III. Downstream Sector

The transition brought some dramatic changes to the meat processing industries. The giant state-owned monopoly processors that characterized the Communist period could not compete in a free market. These were successfully privatized in Hungary, but the other four countries have had difficulties finding interested buyers. All five countries have seen the startup of a large number of new private processing firms that pose formidable competition for the remaining state-owned giants. Many of these private firms are very small; some operate out of a stall in a marketplace. Poland and Hungary have seen the emergence of medium-sized, specialized firms capable of meeting EU standards. But meat processing in Romania, Russia, and Ukraine continues to be characterized by the "missing middle."

Whereas there was considerable diversity in farm structure among the five countries at the beginning of the transition, the structure of the downstream industries was quite similar in each country. Under central planning, decisions concerning purchasing, processing, and marketing of animal products was in the hands of state-owned monopoly enterprises. In some countries, there was a single state enterprise—Animex in Poland, for example—which controlled the entire meat processing and distribution system. This enterprise had regional branches, but all decisions were made in the center. In contrast to Poland, Romania's meat processing industry was characterized by a small number of discrete, vertically integrated livestock complexes. Hog and poultry complexes engaged in all stages of animal product production, from live animal breeding to meat retailing. A single hog complex in Romania typically processed close to a million hogs a year.

After the liberalization of prices and trade in the early 1990s, it became clear very quickly that the products produced in state-owned slaughter/processing facilities were not competitive in a market environment. Many facilities were technologically outdated—Communist era investment had been aimed at heavy industry, and few resources were allocated to the food industry. Central planners in the capital decided the location of slaughter/processing facilities. Frequently, the outcome was that slaughter/processing facilities were located far from the primary animal producers. Moreover, as production and consumption subsidies were removed, it also became clear that the scale of most state-owned facilities exceeded market demands. To summarize then, the slaughter/processing industries in each country at the beginning of the transition, were largely characterized by a suboptimally located set of facilities, suddenly too large to accommodate the new market environment.

The industries in each country differed significantly, however, in their responses to the collapse of central planning. Hungary, and to some extent Poland, has had some success in transforming state-owned enterprises into modern, profitable Western-style plants. An important factor contributing to the success of this transformation process was the effort of the governments of Poland and Hungary to create policy environments conducive to free enterprise.

In contrast, majority state-owned facilities continue to operate in Romania, Russia, and Ukraine. Such facilities typically operate at a fraction of their original capacity and many continue to stay afloat only through soft credit from government instituions that is rarely repaid. In these three countries, there has been little development of alternative, private marketing channels. Consequently, a major share of meat, poultry, and dairy production is marketed in direct transactions between producers and consumers in farmers' markets.

In hindsight, it is clear that the governments of Poland and Hungary initiated and completed a series of discrete steps that together facilitated the transformation of the downstream sector, from a centrally planned industry to a set of privately owned and operated companies. In Russia, Romania, and Ukraine, the transformation process has been initiated, but not as yet completed.

Privatization of State-Owned Purchasing and Processing Enterprises

As a first step, each government passed legislation intended to privatize state-owned enterprises. Governments differed significantly, however, in terms of procedures and implementation of privatization legislation. Most privatization legislation called for the transformation of state enterprises into joint stock companies, followed by the sale of equity shares to investors. In Romania, Russia, and Ukraine, however, the state continues to exert control over many enterprises through ownership of the majority of shares.

Hungary has nearly completed the process of privatizing its state-owned slaughter/processing enterprises. As a chief means of facilitating privatization, the Hungarian Government successfully marketed equity shares to foreign investors. The result is that nearly half of the livestock/poultry slaughter and processing industry is currently foreign-owned. Another key element of the Hungarian Government's privatization effort was acceptance of the notion that (financially) weaker units of large enterprises could be separated from stronger units. Weaker units were allowed to go out of business, enabling stronger units to be sold at higher prices than if accompanied by the weak units in a "package" sale. Hungary's efforts to privatize the slaughter/processing industry were accompanied by a significant reduction in the labor force, however. Because of Hungary's aggressive efforts, the meat-processing sector in that country is nearly 100 percent privatized.

Privatized meat plant in Hungary.

Privatization efforts in the other four countries have not yet achieved Hungary's level of success. Privatization has progressed very slowly in Romania, Russia, and Ukraine. Poland has made more progress, but 40 percent of the meat processing capacity remained in state hands at the end of 1999.[4] As in Hungary, the governments of Romania, Russia, Ukraine, and Poland initiated privatization efforts through the issuance of equity shares for sale to the public. But demand has been slack, and these governments continue to own the majority of shares in many slaughter and processing enterprises.

Several factors have limited private investor demand. Often the privatization ministries insist on minimum share prices which investors consider to be too high given the condition of the firms. The Romanian Government, in direct contrast to Hungary, was very reluctant to allow stronger units of an enterprise to be sold individually. In Russia and Ukraine, investors prefer starting up new enterprises over buying into existing state enterprises. Potential investors are put off by the high indebtedness of the firms and potential difficulties in downsizing the labor force.

Thus, 10 years after the beginning of the transition, many of these state-owned enterprises continue to operate in the three slower reforming nations. They are generally inefficient, incurring high costs because of outdated technology. Most operate well under capacity—some in Russia operate only at 25 percent of capacity—which raises per unit production costs still higher. Facing competitive world prices, they are unable to raise prices to cover their costs. Instead they rely heavily on government support and seek to maintain profits by cutting production to a point where variable costs are covered. In addition, they attempt to use whatever market power they have to limit producer prices. In the early years of the transition, these firms held considerable market power, but, in recent years and even in the less reformed countries, this market power has been eroded by competition from new private firms.

[4] Conversation with Polish experts.

Disintegration of Vertically Coordinated Marketing Chains

A high degree of vertical coordination characterized the meat processing industry under Communism. Many state-owned conglomerates were vertically integrated, engaged in every stage of production, from live animal production to processing to retailing. In all five countries, state enterprises also tended to contract with private producers. The state enterprise typically provided young animals and feed. The slaughter-ready animal was delivered at a negotiated price.

The transition to a large extent was characterized by a reversal of this trend. The Polish Government deliberately broke up the state-controlled marketing chains and split the state-owned enterprises into smaller units. Contracting agreements often broke down as a consequence, and most producer-growers pursued alternative marketing channels. Governments in Russia, Romania, and Ukraine attempted to retain a vertically coordinated system of animal product production, but their efforts have been largely unsuccessful. In response to delayed payments or no payment at all, producers have virtually ceased selling live animals to the state processing enterprises, seeking out various alternative private marketing channels.

The disintegration of established marketing relationships was much less pronounced in Hungary. Evan as former state enterprises were split into smaller units, the system of producer delivery contracts remained intact. Poultry processors, in particular, maintained their former links with private producers.

Producers Seek Alternative Marketing Channels

For a short time after the transition began, most livestock/poultry producers in the five countries continued to deliver slaughter animals to state slaughter/processing facilities. For reasons set out in Chapter 1 and above, prices paid to producers by state enterprises declined persistently, inducing most producers to search out alternative marketing channels. The chief alternative was often home processing (i.e., butchering, milk processing, etc.) with direct product marketing to consumers in open-air markets. This alternative reduced marketing risk, and allowed producers to capture value-added through processing.

Specialization

In the next stage of development of alternate marketing channels, the more enterprising producers/direct marketers begin to specialize, either narrowing their range of products or focusing on just one stage in the marketing chain. The open-air meat stalls slowly disappear, as their operators have been able to accumulate capital sufficient to

Open-air markets still play a vital role in retail food marketing.

move their operation into an indoor shop and purchase equipment. This slow process of developing new marketing alternatives to replace the former state-controlled channels can be observed to some extent in each of the five countries. Development of new marketing channels via specialization and capital accumulation provides evidence that market prices are diverting resources away from "old" marketing channels.

In Poland, as early as 1991, the sale of fresh meat moved from stalls in open-air markets to enclosed retail shops. This development can also be observed in Romania. But in Russia and Ukraine, would-be entrepreneurs still face

Box III-1—Poland, Hungary Influenced by Preparations for EU Accession

Developments in the hog and poultry sectors of Poland and Hungary are increasingly shaped by their preparations for EU accession. As the transition moves forward, and other Central and Eastern European countries prepare for accession, changes currently underway in Poland and Hungary will likely be duplicated.

The defining challenge of EU accession for the livestock/poultry production and processing sectors in Poland and Hungary is the prospect of direct competition with European producers and processors. The poultry, beef, and pork industries are in different states of readiness for accession. Both the production and processing ends of the poultry industry are well positioned for accession because of its strong historic orientation to the EU. Most large poultry processing facilities in Poland and Hungary meet EU phytosanitary and health standards, and are certified for export to the EU. Because the Polish and Hungarian poultry industries are each characterized by a high degree of vertical coordination, processors contract with producers to either purchase hatching eggs directly from the EU, or from breeding flocks sourced from European genetics.

In preparation for EU accession, both Poland and Hungary have adopted the EU's EUROP standard for grading beef and pork. The EUROP standard is a set of quality grades, beginning with the "E" grade at the high end of the quality spectrum, and the "P" quality grade at the opposite end of the scale. Because of higher consumer prices associated with higher quality grades, slaughter facilities compensate producers for higher quality animals. While the EUROP standard has limited relevance for the cattle and beef industry, as beef is largely a residual product of the dairy industry and is therefore rarely graded for quality, adoption of the EU standard is currently driving change in the Polish and Hungarian pork sectors.

Adoption of the EUROP grading standard became mandatory for large slaughter facilities in 1996 in Hungary and 1997 in Poland. Consequently, well-managed operations are currently paying premiums to hog producers for uniform, high-quality animals (i.e., those with less backfat, and higher lean yield). Producers, in turn, are incorporating new genetics into breeding herds in order to capture quality premiums. This dynamic will likely characterize transition hog and pork sectors for the next several years. Clearly, slaughter facilities whose managers are able to secure the financial capital necessary to upgrade slaughter and processing technology to meet the EUROP standard, and to pay premiums for quality hogs, will be among those most likely to survive. Producers who, in turn, are able to secure the financial capital necessary to improve breeding herd genetics and lower production costs have the greatest probability to grow and prosper.

To summarize, preparation for EU accession as a driver of change in the livestock/poultry production and processing sectors of transition economies has several implications: First, adoption of the EUROP meat grading standard suggests an increase in demand for financial capital in order to remain competitive within an expanded EU. Second, as consumer incomes continue to increase, demand for higher meat quality will likely follow. Together, these factors imply a greater degree of future vertical coordination in the meat industry. The livestock/poultry production and processing sectors of transition economies will thus likely be characterized by larger and fewer operations, each with good access to financial capital, to maintain a base of current technology for low-cost production of high-quality meat products.

EU welfare regulations prohibit tethering of cattle.

formidable obstacles. The principal obstacles include a lack of capital, ill-defined property rights, absence of contract enforcement, and an undeveloped market infrastructure. Moreover, small private firms in Russia and Ukraine must compete with state firms that still benefit from soft credit not available to private entrepreneurs.

As a result of this process, Poland, Hungary, and Romania have seen a dramatic increase in small slaughtering and processing plants. There were approximately 7,000 slaughterhouses in Poland in 1999, compared with a few hundred in 1990. In Romania, there were 93 slaughter/processors certified by the Ministry of Agriculture, but more than 1,000 other small plants still waiting for official certification; there were virtually none in 1990 (Grant and Gerber, 1997). Indeed, many new slaughter operations are little more than single-room operations; a Romanian expert described some new enterprises as little more than a "rope for hanging." The future for such operations is doubtful, particularly in Poland and Hungary, which are likely to accede to the EU membership in the coming decade and will be subject to the very strict EU sanitary standards. Many newer, more specialized processing operations in Poland and Hungary are expected to thrive as members of the European Union (see Box III-1).

The survival outlook for small, private slaughter/processors in Romania is more problematic. Most animal products currently found in retail markets are products of the large state-owned enterprises, or partially privatized enterprises. Private slaughter and processing facilities in Romania are very small. They typically depend on state farms for slaughter animal supplies and compete at a disadvantage with the same state farms on the retail market. The state farms have long-established ties with the major retail shops, and some maintain their own shops. It is difficult for a new, small-scale processor to break into this network (see Box III-2).

Box III-2—Fighting the Odds in Romania: A Private Sausage Plant, Visited in 1998

This was a private meat processing plant founded in 1992, in what had been a bakery. The plant did not slaughter animals, but bought carcasses from the state farm in Peris described on page 13 and processed them into ham, sausage, and baloney. The plant sold 95 percent of its output to retail shops, aiming at higher income consumers; its largest customer was the German-owned hypermarket Metrou in Bucharest.

The plant was facing considerable difficulties because of the depressed pork market, and was working at less than half its capacity. Demand for pork meat had dropped substantially when prices were liberalized in 1997, and the plant was facing sharply higher prices for raw materials. Fresh carcasses accounted for 70 percent of its production costs. The only supplier was the state farm in Peris, and its prices had gone up 50 percent in the previous 6 months. The peasant market could not ensure reliable supplies. The plant was in a very disadvantageous position relative to that of the farm in Peris. The state farm had much easier access to credit, and, being the only reliable supplier of live hogs, it had all the market power.

In Russia and Ukraine, privately owned slaughter/processing or dairy processing facilities account for just 5 percent of annual supplies of processed meat products. High transportation and search costs for slaughter animals appear to be the major problems faced by new slaughter facility managers. Poor roads and irregular delivery of slaughter animals from large numbers of small producers combine to increase production costs. A key problem for private processors is the high cost of refrigerated storage, which reduces the quantity of carcasses that can be purchased and stored for later processing. In Russia and Ukraine, it appears that privatization and development of alternative marketing channels have not advanced to the point where entrepreneurs have accumulated sufficient capital to take such elemental steps as leasing shops or investing in refrigeration. Currently, most successful specialized entrepreneurs in Russia and Ukraine continue to operate in open-air farmers' markets (see Box III-3).

Increasing Concentration and Reintegration

After animal processing becomes more specialized, developing private animal products industries appear to enter a consolidation period, where the industry often becomes

Raising broilers under contract.

Credit: Milton Madison.

more concentrated. The very smallest slaughter/processing operations go out of business, or merge with others. Larger, more successful plants gradually expand, and begin to account for significant percentages of national production.

The trend toward greater concentration in the livestock/poultry slaughter/processing industry is most pronounced in Hungary. In 1998, 24 of Hungary's 700 slaughterhouses produced 60-65 percent of total meat output, and three large companies controlled most poultry processing. The same trend is accelerating in Poland, particularly in the poultry sector: There are 500-600 poultry plants, but 28 account for 65 percent of birds slaughtered. The larger poultry processing operations have organized into groups. In 1999, four such processor groups were accounting for

Box III-3—Adam Smith's Pin Factory: The Principle Revisited at a Ukrainian Meat Market

The story of the pin factory in "Wealth of Nations" was used by Adam Smith to illustrate the basic economic principle of increased productivity of labor through specialization. We were able to see this process demonstrated at an open-air market in Kiev in the summer of 1998. This was a market for a multitude of food items—fresh vegetables, fruits (both imported and domestically produced), some fresh dairy products, household items, and fresh meat. The local municipal government operated the market, and stalls or booths were offered supposedly on a first-come, first-served basis to sellers. Local officials provided supervision and some inspection services for fresh meat items and overnight refrigeration—for a fee—for unsold meat.

We interviewed one butcher at this market. He and his wife had been operating this enterprise since 1995. They both had previously worked at a cooperative farm, where the man had been responsible for preparation and feeding of livestock. In a previous assignment, he had worked in the farm's meat processing shop, where he learned to dress hogs and cattle. Like most cooperative farmworkers, by 1995 he had received only sporadic payment of cash wages; by 1998 he had not received any cash wages in nearly 2 years. He still maintained a small plot on the farm of about 1.5 hectares, on which he lived and was currently raising five hogs as well as vegetables and a little wheat.

In 1995, he began cutting up his own hogs and delivering them to the Kiev market. He claimed to have earned about $150 from his first sale, compared with his monthly salary of 50 grivna (about $30 at the time.) After this initial success, he began looking for live animals to purchase, slaughter, and sell in the Kiev market. He was able to purchase live animals from plot owners like himself on a cash-and-carry basis. He would purchase the animal, take it into the woods, and slaughter it during the night. He transported the meat to Kiev, where he and his wife would set up a booth and sell it. This labor intensive and physically demanding activity was repeated no more than twice weekly, sometimes less depending on availability of animals and fatigue. Until early spring of 1998, he claimed profits of about $100 per animal. Ideally, he sold all the meat in one day. If not, the remainder was stored in the municipal refrigerator and removed the next day for sale. Since the meat was not refrigerated up until storage, it would perish quickly and would have to be discarded.

Some observations: First, this market was completely independent of government regulation. There is no state involvement in the pricing or terms of sale of the animals or meat. The municipality does operate the market, but entry is easy and relatively open to any bona fide marketer. The butcher we interviewed claimed that this type of market has captured virtually all of the fresh meat processing and marketing in Kiev. The privatized processing plants sold only processed meats—that is, smoked meat, pre-packaged hams, and casing meats.

Also, this was a "hot meat" system. This means that the meat was not refrigerated at any point in the processing chain. The characteristics of a hot meat system are that the time from slaughter to consumption is short, usually never more than a day or two at the most. Consequently, distances from farm to table are short and there is virtually no inventory in the system. This system is common in countries and areas where refrigeration or electricity is not available. However, electricity supplies were not the problem in Ukraine. The country has an electrical grid, and most Kievites have at least a small refrigerator. Thus, it seems that the reasons for the existence of this system were economic, not technical. Since the technical infrastructure already exists for a more modern meat processing system, this informal market will likely disappear when the terms of trade between farmers, consumers, and processors no longer make this activity profitable.

The processor assumes all risks associated with both purchase and sales; he has no recourse if he purchases a diseased animal. Likewise, losses due to leftovers were the processors' losses exclusively. While the larger, formerly state-owned factories complained of nonpayments, all sales at these private markets were made for cash. Thus, it appears that there

an increasing percentage of birds slaughtered annually in Poland.[5]

Many of the larger slaughter/livestock facilities in Poland and Hungary are former state enterprises. These operations have undergone considerable modernization, and some are licensed for export. Some are recently constructed plants, built in the early 1990s, but nearly all such operations have a significant share of foreign ownership (see Box III-4).

By the end of the 1990s, about a dozen large-scale privately owned packing plants had emerged in Russia.

[5] This information was obtained through extensive interviews with meat processing experts in Poland and Hungary.

is adequate monetary liquidity in the system. The state and formerly state-owned firms are by Western definitions bankrupt, but there is no formal liquidation or business exit procedure.

This alternative marketing system is rapidly changing. According to the butcher, his profits had deteriorated over the last year and especially in the last few months. This was likely because there were more people doing what he was doing. The large processors had raised prices for live animals, and prices at the live market had also risen. Another major change was the emergence of rural live animal markets. Initially, our processor would drive about the countryside looking for an animal to purchase. Lately, he had been able to purchase animals at the rural market. At this market, the closest of which is about 30 kilometers from Kiev, farmers (usually small plot holders) can sell animals for cash. There are some professional marketers who acquire a small number of animals to sell at this market, usually to people like the butcher, who process them into meat for the urban market. The gathering of animals, usually in small numbers, at a sales point is an example of specialization of activity.

A second development was the emergence of "families." These were groups of people, usually related, who engaged in meat processing with greater specialization than was possible for a single-person operation. One or two members would purchase animals from farmers, usually private plot holders or sometimes from the private co-ops. Numbers purchased were small and were paid for by cash. Other members specialized in slaughter. They operated in a garage, shack, or even outdoors, and the process was labor intensive. Finally, another member or two would staff the booth, selling the product. Several advantages accrue to this operation. First, unlike the single-person operation, the family can operate a booth 6 or 7 days a week, not just 2. The family thus realizes a greater volume of sales. The family can also make sure that they have not only the best location, but also the same location in the market. This makes it easier to establish a repeat business clientele. Asked if he had any regular customers, our interviewee mentioned only one person who would seek him out. A constant presence in the market permits quicker adjustment to changes in consumer preferences as well as prices.

It seemed that the market responded rapidly to consumer preferences. For example, processors in the market had, within the last 6 months, begun packaging purchases in plastic bags like the ones in U.S. supermarkets. Some of the larger merchants were able to offer these bags as gratuities to customers and soon everyone was doing it. In addition, customers definitely preferred 400- to 600-pound hogs, rather than the 250-pound "lean" hog desired in the United States and Western Europe. Hog fat was selling briskly at about $5 a pound in this market, and many of the tables were covered with bacon fat.

There was also specialization by livestock type. Our interviewee slaughtered only cattle and no longer hogs. There were several reasons for this, all rooted in market economics. First, hogs take longer to dress, despite their smaller size. With cattle, the hides are stripped and immediately sold to a broker, who exports them to Western Europe, usually Italy. With hogs, the hair has to be singed off with a blowtorch without burning or scorching the skin. Customers preferred cuts, especially back and belly fat, with the skin still intact. The singeing was a time-consuming activity requiring considerable skill. Hogs were also considered somewhat riskier to handle. Pork would go out of condition faster than beef, and consequently the losses from unsold meat were greater.

The butcher complained that his profits had been eroding steadily for about a year because of increased competition both at the retail booth and for procurement of live animals. In other words, processor margins were declining and efficiencies of operation, such as the specialization of family operations, were being passed on to consumers. Asked what he would do if this enterprise should fail, our interviewee would not speculate. But he did allow that he had six hogs on his plot, and that he expected to sell some of them.

These operations together accounted for about 30 percent of processed meat production. The plants are fully privatized, with 100 percent of their shares distributed among shareholders. Meat products are distributed mainly in large metropolitan areas (Moscow, St. Petersburg, Omsk, etc.). Metropolitan governments, which number among the large shareholders of the companies, assisted the private meat production operations by providing initial financing. Individuals hold the majority of outstanding shares. The private meat production companies have invested in new technology and operate at well above 50-percent capacity. They have steadily expanded their networks of warehouses and retail outlets throughout their product distribution areas. Typically, these plants are engaged in both importing and exporting (prior to the ruble depreciation in August 1998, the companies imported up to 90 percent of meat they processed; that proportion has presumably declined since then.)

The emergence of large, fully privatized meat processing facilities has not yet been observed in Ukraine, where privatization efforts lag behind those underway in Russia. In Ukraine, about 70 percent of all meat is processed at 25 very large, formerly state-owned facilities. These have all be transformed into shareholding companies, but the state still owns the majority of the shares, and the management is largely unchanged. These facilities reportedly operate at between 15 and 25 percent of available capacity.

Many of the larger companies in Hungary and Poland are now becoming more integrated; more and more buy their animals on contract with producers. In Poland, Romania, and Hungary, the processing firms tend to integrate backwards into production. The purpose is to insure more reliable supplies of animals of a uniform quality. Processors in Poland are beginning to rebuild the system of producer contracts that existed before 1989, in order to assure a

Box III-4—Farm Food, a Meat Processing Plant in Eastern Poland: An Example of Vertical Coordination and Increasing Concentration

Farm Food, which we visited in November 1998, produced fresh and processed beef and pork. It had been founded 5 years earlier by a former government Minister. He used his own capital and a loan from the Export-Import Bank of the United States. Since then, some Germans have bought a 25-percent share, and a Swedish group bought 15 percent. The company had also purchased existing plants in two other cities and established its own hog and cattle breeding farms in southern Poland.

The firm purchased 50 percent of its animals from nearby farms and the rest from larger units in neighboring regions. It supplied the genetic material to those farms in an effort to raise the quality of meat. The company used marketing contracts to purchase 70 percent of its hogs.

The plant processed 700-800 animals daily, producing 40 tons of sausage, 10 tons of variety meat sausage, 25 tons of smoked products, and 3 tons of fresh meat. The main plant's manager had a definite preference for processed products and hoped eventually to shift all of the plant's production to value-added processed meat products.

The main market was Warsaw, which took 48 percent of the output; the firm also sold in Gdansk, Szczecin, and Poznan.

The firm also exported to Russia. Before the Russian financial crisis of August 1998, Farm Food's main plant produced 100,000 tons of sausage a month for the Russian market. Immediately after the onset of the ruble depreciation, the Russian market all but disappeared. However, the manager said that exports had recently resumed. Farm Food had developed a new line of lower quality sausage to reach this market. It imported deboned turkey from the U.S. for use in this sausage.

The plant manager, when asked about possible impacts of a nationwide increase in wages, said that he did not think labor costs would be affected. Under the current economic conditions, the plant used quite a bit of hand labor and found it more profitable to invest in new plants rather than automated equipment. He had clearly made a decision to stay with more labor-intensive technologies for the time being, but if wages were to rise, he suggested that he would make every effort to substitute technology in place of labor.

Farm Food also owned two breeding farms—one for hogs and one for cattle. The breeding farms supplied genetic material to larger hog growers (cooperators), and young animals to the smaller growers. In this way, the firm had been able to raise the carcass quality. In 1993, for example, average lean yield for hogs slaughtered at Farm Foods was 42 percent. By 1998, the lean yield had increased to 49 percent.

The biggest challenge remains distribution, and any additional investment would go to improving the marketing and distribution system.

In November 1999, as evidence of the growing trend toward greater concentration, Farm Food announced a merger with three other major meat processors. Together these will constitute the country's largest meat producer with 20-percent share of the domestic retail market.

Box III-5—Ber-ker-bet Poultry Farm, Hungary: A Case of Contract Farming

This farm raised birds under contract to a nearby slaughterhouse/processor, which had provided credit to start the business and continued to provide the chicks and the feed. The farm covered the remaining costs. The slaughterhouse belonged to one of the two largest poultry processing companies, which together accounted for 90 percent of commercial poultry slaughter in Hungary. The company processed 50 million birds per year at eight separate plants. The farm had a 3-year contract with the slaughterhouse, which was renegotiated every 6 months. The manager stated that 80 percent of Hungarian poultry is produced under such contracts.

The manager had plans to build his own feed mill with a capacity of 10 tons per hour. He believed this was necessary to ensure uniform feed quality. Hungarian feed mills were allowed a considerable margin of error in the protein content, since most did not have the equipment to measure it more precisely. As a result, the manager was never exactly sure what was in the feed that he used, which resulted in some loss of productivity. The farm planned to finance the construction with assistance from a government program that established a fund of 8 billion forints for building or reconstruction of such facilities. Forty percent of the cost, up to 40 million forints, would be covered by the state under this program.

timely supply of uniform animals. The poultry sector in Hungary and Poland exhibits the greatest degree of vertical coordination. Virtually all birds processed by the large slaughter/processors are grown under contract. In Hungary, the slaughter/processor provides baby chicks and feed to the grower. The grower delivers the finished bird at a price specified in the contract. In Poland, growers procure feed and chicks on their own, but most have marketing contracts with processors. The pork sectors in Hungary and Poland are less integrated (see Box III-5).