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**CHANGING PATTERNS OF LIVESTOCK, MEAT, AND DAIRY
MARKETING IN POST-COMMUNIST KAZAKHSTAN**

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CHANGING PATTERNS OF LIVESTOCK, MEAT, AND DAIRY MARKETING IN POST-COMMUNIST KAZAKHSTAN

Saulesh Esenova and W.D. Dobson*

Executive Summary

Introduction

- This Discussion Paper identifies for the Almaty region of Kazakhstan certain characteristics of the markets for livestock, meat, milk and dairy products, namely:
 - Elements of the economic and business environment that have shaped marketing channels for these products.
 - The nature and condition of marketing channels for the products.
 - Key constraints to efficient marketing performance for these products.
 - Policy and technological interventions that would improve the performance of firms marketing livestock, meat, milk, and dairy products.
- Porter's five competitive forces that determine industry profitability were used to frame the study.

The Economic and Business Environment in Kazakhstan

- Kazakhstan became an independent republic in 1991 when the former Soviet Union collapsed. As in many countries that were once part of the Soviet Union, adjustment problems have caused economic growth to become unstable and decline.
- Kazakhstan's Gross Domestic Product (GDP) at purchasing power parity for 1997 was down 41% from the 1991 figure. Agriculture's contribution to GDP at market prices fell to 8.8% in 1998, its lowest contribution since 1991.
- Overall Kazakhstan's banking sector is still so small that it plays little role in providing credit to the real economy. Shortages of credit at acceptable terms have limited the ability of meat and milk processors in the Almaty region to expand.
- Livestock numbers in Kazakhstan declined sharply from 1991 to 1999—79% for sheep and 69% for hogs.

The Nature of Marketing Channels for Livestock and Meat in Kazakhstan, 1999

- There are approximately a dozen mid-sized and small sausage/meat processing plants located in or near the city of Almaty. There are more than 100 (mostly tiny) additional sausage plants in Almaty.
- Becker and Company is a large processor that holds a dominant position in the important boiled sausage market segment in the Almaty region. Becker sells 6.5 to 7.0 tons of sausages daily through 28 company shops in the Almaty area and markets additional sausage through retail stores.
- Two mid-sized plants include Balapan Farms (canned pork producer) and Accept Agro's Talgar Slaughter House (integrated beef feeder and processor). Both have significant growth potential if constraints limiting their operations can be overcome. Balapan Farms faces credit constraints and Accept Agro fears that it will be difficult for the firm to obtain adequate numbers of feeder bulls.

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- With the exception of Becker, and possibly Balapan Farms and Accept Agro, much of the remainder of the livestock and meat marketing and processing sector in the Almaty region of Kazakhstan fits Porter's description of a fragmented industry.
- Becker and Company and a processor associated with Ramstor supermarkets have integrated backward into hog production to safeguard supplies of pork. The Ramstor affiliate feared that few hogs would be left in Kazakhstan by 2002 or 2003.
- While integration backward into production and meat imports by marketing firms are orthodox adjustments of the type predicted by Porter, these adjustments may further reduce livestock numbers in Kazakhstan.
- Small livestock farmers supplying the Almaty region possess little bargaining power relative to dealer-wholesalers and processors. If trends in Europe and North America spread to the Almaty region, expect the bargaining power of supermarkets to increase relative to others in the marketing chain.

The Nature of Marketing Channels for Milk and Dairy Products in Kazakhstan, 1999

- In 1999, eight dairy processing plants operating in or near the city of Almaty processed a total of about 200 tons of milk per day.
- Dairy farming in the Almaty region does not appear to be in a downward spiral. Moreover, milk processing in the region is not fragmented to the same extent as meat processing.
- Food Master is the dominant dairy processing firm in the Almaty region. The firm claims to have about a 60% market share for the main products that it markets in the Almaty region. The firm processes about 40 tons of milk daily in the Almaty and Yessyk plants.
- Food Master faces strong competition from foreign sellers of ice cream and hard cheese in Almaty supermarkets. The foreign dairy products enter Almaty via Russian, Kyrgyz, and Kazakh wholesale companies.
- Food Master has literally changed the structure of milk markets in the Almaty region by establishing 28 milk collection stations for smaller milk producers in the region. These collection stations and price incentives provided by Food Master have encouraged small producers to stay in business and have helped the processor obtain adequate milk supplies.
- SMAK Company Ltd. produces ice cream and fluid milk products. The firm has capacity to produce 30 to 40 tons of milk per day but in 1999 obtained only about 15 tons of milk per day from farmers.
- Agro Products began operations processing two tons of milk per day but in 1999 had substantially larger operations. The firm sells fluid milk products, cream cheese desserts, and ice cream. Most of the firm's fluid milk products are sold through a chain of kiosks and lesser amounts through retail stores.
- Both SMAK and Agro Products find it expensive to obtain needed imported dairy product packaging material, in part because of the devaluation of Kazakhstan's currency in April 1999 and the 20% tariff on imported fluid milk packaging materials.
- Foreign firms and new entrants from elsewhere in Kazakhstan may have incentives to sell increased amounts of ice cream and hard cheese in the relatively prosperous Almaty market.

Constraints to Efficient Marketing Performance

- The large decline in livestock numbers in Kazakhstan from 1991 to 1999, which created excess processing capacity and promises to further limit available livestock supplies.
- Credit shortages for marketing and processing firms at acceptable interest rates and repayment terms.

- Government and bureaucratic practices affecting (a) veterinary inspections, (b) tax incentives for expansion of livestock, meat, milk, and dairy production and processing, and (c) tariffs.
- Weak consumer demand for value added meat and dairy products.
- Shortages of personnel with sophisticated management, marketing and quality control experience relating to meat and dairy products.
- Lack of producer and processor experience with conditions that have emerged in the livestock, meat, milk and dairy product markets in the Almaty region during the transition from socialist to market-based systems.

Policy and Technological Adjustments to Improve Marketing Performance

- Weakness in demand for meat and dairy products is a deep-seated problem that will be remedied in part by economic policies that promote growth, stability, and a favorable business environment.
- The government can help to provide a favorable business environment that would make it attractive for foreign firms to enter into joint ventures with meat and dairy processing firms in the Almaty region and supply equity capital.
- Processors and dealer-wholesalers can establish integrated cattle- and hog-raising systems where farmers share more fully in the profits from livestock enterprises.
- The government can provide additional market information for small livestock producers that would be distributed mainly by radio and newspapers. The market information could be supplemented with a system of grades and standards.
- Regulatory abuses—especially those associated with veterinary inspections—could be reduced.

CHANGING PATTERNS OF LIVESTOCK, MEAT AND DAIRY MARKETING IN POST-COMMUNIST KAZAKHSTAN

Saulesh Esenova and W. D. Dobson

Introduction

This Discussion Paper describes the results of marketing research conducted in Kazakhstan during 1999 to identify:

- Elements of the economic and business environment in Kazakhstan that have shaped marketing channels for livestock, meat, milk, and dairy products in Kazakhstan.
- The nature and condition of marketing channels for livestock, meat, milk, and dairy products in Kazakhstan.
- Key constraints to efficient marketing performance for livestock, meat, milk and dairy products in Kazakhstan.
- Policy and technological interventions that would improve the performance of firms marketing livestock, meat, milk and dairy products in Kazakhstan.

The paper is based on interviews conducted by the authors in the Almaty region of Kazakhstan in the third quarter of 1999 and published information. Business people interviewed were asked to describe their purchasing and marketing practices, production/sales rates, safety and quality control practices, marketing challenges, and plans for development of their firms (see the Appendix for a list of persons interviewed).

The Almaty province (excluding the city of Almaty) and city of Almaty had populations of 963 thousand and 1.172 million, respectively, together accounting for about 13% of the 16.7 million total population of Kazakhstan in 1995 [2, p. 12]. The region—especially the city of Almaty—is one of the most important markets for agricultural products in the country. Findings for the Almaty region may have applications in other regions of the country.

I. The Economic and Business Environment in Kazakhstan

Michael Porter of the Harvard Business School has demonstrated that the essence of formulating competitive strategy is relating a firm to its environment [4, p. 3]. Accordingly, to understand how Kazakh firms have shaped the nature of marketing channels for live animals, meat, milk, and dairy products, it is useful to briefly summarize the nature of the economic environment that emerged in Kazakhstan during the 1990s.

The Macroeconomic Environment in Kazakhstan

Kazakhstan became an independent republic in 1991 when the former Soviet Union collapsed. As in many countries that were once part of the Soviet Union, there have been adjustment problems that have caused economic growth to decline. In 1997, Kazakhstan had a Gross Domestic Product (GDP at purchasing power parity) of U.S.\$42.8 billion, and U.S.\$2,734 per person [1, p. 39]. The aggregate GDP figure at purchasing power parity for 1997 was down 41% from the comparable figure for 1991.

According to the Economist Intelligence Unit, real growth of the Kazakh economy contracted by about 2.5% in 1998 and was expected to contract another 2.0% in 1999 [1, p. 7]. In part, the larger than expected decline in real GDP in Kazakhstan resulted from the worst grain harvest in 30 years. Other forces causing the economy to contract were a decline in demand for Kazakh exports to former Soviet markets—Russia in particular—as well as falling domestic demand caused by the tight money policy of the National Bank of Kazakhstan. Agricultural production contracted by

18.9% during 1998. Consequently, agriculture's contribution to GDP at market prices fell to 8.8%, its lowest contribution since independence in 1991 [1, p. 20].

Kazakhstan, which used the Soviet Ruble and later the Russian Ruble in the early years of the Republic, began using its own currency—the tenge—in 1993. The tenge was devalued by about 30% on April 5, 1999 [1, p. 6]. This put the exchange rate in the fourth quarter of 1999 at about 132 tenge to the U.S. dollar. Among other things, this devaluation substantially increased the cost of imported packaging material for milk processors in the Almaty region.

Consumer inflation, which averaged 176% as recently as 1995, was expected to be brought down to about 18% at the end of 1999 and was expected to slow further to about 7% in 2000 [1, pp. 8 and 24].

According to the Economist Intelligence Unit, **"Overall the banking sector is still so small that it plays little role in the provision of credit to the real economy** [1, p. 18]." (emphasis supplied). This conclusion was reached in part because Kazakhstan's commercial banks have a small deposit base—only 84.8 billion tenge (4.5% of GDP) at the end of 1998, making any significant withdrawal of funds crippling [1, p. 18]. In all European Union countries, bank deposits are equivalent to more than 50% of GDP [2, p. 27]. In part, the small deposit base reflects the absence of deposit insurance comparable the systems available in North America and Europe, and depressed economic conditions. As noted later, shortages of regular commercial credit have limited the ability of meat and milk processors to expand.

The overall development of Kazakhstan's agricultural sector is hampered by a related development, which the Economist's Intelligence Unit described as follows:

One major stumbling-block facing agricultural improvement is the absence of proper freehold rights for land, which has hampered the emergence of a functioning land market. Current legislation severely curtails private land ownership: only Kazakh citizens can own land, while other land is only open to private ownership if productive assets or dwellings are situated on it, **meaning that land cannot serve as collateral for loans** [2, p. 24]. (Emphasis supplied).

While the problems besetting Kazakhstan's agricultural sector spring from a number of sources, the credit problems affecting farmers and agribusinesses appear to be among the most serious.

Meat and Milk Production and Processing in Pre-1991 Kazakhstan

The Soviet system, which prevailed in Kazakhstan prior to the dissolution of the Soviet Union, was characterized by many large and complex agricultural enterprises. Animals were raised on large farms—sovhozes (state farms) and kolhozes (collective farms)—which were required to supply live animals, carcasses, and milk to large processing plants.

For example, under socialism, the large Almaty meat processing plant was the only commercial meat processing plant in the city of Almaty. This plant closed in 1997 and in 1999 was attempting to restart operations. Portions of the meat produced by the large processing plants were canned and/or processed into sausages, while much of the remaining meat was frozen and stored at the plants or refrigerator stations. Frozen meats were distributed to the military, supermarkets, other retail stores, restaurants and other outlets.

The dairy industry of Kazakhstan in the Soviet era also had large dairy farms and milk processing plants. For example, prior to 1985 two milk processing plants in the Almaty region processed 400 to 500 tons of milk daily. These plants are larger by a factor of 10 than the largest milk processing plants in the region today. Only a few large socialist-type dairy farms with 800 to 1000 cows each currently survive in the Almaty region.

The planning, resource allocation, procurement, and distribution systems in the meat and dairy industries of pre-1991 Kazakhstan bore little resemblance to those of a free market system.

The Decline of the Livestock Herd in Kazakhstan

The phase-out of the Soviet type farms and processing facilities, the shrinkage of the economy, and economic recessions that caused farmers to liquidate livestock to obtain needed funds have caused a large decline in the Kazakh livestock herd (Table 1). The decline in sheep and hog numbers was especially pronounced during 1991 to 1999.

Table 1. Changes in Livestock Numbers in Kazakhstan, 1991-1999*

Species	Number of Livestock (million head)		% Change 1991-99
	1991	1999	
Sheep	34.0	7.0	-79%
Cattle	9.6	4.2	-56
Horses	1.5	1.0	-33
Camels	0.14	0.099	-29
Pigs	3.2	0.98	-69

* Source: Kazak Research Institute of Feed and Pastures, 1999.

II. The Nature of Marketing Channels for Livestock and Meat in Kazakhstan, 1999

The marketing channels for Kazakhstan's livestock and meat products are in transition. Thus, this study provides only a "snapshot" of the channels that existed in 1999. However, this picture identifies evolutionary tendencies in the markets and suggests how policy and technological interventions might influence the evolution in desirable ways.

Porter's five competitive forces that determine industry profitability (Figure 1) are useful for summarizing the forces and developments that shaped the livestock and meat marketing system that existed in the Almaty region of Kazakhstan in 1999 [3, p. 5].

Porter describes the influence of the five competitive forces as follows:

The collective strength of these five competitive forces determines the ability of firms in an industry to earn, on average, rates of return on investment in excess of the cost of capital. The strength of the five forces varies from industry to industry, and can change as an industry evolves....The strength of each of the five competitive forces is a function of industry structure, or the underlying economic and technical characteristics of an industry....Firms, through their strategies, can influence the five forces. If a firm can shape structure, it can fundamentally change an industry's attractiveness for better or for worse [3, pp. 4-7].

As noted later, a few firms in the livestock and meat and dairy industries of Kazakhstan have changed industry structures to improve their competitive positions.

Industry Competitors (Rivalry Among Existing Firms)

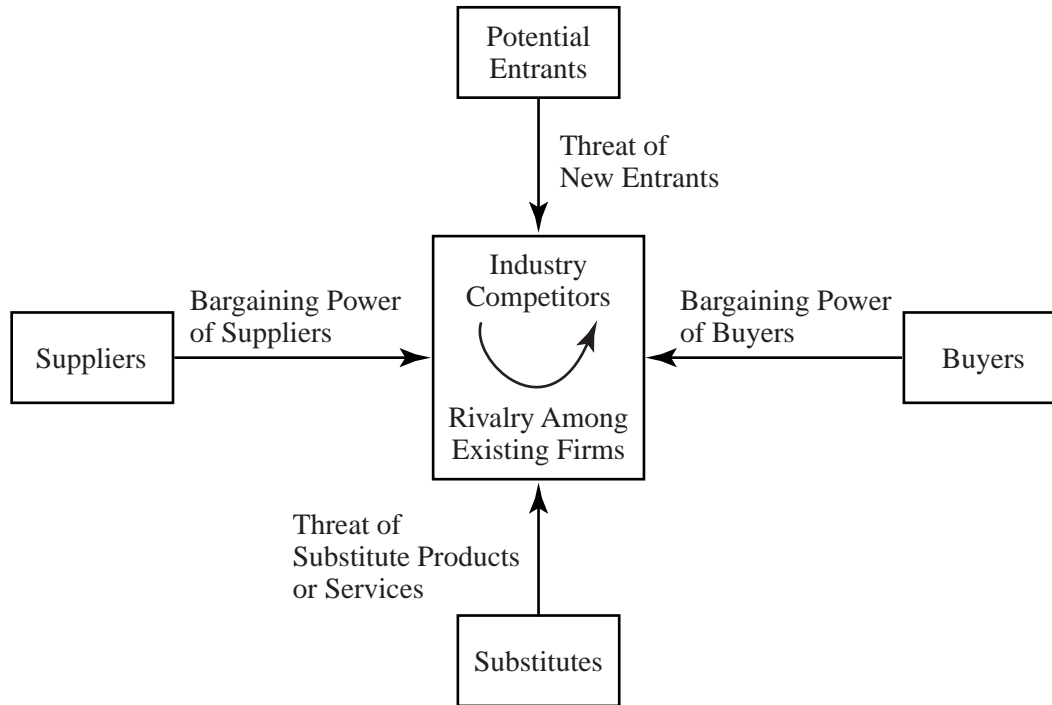
Industry competitors and the rivalry and interactions among firms in the livestock and meat industry in the Almaty region of Kazakhstan are described using the marketing chain shown in the following diagram to frame the discussion.

FARMER—DEALER—WHOLESALE—PROCESSING PLANT—FOODSTORE

Processing Plants

Processing plants are key players in the chain, representing the market for the products of farmers, dealers, and wholesalers. They innovate in ways that modify the nature of the marketing chain and industry structure.

Figure 1. The Five Competitive Forces That Determine Industry Profitability



* Source: Porter [3, p.5].

Becker and Company. This firm is the market leader in an important niche area, the boiled sausage market segment. While the company's share of the boiled sausage market is not known, Becker does hold a dominant position in this important market segment. Becker sells 6.5 to 7.0 tons of sausages daily through 28 company shops in the Almaty area, and markets additional boiled sausage product through retail stores owned by others. See Profile No.1 for a brief description of Becker's history and operations.

Profile No. 1. Becker & Company's Meat Processing and Sausage Operations in the Almaty Region of Kazakhstan

- **BACKGROUND.** Becker is a German firm that specializes in selling consulting services, engineering services, industrial equipment, and protein casings. The firm came to Kazakhstan in 1990 seeking business opportunities; they selected meat processing under a joint venture arrangement as a major investment.
- **PLANT CONSTRUCTION AND OPERATION.** Becker began construction of a meat processing plant in Almaty in 1991 that went on line in 1996. In July 1999, the Almaty plant produced 183 tons of sausage in 26 working days. The plant employs about 70 people in sausage production. In addition to the sausage processing operation, the firm has a brewery and restaurant.
- **MARKETING PRACTICES.** The firm markets the sausages produced, which have a short five-day shelf life, mainly through 28 company shops located in different parts of Almaty. Sausages not sold through the shops in two days are destroyed. A small proportion of the company's sausages is marketed through supermarkets and other retail stores. About 100 employees market the company's meat products.
- **MEAT PURCHASING SYSTEM.** Becker is the largest buyer of meat in the Almaty region, purchasing about four tons of pork, four tons of beef, and 1.5 tons of horsemeat each day. All meat purchased is chilled. The purchases are made from 10 wholesale firms that have supplied Becker with meat since 1997. Becker contends that the stable supply relationship that the firm enjoys with wholesale suppliers reflects the firm's practice of

paying the wholesalers promptly, which allows the wholesalers to pay their clients (farmers and meat dealers) promptly, creating clients who are pleased to do business with the wholesalers. Becker claims that because it is the region's largest purchaser of meat, it can practice paying "the lowest prices that will allow the firm to obtain the excellent quality of meat that it requires."

- **CHALLENGES.** Mr. Ivan Kravchenko, the Managing Director of Becker, said, "The only challenge we face is the local bureaucracy. We are not trying to take advantage of the local system of taxation, sanitary and veterinary regulations. We carefully follow all standards and legislation adopted by the state. The only thing that we need is that the bureaucracy does not create requirements which interrupt the smooth running of our business."
- **FUTURE DEVELOPMENTS.** Becker plans to expand meat-processing operations in Almaty, increasing production of a variety of sausages to 12 tons per day. The firm plans to occupy the niche for salami sausages in Kazakhstan. The firm began to vertically integrate into pig raising in 1998 and plans to expand production up to 10,000 hogs in 2000. This is being done out of concern for the adequacy of supply of farmer-raised pigs.

Among those interviewed, two other meat-processing firms in the Almaty region appear to have significant growth potential if constraints limiting their operations can be overcome.

Balapan Farms. This processor specializes in the production of canned meat and produces small quantities of sausage. The firm imports pork from a number of countries including the U.S., China, Uzbekistan, the Netherlands, and Belgium. Balapan Farms has an efficient, automated processing system, adequate supplies of pork, and guaranteed markets (contracts to supply the military) or dependable markets for a large part of its canned meat sales. While the operation would appear to represent minimum risk to a creditor, the firm was finding it difficult to expand operations because of shortages of credit at acceptable interest rates and repayment terms.

Accept Agro: Talgar Slaughter House. Accept Agro entered the livestock and meat business via purchase of a slaughterhouse from the state. The firm purchases about 2000 bulls each year from Northern Kazakhstan weighing about 250 kilos and feeds them to a slaughter weight of 500 kilos. Accept Agro adds grain by-products from its alcohol production operations to forage used to fatten bulls in an integrated cattle feeding and slaughter operation. The firm has the capacity to slaughter about 25 animals per eight-hour day in its slaughter plant, which is equipped with power-surge resistant Italian equipment. Bull beef produced by the firm is in strong demand from outlets supplied by firm. The outlets include cantinas and Ramstor, an Almaty supermarket.

The chief constraint facing the firm is an insufficient supply of young feeder bulls to fatten in the integrated production-slaughter operation. The firm also complained of problems in getting credit at acceptable interest rates and repayment terms.

With the exception of Becker, and possibly Balapan Farms and Accept Agro, much of the remainder of the livestock and meat marketing and processing sector in the Almaty region of Kazakhstan fits Porter's description of a fragmented industry. Porter describes a fragmented industry as an industry in which no firm has a significant market share and no firm can strongly influence the future structure and nature of the industry [4, p.191]. In addition, he noted that fragmented industries usually are populated by a large number of small and medium-sized firms, many of which are privately held.

There are approximately a dozen small or mid-sized sausage/meat processing plants in and around the city of Almaty. A manager of one meat-processing plant speculated that there are up to 300 (mostly tiny) sausage plants in Almaty. It is unclear whether the latter number is approximately correct. However, even if this figure is too high by a factor of three, it is added evidence of a fragmented meat processing industry in the region.

Other Players

Representative functions frequently performed by other players in the marketing chain are as follows:

- The DEALER purchases meat from farmers, slaughters animals (in many cases), and delivers carcasses, meat cuts or live animals to the wholesaler.
- The WHOLESALER slaughters live animals (in some cases), chills carcasses or meat cuts, takes carcasses or meat through veterinary inspection, and delivers meat cuts or carcasses to the processing plant or bazaar.
- In some cases, the DEALER and WHOLESALER are the same firm and perform the combined functions of the two players.
- REFRIGERATOR STATIONS rent their facilities to wholesale firms, processing plants and supermarkets.
- FOOD STORES, which range in size from small food markets to supermarkets, purchase processed meat from processing plants and wholesalers.

Dealer-Wholesaler Networks

The dealer and wholesaler networks have emerged as important components of the livestock and meat marketing system that replaced the systems used in Soviet times.

There are two kinds of dealer-wholesaler firms. The first category handles live animals, fresh meat, and chilled meat. Most of the clients for these firms are processing plants and bazaars. Firms in the second category specialize in frozen meat, which they sell to supermarkets and other retail food stores.

Marketing officials interviewed claimed that the dealer-wholesaler system provides valuable services to processors, food stores, and farmers. Some processors report that they are not interested in purchasing meat directly from individual farmers unless those farmers have licenses and are registered as legal entities. The registration and licensing requirements reflect the tax and financial policies of the government, which mandate full documentation to produce a legal transaction.

A bazaar seller commented that farmers can sell meat directly to a processor, but there are complications. First, every meat seller is required to go through a sanitary inspection every six months. This procedure is time consuming and involves payment of a fee. Second, the farmer could not be assured of having a counter available for selling meat at a bazaar. The dealers and wholesalers perform tasks (for a fee) that farmers would find time-consuming or expensive to perform.

The Director of the Nauryz bazaar in Almaty argued that producers do not lose much by selling their meat through bazaars, claiming that the cost to the farmer of selling through the bazaar is 1,000 to 1,500 tenge per pig (U.S.\$7.50 to U.S.\$11.35 at late 1999 exchange rates). Such claims are difficult to assess. Others interviewed claimed that the dealer-wholesaler networks extract monopoly profits from farmers.

Bazaars and Food Stores

There are about 90 bazaars located in or near the city of Almaty, most of which sell agricultural products. While these bazaars resemble the farmers' markets found in North America, most of the merchants at the bazaars are professional sellers rather than farmers. The bazaars in Almaty that specialize in meat and/or live animals include the following:

- *Tausamaly Bazaar* (Kamenka) operates a slaughterhouse and maintains counters for 150 sellers of live animals and meat. On average, each seller sells one half of a carcass per day at the bazaar.
- *Sary Arka Bazaar*. This bazaar has a size and structure similar to the Tausamaly Bazaar.
- *Green Bazaar*. This is claimed to be the largest meat market in the city of Almaty with about 350 sellers of slaughtered animals. The bazaar has both meat and dairy departments.
- *Nauritz and Nikolskiy Bazaars*. Both sell meat from slaughtered animals. The Nauritz Bazaar has 20 to 30 counters for daily sales of meat. The Nikolskiy Bazaar is smaller with three to four counters for sale of meat each day.

The bazaars specialize in fresh and chilled meats—pork, mutton, beef, horsemeat, and horsemeat products. All are privately owned. Typically, a director, deputy director, and controllers administer a bazaar. Sellers are entrepreneurs who rent facilities at the bazaars (counters, space in refrigerators, pushcarts, cutting facilities, and services) for fees.

Bazaars are frequently surrounded by small restaurants, cafes, teashops, canteens, and barbecue places, which purchase the products sold at the bazaars for cooking. Large bazaars serve a variety of shoppers including wholesale buyers (restaurants, retail stores, and processors).

The food stores that comprise the end point of the livestock and meat marketing chain vary widely in size and nature. A few large supermarkets resembling those found in Europe and North America operate in Almaty, along with many smaller grocery stores. Cookery stores—some of which resemble North American delicatessens and sell prepared foods and upmarket imported food items—represent another outlet for meat products produced and distributed in the Almaty region. Company stores owned by meat processors represent another outlet.

Large supermarkets, including the Central Grocery Store, purchase relatively large quantities of meat at one time. For example, the Central Grocery Store sells about one ton of beef daily and prefers to purchase three to four tons of beef at one time from processors or wholesalers. Smaller supermarkets and other retail stores frequently purchase about 300 kilos of beef and/or 200 kilos of mutton every day.

Surprisingly, the large retail food stores generally do not appear to have contractual relationships with wholesalers or processors that would guarantee them a regular supply of meat. Ramstor represents an exception in that it does have such supply guaranteeing contracts. Other stores obtain needed meat supplies partly through the use of "lists" of potential meat suppliers.

Suppliers (Bargaining Power of Suppliers)

Supplier relationships exerted important influences on the marketing practices and channels for livestock and meat products in the Almaty region of Kazakhstan in 1999. The important supply relationships included both those affecting supplies of livestock and/or meat provided by farmers and dealer-wholesalers to different players in the marketing channel and those affecting marketing services.

Implications of the Decline in Livestock Numbers

The figures noted earlier in Table 1 showing the sharp decline in livestock numbers on Kazakh farms from 1991 to 1999 reveal much about the supply situation from the farmers' standpoint. Of course, factors in addition to weak farmer bargaining power created this situation. In some cases, farmers found it necessary to liquidate livestock at whatever prices they could get in order to make essential purchases.

Currently, dealer-wholesalers and meat processors serving the Almaty region obtain slaughter livestock mainly from the following areas:

Product	Main Sources
Beef cattle	All regions of southern, northern, and eastern Kazakhstan
Hogs	Almaty, Taldy-Kurgan, and Dzhambul Regions
Sheep	Almaty, Taldy-Kurgan, and Dzhambul Regions

As indicated in Figure 2, several of these supply areas are located relatively near the city of Almaty. In addition, a few dealer-wholesalers obtain beef and horsemeat from distant regions such as Ustkamenogorsk, Karaganda and Pavlodar.

While it is unclear whether the supply reductions are declining by similar amounts in all regions, the aggregate figures in Table 1 suggest that most regions must be experiencing substantial reductions in livestock numbers.

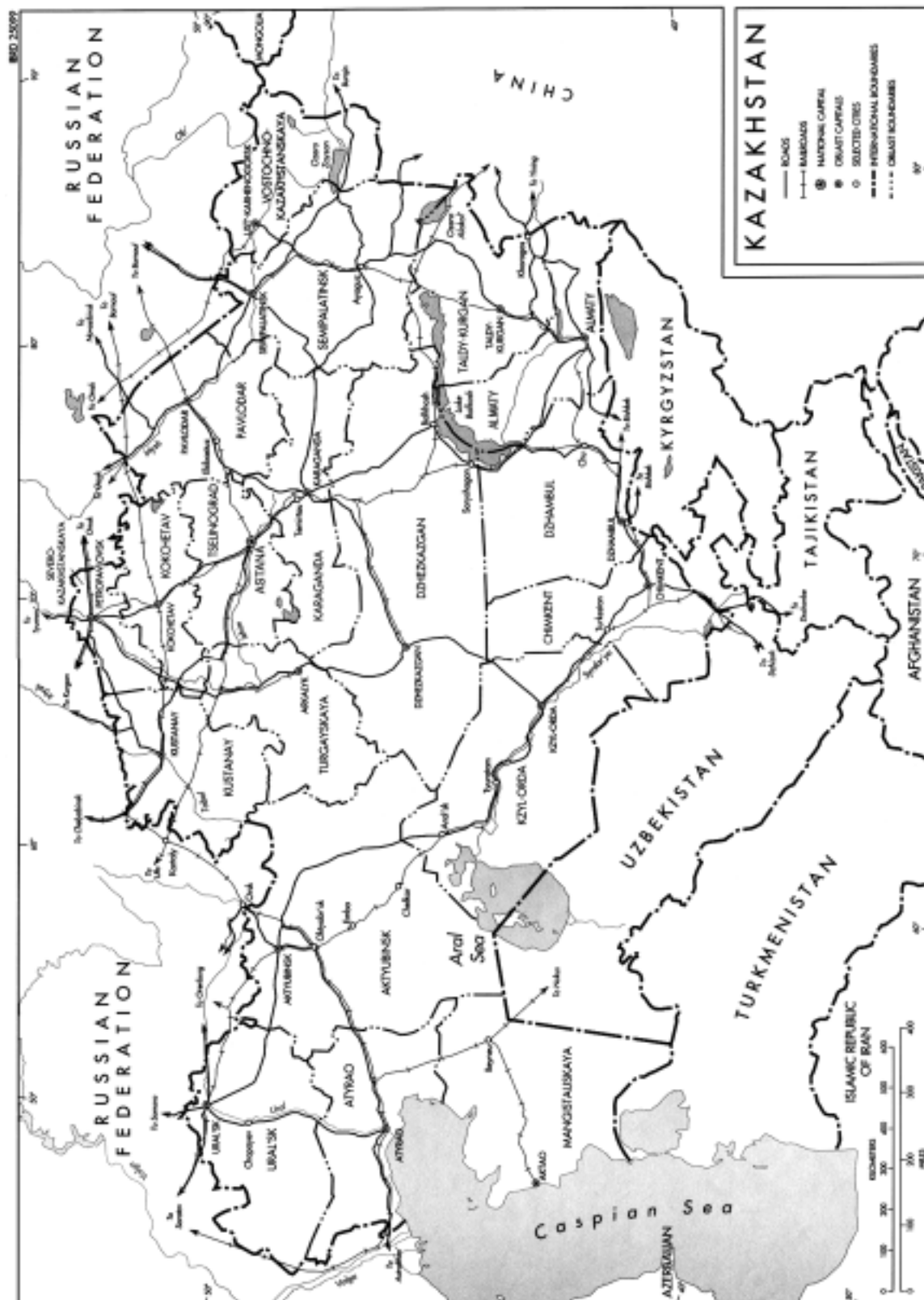
The supply situation has created concerns and triggered adjustments on the part of meat processors. As noted earlier, managers at Accept Agro's Talgar Slaughter House fear that the supply of feeder bulls available from Northern Kazakhstan will be inadequate to meet the firm's needs. Becker and Company has integrated backward into hog production to ensure that the firm will have adequate pork supplies. A processor affiliated with the Ramstor supermarket has begun to produce hogs to safeguard the firm's supplies of pork, speculating that there will be few hogs left in Kazakhstan by 2002 or 2003. The State-owned Almaty meat processing plant, which ceased operations in 1997, is attempting to resume operations, partly by contracting for supplies of livestock from farmers in the Almaty, Dzhambul and Taldy-Kurgan regions. Since there are only a limited number of large farms of the type the firm wishes to contract with for livestock supplies still in operation, the plant is looking to Mongolian, Polish and Belgian meat companies as sources of supply.

Processor concerns over the availability of pork supplies are rooted partly in producer response to the high prices and the subsequent recent collapse of hog prices in Kazakhstan. Pork prices were among the highest for all meats in January 1998, when a kilo of pork retailed for T(enge)200 to 220/kilo in Almaty. Prices transmitted to the farms attracted many people into hog raising, including Muslims who do not consume pork themselves. The resulting expansion of hog production caused retail pork prices in the Almaty region to fall from T200-220/kilo in January-March 1998 to T160/kilo in October 1998 and finally to T85 in May, 1999. The low prices triggered a sharp reduction in hog production, which processors fear will be not soon reversed.

Many small hog producers supplying the Almaty region have limited access to livestock market information. They typically market hogs through dealer-wholesalers and have limited bargaining power. By integrating backward into hog production under a tapered integration arrangement whereby they produce part of their own hog supplies, processors will further weaken the bargaining power of small producers. If processors find that high prices must be paid to producers, they can put downward pressure on those prices by buying hogs temporarily from their own farms. In addition, the demonstrated propensity of processors to import meat will limit increases in domestic meat prices in Kazakhstan. Of course, unless processors are willing to produce or import much of their needed livestock and meat supplies, these strategies will not serve them well over the long run. They will create a situation where the number of livestock remaining in Kazakhstan will be even lower. It is not clear that it will be profitable for processors to rely on their own production and imports for nearly all livestock and meat needs.

These comments should not be interpreted as criticisms of dealer-wholesaler and processor practices. Indeed, consistent with Porter's recommendations, these firms have adjusted their strategies to deal with the economic environment that has unfolded in the market. But, dealer-wholesalers and processors must be aware of the implications of their actions in the long run.

Figure 2. Map Showing Sources of Livestock for Meat Processing in Almaty Region



* Source: The World Bank (Alma-Ata changed to Almaty) [5, back cover insert].

Implications of Shortages in the Supply of Marketing Services

There is an asymmetry in the supply of price and other market information. Dealer-wholesalers and processors have access to price information and mechanisms for communicating the information that small farmers typically lack. This contributes to weak bargaining power on the part of small farmers. There is also little evidence that quality differentials are transmitted back to farmers in the form of price premiums for high quality livestock. However, dealer-wholesalers and processors do reject farmers' livestock if those products do not meet minimally acceptable standards.

Veterinary services are not supplied in ways acceptable to all participants in the marketing process. Veterinarians inspect livestock carcasses and meat cuts to detect foot and mouth disease, animal ulcers, salmonella, tuberculosis, brucellosis and helminth, and to keep diseased meat from being consumed.

Charges levied for these services vary. For example, at the Nauryz Bazaar veterinarian services were built into charges levied for using the bazaar's services. The Nauryz Bazaar has two staff doctors who are on the bazaar payroll and perform preliminary tests. If preliminary tests on a meat sample show some possibility of disease or infection, the doctors send the meat product sample to the main office of the City Veterinarian Laboratory in Almaty for further tests. The carcass or meat cuts from which the sample was taken are isolated and kept for several hours until the detailed test results are obtained from the City Laboratory. After getting the test results, the meat is either released for sale or condemned.

The procedure used at the Nauryz Bazaar was generally regarded as effective for avoiding excessive charges. Sellers at some other bazaars indicated that they encountered abuses when dealing directly with the City Veterinarian Office. Officials of the City Veterinarian Office would, it was claimed, sometimes collect large cuts of the best meat (2 to 3 kilos) for tests, arguing that this quantity of meat was needed for tests. If true, such practices would reduce the returns to livestock producers and marketing firms and/or increase meat prices to consumers.

Buyers (Bargaining Power of Buyers)

Several differences in the bargaining power of livestock and meat buyers in the marketing chain for the Almaty region have already been identified. Therefore, these points will be given brief coverage here.

Small farmers, for reasons noted earlier, possess little bargaining power when dealing with the dealer-wholesalers who typically purchase their livestock. It is perhaps surprising that competition among the many dealer-wholesalers does not produce strongly competitive pay prices to farmers for their livestock. However, we found little evidence that this was the case for small farmers. Larger farmers were able to bargain more effectively for competitive pay prices.

Becker and Company, which claims to be the largest meat processor in Kazakhstan, reports that it has the market power to pay the lowest price needed to obtain the quality of meat that it requires from dealer-wholesalers.

Bazaar authorities complain that new government taxes place them at a competitive disadvantage to supermarkets and other stores. The government has introduced new tax regulations relating specifically to bazaars. Thus, if a bazaar counter or shop was previously a taxable unit, under the new tax law, the taxes are levied on square meters of bazaar space, resulting in a higher tax burden. Bazaar operators claim that this new tax has purposes in addition to raising more revenue. They interpret the measure as part of a plan to place bazaars at a disadvantage relative to supermarkets, department stores, and specialty stores. Bazaar operators claim that the new tax reflects the political influence of business people who stand to gain from the demise of bazaars. It is unclear whether the new tax law has purposes other than to increase revenues.

The dealer-wholesalers appear not to be uniform in the amount of bargaining power possessed. The manager of a large Almaty supermarket argued that there was a tendency for monopolization of the market for frozen meat in Almaty by two firms, Private Entrepreneur Iskakov and Dariga, Inc. Such a claim is not easily accepted given the large number of dealer-wholesaler firms in the Almaty region. While market imperfections doubtless exist, the competition among the region's many dealer-wholesalers should prevent the development of outright monopoly arrangements.

Supermarkets appear to exercise less bargaining power than might be supposed. The admittedly limited amount of markup information that we collected suggests that the supermarket price markups from the wholesale level are not excessive (20% to 25%), probably owing in part to competition provided by bazaars (in particular), smaller grocery stores, and cookery stores. Three bazaars for which we obtained information had an average wholesale-to-retail price markup on meat of 15%. However, the supermarkets do, in many cases, demand that meat products be delivered to specification by wholesalers and meat processors. If trends in Europe and North America spread to the Almaty region, expect the bargaining power of supermarkets to increase relative to other members of the marketing chain.

Substitutes (Determination of Substitution Threat)

Earlier comments identified processor production (tapered integration) and imports as important substitutes for domestic farmers' products.

It is unclear how profitable it will be for processors such as Becker and Company and the Ramstor supermarket affiliate to produce their own hogs to ensure adequate supplies. Until recent years, North American hog processors relied heavily on individual farmers for their pork supplies. In recent years, Smithfield Foods, Inc. of Virginia in the U.S. has integrated backward into production to a significant extent, taking advantage of scientific advances in genetics, nutrition, and economies of large scale production to produce more of the hogs that Smithfield Foods slaughters and processes to specification. Smithfield Foods is now the number one hog producer in the United States, accounting for about 10% of U.S. hog production. Experience with large-scale production in Soviet times may cause private Kazakh processors to integrate into hog production more rapidly than was the case in North America.

Meat imports represent an important substitute product. Balapan Farms, for example, has found that purchasing imported pork in large lots is more profitable than either integrating backward into hog production or purchasing small quantities of pork from individual producers or through dealer-wholesalers. Also as noted earlier, in efforts to restart operations, the Almaty meat processing plant is attempting to arrange for foreign supplies of meat to supplement supplies available from large Kazakh farmers.

Bazaar sellers report that Almaty consumers prefer to purchase domestically-produced meats. This choice is based partly on consumers' beliefs that Kazakh meat is of higher quality. Still imported meats appear in the bazaars when price relationships favor imports. For example, when prices of meat in Russia (Altay region), Kyrgyzstan, and Uzbekistan have dropped below those in Kazakhstan by enough to cover transportation and other importing costs, substantial quantities of imported meat from these countries have been sold in Almaty bazaars.

Expect the trends toward increasing use of the above substitutes to continue until farm production of livestock in Kazakhstan is rationalized and becomes more profitable.

New Entrants (Threat of New Entrants)

The threat of new entrants into livestock processing did not appear to be great when the study was conducted. One processor remarked that it was probably easier to enter the Almaty meat processing business three or four years ago than now. This is partly because Becker and Company has established a strong foothold in Almaty and would represent formidable competition to new firms seeking to enter the Almaty market for boiled sausage. Moreover, there appears to be

massive excess capacity in meat processing in the Almaty region because of the drop in livestock numbers in Kazakhstan—creating a hostile environment for new entrants into meat processing.

However, the Almaty region is one of the more economically prosperous regions of Kazakhstan. According to two business officials interviewed, as many as 30% of the people in Almaty can afford to purchase high quality meat products. This might attract imports of upmarket processed meats, which would be sold at the larger supermarkets in Almaty. Imports of upmarket products would likely consist of longer shelf life meat products. Moreover, meat processors located elsewhere in Kazakhstan may attempt to expand sales into this relatively prosperous market.

III. The Nature of Marketing Channels for Milk and Dairy Products in Kazakhstan, 1999

Porter's five competitive forces that determine industry profitability (Figure 1) again will be used as a summary device in this section to describe the forces and developments that shaped the milk and dairy product marketing system that existed in the Almaty region of Kazakhstan in 1999. As will be evident, the milk and dairy product marketing system in the Almaty region is smaller and, in some ways, less complex than that for livestock and meat.

The withdrawal of state subsidies for dairy cattle breeding farms in the late 1980s and the privatization of dairy farms in the early 1990s has influenced the nature of milk and dairy product marketing systems that have emerged in the Almaty region and elsewhere in Kazakhstan.

About 35% of the state-owned dairy cows were slaughtered following the end of subsidies for dairy cattle breeding farms and the decentralization of the milk collection systems in the late 1980s and early 1990s. In addition, about 65% of the dairy cows owned by state-owned farms were transferred to privatized dairy farms. Thus, only a few Socialist-type dairy farms with 800 to 1000 cows survived in the Almaty region in 1999. Surviving large farms included the Soke Tobe farm in Uzun-Agach, the Peka Shelek farm in Chilik, the Kara Kemyr farm in Turgen, the SPK Kazakhstan farm in Kara Turik, and a few others.

Milk processors in the Almaty region found it necessary to develop new systems for buying milk from the smaller dairy farmers that emerged in the aftermath of the above developments. However, unlike the livestock situation, dairy farming in the Almaty region does not appear to be in a downward spiral. Moreover, milk processing in the Almaty region is not fragmented as badly as is meat processing.

Industry Competitors (Rivalry Among Existing Firms)

The industry competitors and the rivalry and interactions among firms in the dairy processing and marketing channels in the Almaty region are less complex than those existing in the livestock and meat channels. In particular, the dealer-wholesaler network that was prominent in livestock and meat marketing and processing is largely absent from dairy products. The main marketing-processing chain for milk and dairy products in the Almaty region can be described using the following simple chain.



Processing Plants

Food Master is the dominant dairy processing firm in the Almaty region. According to Food Master's estimates, it has about a 60% market share for major dairy products that the firm markets in Almaty. The firm processes about 40 tons of milk daily at the Almaty and Yessyk (within Almaty region) plants. The firm's products are distributed through supermarkets and other retail

food stores. In addition, the firm has a network of distributing companies that puts the firm's products in about 100 stores. Profile No. 2 gives additional background for this player.

Profile No. 2. Food Master's Milk Processing Operations in the Almaty Region of Kazakhstan

- **BACKGROUND.** Food Master in Almaty was formed in 1995 as a joint venture between Developed Technology Resources, Inc. of the U.S. and Ak-Bulak, Ltd. The business began with the production of yogurts and expanded to include fluid milk, fluid cream, sour cream, ice cream, cheeses, fruit juices, fruit drink, and potato chips.
- **PLANT LOCATIONS, SALES, AND EMPLOYEE NUMBERS.** The firm has five plants located in Almaty, Yessyk, Astana, Chimkent (soft cheeses), and Korday (hard cheeses). The plants' sales were expected to reach US\$ 24 million in 1999, but may fall short of this figure because of depressed consumer demand. The firm has about 800 employees in its plants and other facilities.
- **MILK PROCUREMENT PRACTICES.** About 70% of the milk purchased by the firm comes from areas surrounding Yessyk, with the remainder purchased from Taldy-Kurgan, Uzun-Agach, Kugalinskiy, Uygurskiy, and Dzhambul'skiy regions. Milk is priced on the basis of fat content. Every milk supplier for the firm is expected to have a sanitary inspection monthly and secure a veterinary certificate before selling milk to Food Master.
- **NEW MILK COLLECTION STATIONS.** In 1998, Food Master invested about US\$ one million to create milk collection stations for obtaining milk from small milk producers. Twenty-eight stations were established around Almaty. Each station has a cooling tank that holds one ton of milk, a complement of laboratory equipment, and a power generator. These stations are now the major source of milk for the firm's Almaty and Yessyk plants.
- **MARKETING PRACTICES.** The firm's products are distributed through large and medium-sized supermarkets and other retail stores. Food Master delivers products to large supermarkets but requires smaller supermarkets to pick up the company's dairy products themselves. The firm also has a network of distributing companies that places the firm's products in about 100 stores. The distributing companies receive a wholesale discount, but are required to see that the Food Master products marketed by the distributor sell for the same price as established in stores where the firm makes direct sales.
- **CHALLENGES.** According to Erlan Sagadiyev, Managing Director of Food Master in Almaty, important challenges include "gray imports" of competing dairy products (especially ice cream), which do not pay tariffs, and finding personnel who can be trained to be good managers and skilled marketers with excellent standards.

In 1999, the eight dairy processing plants operating in or near the city of Almaty processed a total of about 200 tons of milk per day. As noted earlier, before 1985 two Almaty milk-processing plants processed 400 to 500 tons of milk per day. In addition to Food Master, two other plants (SMAK Company Ltd. and Agroprodukt) currently operating in the Almaty region, have noteworthy operations that reveal how dairy marketing and processing have evolved in the region.

SMAK Company, Ltd. This company, which produces ice cream and fluid milk products, is owned by a former manager of a state milk plant. Nine dairy farmers supplied the firm in 1999, with whom SMAK had supply contracts. SMAK has processing capacity of 30 to 40 tons per day, but currently obtains only about 15 tons of milk per day from farmers.

SMAK delivers ice cream (the firm's most profitable product) and fluid milk products to Almaty supermarkets, and also sells products from trucks at locations in and around the city of Almaty. The firm's fresh dairy products have a shelf life of about two days.

The major challenges facing the company included (a) the expense of acquiring imported packaging material, (b) the mismatch between the seasonally high milk production and weak demand in the summer, and low milk production and higher demand in other seasons.

SMAK imports packaging materials from Finland and Germany. The April 1999 devaluation of the tenge plus the 20% tariff on these imports makes these packaging products expensive to use. While dairy product packaging materials is produced in Kazakhstan, in Almaty and Semipalatinsk, the domestically produced packaging materials are imperfect substitutes for the foreign products.

SMAK reports that it may have difficulty selling all the dairy products that could be produced with the available supply of milk in the summer, but can't get enough milk to satisfy the winter demand for dairy products.

Agro Products. This Almaty dairy processing plant produces fluid milk items, a new cream cheese chocolate dessert product, and distributes ice cream produced by a plant in Northern Kazakhstan. All of Agro Products' employees formerly worked at state plants that have been privatized. The firm began operations by processing two tons of milk per day, but in 1999 their operations were substantially larger.

The firm buys milk from three farmers and pays for the milk in advance to encourage the farmers to continue to produce. The Commercial Director for Agro Products forecasted that the number of dairy farmers in Kazakhstan would stabilize—in part because many dairy farmers have found dependable markets for their milk. Agro Products sells most of its dairy products through a chain of kiosks and vendor trucks, and lesser amounts through retail food stores. In the future, Agro Products plans to open specialized dairy product shops in Almaty. The shelf life for the firm's fluid milk items is about three days.

Marketing, the firm claims, is its biggest challenge since competition is strong for food store accounts and retail consumers of dairy products. Summer is a difficult time for the firm since some consumers go to summerhouses and buy milk from local farmers. Somewhat like SMAK Company, Ltd., Agro Products finds that the market for their dairy products is stronger in the fall, winter, and spring. Also like SMAK Company Ltd., they find it costly to acquire needed foreign dairy packaging material.

Agro Products has found it difficult to obtain credit at acceptable terms. The Commercial Director said that loans are received in tenge but must be repaid in dollars, which passes devaluation risk from the lender to the borrower. We could not confirm whether this was a fully accurate account of business credit transactions. However, Agro Products has found credit terms sufficiently unfavorable that it has chosen to expand using mostly retained earnings rather than credit.

While a few other small dairy processing plants serve the Almaty region, it is evident that dairy processing is not as fragmented as meat processing.

Other Players

The other players in the marketing channel for milk and dairy products include some of the same types of firms, i.e., bazaars, wholesalers, and food stores—that are involved in marketing meat. However, the role of bazaars is small and shrinking, and that of the wholesaler is small. In addition, the farmer distributor, a player not discussed in connection with meat marketing, has a noteworthy role in milk distribution.

Bazaars and Wholesalers

Most milk sold in Almaty goes to supermarkets through industrial processing. Furthermore, recent developments in industrial milk processing—especially those used by Food Master—and marketing systems emphasizing supermarkets, truck sales, and kiosk sales have pushed the bazaar sale further to the margin. The Controller of the Green Bazaar commented, "We used to have good

sales of dairy products in the past. Things have changed lately and sales are going very slow now. Many sellers have left the bazaar. Thus, nowadays there are 16 to 18 sellers of dairy products. In the past there were up to 100 sellers."

As noted in Profile No.2, Food Master does employ wholesale firms to distribute dairy products to store outlets. However, wholesalers do not play a large role in marketing dairy products in the Almaty region.

Farmer Distributors or Milk Dealers

Individual farmers or milk dealers deliver fresh milk and dairy products directly from the farm to residential areas. The farmers or milk dealers typically come to the same delivery point every day, giving consumers a regular place to purchase milk.

Prices charged by these vendors are lower than those charged in food stores or kiosks. This attracts certain categories of consumers such as low-income people and retired people. The vendors can charge lower prices because they incur no packaging costs—consumers supply their own milk jugs—and processing costs are lower. In addition, these vendors may escape taxation, sales fees, and safety control (veterinary and sanitary inspection). The lack of safety controls means that consumers buy such milk at their own risk and typically must boil the milk purchased from the vendors to make it safe to consume.

Food Stores

The role of food stores in marketing dairy products is similar to that described earlier for meat products. The supermarkets have been an excellent outlet for Food Master's upmarket products. However, the supermarkets also sell imported dairy products, e.g., ice cream and cheeses, from European companies, Russian companies, and the New Zealand Dairy Board. The imported products provide strong competition for parts of Food Master's dairy product line.

Relatively little information was obtained on dairy product price markups employed by food stores. Agro Products reported that the firm sells sour cream to supermarkets for 36 tenge/unit and the supermarket retails the product for 48 tenge/unit (33% markup). Convenience wagons sell Agro Product's sour cream for 50 tenge/unit (39% markup).

Agro Products reported that the supermarkets pay them for their products after those products are sold. Agro Products does not take back unsold products from stores. Food Master agrees to take back half the unsold products, some of which are further processed.

Suppliers (Bargaining Power of Suppliers)

Developments affecting the bargaining power of livestock producers mentioned earlier obviously have implications for milk producers supplying the Almaty region. As is the case regarding livestock producers, operators of small farms have limited bargaining power, while the large farms that have survived have more. However, the milk collection system that Food Master has put in place has given smaller milk suppliers for that firm greater capacity to remain in business as viable producers.

Because of the bulky nature of milk, the milkshed (supply area) for Almaty is smaller than the area from which livestock and meat products for the city are obtained. As noted in Profile No.2, Food Master obtains about 70% of its milk from areas surrounding Yessyk, and the remainder is purchased from the Taldy-Kurgan, Uzun-Agach, Kukgalinskiy, Uygurskiy, and Dzhambulskiy areas.

More important than the location of suppliers is the evolution of supply relationships for Food Master. In 1996, about 95% of the milk collected by Food Master came from large, Soviet-type cattle breeding farms that specialized in milk production. The large farms proved to be inefficient

in the post-Soviet period and have tended to dissolve in recent years. In 1999, about 65% of Food Master's milk supply for the Almaty market came from smaller farms.

Prior to implementing the current milk collection system, Food Master tried purchasing needed milk supplies from intermediaries. This system proved to be unworkable because the intermediaries returned relatively low prices to milk producers. This in turn discouraged producers from staying in the milk business and reduced supplies available to Food Master.

Faced with supply problems created by the dissolution of large farms and the unworkable relationship with intermediaries, Food Master invested US\$ 1.0 million in 1998 to create 28 milk collection stations. Fifty four people were trained by Food Master to work at the collection stations, which consisted of an Alpha Laval milk cooler with a one ton capacity, laboratory equipment, and a power generator. Producers who use their own refrigeration equipment to cool their milk before it is brought to the cooling station receive a premium of two tenge per liter. An additional two tenge per liter premium is added if the farmer delivers his/her milk to the cooling station, and additional premiums are provided for farmers who supply Food Master for a continuous 12-month period.

Milk from about 30 producers is collected at each cooling station. In general, the quality of the milk received at the cooling stations is satisfactory, but contaminated milk from one producer can spoil a tank of milk.

The creation of the cooling stations appears to have created a win-win situation for producers and Food Master. Producers receive higher prices than those paid by intermediaries and Food Master gets more assurance of adequate milk supplies. This win-win development suggests that one large processor can create incentives that encourage the maintenance of milk production in a substantial part of a region of Kazakhstan. Rather than use the firm's bargaining power to drive down milk prices, Food Master created incentives for milk producers to stay in business. The firm has literally changed the structure of the industry in the Almaty region, making it more attractive for producers and the firm itself to operate there.

While problems with veterinary and sanitary inspectors are not as common as those reported by livestock and meat producers, some milk producers complained of misuse of authority by the inspectors. This caused some producers in distant rural areas to drop out of the milk business. It is not clear whether this represents a significant problem that will affect milk supplies for the region.

Buyers (Bargaining Power of Buyers)

Supermarkets and processors such as Food Master possess significant bargaining power. We have noted how Food Master has used its financial resources to obtain more adequate milk supplies. Given that several dairy processors in the Almaty area now compete to supply large supermarket accounts, the dairy processors doubtless face buyers in the purchasing departments of supermarkets that possess considerable bargaining power. The supermarkets can demand delivery to specification, and favorable price and credit terms from suppliers.

However, there are limits to how much bargaining power can be exercised over processors by supermarkets and other retail food stores. If supermarkets apply excessive price pressure, they will accelerate the creation of the specialized dairy stores of the type that Agro Products plans to build, and sale of dairy products through trucks and kiosks.

Substitutes (Determination of Substitution Threat)

Substitutes for dairy products produced in the Almaty region are substantial. Processors and distributors of dairy products produced through industrial processes will encounter substitutes at both ends of the price spectrum. If supermarkets price dairy products out of the reach of larger numbers of consumers, farmer distributors will sell more unpasteurized milk in the

neighborhoods. More sales through farmer distributors will also materialize if economic recessions further limit the purchasing power of consumers.

For reasons just noted, sales through specialized dairy stores, kiosks, and trucks could expand to substitute for sales through supermarkets and other retail food stores.

Imports represent an important source of substitutes for upmarket products such as hard cheeses and ice cream. These substitutes represent a threat to Food Master and supermarkets handling dairy products with a high value and long shelf life.

Food Master points out that the top competition faced by the firm is with foreign firms. A total of about 26 foreign producers (mostly European firms) sell dairy products in Almaty. The imported products come to Almaty via Russian, Kyrgyz and Kazakh wholesale companies. A new marketing regulation may come into force in February 2000 that could blunt the impact of the foreign competition. According to a proposed new regulation, product labels must be in both the Russian and Kazakh languages. Since most imported dairy products now arrive with labels in Russian and/or other foreign languages, this regulation may represent a significant (albeit probably temporary) nontariff barrier to imports of dairy products.

New Entrants (Threat of New Entrants)

As was the situation for livestock and meats, the threat of new entrants into the Almaty region is not particularly great. Food Master has a relatively large market share for dairy items that the firm sells in Almaty. It presumably would be difficult for other firms to capture large percentages of market share from Food Master. Moreover, as was the case in meat processing, substantial excess capacity exists in dairy processing, creating a hostile environment for new entrants.

While the milk supply situation is not as gloomy as for meat, it could be expensive for a new entrant to obtain adequate milk supplies. It probably would be necessary for a new entrant to put in place collection systems similar to those used by Food Master to secure needed supplies. Given the number of producers committed to supply Food Master, this might not be economically feasible.

Foreign firms and new entrants from elsewhere in Kazakhstan might sell ice cream or hard cheese in the relatively prosperous Almaty market. Nestle, the Switzerland-based multinational food company, is a strong competitor for sales of premium ice cream products in Almaty. Recall that Agro Products distributed ice cream produced by a Northern Kazakhstan firm. Firms from outside the region presumably could sell ice cream and hard cheese directly in the Almaty region.

IV. Constraints to Efficient Marketing Performance

The key constraints to efficient marketing performance for the livestock, meat, milk and dairy product sectors in the Almaty region are products of the business and economic environment that emerged in Kazakhstan during the 1990s. Closely-related constraints in approximate order of importance include the following:

- 1) The large decline in livestock numbers in Kazakhstan during 1991 to 1999.
- 2) Shortages of credit for marketing and processing firms at acceptable interest rates and repayment terms.
- 3) Government and bureaucratic practices affecting (a) veterinary inspections, (b) tax incentives for expansion of livestock, meat, milk and dairy production and processing, and (c) tariffs.
- 4) Weak consumer demand for value added meat and dairy products.
- 5) Shortages of personnel with sophisticated management, marketing and quality control experience relating to meat and dairy processing.

- 6) Lack of experience on the part of producers and processors with market conditions that have emerged in the livestock, meat, milk and dairy product markets as the markets make the transition from socialist to market-based systems.

Impacts of several of these constraints were discussed earlier. Accordingly, only summary comments of their effects will be made here. The number 1 constraint is the decline in livestock numbers. The decline in livestock numbers reflects impacts of the transition away from large, state farms to smaller farms, withdrawal of certain agricultural subsidies, and depressed economic conditions. This constraint contributes to developments such as excess capacity in meat and dairy processing and processor concerns about obtaining adequate livestock and milk supplies. A few meat processors have dealt with the problem of inadequate supplies by integrating backward into hog production and importing meat. While these represent rational adjustments on the part of processors, their actions may contribute to further reductions in domestically-produced livestock supplies. Whether it will be profitable over the longer-run for processors to produce a large percentage of the hogs needed to meet slaughter requirements and import larger quantities of meat is unclear.

Shortages of credit at acceptable interest rates and repayment terms have limited the ability of meat and dairy processors to expand output. As reported in the previous section, some livestock and milk processing firms have chosen to rely largely on retained earnings to expand output. Heavy reliance on retained earnings can be counted on to stunt the growth of processing and marketing firms. Of course the credit problem is not unique to livestock, meat, milk and dairy processing and marketing firms. It presumably affects firms in many segments of Kazakhstan's economy.

Marketing and processing firms voiced complaints about the high costs and uncertainties created by government and bureaucratic practices. Abuses of veterinary practices affecting livestock and milk producers, and meat processors were among the most frequently mentioned problems. Tax incentives are a problem because there is uncertainty about the availability and continuation of tax incentives for business creation and expansion. A Food Master official complained of "gray imports" that enter the country and compete with Food Master dairy products without being subject to tariffs. Dairy processors noted the high cost of importing needed packaging material from Finland and Germany, attributing the high cost to tariffs and devaluation of the Tenge.

Weak consumer demand for value added meat dairy products reflects, in part, the recessions affecting Kazakhstan's economy and the lower purchasing power of consumers during the transition to a market economy. Food Master, for example, reported that the demand for its branded yogurts was reduced by the recession in 1999. Like the credit problem, demand shortfalls are not unique to the livestock, meat, milk and dairy sectors. However, such shortfalls do reduce profits in much of the livestock-meat and dairy marketing chains and reduce firms' incentives to introduce new products. This problem may be self-correcting if the general economy begins to grow vigorously.

A Food Master official said that his biggest challenge was to obtain skilled personnel for management, marketing and quality control work. Such personnel are needed to do sophisticated work on matters such as package design and to ensure that consumers receive products of consistently high quality. Skilled marketing and quality control personnel help firms build brand loyalty.

Many developments that have limited livestock and milk production and have impaired the performance of marketing and processing firms will be self-correcting. As Kazakhstan's people gain additional experience with the workings of a market economy, they will know what to expect in terms of market adjustments. The key will be to keep the livestock and meat industries, in particular, from shrinking to nonviable size before that experience is gained.

V. Policy and Technological Adjustments that Would Improve Marketing Performance

Several key constraints affecting the livestock, meat, milk and dairy product markets in the Almaty region spring from problems with Kazakhstan's general economy. For example, weakness in demand is a deep-seated problem that will be remedied in part by macroeconomic policies that promote growth and stability of the economy and create a favorable business environment. Economic growth and demand will also revive as Kazakhstan's people adjust to living in a market economy.

The credit constraint described above will not be quickly or easily remedied. Marketing officials interviewed recommended that credit subsidies be provided for farmers and processors. However, credit subsidy programs are expensive and difficult to administer in an even-handed fashion. The credit problem for farmers is exacerbated by the fact that farmland cannot be used as collateral for loans. Probably the best remedy is for the government to provide the most favorable environment possible for joint ventures involving domestic firms and foreign firms that would supply equity capital. While Becker and Company and Food Master represent success stories involving foreign firms that entered into joint ventures with Kazakh firms, the success of these joint ventures diminishes chances for other foreign meat and dairy processors to enter the Almaty region. However, there are undoubtedly attractive niches for foreign joint venture partners, especially for meat and dairy products that cannot be easily imported.

The decline in Kazakhstan's livestock herd will not be easily reversed. Improvements in general economic conditions would slow the slaughter of the herd since fewer farmers would be so strapped for cash that they would liquidate herds. However, livestock and meat processors will need to return higher prices to farmers for livestock before strong incentives will exist for an increase in livestock production. Dealer-wholesalers and meat processors might find it advantageous to create win-win situations similar to the one created by Food Master for small milk producers. This may necessitate establishing integrated cattle and hog raising systems where farmers share more fully in the profits from livestock enterprises. Large meat processors such as Becker and Company might find it profitable to enter into such integrated arrangements rather than raising more livestock on the firm's own farm.

Both livestock and milk processing firms might find it profitable to enter into production contracts with farmers to a greater extent than is now done. These contracts could provide limited price guarantees for farmers and give farmers incentives to provide dependable supplies to processors. With appropriate modifications, the incentives used by Food Master to encourage small milk producers to be consistent milk suppliers might have applications in the livestock and meat industry of Kazakhstan.

Livestock farmers need additional market information, which could be distributed mostly by radio and newspapers. However, a system of grades and standards will be needed to supplement such information if it is to be fully useful. The system need not be the rigid system existing in Soviet times that divided all meats into several categories with corresponding prices. But grades and standards are needed to supplement those of the current pricing arrangements for livestock in the Almaty region; these give farmers few incentives to produce high quality products. The main mechanism now used is rejection of diseased livestock and rejection of livestock that fail to meet a minimum quality hurdle.

The government could have a direct role in reducing regulatory abuses—especially those relating to veterinary inspections. While we do not have complete information on the extent of abuses by veterinary and sanitary inspection services, the complaints were voiced sufficiently often that we think that they have validity. If true, the Almaty City Veterinary Officials who collected two to three kilos of high quality meat in order to perform a safety inspection provide an example of an egregious abuse that could readily be corrected by proper administrative oversight. On a related point, Becker and Company pleaded for a bureaucracy that does not create requirements that

interrupt the smooth running of the firm's business. We are mindful of the difficulty of correcting regulatory and bureaucratic abuses, but there are some that need to be remedied.

Time and experience will help farmers and processors adjust to a market economy. Universities and other educational institutions will presumably generate additional personnel trained in management, marketing and quality control. Experience with a market economy and the availability of larger numbers of trained personnel should contribute to a healthier livestock and dairy marketing system in the Almaty region and elsewhere in Kazakhstan.

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Appendix. Persons Interviewed for the Study of Changing Patterns of Livestock, Meat, and Dairy Marketing in Post-Communist Kazakhstan

Person	Affiliation
1. Alaudin Gaytugiev	Balapan Farms
2. Harshul Gupta	IPC Industrial Products Ltd.
3. Ivan Kravchenko	Becker and Company
4. Maksat Kudaimendinov	SMAK Company Ltd., Eltai Dairy Plant
5. Mukash	Accept Agro, Talgar Slaughter House
6. Gauhar Muratova	Zhorga Company Ltd.
7. Erlan Nurmagambetov	Butya Ltd. Agro
8. Erlan Sagadiev	Food Master
9. Galina Vasil'eva	Agro Products Mini-Factory
10. Dr. Satubaldin	National Academic Center for Agrarian Research of the Republic of Kazakhstan
11. Drs. Asanov and Alimaev	Kazakh Research Institute of Feed and Pastures
12. Dr. Chomanov	Kazakh Research Institute of Food Industry
13. Drs. Chumakov and Terent'ev	Kazakh Sheep Breeding Research Institute