XI: Conclusions

Throughout this analysis, it has been clear that of the five countries examined in this study, Poland and Hungary are rapidly emerging as relative success stories. Pork production has stabilized and appears to be on a slight upward trend, and the poultry sectors are growing in both countries. Both countries, after a brief surge in meat imports in the early years of the transition, are now net exporters. Moreover, as a result of pressures associated with EU accession, there have been significant improvements in the overall quality of meat output. In these countries, only the cattle/beef sectors continue to decline.

The adjustment has been much slower in Russia, Ukraine, and Romania. In Russia, producers have finally begun to respond to the ruble devaluation of August 1998, but this response is only now becoming evident. The downward trends in Russian livestock inventories finally slowed in 1999, and in 2001 there are indications of a slight degree of recovery at the farm level. This is in contrast to Ukraine and Romania, where the livestock sectors continue their stagnation or decline. There are still few signs of the turnaround that analysts expected at the beginning of the decade. These countries continue to import meat despite their production potential, and the imports of feed grains and soymeal once eagerly anticipated by Western agribusiness still haven't materialized.

All five countries, including the three slower reformers, have implemented wide-ranging policies of price and trade liberalization. Domestic price controls have been almost completely eliminated, and all five countries permit relatively free flow of imports and exports. But producers in the slower reformers have yet to realize benefits of such trade liberalization. Even in Poland and Hungary there remain institutional bottlenecks that hinder the flow of market signals to producers.

A large part of this report examined the impact of some of the institutional bottlenecks. Key among these are:

- Incomplete privatization: majority state-owned enterprises tend to be less responsive to market signals, primarily because soft credit provided by governments shield them from any hard budget constraint.

- High-risk business environment: this risk results from inadequate market information and a lack of contract enforcement, and is the key contributing factor to the high costs of marketing and distribution of agricultural products.

- Underdeveloped capital markets: capital needed for technological improvements and expansion of enterprises is difficult to obtain or prohibitively expensive.

- Lack of a land market and poorly defined property rights: these conditions make it more difficult for land to move to its most efficient uses.

- Barriers to labor mobility: agricultural enterprises are burdened with excess labor, which reduces productivity.

These problems endure to some extent in all five countries but are more serious in Romania, Russia, and Ukraine than in Hungary or Poland.

In the second half of this report, we presented the results of a model we built in an attempt to measure the impacts of the removal of these institutional bottlenecks. We tested the following scenarios:

- Partial price liberalization in Romania;

- Removal of bottlenecks in capital markets and the benefits to be derived from different types of investment;

- Reduction of marketing and distribution costs that might result from a better developed market infrastructure;

- Better functioning land markets;

- Removal of barriers to labor mobility.

From these model scenarios we can draw the following general conclusions:

Successful Reform Does Not Necessarily Mean a "Recovery" of the Livestock Sector

In these scenarios we have attempted to measure the potential impact of the removal of some of the most serious barriers to fully functioning markets. Our results suggest that successful reform can bring significant benefits to both producers and consumers. Lower marketing costs and more readily available capital can improve profitabil-

ity for producers and bring higher incomes or lower meat prices to consumers. Several of the scenarios suggest a potential for higher meat exports or lower imports for the transition economies. But output increases are generally rather modest—3 to 17 percent. Output declines between 1990 and the base period used in the model (1994-96) were often 40 to 50 percent, and none of the scenarios bring output even close to pre-1990 levels.

These results confirm our assertion that success cannot be measured in terms of output indicators alone. Rather, they suggest that during the Communist era, livestock output was much higher than optimal, artificially supported through a vast array of subsidies and price and trade controls. Successful reform can bring benefits to both producers and consumers of livestock products, but may not bring the "recovery" in inventories and output that some policymakers are striving for.

The Livestock Sector Is the Farm Economy's Shock Absorber

The livestock sector responds far more than the crop sector to both positive and negative stimuli. This was observed during the early years of the transition, when the livestock sectors of all five countries contracted more than the crop sectors. The results of the partial liberalization scenario for Romania also demonstrated the same conclusion. In that scenario subsidies were removed in both the crop and livestock sectors, but livestock output declined far more than crop production. This phenomenon lies behind the increasing grain exports and falling imports that have been observed in the transition economies.

On the other hand, model results suggest that the livestock sector can expand faster than the crop sector in response to positive shocks. This pattern was observed in both the credit and the reduced marketing cost scenarios. Reduced credit costs gave a boost to the livestock sector, while crop output changed very little. In the crop sector, the benefit of lower cost credit was generally offset by higher land rents. Both crops and livestock benefited from reduction of marketing costs. However, livestock producers benefited in two ways: once through higher prices for the live animals, and again through lower feed costs. Crop producers benefited in only one way, since they typically do not use agricultural products as inputs.

The corollary to this conclusion is that once the livestock sectors begin to expand, much of the resulting increase in feed demand will be met through higher imports or reduced exports. In some scenarios, a portion of the increased feed demand was met through higher domestic production, but domestic output increases were not sufficient to meet the increase in feed demand.

The High Cost of Credit Is Not as Serious an Impediment as High Marketing Costs

Improved functioning of rural credit markets brings a small benefit to agriculture, but the principal effect is to shift production away from subsistence producers towards commercial producers. Because subsistence producers make little use of credit, they do not benefit from the lower costs. Furthermore, they are adversely affected by higher land rents and lower prices for live animals. For commercial producers, the positive impacts derived from cheaper credit are less than those that come with a reduction of marketing costs. The reason is that lower marketing costs lead to a reduction in feed costs and simultaneously an increase in the output price, whereas lower credit costs do not have such an impact on feed costs or the output price. The insensitivity of the results to changes in credit costs also reflects the situation that, in the base period, the use of credit was limited. As credit costs fall and more credit is used, the impacts of credit cost changes could increase.

Investment in Meat Processing Brings Greater Returns Than Farm-Level Investment

A new injection of capital at either the farm or the processing level can bring significant benefits. Meat output increases, producers realize greater profitability, and there is either an increase in exports or a decrease in imports. Expansion of the livestock sector leads to increased feed demand, and can mean stronger markets for exporters of grain and oilseeds.

However, scenarios tested for both Russia and Poland suggest that investment returns are far greater if the investment is directed to the processing industry rather than farm level production. Investment at the farm level means that more animals can be produced at any given price, but the resulting expansion of inventories puts downward pressure on livestock prices. Investment in processing enterprises increases processors' demand for live animals, which leads to a higher price for producers, which in turn stimulates even greater increases in meat output.

Tradability Matters

The investment scenarios also suggest that the returns to investment are greater if the final good is fully tradable on international markets. If the final output is not fully tradable, the expansion of output induced by the investment simply brings about lower domestic prices.

This is an important consideration because none of the countries under consideration, with the possible exception of Hungary, have reached the point where their domestic livestock sectors are fully integrated into world markets. Even in Poland, export markets are limited because of uneven quality and disease problems. Less than half of Poland's pork is produced in plants that are licensed for exports, and because Poland still vaccinates for foot-and-mouth disease, export markets for fresh pork are limited. The same problems apply to Russia, Ukraine, and Romania, but in those countries tradability is further hampered by downstream bottlenecks that prevent the full transmission of price signals from the world market to producers. In Russia the interregional trade barriers also reduce integration into the world market.

Model results suggest that there is a potential for greater foreign direct investment in these countries if their livestock sectors do eventually become fully integrated into world markets. Once Poland and Hungary join the EU, their livestock sectors will almost by definition become more integrated, and these countries will almost certainly become more attractive to investors. But in the other countries, this is almost a vicious circle. Investment is needed to overcome the institutional barriers to full integration into the world market, but the investment will come only when the governments take steps to create a business environment that facilitates the transmission of world market signals.

Removal of Bottlenecks Brings Greater Benefits to Commercial Producers Than to Subsistence Producers

One generalization that emerges from scenarios 2 and 3 (Chapters VI and VII) is that commercial producers and processors derive greater benefits from the removal of institutional bottlenecks than does the subsistence sector. In the case of reduced credit costs, output from subsistence producers actually declines because, as commercial producers expand, resources shared by subsistence producers become more expensive. With a reduction in marketing costs, the gains are significantly greater for commercial producers; in many cases there is almost no change in subsistence output. An injection of capital investment also brings greater benefits to commercial producers. The net impact of all three shocks is to increase the share of commercial producers and processors in the total output of the sector. As output shifted from the subsistence to commercial sector, there was a small movement of labor in the same direction.

The Process of Drawing Excess Labor Out of Agriculture Will Be Slow

Four of the countries under consideration—Hungary is the exception—continue to be burdened with a large amount of excess labor in agriculture which cannot move easily to other sectors. We hypothesized that investment in the nonagricultural sectors would generate an increased demand for labor, push up wages, and draw labor out of agriculture. However, model results suggest that large amounts of investment in nonagricultural sectors will be needed to pull even small numbers of workers out of agriculture. The reason is the large amount of excess labor. Furthermore, without simultaneous investment in agriculture, the principal result of reducing the labor employed in agriculture will be a decline in output.

Model results further suggest that it may not be only the subsistence sector that releases labor under this scenario. The reason is that investment in nonagricultural sectors can affect the prices of nonagricultural inputs. Commercial producers are heavier users of these inputs than subsistence producers, so the wage increase can be compounded by rising prices for other inputs. Depending on the cost shares, the result is sometimes that commercial output contracts more than subsistence output, causing the commercial sector to release more labor.

What About the Future?

Model results suggest that institutional reform can bring significant benefits to the livestock sectors of the transition economies. Each of the scenarios was modeled in isolation, but in reality these shocks will probably not occur in isolation. Reduction of the downstream bottlenecks will not only reduce marketing and distribution costs, but will create a more favorable business environment that will attract additional investment. The result could therefore be an even greater stimulus to the livestock sector than the scenarios suggest. If agriculture becomes more attractive for investors, there could be simultaneous investment in

both agricultural and nonagricultural sectors, which could eventually lead to an exit of labor from agriculture.

But the key question is whether and when these reforms will take place. Hungary and Poland have made significant progress in the reform process. There has already been a large amount of foreign investment in the livestock sectors of these countries, and, as EU accession draws nearer, the rate of investment will probably accelerate. Moreover, the EU will not admit these two countries until most of the remaining institutional shortcomings are overcome, and this provides a strong incentive to speed up and complete the reform process.

But the other three countries have much further to go. With their rich resource endowments, these countries certainly have the potential to develop modern, competitive livestock sectors, a hypothesis confirmed by our model results. Should these countries move in that direction, the result could well be the surge in demand for imported feed ingredients that Western agribusiness has been waiting for. But the needed reforms have come slowly, and may never be complete. In that case these economies could remain indefinitely in their current state of low-level equilibrium.

Because of such uncertainty, this report cannot give definitive answers to policymakers, agribusiness, and others interested in the agricultural economies of the transition economies. The future depends on political as well as economic developments. But we have identified some of the most important variables that will determine developments in the livestock sectors in the transition economies over the next decade. Readers are urged to monitor the reform process as it continues to unfold and watch for signs of the needed institutional changes.

Capital investment, whether domestic or foreign, is key to any positive developments in the livestock economies of these countries. An important conclusion of our work is that this investment will bring maximum returns if these countries are fully integrated into world markets. That is, if market signals from the world market are fully transmitted to producers. While markets in all the transition economies have opened up and are functioning, the institutional barriers summarized at the beginning of this section to varying degrees continue to hinder the full transmission of these price signals.