

Executive Summary

This study is a comparative analysis of the restructuring of the livestock sectors in five of the transition economies of Eastern Europe and the Former Soviet Union: Russia, Ukraine, Poland, Hungary, and Romania.

Ten years after the end of Communism, Poland and Hungary had emerged as the most successful reformers of the five countries. But even in these countries, barriers remain that prevent the full restructuring of their livestock sectors. These barriers are much more serious in the other three countries.

Using general equilibrium models, we examine the potential effect of removing these barriers.

All five countries experienced a sharp decline in both animal inventories and meat output during the early years of the transition. These declines were in response to multiple economic shocks in both demand and supply. Producers were hit simultaneously by the reduction or elimination of government subsidies and sharp rises in feed prices. At the same time, demand for livestock products fell as real income declined.

There has been considerable divergence in the experience of these five countries since the early years of the transition. Animal numbers and meat output began to flatten out in Russia in 2000, but are still declining in Ukraine. In Poland and Hungary, the downward trend in cattle numbers has flattened out, and hog and poultry sectors are beginning to grow. Poultry output in Poland has rebounded significantly. The Romanian livestock sector saw a brief period of stability in the mid-1990s, but this was the result of heavy government support for the sector, and inventories and production resumed their downward trend after subsidies were withdrawn in 1997.

A number of factors accounted for the relative success of Poland and Hungary in restructuring their livestock sectors. These include the initial conditions—both countries had had a strong entrepreneurial tradition before the Communist period, and both had active private sectors throughout the Communist period. Both countries also moved more quickly to liberalize markets and privatize state property, in this way creating a friendlier environment for foreign investment. Russia, Ukraine, and Romania, in contrast, were much slower to privatize state farms

and processing plants, and their governments continued to protect weak firms through soft credit and high border protection. In addition, weak market infrastructure and poor contract enforcement created a high-risk business environment, which raised the transaction costs of processing and distributing agricultural output.

However, unfinished business remains even in Poland and Hungary. Property rights are not fully defined, and land markets remain underdeveloped. There are large numbers of subsistence producers in both countries who do not participate in the market and whose productivity is low. But they are reluctant to leave the farms because of a lack of employment alternatives. Farmers interested in expanding are hindered by a lack of short- and long-term credit. Many very small processing enterprises do not meet European Union (EU) standards and will have to go out of business once these countries join the EU. Few of these plant owners have access to the capital to upgrade their facilities.

To simulate a market environment in the absence of these barriers, USDA's Economic Research Service (ERS), in cooperation with Purdue University, built five general equilibrium models depicting the economies of each country in the study. The models explicitly incorporate primary factor markets, as well as nonagricultural sectors. Livestock/poultry production and processing sectors are disaggregated, thus capturing key relationships along the entire marketing chain, from farmgate to retail outlet. Three of the country models also separate the subsistence from the commercial, or state, sectors. An important feature of these models is that they include nontraded feed crops as inputs to the animal production sectors. Inclusion of these crops is critical to the adjustment possibilities, and an analysis of animal agriculture without considering forages as a feed input biases the results. Using grains and meal as proxies for feed costs is inappropriate for cattle/dairy because that would understate the flexibility of the sector.

The models allow a simulation of the removal of identified price transmission barriers. The scenarios analyzed in this study are the following:

- capital investment at different stages of the production chain;

- rise in land prices that would result from a better functioning land market;
- reduced marketing costs;
- increased availability of credit;
- creation of off-farm employment to draw labor out of agriculture.

Country model simulations point to several general conclusions:

1. Location of investment within the marketing channel influences the magnitude of benefits to the sector. According to the model results, investment at the processing level brings greater benefits to the livestock sector than investment at the farm level.

2. Tradability and integration with the world market enhance the benefits of investment. Investment without integration tends to lead to a fall in output prices. The effect is to reduce the national benefit from the investment, in some cases to the point where there appears to be no net gain from the investment.

3. While improved functioning of the credit market is a small stimulus to agriculture, its major impact is to shift the production mix away from subsistence producers, toward commercial/state producers. Cost data do not suggest that credit costs are a major obstacle to agriculture.

4. Animal agriculture is the farm economy's shock absorber. During transition, it performed that role in each of the five countries in the study, by contracting more than the crop sector. The modeling results suggest it could expand faster than the crop sector in response to positive shocks. For example, scenarios simulating the effects of reduced farm marketing costs show that animal agricul-

ture benefits in two ways: by raising the animal price and lowering the feed costs. Crops only benefit from the rise in crop prices.

5. Model results suggest that growth outside of agriculture is necessary to pull labor out of agriculture and that this is a slow process. To move even small amounts of labor out of agriculture requires large investments in nonagricultural sectors, because of the large amount of excess labor in transition economies.

6. The model results suggest that it may not be peasant agriculture that releases labor despite its high labor cost share. This is because economic expansion affects other prices, particularly those for nontraded goods and services (goods and services produced and consumed only within the domestic economy). Commercial and state agriculture tend to use these inputs, and are harmed by both the wage rise and the rising prices of nontraded inputs. Depending on the cost shares, commercial or state agriculture may release labor more quickly than the peasant farms.

In conclusion, the study points out potential opportunities for trade and investment, but emphasizes that realization of this potential depends critically on the successful implementation of institutional and policy reforms. Successful reform could lead to significant increases in livestock production and exports, which in turn may lead to increases in demand for grain and feed imports. Moreover, the livestock sectors and processing, in particular, can offer potentially high returns to foreign investors. However, such positive developments are by no means guaranteed. The reform process could very well remain stalled in many of these countries, with the result that their livestock sectors might remain indefinitely in a state of low-level equilibrium.