect the troubled dairy industry.

Given the inherited concentration in food processing, a concerted demand for tariff protection against imported food is a predictable feature of the political economy of agriculture during the transition. Producers may be drawn into alliance with processors when their longer term interests are not well served by protection of processors' monopolies.

Producers throughout the region are calling for subsidized interest rates, and the domestic politics are such that they will probably get them. An economic argument can even be made in favor of subsidized interest rates for agriculture, (i.e., lower than the current nominal market rates of 30-50 percent and higher) since as the price level stabilizes, long term rates will come down, and a subsidy now may simply embody confidence that the stabilization will succeed. The dangers of subsidized rates are also clear and very high. Interest rate subsidies lead to credit rationing (Braverman and Guasch, 1991). Those best armed to compete for rationed credit are the economically strong cooperatives, especially those of the new type. Even under the more stringent calculus of credit risk in which bank staff members are now being trained by foreign advisors, the new "private" producers' cooperatives will look better than genuinely private producers, who have had to leave most of their potential collateral with the cooperative. Subsidized interest rates will make capital intensive production practices and capital intensive products, such as livestock, more attractive, when in fact they should be less attractive. With subsidized credit, it is likely that investment will go into more large machines and large buildings for large farms under ambiguous and transitory collective ownership.

Without subsidized interest rates, agricultural producers will take little credit. Distress slaughtering of livestock may exacerbate excess supply of meat. Those who might want to go private will be discouraged by lack of working capital and money for purchase of draft power.

If governments choose to venture into the questionable business of subsidizing agricultural credit, attempts should be made to target the subsidies to "the emerging private sector." Cooperatives should not be granted credit to perpetuate collective production. If they borrow to invest in agricultural services or marketing, the loan should be contingent upon reorganization of farm accounts to stop internal cross-subsidization of activities that result in noncompetitive pricing. Credit could be tied to purchase of machinery of little use to larger cooperatives. Small private producers want to purchase very small scale equipment appropriate for plots of two and three hectares, such as garden tractors, and cooperatives would have little interest in this equipment. Lending to cooperatives for purchase of larger machinery, such as 45 horsepower tractors, should be contingent on their creation of a separate private firm for sale of custom machinery services to all customers.

This argument is motivated not by ideological antipathy to cooperatives, but by the imperative that the inevitable continued existence of cooperatives not strangle the private sector. An anecdote from a Bulgarian village illustrates the potential danger of lending to cooperatives without these precautions. Four private owners of 45 horsepower tractors were trying to sell services to households, most of whom were still members of the cooperative. The private tractor owners priced their services to meet the costs of purchase and maintenance of the tractors, and furthermore asked customers to provide the fuel. The cooperative offered services to members at a much lower rate and did not charge for fuel. The private drivers could not compete with the cooperative, and their tractors were underutilized. Few members planned to give up continued access to subsidized machinery services by leaving the cooperative.

An offer to lend to a private custom machinery unit carved out of the machinery park of the old cooperative would force a revision of custom rates, and make more room both for private tractor drivers and private customers. Moreover, with the recent break up of artificially amalgamated megacollectives, most cooperatives are now relatively small. If many of them privatized their machinery park, a competitive industry in machinery services would be created quickly. Analogous arguments can be made about investment in marketing and food processing.

Distribution of Agricultural Land

In Czechoslovakia, Hungary, Romania, and Bulgaria, the decision to restore rights of former owners has been universal. Debate on the legal foundation for reaffirming property rights in land proceeded throughout the region in 1990, and until late in the process it was not obvious that restitution would be the outcome. Parliaments passed land laws in Romania and Bulgaria in February, 1991, in April in Hungary, and in May in Czechoslovakia. Each of these laws recognizes the rights of land owners just prior to collectivization, and sets up a procedure for reinstating the property right.

Since most agricultural land is being returned to people perceived to be rightful owners, recipients do not pay, and the land distribution has little impact on macroeconomic balances. In the parts of the Soviet Union in which land was nationalized in 1917 and collectivized between 1929 and 1933, it is difficult to imagine how rights of former landowners could be reinstated. The course of decollectivization is thus likely to be quite different in much of the USSR.

The Romanian land program embodies the judgment that costs of delay are greater than those of moving ahead before all complications are foreseen and forestalled. Local land commissions in each district were established quickly after passage of the law, and began receiving claims. Households can claim a maximum of ten hectares, and can submit a variety of evidence to support their claims. The period for submission and judgment of claims ended on May 20, at which date the Land Commissions were to post their preliminary rulings.

When possible, claimants will be given the land actually owned prior to collectivization. When this is not feasible, a piece of equivalent size and quality will be returned. When the original land was parcelized, the parcelization is deliberately duplicated in the returned land. Many households in the Danubian plain will receive four or five hectares divided into several parcels. Holdings in the hill areas will be larger, and broken into more parcels.

Romanians who receive land through restitution of their rights can sell it immediately if they so choose, or buy more up to a maximum holding of one hundred hectares per household. Family members and neighbors have rights of first refusal on farm land for sale, and this restriction on free sale is intended to address the fragmentation problem. Since in the densely settled areas of intense agriculture almost all land will be distributed through restitution, an active land market could develop rather quickly.

There appears to be little intent in the law or its implementation to create farms of an optimal size, or to look forward to how farming will take place after the land is distributed. This at first appears economically myopic, but may in fact show a much more profound sophistication. The Romanian approach to the land distribution is more like a voucher scheme than a land reform, since it widely disperses claims to the land, but carries little expectation that people will work the land in the units they receive. A small number of people receiving large holdings (for example, eight to ten hectares) plan to manage them as households. Most people plan to keep most of their land in collective management this season and next. The distribution thus opens a trading period during which households can buy and sell their land, consolidate holdings, and prepare to leave the collective when the infrastructure for individual management is more developed. In the meantime the collective will continue to work the land, and land owners will receive a share of returns to land proportionate to their share of the farm's total area.

The IMF/IBRD/OECD/EBRD joint mission to the USSR suggested that the collective serve in a transitional period as a vehicle for the trade and consolidation of members' shares after an initial apportioning. This role for the collective may be emerging spontaneously from the Romanian land distribution. It is not a consciously assumed role, however, and there is no indication that the new collectives see themselves as transitory organizations. It is thus important that the land distribution be accompanied by new regulations easing procedures by which members can withdraw and take their share of non-land assets with them. It also underscores the importance of restricting cooperatives from taking on debt that would complicate the future exit of members.

People who worked on cooperative farms in Romania but cannot claim any land through restitution can claim on the basis of their labor input. Since even those with prior claims will receive small allotments, the holdings distributed purely for labor will be quite small. People receiving land in recognition of their contribution of labor cannot sell their land for ten years. This is a curious provision, since young people who chose to remain on collective farms are probably the least likely of their cohort to be the universally despised "speculators," who might acquire and sell an asset purely to make some money. The quantity of land tied up by this restriction is not significant.

The Romanian approach to the land distribution appears to have broken through the confusion about how to start the process. Its progress, and that of the land programs in Bulgaria, Hungary, and Poland will be monitored in a study jointly undertaken by The World Bank the member countries.

The fragmentation of very small holdings implicit in the Romanian approach could plague agriculture in the future. Market based solutions to fragmentation of farm land in Western Europe after World War II were not adequate to consolidate holdings, and administrative consolidation was necessary. The chance for success in market based consolidation is greater in Romania now, since all rights are distributed simultaneously and many recipients will be trying to adjust their initial claims before removing the land from collective management. Special programs to promote purchase, sale, and trade over the next year could be highly productive in the longer run. Financing for land acquisition may be necessary, and subsidized rates for land consolidation would be justifiable. Since the quantities of land traded will be small and the value of land relatively low during the contraction, many buyers will probably choose to pay cash. The cash may come from urban relatives who hold the residual of the monetary overhang. People who put spare money into land are more likely to be relatives than the feared land speculators.

The land law in Bulgaria was also passed in February, 1991, but political stalemate and administrative inertia delayed its implementation. The National Land Council, the main administrative organ of implementation, was not appointed until May 31, 1991, and appointment of local land commissions was attendant upon the formation of the national commission. As a consequence, people who wanted to claim land in the first half of 1991 had nowhere to take their claims. Many of the records showing who brought land into the collectives are held by the farms, and even managers who wanted to speed the restitution of land rights could not submit them to nonexistent local commissions. Some land has been returned under temporary use rights, but transfer of title is much delayed.

Administrative delay has slowed the implementation of the Bulgarian law. The philosophy of land distribution embodied in the law and the implementing regulations is by nature a slow one. Rather than relying on market trades to improve a quick and imperfect distribution of rights, the Bulgarian approach attempts construction of appropriate holdings through administrative assignment. Local land commissions accept and adjudicate claims, and when a substantial number of claims have been verified, turn them over to a team of specialists who draw up a local map of the allocated holdings.

This approach is deemed necessary for several reasons. The Bulgarians want to avoid parcelization, and doubt the efficacy of market based consolidation. Market based solutions are indeed unlikely to work, since the law prohibits purchase and sale of land by private individuals for three years. In many places the amount of land that can be restored is only a proportion of that claimed, since development has changed the contours and use of land, and agricultural area has declined. In these areas all claims will be prorated by the necessary proportionate adjustment. The effort to achieve justice and economic efficiency through administrative meticulousness can be contrasted with the Romanian priority on speed. The costs and benefits of each approach are not yet clear. It is certain, however, that the Bulgarian distribution is much delayed, and six months after passage of the law, not yet ready to move into high gear.

In Hungary, the initial attempt to return agricultural land to prior owners in 1990 was struck down by the Constitutional Court, with the ruling that restitution of ownership of agricultural land must be considered along with that of other assets. In April, 1991, land owners, along with dispossessed owners of other property, were granted vouchers redeemable for agricultural land or other assets. Landowners who continued to hold title to lands managed by the cooperative are granted the return of their managerial rights unconditionally. In Hungary, thus, the restitution for those who relinquished title is essentially monetary, and the impact on demand for land depends on economic agents' assessment of the value of land compared to other assets. Many who use their vouchers to buy land are likely to take a consolidated holding and remove it from collective management. Others with a speculative demand for land may buy it with vouchers, but rent the land to collectives or other individuals. Those who resume use rights over land they always owned are more likely to have fragmented pieces, and may keep the land in collective management longer. The new Hungarian law has not yet passed the Constitutional Court.

In Czechoslovakia, the law mandating return of agricultural land to prior owners who will cultivate it passed only in late May, 1991, and at the time of passage, little interest in claiming land was reported. In Czechoslovakia the agricultural sector is a relatively small part of the national economy, due largely to the industrial development of the Czech republic and its dominance in the aggregate measures. Agriculture is more important in Slovakia. Food markets approximately cleared even prior to the price liberalization, and few citizens of the country perceive that they have had or now have a "food problem." Thus the need to change the inherited structure of agricultural production has been late in coming, although a fully open trade regime would demonstrate its high cost relative to world levels.

The agricultural contraction is just beginning in Czechoslovakia, and difficulties marketing meat and milk are pulling farm incomes down. Pressure for change is increasing, but it is early yet to predict whether the form of change will be protection of the old structure, or the start of decollectivization. Since the agricultural sector is a smaller share of the Czechoslovak economy, and given the complications of federal politics, pressures for protection and subsidy will be great.

In Poland, the state sector owns only about 20 percent of agricultural land, since the remainder of land was never collectivized, and remains in fragmented private ownership by smallholders. Although the proportion of marketed output that originated in the state sector was greater than its share of land ownership, the excess supply of food occasioned by the Polish big bang diminished the perceived urgency to reorganize state farms. Those most agitated about the fate of state farms were their employees, who favored transfer of land and assets to the work force. The disposition of land in Polish state farms has thus been deferred. In general, throughout the region, decisions with regard to state farms have lagged reorganization of the collective sector.

In summary, the land distribution programs in practice are quite diverse, and are not what most people outside the region expected. In surveying the economic options, few outside economists would have chosen physical restitution of rights of prior owners as the preferred solution (see Vickers and Yarrow, 1990). The economic difficulties are evident. Moral issues seldom raised are also relevant: what about the rights of people killed or dispossessed prior to 1946 or 1948 or the date that serves the interests of those now represented politically? These issues have been raised, but not resolved, in Hungary, and have not figured importantly in debate in the other countries.

It is not surprising, given the reorganization and turmoil that has characterized the agricultural sectors of the region, that the paper trail of prior property rights has in some areas been lost. The more unexpected fact is how well preserved it is in many places, testifying again to the political inevitability of restitution. The emergence of yellowed but carefully preserved land titles, tax documents, and registries of property brought into the collective farm suggests an enduring conviction that these documents would some day be important. An elderly Romanian peasant viewing, in early May, 1991, a draft copy of the new land title looked at it carefully, paused, and commented, "Yes, I have one of those from my father. You should give it a bit more color."

The restitution approach has an economic advantage to complement its apparent political appeal, and counter some of the economic problems it raises. Had land been distributed without payment to the agricultural work force with no higher principle than "land to the tiller," it would have been easy to exclude rural people from further distribution of state owned assets, on the grounds that they already received their fair share. Since landowners have instead received back property that was rightly theirs all along, there can be little justification for excluding rural people from a share of assets accumulated by the state. Thus, when privatization swings into full force through vouchers or distributed shares, rural people will be integrated into the new capital markets.

Price Liberalization

The speed and apparent success of liberalization of retail food prices is surprising and poorly recognized. Even a year ago the liberalization of retail food prices was considered a political mine field. Governments entered it with great trepidation and varying degrees of caution. All (except Albania and the USSR) are now either in the midst of the process or essentially through it. Curiously, no one has noted that nothing exploded.

The success of the food price liberalization is in part because it came first. To that ambiguous honor, plus the fact that the liberalization is in general partial, can be attributed many problems, but the problems must be viewed in light of the original pessimism that food prices could never be changed without social explosion.

In a world of partial price liberalization with immature markets, many products are sold at essentially world prices, while others are little changed from the days of high Stalinism. In the early and haphazard privatization of state retail stores, the newly private space goes to high margin retailers, primarily in high quality clothing, electronics, and imported toys, food, and miscellany. By accident rather than design these outlets appeal to a very important political constituency, urban young adults, the East/Central European yuppies. These people have sought out imported goods for years, and the greater opportunities to do so now in open legal transactions bring an increase in perceived welfare greater than this sector's miniscule impact on aggregate indicators.

Although more high quality products are now available at world prices, many domestic products are still sold at low prices even if prices are no longer strictly controlled. For example, one can buy Barbie dolls in the import shops of Bucharest at world prices at the market exchange rate, but decent quality domestic records of classical and folk music cost ten cents each.

No economist designing a clean transition would write in price distortions of the kind that are appearing now. They decapitalize state enterprises slow to adjust their prices. For industries that will not survive the transition, it is perhaps justifiable to distribute assets generally to consumers, rather than encouraging workers to cannibalize the enterprise through wage increases. For enterprises that will survive and will be restructured by new owners, the depreciation of assets through delayed price adjustment is more damaging.

Despite the longer term costs of these price distortions peculiar to the early stage of the transition, they explain in part why food price liberalization did not elicit the feared reaction. The distortions are also an essential ingredient in understanding changes in agriculture early in the transition. Retail food prices have been among the first liberalized at the consumer level. With other prices adjusting more slowly, the relative rise in food prices is even greater in the short run than it will be over a longer horizon.

Since the food processing and retailing industries are not yet privatized and a number of distortions remain throughout, it would be erroneous to argue that retail food prices are free market prices. Prices are free to fluctuate, however, and governments are paying little if anything in direct food subsidy. Few observers would have predicted *ex ante* that this could have been done in a short time without triggering widespread protest.

The success of the price liberalization is all the more remarkable in that it was done in the virtual absence of any safety net to cushion the impact of much higher relative prices for food. Citizens were granted partial monetary compensation, but targeted programs of direct food relief were not attempted anywhere. A small number of old people, handicapped, and generally desperate types begging on the streets of major cities show that an explicit food safety net is needed in East/Central Europe, just as it is in more prosperous market economies.

In the wealthier northern countries of Poland, Czechoslovakia, and Hungary, full liberalization of food prices without targeted assistance appears to have been accomplished; generalized compensation was adequate and prices are now largely free. In Romania and Bulgaria, where consumer incomes are lower but fully free prices will be approximately at world levels, the liberalization that has taken place is incomplete at this writing in June, 1991. Consumers absorbed a large increase when the explicit subsidy was removed, and were compensated through partial adjustment of wages. Governments with shaky political mandates, however, were unable to risk freeing prices to world levels, and retained administrative pressures on wholesale prices. Wholesalers and processors pushed the controls back to the producer level.

In the southern countries, thus, the contraction is greater and distress at the producer level is more extreme than in the northern countries where price liberalization has been more complete. Future policy in Romania and Bulgaria will have to include further freeing of wholesale and producer prices, and introduction of cost effective targeted assistance for needy consumers. The Romanian and Bulgarian experience is likely to be replicated in the USSR unless the lessons of partial liberalization on agricultural production can be demonstrated.

The actual course of liberalized food prices is difficult to trace because of the general weakness in statistics now. Both the record and the course of liberalization in Czechoslovakia seems most straightforward. Food prices were raised administratively in July, 1990, by 26 percent on average to remove the direct budgetary subsidy. Prices were controlled at the new higher levels, and consumers received partial compensation. In January, 1991, prices were liberalized, and jumped quickly by about 30 percent, before levelling off in March and starting to decline in response to excess supply, particularly of beef.

These price increases, although large by world standards, are modest in the East/Central European current context. Moreover, the larger Czechoslovak incomes and smaller share of food in family budgets eased the absorption of the shock. In Romania, in contrast, with partial price liberalization that pressures producer prices of grain to approximately half of world levels, the consumer price index for food is reported to have risen in April, 1991 to 255 compared to 100 in October, 1990 (*Buletin Statistic de Preturi*, Nr. 5, April 1991, Bucharest, Romania).

Consumers' adjustments in Romania and Bulgaria have been both admirable and painful, and more adjustment lies ahead. The puzzle of declining production and continued lines and "shortage" when prices are in theory free and have doubled in a short time is explained by the considerable degree of control that remains behind the retail level.

Conclusion

The agricultural transition is an essential part of stabilization and adjustment in East/Central Europe because agricultural sectors are large and food is important. The transition is not the story-book variety; agricultural producers cannot spin collectivized straw into market oriented gold and deliver it in the morning to the Minister of Finance. Like the miller's daughter, however, producers and their domestic and foreign advisors must name the thing they face before they have any power over it. An agricultural transition when demand is constrained is more difficult to manage than one in which the fruits of institutional change and productivity growth find ready outlets. Moreover, although price movements are not yet clear, it appears that removal of subsidies on feed credit, fertilizer, machinery, and energy will move terms of trade against agriculture, particularly against the large livestock sector. The need for productivity increase will thus be even greater than in the past. Productivity growth will be difficult to achieve if demand is constrained. Any progress on the demand side, through expansion of domestic demand or improved performance in export markets, will therefore give a major impetus to the institutional changes needed on the supply side.

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Per Capita Average Food Consumption, 1985
Kilograms Annually

Country	1984-86 Calorie Per Day	Meat	Milk [a]	Vegetable Oil [b]	Sugar [c]	Grain and Bread
USA	3.642	118	129	11	30	65
Japan	2.858	38	36	12	21	108
Austria	3.416	90	142	15	37	68
Finland	3.080	68	182	6	37	73
France	3.273	106	84	12	34	80
FR Germany	3.476	100	112	5	37	74
Ireland	3.692	97	289	11	41	92
Norway	3.219	51	203	n.a	38	71
Portugal	3.134	52	43	12	29	106
Spain	3.365	75	102	25	33	77
United kingdom	3.218	74	141	12	37	83
1985						
Bulgaria	3,634	77	250	16	35	144
Czechoslovakia	3,473	86	239	8	35	111
GDR	3,800	96	-	2	40	99
Hungary	3,541	77	175	5	35	110
Poland	3,298	67	403	3	41	118
Romania	3,358	60	-	n.a	26	143
USSR	3,394	62	295	10	42	133

Source: FAO Production 1987, pp. 291, 293. Food and Agriculture Organization of the United Nations, 1988.

Food Consumption Statistics 1976-85, OECD, Paris, 1988.

COMECON Data 1988. Wiener Institute für Internationale Wirtschaftsvergleiche, 1989, pp. 157-163.

a/ For OECD countries, excludes processed dairy products. For CMEA countries, includes milk equivalent of all dairy products.

b/ For OECD countries, excludes margarine. For CMEA, includes all vegetable oil and derivative products.

c/ Excludes other sweeteners, and syrups.

1985-88 Average Yields: (MT/HA, MT/COW)

Country	Barley	Milk	Rye	Sugar Beet	Wheat
Bulgaria	3.544	3.386	10.473	17.636	3.638
Czechoslovakia	4.336	3.843	18.942	35.854	4.936
GDR	4.700	4.312	25.241	31.196	5.282
Hungary	3.866	4.803	18.221	37.435	4.765
Poland	3.252	3.098	18.555	33.632	3.584
Romania *	n.a.	n.a.	n.a.	n.a.	n.a.
Soviet Union	1.700	2.395	11.799	25.029	1.747
Yugoslavia	2.611	1.750	8.294	38.813	3.726
Austria	4.289	3.804	27.954	54.471	4.780
Canada	2.722	5.444	25.800	39.027	1.782
Denmark	4.911	4.793	35.339	50.824	6.293
France	5.104	3.603	34.187	61.123	5.790
Greece	2.296	1.890	17.465	61.320	2.387
USA	2.596	6.159	33.020	46.539	2.415

Source: FAO Production Yearbook, 1989.

* **Revised Romanian data for 1985-88 are not yet available.**

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