Special Article

Livestock Sectors Restructuring In CEE/NIS Countries

One of the most dramatic adjustments brought on by liberalization of the economies of Central and Eastern Europe (CEE) and the Newly Independent States (NIS) has been the virtual free fall in the livestock sectors. With liberalization, consumer and producer subsidies for meat were eliminated, and producers were exposed to new international competition. Consumer demand plummeted, and producers were increasingly squeezed between falling output prices and skyrocketing production costs. The result: a drastic decline in livestock inventories.

The situation is beginning to change, however, in some of the transition economies, particularly in the CEE countries. In general, the restructuring process is quite far along in Poland and Hungary, but remains incomplete in most of the NIS countries. Poland never did experience the declining trend in hog numbers that was observed in the other countries, and hog and poultry numbers have begun to stabilize elsewhere in CEE countries. Cattle numbers continue to decline, however, and inventories of all species are still declining in the NIS countries.

In order to identify the reasons behind the diverging paths these countries have taken and to analyze scenarios for future development, USDA's Economic Research Service (ERS) has been studying the restructuring of the livestock sectors of the transition economies. The project focuses on five countries—Poland, Hungary, Romania, Russia, and Ukraine—that represent a cross-section of the ongoing structural changes. ERS has analyzed some of the differences that have emerged among these countries since 1990 and the reasons behind the relative success of countries such as Poland and Hungary.

Economic Liberalization Led to Restructuring

The decline in the CEE and NIS livestock sectors began with the price and trade liberalization early in the transition of these economies from central planning to market orientation. Producer and consumer subsidies were removed or drastically reduced, price controls were removed, and nontariff border restrictions were abolished, allowing a flood of imports from the West. The response on both the supply and demand sides came swiftly. Real incomes fell as prices rose faster than wages, and consumer demand for meat plummeted. On the supply side, producers were squeezed between rising prices of feed and other inputs, which adjusted quickly to world levels, and falling real output prices.

A second factor affecting the livestock sector is the farm restructuring and land redistribution that took place in many of these countries. Early in the transition, especially in the CEE countries, state farms and cooperatives were privatized, restructured, or liquidated—a process generally accompanied by the wholesale transfer of animals into private hands. The new livestock owners lacked adequate facilities for the animals and could not afford proper feed, leading to widespread slaughter—even of prize breeding animals—or export of live animals. Livestock that

remained on large state-owned complexes, often heavily indebted and short of cash even when supported by soft government loans, usually did not fare any better.

Producer Response Linked to Farm Structure

The initial effect of the macroeconomic shocks on livestock varied across species and depended also on the structure of production before the transition.

Poultry declined significantly throughout the region in the early years of the transition. Poultry is more dependent than other livestock on high-quality protein feed and suffered more from the deterioration in feed quality. The CEE and NIS countries also found it difficult to compete with low-cost chicken legs from the U.S.

In general, poultry fared better in Poland and Hungary, in part because a large share of production was private before the transition. Both countries also had a well-established tradition of contracting between processing plants and producers, whereby processors provided baby chicks and feed against delivery of finished birds. Poultry in Romania, Russia, and Ukraine tended to be concentrated in large state-owned complexes, which were heavily subsidized under the previous communist regimes and had great difficulty adjusting to the new economic conditions.

Cattle numbers fell sharply throughout Eastern Europe and are still in decline. Consumers there greatly prefer pork to beef; cattle are raised primarily for dairy production, with beef mainly a byproduct. Before the transition, dairy products were subsidized even more than meat. Following removal of these subsidies, there was a significant drop in consumer demand. East European cattle numbers were severely affected by the dairy industry's collapse.

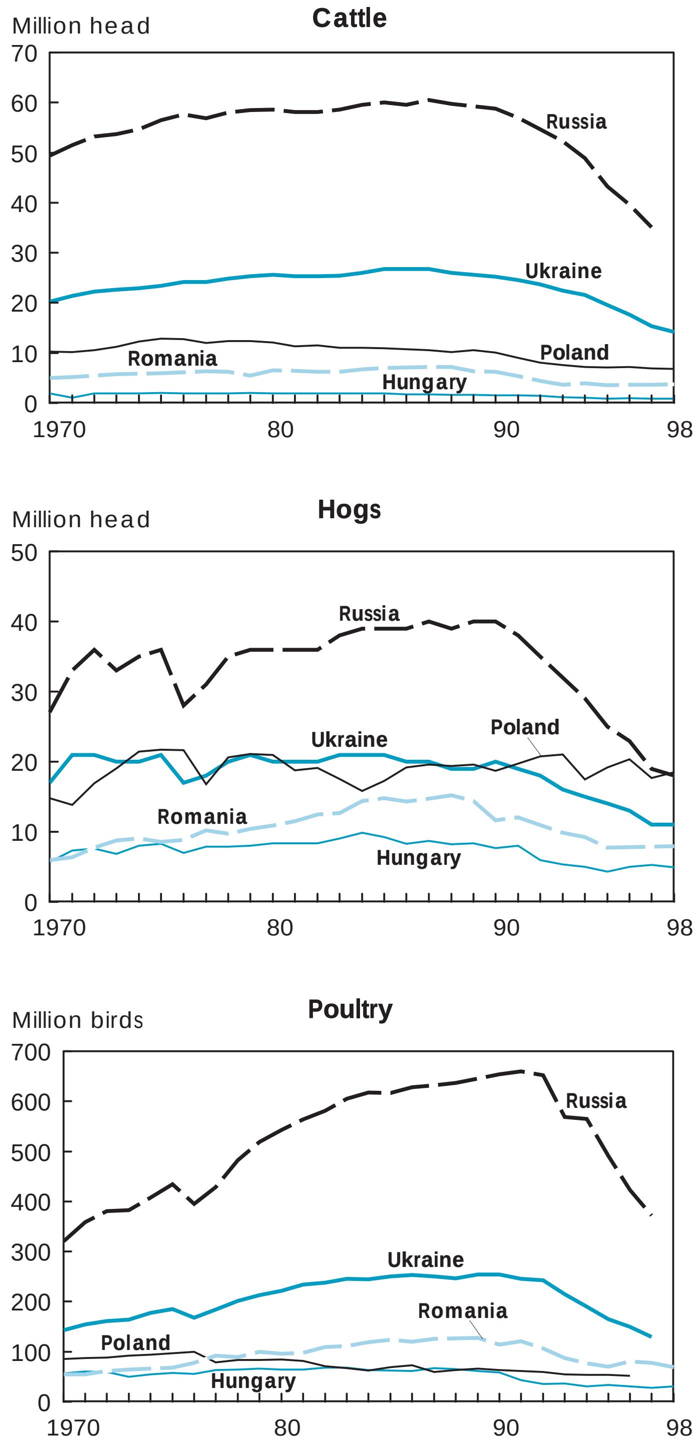
In the NIS, in contrast, cattle did not fare as badly as hogs and poultry. In Russia, beef is preferred to pork, and meat and dairy products were subsidized about equally. Cattle in the NIS were likely less affected by a demand shock from the removal of dairy subsidies than were CEE cattle. Also, NIS cattle producers were able to substitute forage crops and pasture grazing for mixed feed to a greater extent than were cattle producers in Eastern Europe. In Romania, for example, most cattle were on cooperatives before the economic transition. These cooperatives were liquidated in 1991, and that process was accompanied by massive redistribution of cattle to private producers, most of whom did not have sufficient land to keep them. The NIS did not experience the liquidation of cooperative farms that occurred in many of the East European countries, so producers continued to have access to grazing land. In Poland, farms were already small and fragmented—not well-suited for grazing cattle.

Trends in *hog* numbers varied considerably across the region and seem to have been linked closely to changes in farm structure. In Poland, 75 percent of hogs were on private farms even before its economic transition in 1989. Poland has had a clearly defined hog cycle since 1970, and this pattern did not change after 1989—hog numbers continue to rise or fall in response to grain prices. Elsewhere, hog inventories dropped sharply in the early years of the transition and continue to decline in the NIS, although they've recently recovered in CEE countries.

Hogs in Russia, Ukraine, and Romania were concentrated on very large, state-owned complexes, some with as many as 500,000 animals. The complexes were heavily dependent on concentrated feeds based on imported protein meal. They received substantial subsidies and tended to employ large amounts of both labor and capital. In addition, the complexes in Russia and Ukraine generally did not have enough land to grow their own feed, and many were also located far from feed and energy supplies. With the economic transition, prices of feed, energy and other inputs rose, while output prices and subsidies fell. The complexes responded by slaughtering livestock, although in many cases the animals simply starved to death. However, the farms continued to employ large numbers of workers and were not relieved of their social welfare obligations such as health care, housing, and pensions.

Hog complexes in Romania operated under somewhat more favorable conditions than those of the NIS, until 1997. Most complexes were in Romania's grain belt and were able to grow their own feed grains. But Romanian hog complexes were in precarious financial condition and remained afloat only through soft credit and subsidies from the state. The government that took power in January 1997 cut these subsidies and began privatization in earnest, which has reduced hog numbers in 1997 and 1998.

Livestock Inventories Stabilizing in CEE Countries, But Continuing To Fall in NIS



CEE: Poland, Hungary, Romania; NIS: Russia, Ukraine.
Some recent data unavailable.
Sources: Statistical yearbooks of respective countries.
Economic Research Service, USDA

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In contrast to the experience of state-owned hog operations, hog numbers in the private sector rose in most of the transition economies. Alternate feed rations for hogs are more available than for poultry, and private producers responded to transition-induced increases in concentrated feed prices by substituting lower quality feeds. The result was lower feed productivity (more kilograms of feed required per unit of liveweight gain), longer feed-out times, and less meat output per animal. Private producers have essentially substituted their own labor (which has had a low opportunity cost) for high-priced material inputs, which has allowed private hog producers to hold their own. Most of these hogs, however, are produced on subsistence farms—very little of this output enters the market.

Poland, Hungary Move Forward While Others Lag

Seven years into the transition, some CEE countries are much further along in the restructuring process than other transition economies. Inventories and output of all livestock continue their decline in Russia and Ukraine. In contrast, hog and poultry numbers are stabilizing or even increasing in Poland and Hungary, although cattle numbers continue to lag. Pork and poultry output are on the rise, and livestock exports from Poland and Hungary have risen as both countries find markets in the West. Livestock numbers stabilized in Romania in 1995 and 1996, but the sector is once again in decline with the disruptions caused by privatization. Romania, Russia, and Ukraine continue to be net importers of livestock products.

A significant class of commercially oriented private producers in Poland and Hungary now recognizes the importance of meeting the quality standards of foreign markets. Many producers in both countries still produce mainly for their own consumption, but even in Poland, where the average farm size is still just 8 hectares (up from 7 in 1990), a growing number of producers have 50 or more animals and produce mainly for the market. In Hungary, around half the animals belong to corporate farms, many of which are foreign-owned.

Polish and Hungarian producers are tending toward more efficient use of higher quality feed ingredients—the ratio of kg of feed to kg of liveweight gain for poultry is around 2 to 1, and for hogs close to 3 to 1. The improvement has been particularly impressive in Poland, where feed ratios of 6 to 1 were typical for hogs in 1989. Polish farmers have almost entirely abandoned feeding potatoes to hogs, in favor of grains. Preparing potatoes for use as feed is very labor-intensive, and apparently the value of labor has increased to the point where this practice is not regarded as economical. Only the very smallest two-hog farms still feed potatoes.

Poland and Hungary are also further along in privatizing the processing sector. The processing industry in Hungary is fully privatized (thanks largely to foreign investment), and about 60 percent of the Polish meat processing industry is privatized. Even in Polish companies in which the state retains a share, managers are under pressure to keep the companies afloat without support from the state treasury. Failing plants are allowed to go bankrupt rather than being bailed out with soft loans.

Poland & Hungary: Upgrading To Meet EU Standards

The prospect of eventual European Union (EU) accession increasingly dictates agricultural policies in Hungary and Poland and has led to measures encouraging livestock producers and processors to upgrade their operations so that they can meet EU standards. Various measures are being taken to induce producers to grow leaner hogs. Hogs in both countries are rapidly approaching 60-percent lean content. Polish plants that produce more than 250 kg per week must have equipment to measure the fat content precisely and are required to pay producers a premium for high lean yield over 60 percent and a discount for lean content under 60 percent.

Hungary provides a variety of subsidies and price supports to encourage plants to raise their lean yield standards. The system of guaranteed prices has been replaced by a set of target prices, but this support only applies for hogs slaughtered at plants applying EU standards. In addition, any Hungarian producer who trades in an ordinary sow for a swine with an acceptable pedigree can receive a subsidy of 30 percent of the value of the new sow; the producer must be a member of the Hungarian Breeders Association and must use boars or semen provided by the association. This subsidy is not attractive for small producers, since these high-quality animals must be raised in good conditions, which raises production costs.

Poland's intervention in the meat market is much less pervasive than Hungary's. But like Hungary, much of Polish support to livestock producers is intended to encourage the development of larger units that will be able to produce according to EU standards. Poland's Agency for Agricultural Markets (AMA) carries out intervention purchasing of hogs, but plants authorized to purchase on behalf of the AMA must be licensed to export and must meet EU standards. Further more, all carcasses purchased must meet the EU grading standard.

These measures have encouraged the development of a class of private, commercial livestock producers. In each country, a segment of small-scale producers remains, producing for home consumption or for sale to small processors who do not meet EU standards, but these producers are increasingly left to their own devices. The new policies are costly and, especially in Hungary, distort production decisions, but they have contributed to the creation of better functioning markets.

The commercial livestock industry has not developed to this extent in Romania, Russia, or Ukraine. Livestock in these three countries is still owned by either small, subsistence-level farms or inefficient, quasi-privatized corporate farms. As subsidies are cut further, the corporate farms continue to contract. Moreover, private producers in Russia and Ukraine have depended heavily on their close relationship with corporate farms—they have free use of land and are able to acquire other inputs from their "mother" farms. As subsidies to the state farms have been reduced, private producers have lost some of these benefits. Also, marketing channels continue to be dominated by monopolistic state-owned enterprises, which serve the needs of state farms. Private producers increasingly bypass these channels and market directly.

Incomplete Institutional Reform Inhibits Restructuring

A major impediment to the complete restructuring of the region's livestock sectors is the poor development of institutions needed to support markets, including clearly defined property rights, bankruptcy procedures, enforcement of contracts, a credit system, and market infrastructure. These institutions are better developed in Poland and Hungary than in Romania, Russia, or Ukraine, but are not fully developed even in Poland and Hungary. The lack of such institutions inhibits the free movement of factors of production and slows the transition of the livestock sector from subsistence farming to a fully commercial sector. Even when relative prices might favor expansion of a part of the livestock sector, producers are often unable to respond because of a lack of these institutional supports.

Enterprise privatization. The privatization of farms and agribusinesses is complete in Hungary and nearly complete in Poland. In Romania, Russia, and Ukraine, state-owned enterprises have been transformed into various types of joint-stock or shareholding companies, but the state continues to be the majority owner.

A significant share of state ownership in the production and processing of livestock and other products inhibits private producers' options. State production units tend to receive a disproportionate share of state subsidies, giving them an advantage over private producers. State dominance of marketing channels limits marketing options, tends to depress producer prices, and leads to direct marketing. State ownership of grain storage and feed mills also raises production costs for private producers.

More rapid enterprise privatization is blocked by several impediments. These countries lack bankruptcy procedures or enforcement mechanisms and privatization procedures may be clumsy. Overvaluation of assets discourages potential investors, and sometimes privatization agencies are reluctant to allow a large, vertically integrated enterprise to be dismantled. Employees of the state-owned enterprises also tend to resist privatization, fearing unemployment and loss of benefits such as health care. Restrictive labor laws put in place to protect these workers discourage potential investors who may want to shed some of the labor.

Land markets. The development of land markets is also critical to agricultural markets. Poorly functioning land markets block the development of economies of scale and perpetuate subsistence farming. Without clear title, producers cannot offer land as collateral for credit. Moreover, without clear ownership rights, those using land have no incentive to conserve the resource, resulting, for example, in overgrazing and environmental degradation.

Land markets are undeveloped in most of the transition economies and are completely lacking in Russia and Ukraine. While members of the former collective and state farms received rights to shares of land, the absence of titles impedes their ability to farm a plot of land privately, or to sell or lease it. In Romania, 80 percent of the land has been in private hands since 1991, but a moratorium placed on land sales was only recently lifted, and there are not yet any procedures to facilitate land transfers.

In Poland, land is privately owned with clear titles and there are no legal restrictions on sales or leases. Yet in practice, the land sale market is extremely thin with little demand, since agriculture is still not considered profitable. At the same time, landowners remain reluctant to sell because of limited employment opportunities outside agriculture.

Land sales are legal in Hungary as well, but only individuals may buy and sell land; restructured cooperatives and commercial companies can only lease land. Consequently, a Hungarian landowner whose piece of land is in the middle of a large tract leased by a cooperative will find very few potential buyers.

Market infrastructure. The market infrastructure (transportation, storage and handling facilities, processing and retail networks, communications, and market information) inherited from the centrally planned economies was heavily centralized, designed to meet the state's needs and entirely inadequate for smoothly functioning markets.

Poland and Hungary have seen significant improvements in their physical infrastructure: highways have been upgraded, public transportation has improved, and telephone communications are more reliable. These improvements are made possible largely through foreign investment and technical assistance. The improved infrastructure has reduced transaction costs and helped to attract more foreign investment.

Russia, Romania, and Ukraine, however, have seen very little investment in market infrastructure. In Russia and Ukraine, transport services are centered on railroads, and limited highways are deteriorating. Transportation costs from farmgate to consumer in Russia are estimated to be 20-40 percent of the costs of production. Because the existing market structures are geared toward serving large cooperatives and state farms, emerging private producers face severe infrastructural limitations. As a result, private producers increasingly bypass these marketing channels and market directly to consumers, slowing the development of an efficient economywide distribution system.

The high transactions costs associated with poor market infrastructure explain the apparent anomaly that Russian meat processing operations located near the large urban markets of Moscow and St. Petersburg actually prefer importing meat over contracting for domestic meat to maintain processing capacity.

Market information. Market information—broadly disseminated reports of daily prices on different markets—is essential to the efficient movement of goods. Market news reporting is now well developed in Poland and Hungary and is improving in Russia, but remains rudimentary in Romania and Ukraine. The lack of widely available market information creates a severe handicap for small, private producers. Large producers, both state and private, have their own sources of information. Low-cost, publicly

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available information helps level the playing field so that small producers can compete.

Credit. Private producers are frequently limited in their decision-making by a lack of ready cash. A hog producer may believe that changes in relative prices of hogs and feed would make expanding the operation profitable. But without credit, producers find it difficult to purchase additional animals or feed, let alone invest in a new barn or small feed mill.

Both supply of and demand for commercial credit is constrained in the region. Producers are unwilling or unable to pay commercial interest rates. Banks view agriculture as risky and unprofitable, and are particularly reluctant to lend to producers who cannot offer land as collateral. Governments have attempted to step in with a variety of subsidized credit programs—in many cases, loans are provided against future delivery of output. But these programs offer mainly short-term credit, and governments in the region frequently lack the funds to meet even a small share of the demand for credit.

Rule of law. Russia, Ukraine, and Romania lag significantly behind Poland and Hungary in the development of a market-based legal framework that underlies the sanctity of commercial contracts and other aspects of the rule of law in commerce. Inconsistent application of the law and random enforcement of penalties continue to undermine business transactions in these three countries, as does the ad hoc recognition of property rights by regional governments. Widespread corruption and the ever-present “mafia” still impede commerce in many cases. Such conditions greatly increase the risk of investment, diverting expansion capital elsewhere.

For countries such as Romania, Ukraine, and Russia, the question remains open whether their governments will make real progress in removing institutional obstacles to full restructuring of the livestock sector. If they do, and land, labor, and capital begin to move freely, the coming decade should see the consolidation of household plots into commercially viable farms and the emergence of a class of true corporate farms operating on a hard budget constraint. But an equally realistic scenario suggests little progress toward institutional reform, with further declines in inventories in the short term as governments find themselves unable to subsidize state farms at the current level. Eventually, the declines would halt and the livestock sectors in these countries could exist for several years at a low-level equilibrium.

The future of Poland and Hungary is increasingly tied to preparations for EU accession. Completion of institutional reform will be a prerequisite for membership, and the principal question is *when* rather than *whether* these reforms will be complete. Thus, questions about the future net trade position of these two countries and the changing balance of factors used in livestock production and processing industries (and between meat production and non-agricultural sectors) have become paramount.

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8:30 July Releases—USDA's Agricultural Statistics Board

The following reports are issued electronically at 3 p.m. (ET) unless otherwise indicated.

July

1	*Broiler Hatchery*
	Dairy Products
2	*Cheddar Cheese Prices (8:30 a.m.)*
6	*Egg Products*
	Poultry Slaughter
	Crop Progress (after 4 p.m.)
7	*Noncitrus Fruits and Nuts, Annual*
8	*Broiler Hatchery*
9	*Vegetables*
10	*Cheddar Cheese Prices (8:30 a.m.)*
	Crop Production (8:30 a.m.)
13	*Crop Progress (after 4:00 p.m.)*
15	*Broiler Hatchery*
	Milk Production
	Turkey Hatchery
17	*Cheddar Cheese Prices (8:30 a.m.)*
	Cattle
	Cattle on Feed
	Sheep
20	*Cold Storage*
	Farm Production Expenditures
	Crop Progress (after 4:00 p.m.)
21	*Agricultural Chemical Usage, Fruits*
	Chickens and Eggs
22	*Broiler Hatchery*
23	*Agricultural Prices, Annual*
	Mink
24	*Cheddar Cheese Prices (8:30 a.m.)*
	Catfish Processing
	Livestock Slaughter
27	*Crop Progress (after 4:00 p.m.)*
29	*Broiler Hatchery*
	Peanut Stocks and Processing
30	*Catfish Production*
31	*Cheddar Cheese Prices (8:30 a.m.)*
	Agricultural Prices

To learn more . . .

See “Restructuring of the Livestock Sectors in the Transition Economies of the NIS and Central and Eastern Europe,” an article in the forthcoming ERS publication *Transition Economies: International Agriculture and Trade Report.* Printed copies available this month; call 1-800-999-6779 to order. Watch for it on the Economic Research Service website at www.econ.ag.gov