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Food Supply Chains in Ukraine and Kazakhstan

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Executive summary

The report elaborates on the agribusiness sector in Ukraine and Kazakhstan with a supply chain point of view, by providing general models of the aggregate food supply chains in both of the target markets, and providing reviews on the three major sectors in the food supply chain: agriculture, food processing, and retail.

The heritage of the Soviet Union and the disruptive transition from command economy to market based economy contributed to the dysfunctioning food supply chains and consumer good supply chains in general in the CIS. The unsynchronized development of the food supply chain sectors may not contribute to the general functioning of the chain, as disruption in some parts raise the costs in others. The development of CIS food supply chains is by no means an easy task for policy makers and entrepreneurs, as coordinated efforts are needed in this relatively capital intensive sector. After some 15 years of market economy, we are beginning to see well established companies in all the value adding phases of the supply chain in the major CIS countries that are oriented towards agribusiness due to their favourable endowments on natural resources and conditions. Ukraine and Kazakhstan are good examples of this development, with potential of becoming significant parts in global agribusiness supply chains as well as giving rise to more regionally and locally oriented effective food supply chains.

The Ukraine market offers interesting opportunities with emerging merger and acquisition (M&A) targets. Careful consideration must be taken together with the aims of the entry and the aimed scope of supply chain operations. While Ukraine offers good base for producing branded products for the CIS, Middle Eastern, and EU markets, possible trade impediments must reviewed together with logistics related issues, such as port and road infrastructure and border crossing processes. Similar considerations apply for Kazakhstan. Ukraine has strong potential for local sourcing as well as international distribution. Entirely local supply chains (domestic supply, domestic distribution) are also lucrative, as agriculture and retail continue on their development paths.

In Kazakhstan, retailing is significantly more underdeveloped with much smaller consumer base in comparison to Ukraine. Foreign companies should consider

strategic sourcing operations from the country with possibilities of servicing the market from for example their potentially already established Russian supply chain.
With time, both Ukraine and Kazakhstan are bound to take their share in the global markets for food supply, and develop viable food clusters. Opportunities for providing industry specific know-how and services will consequently be available for foreign companies.

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1 Introduction

The process of economic transition in the CIS countries is ongoing, with diverse pace and determination. Decline in output performance and country-wise variation in foreign direct investments (FDI) characterize the first ten years of the transition period. In general, services overtook the predominant position of industry and agriculture, and left these sectors at 40-45% of the pretransition level (World Bank 2002). Poverty and inequality of population in terms of living standards increased sharply.

The above mentioned developments had a profound effect on the food supply chains that had been organized previously according to the command economy based principles. During the transition, major supply chain disruptions occurred in all the phases of the value chain, from agriculture to the retail function, presenting business opportunities for entrepreneurs, for those with access to major finance, and for foreign companies in the form of exports and later FDI. Due to the nature of the agricultural/food product (perishability, basic quality requirements), and the importance of efficient food supply to the national economy, the coordination and smooth functioning of the supply chain is vital (Beer 2001). Thus the interest of some of the international institutions (IFC, EBRD, FAO) as well as national governments (e.g. the Russian national priority program) in the development of the agribusiness sector can easily be understood.

We may gain understanding of the inherited supply chain problems by reviewing the some of the existing research on the subject. While some of it is Russia centred, it offers basis for the understanding of the situation in our focus markets of Ukraine and Kazakhstan. For example Gochberg (1988) presents a report on the US food logistics delegation's tour in the Soviet Union, with special focus on packaged foods distribution and transportation. The major entities and the planning process are described with some of the major conclusions as follows: the soviet distribution and logistics system is lacking in appropriate technology in comparison to the US system, much of the production system is localized or regionalized, long-haul transportation and finished good warehousing is generally avoided, productivity is low with significant levels of labour intensity, and there exists little comprehension of the integrated logistics concepts. Rodnikov (1994) in turn elaborates on the centrally planned or command economy from the logistical perspective. Centralized control

over economic decisions created the discordance of macro-economic planning and micro-economic management that led to major distortions in the economy. Some of the distortions are listed, namely the hypertrophy of the producer goods and armament industries, excess raw material and work-in-process inventories, and the preference of policy goals over accounting profits and efficiency. A core lesson from the Soviet command economy experience is the rise of severe distortions from the attempt to centrally plan the logistical functions. Taylor (1994) analyses the structure of Russian food supply systems and identifies major inherited problems in these systems from the soviet times. The specialization of Soviet states in the production of various agricultural products caused disruption in the production and supply of food as the Soviet Union disintegrated into independent states, which attempted to trade but lacked the hard currency to do so. Drastic price increases in some basic food products caused plummeting demand and consequently discontinued production. The Soviet food supply chains were characterized by three major traits: (1) massive scale, (2) centralized control, and (3) lack of competition.

The aim of this report is to elaborate on the recent developments of the food supply chains in the former Soviet Union countries of Ukraine and Kazakhstan. These markets are significant due to relatively large populations, favourable prospects for economic prosperity, and progress in the economic transition, factors which together contribute to the availability of business opportunities. Table 1 describes the main socio-economic indicators of the target markets.

Table 1 Main socio-economic indicators (EBRD 2006, Ukrstat)

	Population	*Average real GDP growth 2000-2005*	*Average real wage growth 2000-2004*	*Transition indicator*[1] *2005*
Ukraine	48.5 million[2]	7.6 %	19.4%	2.89
Kazakhstan	15.1 million	10.1%	19.0%	2.93

The report is structured as follows. In the following we elaborate in a concise manner on the supply/value chain concept especially from the point of view of food and agribusiness, and additionally review some of the literature on food supply chain development in the CIS. We aim to provide the general model of the aggregate food supply chain in both of the target markets. Further, we provide snapshots on the three major sectors in the supply chain in both Ukraine and Kazakhstan: agriculture, food processing, and retail. Major issues and the latest developments in each sector

[1] EBRD Transition Indicator is the average of nine transition scores on enterprises, markets and foreign trade, and infrastructure (http://www.ebrd.uz/pubs/econo/series/tr.htm), max score 4.33, e.g. Russia: 2.96, Belarus: 1.81
[2] Population census 2001 (http://www.ukrcensus.gov.ua/eng/)

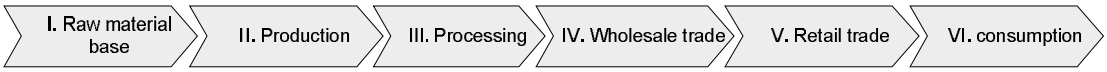
will be presented briefly in order to provide an opportunity for an update on industry and country specific knowledge. Finally we summarize the presented facts and proceed to provide major conclusions.

2 Food supply chain development in the CIS

As the concept of supply chain is focal in this report a brief definition is provided that contributes to the formation of the report framework. LaLonde and Masters (1994) define supply chain as set of firms that pass material forward. Several independent firms are involved in manufacturing a product and placing it in the hands of the end user in a supply chain – raw material and component producers, product assemblers, wholesalers, retail merchants and transportation companies are all members of the supply chain. Lambert, Stock, Ellram (1998) define supply chain as the alignment of firms that brings products or service to market. (see also Mentzer et al. 2001).

The agribusiness or food supply chain maybe defined more closely due to the specific nature of the product. Agriculture forms the raw material base, with primary production supplying the processing industries, where the product reaches its final form. Distribution of the food product includes variety of middlemen that take care of wholesale, retail and catering functions (see Eastham et al. 2001). Packaging and transport industries also have a significant role in the food supply chain in getting the right type of product to the consumer at the right place and time. The general agribusiness supply chain is depicted in Figure 1.

Figure 1 General food and agribusiness supply chain



In this report we concentrate on three sectors that comprise a simplified supply chain: (1) agriculture, (2) food processing, and (3) retailing. Descriptions of these sectors are provided, while the interdependencies and relationships in the supply chain are to a large degree omitted, while naturally some insights will emerge from the sector descriptions. Further research is required to understand the relationships and partnerships fully, as well as the collaboration and forms of vertical coordination in the CIS food supply chains. In the following an attempt is made to cater for the demand on such knowledge by presenting a literature review on the previous studies.

Swinnen et al. (2006) present survey evidence from number of Eastern European countries on how transition and globalization have affected dairy sector supply chains

in the region. FDI into processing and retail industries has contributed to the development of higher quality standards that in turn lead to contracting and increased vertical coordination[3] (VC). The supply chain champions that lead the development are the processing firms in countries in close proximity to the EU, while further from the EU located countries are characterised by retail industry driven developments. Positive influence of the VC has been detected in farms both small and large.

The comprehensive report by Swinnen (2005) on the dynamics of VC in agri-food chains in the transition countries provides interesting conclusions on the functioning of the food supply chains in the CIS. VC is an important and growing phenomenon in the European transition countries, even to larger degree in comparison to western economies. Lack of public institutions that would ensure the enforcement of property rights and contracts hamper the effective functioning of the supply chains and contracting for quality raw materials. Buyers provide inputs and assistance to farms in order to increase the incentives to adhere to the letter of the supply contracts. Farm assistance may include for example investment assistance, trade credit, bank loan guarantees and management advisory services. Search for quality raw material supply is the key engine for vertical coordination initiatives. While the processing industry incumbents are often forced to draw supplies from a fragmented supply base characterized by small farms, larger and more modern farms are preferred, as transaction costs are more favourable in these relationships. VC and supply chain partnerships are naturally easier and more efficient to maintain with small number of key suppliers. From the policy point of view food supply chain development should be seen as part of the wider rural development strategy.

Gorton and White (2006) elaborate on the relationship restructuring between farmers and buyers (processors and retailers) in the CEE and CIS markets. Factors such as the appearance of food retail chains, imposition of private standards, and FDI have contributed to the internationalisation of the agribusiness markets. There remains the policy making task of assisting farmers to gain access to these restructured supply chains.

Specifically the Russian agricultural industry as a whole is on the verge of long required (and in some cases delayed) modernisation induced by three main forces:

[3] Vertical coordination can take various forms (institutional arrangements) between the two extremes along a continuum between spot market based transactions and full ownership integration

(1) the emergence of vertically integrated agricultural conglomerates financed by the private sector, and (2) a massive extension of state financing (loan interest subsidies and loans) to agriculture-related projects, (3) the emergence of a modern food retail sector, expanding rapidly from mostly metropolitan areas to small towns and rural communities. These forces shape the transition path of the agricultural industry from mostly fragmented business players possessing a decaying infrastructure, to modern mostly large-scale industrial facilities. However, primary producers and processors need to implement a system to coordinate production with demand signals along the supply chain and to arrange for coordination with the suppliers of raw materials (feed, vitamins, etc.). Processing industries are forced to utilise either contractual or ownership-related methods in the process of securing an adequate supply base. The most salient phenomenon of this is the seemingly common way of vertically integrating upstream companies, i.e. suppliers under the holding company umbrella (PEI 2006).

As can be grasped from the above elaborations, the development of CIS food supply chains is by no means an easy task for policy makers and entrepreneurs. The Russian case is of course a story on its own due to the huge expanse of the country that spans several climate zones and environmental conditions. The unsynchronized development of the food supply chain sectors may not contribute to the general functioning of the chain, as disruption in some parts raise the costs in others. Hopefully through this report a more refined understanding can be gained on the current development stage of the food supply chains in Ukraine and Kazakhstan.

3 General food supply chains

3.1 Ukraine

Ukraine is bordered in the west by Poland, Slovakia, and Hungary; on the south-west by Romania and Moldova; on the south by the Black Sea and Sea of Azov; on the east and north-east by Russia; and on the north by Belarus. Fertile lands, relatively large population, favourable location in terms of access to EU, Russia, other CIS and Middle-East markets, make Ukraine a strategically important European location for food supply chain activities. Real GDP growth is projected to pick-up moderately after 2005 slow-down (growth 2.6%). Ukraine is the 2nd largest producer of sunflower seeds, 10th largest producer of cow milk and 11th largest producer of wheat in the world. In 2003, 13% of the Ukrainian labour force was employed in the agricultural sector, and 14.1% of the GDP was contributed by agriculture. In order to understand the main features of the Ukraine food supply chain, an attempt is made to graphically present it in Figure 2.

While the agriculture, food processing and retail sectors will be elaborated on in more detail later, few remarks on some of the Ukrainian food supply chain issues are appropriate at this point. As seems to be the case in many CIS countries and developing economies in general, the wholesale/distribution sector lacks in reported statistics. Therefore the presented model also lacks in detail in this respect. As one compares the reported retail turnover and the consumer expenditure, it is obvious that large share of the food sales is through unreported channels of distribution, such as retail and wholesale markets and direct purchases from small scale producers of agricultural produce.

The external relations of the general supply chain are also worth of more attention. Table 2 lists the twenty most significant export and import agricultural commodities to and from Ukraine.

Table 2 Ukrainian import and export of agricultural commodities in 2004 (FAO)

	Import commodity	Value 1000 USD		Export commodity	Value 1000 USD
1	Tobacco leaves	204171	1	Oil of sunflower seed	528474
2	Food prepared nes	128813	2	Barley	370720
3	Chicken meat	115416	3	Wheat	288900
4	Wheat	110106	4	Cheese (whole cow milk)	212583
5	Sugar (centrifugal, raw)	74571	5	Chocolate products nes	194747
6	Oil of palm	72226	6	Maize	168978
7	Coffee extracts	64982	7	Beverages dist. alcoholic	131684
8	Chocolate products nes	45946	8	Cake of sunflower seed	129510
9	Tobacco products nes	40999	9	Beef and veal	105443
10	Food wastes	35341	10	Food prepared nes	103858
11	Fat preparations nes	32998	11	Dry skim cow milk	101121
12	Cigarettes	29613	12	Sunflower seed	97412
13	Cocoa paste	28833	13	Pastry	68942
14	Cocoa beans	28659	14	Butter of cow milk	62673
15	Cake of soya beans	27605	15	Sugar confectionary	62454
16	Milled paddy rice	24075	16	Beef and veal, boneless	60190
17	Maize	23655	17	Cigarettes	52040
18	Pigmeat	22230	18	Hides wet-salted cattle	50000
19	Oils hydrogenated	21436	19	Fruit prepared nes	41519
20	Cocoa powder and cake	21012	20	Sugar refined	39334

The import of tobacco leaves demonstrates the significance of cigarette industry in Ukraine. Notable is also the large import amount of ready made food products to the country. While wheat is one of the major export commodities of Ukraine, at the same time it is also imported to the country. Major import partners include Russia, Brazil and Germany, while major export partners include Russia, Spain and Saudi Arabia, a composition that demonstrates the international nature of Ukrainian food supply chain. In order to understand the driving force of the food supply chain, an overview of the consumer habits is given here. An estimated 61.7% of total household expenditure is used on food purchases that include restaurants, cafes, alcoholic beverages and tobacco.

Figure 2 Aggregate model of the food supply chain in Ukraine in 2005 (Ukrstat)

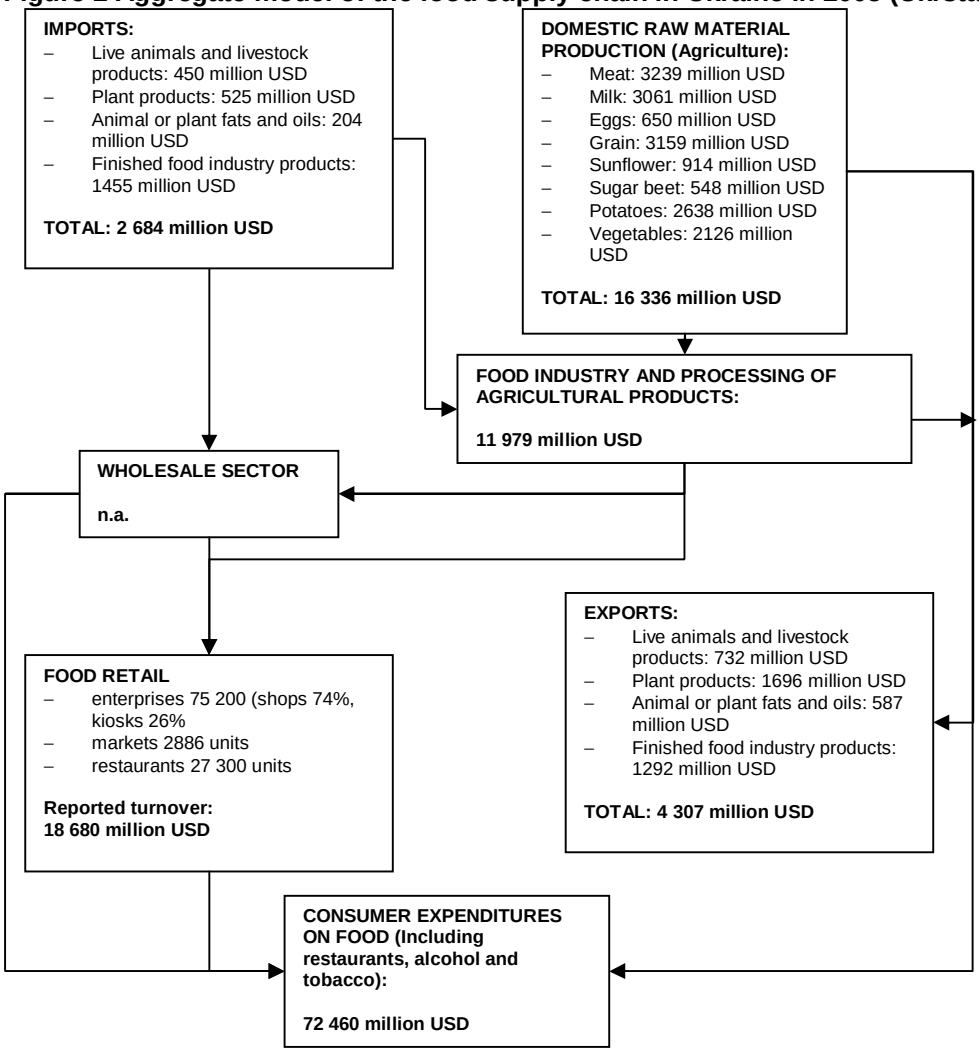


Table 3 presents the six year development trend of food consumption habits. Increase in meat, dairy products, sugar and bread have increased, while for example the consumption vegetables has declined.

Table 3 Monthly average per capita consumption of food in Ukraine

Product: kg, units (eggs)	1999	2000	2001	2002	2003	2004
meat and meat products	3,7	3,3	2,8	3,3	3,9	4,0
milk and dairy products	18,7	17,1	17,3	18,8	19,1	20,2
eggs	19	18	16	17	17	18
fish and fish products	1,3	1,3	1,4	1,4	1,4	1,6
sugar	2,7	3,5	3,3	3,1	3,2	3,6
vegetable and other oils	1,5	1,8	2,0	2,0	2,0	1,9
potatoes	10,2	10,4	11,1	10,3	9,9	10,1
vegetables, melons and gourds	10,0	9,5	9,0	9,5	9,0	8,7
fruit, berries, nuts and grapes	2,0	2,5	2,2	2,4	2,5	2,7
bread and bakery,	9,1	10,7	10,7	10,7	10,3	10,4

3.2 Kazakhstan

The Republic of Kazakhstan, located in Central Asia, is bounded in the north by Russia; in the east by China; in the south by Kyrgyzstan, Uzbekistan, and Turkmenistan; and in the west by the Caspian Sea and Russia. Kazakhstan covers an area of 2 724 900 km2. More than two-thirds of Kazakhstan's terrain consists of deserts and arid wastelands. Most of the remainder is steppes and hilly upland areas, fringed by high mountains in the east and south-east (FAO).

Nevertheless, Kazakhstan hosts a significant agricultural sector and a consumer base that benefits from the recent strong performance in economic growth, which is supported by the sustained high world prices for oil. Forecasts for real GDP growth remain above 8%, 8.4% for 2006 and 8.9% for 2007. Medium term forecast for private consumption growth projects declining growth rates from 14.0% in 2005 to 8.7% in 2010 (EIU). Kazakhstan is the 15th largest producer of wheat in the world, with 11 070 thousand MT in 2005 (Poland achieved 8 556 thousand MT, Ukraine 18 700 thousand MT). The general food supply chain of Kazakhstan is depicted in Figure 3.

The international interface of the Kazakhstan food supply chain is more limited in scope and value in comparison to Ukraine (see Figures 2 and 3). The total value of Kazakhstan agriculture and food product imports is 1 192 million USD (Ukraine: 2 684 million USD), and exports 664 million USD (Ukraine: 4 307 million USD). As Table 4 points out, the largest export commodity of Kazakhstan (wheat) takes up 55% of total agri-food exports, while in Ukraine the same figure reaches 18% (oil of sunflower seed). These figures reflect the strong position of agribusiness in the Ukrainian economy, while the in Kazakhstan the sector plays less of a significant role. Still, in 2003 16% of the labour force was employed in the agricultural sector, and 7.8% of the GDP was contributed by agriculture.

Figure 3 Aggregate model of the food supply chain in Kazakhstan

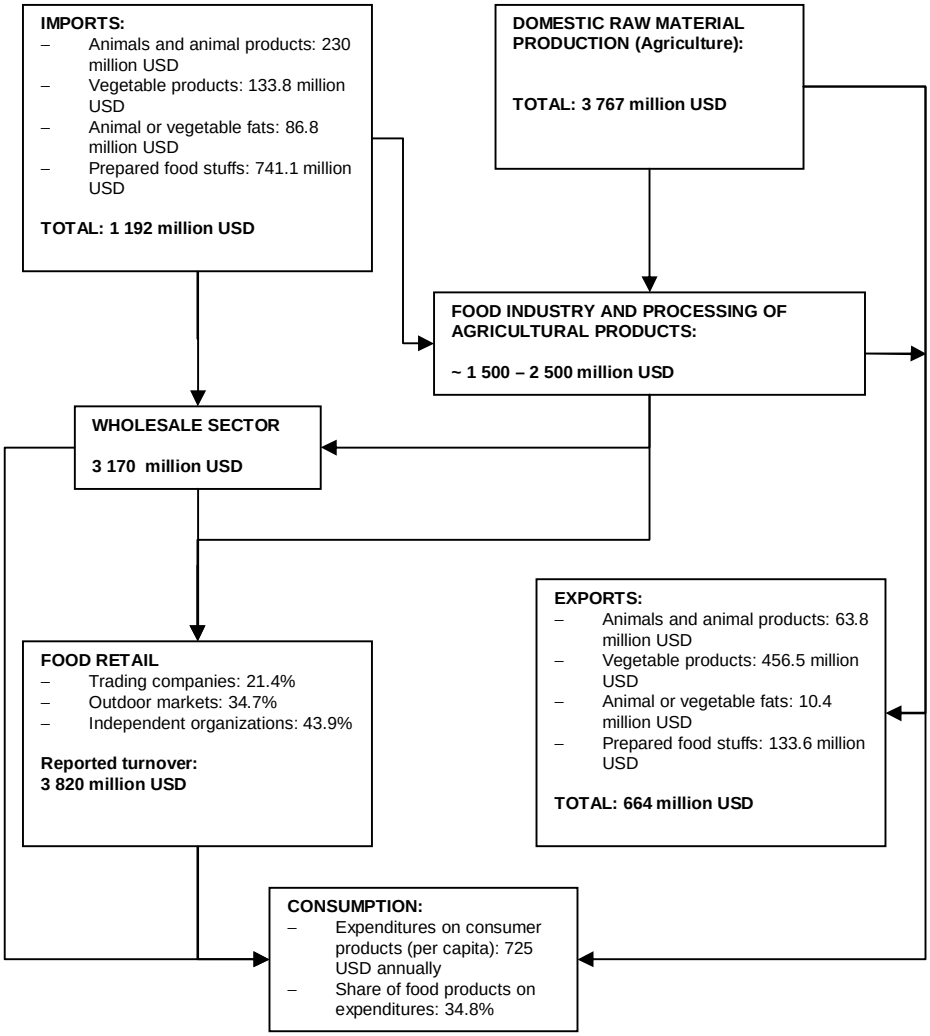


Table 4 Kazakhstan import and export of agricultural commodities in 2004 (FAO)

	Import commodity	*Value 1000 USD*		*Export commodity*	*Value 1000 USD*
1	Sugar (centrifugal, raw)	120341	1	Wheat	360157
2	Food prepared nes	91158	2	Cotton lint	94406
3	Chocolate products nes	86070	3	Barley	31000
4	Pastry	52943	4	Sugar refined	27233
5	Tea	46965	5	Tomatoes	22444
6	Sugar confectionary	35507	6	Flour of wheat	18629
7	Beer of barley	32437	7	Onions, dry	16036
8	Whole milk, evaporated	26734	8	Milled paddy rice	13102
9	Oil of sunflower seed	25016	9	Watermelons	9608
10	Tobacco leaves	24585	10	Apples	8314
11	Sugar refined	18492	11	Tobacco leaves	8068
12	Oils hydrogenated	15547	12	Hides wet-salted cattle	6903
13	Wine	14730	13	Cake of sunflower seed	6202
14	Fat preparations nes	13637	14	Chillies&peppers, green	5846
15	Beverages dist alcoholic	13452	15	Cotton linter	5820
16	Sausages pig meat	12899	16	Grapes	4177
17	Apples	12188	17	Rice, broken	4045
18	Ice cream and edible ice	11412	18	Food prepared nes	3196
19	Beverages non-alcoholic	10767	19	Vegetables fresh nes	2833
20	Bread	10324	20	Cucumbers and gherkins	2703

The structure of the agribusiness related international trade of Kazakhstan reflects the incapability of the domestic food processing industry to cater for the demand for prepared food products. Intuitively one can determine that the value added is greater in the imported products in comparison to the exported products, which are predominantly unprocessed staple commodities.

4 Agriculture

4.1 Ukraine

Of Ukraine's total land area (60 million hectares), roughly 70% is classified as agricultural land. Winter wheat, spring barley, and corn are the country's main grain crops, while sunflowers and sugar beets the main technical, or industrial, crops. Agricultural land use has shifted significantly since Ukraine declared independence from the Soviet Union in 1991. During the first decade of the transition economy, sown area dropped by about 5 percent, from 32.0 million hectares to 30.4 million, and area decreased for almost every category of crop except for technical crops (specifically sunflowers). Forage-crop area plunged by nearly 40 percent, accommodating to the reducing livestock inventories and feed demand (USDA).

There is no shortage of mineral fertilizers or plant-protection chemicals in Ukraine. In general necessary inputs for agricultural production can be obtained if the sufficient funds exist with the farmer or he is able to obtain credit. The high prices of imported plant protection chemicals has caused some farmers to reduce usage, or switch to using less expensive and less effective domestic products. Mechanical weed control is still largely utilized. A persistent lack of adequate harvesting equipment remains one of Ukraine's main obstacles to increasing grain output and quality. The privatisation and restructuring of the Ukraine agricultural sector involves the following trends: consolidation of small farms into larger and more viable enterprises, fluctuating grain prices and scarce availability of credit, increasing fiscal responsibility as well as strive to efficiency (USDA).

In Ukraine, recent forecasts by APK-Inform indicate increases for the grain harvest in Ukraine in 2006 from 29-32 million tonnes to 34-35 million tonnes. The favourable estimates are largely due to the good weather conditions during spring planting campaign and increases in yields. The total forecasted wheat harvest is set at 12.5-13 million tonnes, barley at 11-11.5 million tonnes and maize at 7 million tonnes. The Ukrainian government on the other hand has forecast Ukraine's harvest to reach 37.6 million tonnes of grain in 2006, or about the same level as last year. Ukraine harvested 38 million tonnes of grain in 2005, including 18.7 million tonnes of wheat, 8.97 million tonnes of barley and 7.16 million tonnes of maize (Interfax).

According to some forecasts Ukraine will produce 2 million-2.5 million tonnes of sugar from beets harvested in 2006, compared to 1 892 million tonnes in 2005. The favourable forecast is based on assumptions on continued yield rise and the expanded crop area, as farmers have planted more than 780 000 hectares this year. Ukraine increased production of sugar from beets by 5.7% to 1.89 million tonnes in 2005, with domestic sugar market estimated at 1.8 million-2 million tonnes per year (Interfax).

In terms of livestock production, Ukraine has experienced number of difficulties in recent years, resulting in reducing livestock inventories. According to the USDA, the inability of large agricultural companies, which are the descendants of Soviet time collective farms to continue livestock production, is largely due to the inefficient management and lack of feed supplies. The resultant deficit in pork and beef carcasses increased the dependence on private producers and households. The participation of large holding companies in agricultural production has also had an effect on the numbers of livestock, as the lack of quick profitability encouraged farmers to kill off herds, and focus on other agricultural production in order to satisfy the investors. Currently the cattle inventories are in increase in private household farms, with two or three heads of cattle typically. On the other hand, large industrial farms are substituting cattle with crop production. The development results in overall reduction of livestock inventory levels (USDA).

The following Table 5 lists the major grain and livestock primary producers registered in Ukraine under NAICS 2002 codes 112-animal production and 111-crop production.

Table 5 Major agricultural companies in Ukraine (Amadeus)

Company name	*Sector*	*Employees*	*Turnover (M USD)*	*Profit/Loss (M USD)*	*Shareholders, country (%-share)*
Livestock					
MIRONIVSYKIY HLIBOPRODUKT ZAO	Farming of poultry	432	253	0,8	Merkaba, UA (98.54); Torgovyy Dom Roda, UA (1.4);
DRUZHBA NARODIV NOVA ZAO	Farming of poultry	1464	76	31	Mironivskiy Hliboprodukt, UA (77.4); Durzhba Narodiyv, UA (22.6)
KOMPLEKS AGROMARS ZAO	Farming of poultry	2884	73	18	Dannmar Scandinavia APS, DK (73.05); Kontsern Kompleks, UA (24.06), Small shareholders (2.88)
ORILY LIDER ZAO	Farming of poultry	1340	48	14	Mironivskiy Hliboprodukt, UA (90), Allied Tech LLC, US (na)
PEREMOGA NOVA	Farming of poultry	882	45	14	Mironivskiy Hliboprodukt, UA (100)
Crops					
NIBULON OOO	Growing of cereals and other crops	1523	301	10	Oleksiy Vadaturkskiy (80); Andriy Vadaturkskiy (20)
SHAHTAR AGROFIRMA	Growing of cereals and other crops	4538	27	0,1	State of Ukraine (100)
AGROTON ZAO	Growing of cereals and other crops	2591	17	1	Absolyut MPP, UA (50); Hemoton Ltd, CY (50)
CUKROVYK POLTAVSHTINY APO OOO	Growing of cereals and other crops	1724	16	3	Firma Astarta Kiev, UA (78.72); Small shareholders (14.27); TD APO Tsukrovyk Poltavshtini (7)
DRUZHBA NARODIV OOO	Growing of crops combined with farming of animals	1518	15	0,4	Small shareholders (100)

As is evident from Table 5, the Ukraine livestock business is dominated by one subsector, namely poultry farming. The recent impressive growth in the sector is based on the substantial large-scale investments and strong domestic demand for poultry meat. The negative effects on demand of the Avian flu have been overcome, and strong growth in the sector is projected for 2007. Mironivskiy Hliboprodukt is the major player in the business with ownership ties with most of the top5 livestock companies. The group is owned by Merkaba (96%), which in turn is owned by local entrepreneur Mr. Kosyuk (96%).

The Mironovsky group is the leading vertically integrated poultry producer in Ukraine with 16% share of Ukraine's poultry market. The company was one of the pioneers in

developing a chilled distribution system to retailers, and it sells chilled poultry products (whole birds, cutup, giblets etc.) under a well recognized brand name, Nasha Ryaba, across Ukraine. The company has achieved in obtaining IFC funding for a greenfield poultry factory, expanding the company's poultry operation from the current production capacity of 126 000 tons of poultry per annum to 227 000 tons in 2008. The project consists of expansion of the existing facilities and construction of new ones along the poultry integration chain, including: crushing plant with increased specialized processing capacity for sunflower (800 tpd), soya beans (110 tpd), and rape seed (60 tpd) and expansion of existing feed mill; construction of an additional processing plant to produce a wide range of semi-finished and cooked products; expansion of the company's own parent stock farms, broiler growing farms and hatcheries; construction of a new slaughter plant, with processing capacity of 10 000 birds per hour; expansion of the company's transportation system for feed, eggs, day old chicks and finished product; and investment in working capital (IFC).

The only other significant player among the top5 livestock companies in Ukraine is the Danish owned Agromars poultry company, based in the village of Gavrilovka, Vyshgorodskiy region. Use of modern technologies allows the enterprise to carry out a full production cycle. The forage reserve of the complex provides cultivation grain: wheat, corn and soya. Production of the company is distributed through the major retail chains in Ukraine, such as Silpo, Velyka Kishenya, Megamarket, Metro, Spar, ATB, Tavria-B.

In cereal and crop production one company is above others in terms of sales. Nibulon, situated in Nikolaev Special Economic Zone, is one of the largest national producers and exporters of agricultural products (wheat, barley, corn, rye, sunflower seeds, etc.). The company has 16 branches in six regions of Ukraine, with total harvest of grains exceeding 100 thousand tons in 2004. The company is also involved in seed-growing, agriculture logistics support, livestock farming, and trade and storage of commodities. In the company's own words, the strategic aim of the group is to "arrange for a complete cycle from production and processing up to delivery of products to end consumers, including foreign ones, i.e. to achieve a vertical integration in the agriculture". The company's investments during the last 14 years have exceeded 120 million USD, with for example the decision to build a transhipment terminal in Nikolaev, which was based on a number of factors: availability of the company's own agricultural land; obvious need for Ukraine to export

grains; transit cargoes from Russia and Kazakhstan; outdated domestic port infrastructure. Nibulon held the first position among the Ukrainian grain exporters in 2004/05. Total sales volume of reached over 1.4 MMT, including 1.3 MMT for export (Nibulon.com).

4.2 Kazakhstan

Kazakhstan's agricultural sector is focused on grain and livestock production, and significant geographic specialisation among the five major regions exists in terms of the agribusiness and the food supply chain. Fish industry and animal husbandry are predominant in Western Kazakhstan, irrigated agriculture and sheep breeding in Southern Kazakhstan, food processing industry in Eastern Kazakhstan, and grain, milk and meat production in the largest agrarian area of Northern Kazakhstan (USDC).

Kazakhstan initiated privatisation and restructuring programmes already in 1993, resulting in 90% of agriculture being under private ownership and management according to the current estimates. Determined to diversify the oil and gas dependent economy, and it's desire to join the WTO, agricultural development is strongly supported by the government. The aim is also to promote exports and address the quality of life issues of the 44% of the population living in rural areas.

Kazakhstan is the sixth-largest grain producer in the world. In 2003 Kazakhstan harvested 17.6 million metric tons of grain. High quality wheat with rich protein content is the principal crop and a major source of hard currency from exports, generating up to 300-400 million USD in earnings per annum. The international trade expansion is supported by the erection of new grain terminals in the shores of the Caspian Sea, serving the Middle Eastern market, and the grain elevator in Ventspils Latvia, serving the EU market. The government also encourages the development of modern technologies for the production of innovative new products, namely bio-ethanol, high-octane fuel accelerator, or high-quality gluten for the food industry and enriched yeast for cattle feeding. Livestock related activities are also dominant areas in the agricultural sector, with approximately 46% of total agricultural output. Traditionally, farmers raise sheep and cattle, while hog, horse and camel herding is also well developed in Kazakhstan.

Currently there are some 110 thousand companies in agricultural production sector working in all regions of Kazakhstan. A constraint in these companies is the availability of sufficiently trained human resources for R&D, management and marketing activities. Additional constraint is the low level of technological sophistication. Obsolete machinery is used in the production process due to problems of access to finance. According to official estimates, some 85% of the machinery currently being used in Kazakhstan is at least 12 years old and urgently requires replacement and huge amount of investment: 320 million USD according to some estimates. The scarcity of up-to-date agricultural machinery is considered one of the most pressing matters in the way of developing a modern agricultural sector (USDC). Additionally the nonexistent seed growing industry is considered a serious constraint for agriculture sector growth. Therefore the improvement of educational as well as the introduction of new technologies in agriculture will gradually improve the situation in the raw materials sector for the food producers. The government of Kazakhstan is showing support to the agribusiness sector, by almost freeing the sector from taxes, and subsidizing development oriented investments by 40%. In September 2006, Kazakhstan president Nursultan Nazarbaev announced plans to create a state agroholding company KazAgro. The goal of the company: to raise the governance of state owned corporations in agribusiness to proper international level (Product.ru).

To provide solutions for the above mentioned problems, some of the international financing institutions, such as the World Bank and the European Bank for Reconstruction and Development (EBRD), have set out to support agricultural development in the CIS and specifically Kazakhstan also. Since establishment in 1991, the EBRD has signed 296 transactions worth 4.3 billion EUR in the agribusiness sector alone. The case of Turkuaz Edible Oil Industries is a good example of EBRD agribusiness activities in the country. The bank increased a 16 million USD loan provided to the company in 2005 by 4 million USD in order to support the company's further expansion in Kazakhstan and neighbouring Central Asian markets. Based on assumptions of strong demand growth the company has set out to install a new sunflower oil refinery with a capacity of 200 tons per day. The company has managed to increase its market share from less than 3 to more than 15 per cent in Kazakhstan (EBRD).

The company is a 90% subsidiary of the Saudi Arabian company Afia International Company (previously Savola Edible Oils, part of the major Saudi Arabian food and retail group). While sunflower oil production in Kazakhstan is still quite marginal in comparison to Russia and Ukraine, the potential of the subsector looks favorable. The extension of the new refinery, located in the Aktobe region in western Kazakhstan, will also strengthen local agricultural producers, as the company aims to eventually purchase at least 50% of the sunflower seed used in production locally. EBRD is working with Turkuaz to provide technical assistance for the training of farmers, and additionally support in the areas of packaging, marketing, labelling and product development will raise the standards of retailers and distributors indirectly (EBRD). In general, Kazakhstan is a large importer of vegetable oils. Development of the oilseed industry has been identified as one of the government's priorities in agribusiness sector. Oilseed crops cover 600 000 hectares, of which 418 000 hectares are sunflowers. At present oilseed production is estimated to grow to approximately 400 000 metric tons a year. Domestic oil production is expected to grow fast in response to the increasing demand for feed meal for the rapidly expanding domestic poultry production.

An example of a private dairy farm is the FoodMaster – Agro, a subsidiary of the vertically integrated Food Master Group in Kazakhstan food processing sector (elaborated on later). The acquisition of the farm in Almaty oblast took place in January 2000. In order to raise efficiency in the farm, the following activities were undertaken by the new owner: the core of the pedigree cattle was formed; productivity based selection of the cattle was led; the computerized system of selection work, fodder-producing and feeding was introduced. The management sought after experience and best-practices in dairy farm management from international sources, such as Russia, US and Israel. The FoodMaster – Agro dairy farm produces 7-8 tons of milk daily with the average milk yield of 4800 liters per cow. With a help of newly installed information systems the management of the farm has plans to increase the index of yielding up to 7000 liters in the nearest future (FoodMaster.kz; Product.ru).

In grain production, which is the backbone of the Kazakhstan agricultural sector, state owned large grain producers hold the major share of production. A good example is the JSC Food Contract Corporation, listed in the Kazakhstan Stock Exchange. The company is 100% state owned and is one of the largest grain exporters of Kazakhstan. Purchases annually reach the volume of 2-2.5 million tones

of grain, with 5 elevators in various regions of the country facilitating these operations. The company operates the only grain terminal in the port of Aktau on the shores of the Caspian Sea. Similar facility is being built in Baku, Azerbaidzan. The company's international trade is facilitated by representative offices in for example Moscow, London, Peking and Teheran. The company has several 100% subsidiaries with such specified tasks as warehousing, logistics, elevator operation, processing and finance. (Foodcorp.kz)

Of the privately owned grain producers in Kazakhstan, Ivolga-Holding is probably the largest. Founded in 1992, the Ivolga-Holding LLC represents a large agro-industrial company, with more than 10 000 employees. Ivolga-Holding LLC is a participant in the Grain Union of Kazakhstan, and one of the largest producers and traders of agricultural production, as well as petroleum products. The company sources form more than 560 hectares of cultivated land, located in various regions of the country, with climatic conditions and soil fertility allowing the reception of good grain yields with relatively high content of protein.

The main strategic aim of the grain branch is the "cultivation of high-quality wheat, including seeds of high reproductions, the increase of areas under crop of firm wheat kinds and leguminous plants". The company operates an extensive network of linear elevators and grain reception centers, providing also services in grain storage. Ivolga-Holding LLC is a significant exporter of grain and processed products (wheat flour and cereals) in Kostanay region to the countries of CIS, EU and Asia. The annual volume of grain exports reaches 500-600 thousands tons, making approximately 12-14% of the total grain exports of the Republic of Kazakhstan. The company is also engaged in imports, with such items as petroleum products, agricultural machinery, equipment, spare parts, and chemical fertilizers. (Ivolga.kz).

4.3 Benchmarking with other CIS

The following Tables 6, 7 and 8 present a cross-section of the main agricultural indicators from CIS countries enabling comparison and benchmarking of our focus countries, namely Ukraine and Kazakhstan. Although the long-term perspective is undoubtedly missing, the reader is given feeling to the most recent situation and developments in the business. In terms of gross harvest of staple crops (grains, potatoes, vegetables, sugarbeet) Ukraine comes second after Russia in every

category, although with declining rates from last year (except in vegetables, which grew 4.7%). Kazakhstan is also a notable producer of agricultural staple crops coming third or fourth after Belarus. The country has been able to increase the harvests of grains, potatoes and vegetables, while the harvest of sugarbeets declined.

Table 6 Gross harvest of staple crops in CIS countries in 2005 (Interfax)

	Grains (cleanweight)		*Potatoes*		*Vegetables*		*Sugarbeet (refinery quality)*	
	Mln tonnes	y-o-y %-change	Mln tonnes	y-o-y %-change	Mln tonnes	y-o-y %-change	Mln tonnes	y-o-y %-change
Azerbaijan	2.1	-1.3	1.1	16.4	1.1	4.7	0.04	-35.6
Armenia	0.4	-13.3	0.6	-2.1	0.7	10.5	-	-
Belarus	6.4	-8.5	8.2	-17.3	2.0	-1.4	3.1	-0.6
Georgia	0.7	7.5	0.4	4.8	0.4	-0.2	-	-
Kazakhstan	**13.8**	**11.4**	**2.5**	**11.5**	**2.2**	**5.3**	**0.3**	**-21.9**
Kyrgyzstan	1.7	-4.5	1.1	-16.2	0.7	-0.7	0.3	-55.0
Moldova	2.8	-5.5	0.4	19.0	0.4	23.5	1.0	8.6
Russia	78.0	-0.1	37.5	4.3	15.2	4.1	19.1	0.4
Tajikistan	0.9	4.8	0.6	5.5	0.7	5.3	-	-
Turkmenistan	3.1	9.0	na	9.0	na	11	0.07	60.0
Ukraine	**38**	**-9.1**	**19.5**	**-6.2**	**7.3**	**4.7**	**15.6**	**-5.9**

In terms of staple crops yields Ukraine is below average in potatoes (average: 149.1 centners/hectare) and vegetables (average: 180.6 centners/hectare), while above average yields are experienced in grains (average: 22.6 centners/hectare) and in sugarbeets (average: 239.9 centners/hectare). Decline from last year was experienced in grain and potatoe yields. In the case of Kazakhstan, yields were below average in grains and sugarbeets, while above average performance was demonstrated in vegetables and potatoes. Again Kazakhstan has managed to improve yields in all categories quite significantly.

Table 7 Yields of staple crops in CIS countries in 2005 (Interfax)

	Grains (cleanweight)		Potatoes		Vegetables		Sugarbeet (refinery quality)	
	Centners/ hectare	y-o-y %-change	Centners/ hectare	y-o-y %-change	Centners /hectare	y-o-y %-change	Centners/ hectare	y-o-y %-change
Azerbaijan	25.9	0.4	149	8.8	140	3.7	132	-25.9
Armenia	19.4	-14.9	165	1.9	288	8.3	-	-
Belarus	28.1	-5.1	177	-9.2	208	2.5	316	-14.1
Kazakhstan	**10.0**	**13.6**	**150**	**12**	**196**	**5.7**	**209**	**6.0**
Kyrgyzstan	26.3	-6.7	148	-6.3	174	-3.9	200	-17.7
Moldova	27.4	-1.4	105	14.7	104	23.4	290	10.8
Russia	18.5	-1.3	122	6.0	175	4.8	282	1.9
Tajikistan	21.7	11.3	197	7.4	188	1.0	-	-
Ukraine	**26.0**	**-8.1**	**129**	**-3.7**	**152**	**5.7**	**250**	**4.8**

Livestock populations in the CIS countries vary significantly due to for example cultural reasons, as for example the number of hogs is quite low in some of the

predominantly Islamic CIS countries. Ukraine comes again after Russia in the sizes of cow and hog herds, while sheep and goat herds play a minor role in the Ukrainian livestock culture. Kazakhstan is third in cows while hogs are substituted by sheep and goats with some 14 million heads. Only Russia and peculiarly Turkmenistan top this number.

Table 8 Livestock populations in CIS countries on January 1, 2006 (Interfax)

	Total cattle		Cows		Hogs		Sheep/goats	
	thousand heads	y-o-y %-change	thousand heads	y-o-y %-change	thousand heads	y-o-y %-change	thousand heads	y-o-y %-change
Azerbaijan	2356	2	1138	2	24	5	7631	2
Armenia	583	2	296	2	131	47	617	2
Belarus	3990	0.7	1575	-2	3574	5	124	-0.6
Georgia	1219	-3	727	-1	472	-2	816	1
Kazakhstan	**5440**	**5**	**2449**	**3**	**1313**	**2**	**14275**	**6**
Kyrgyzstan	1075	4	565	3	77	-7	3876	3
Moldova	322	-3	225	-2	473	19	926	-2
Russia	21418	-6	9503	-6	13258	-1	17290	-2
Tajikistan	1357	4	708	4	0.6	-18	3035	8
Turkmenistan	2065	2	na	na	na	na	16598	10
Ukraine	**6704**	**-4**	**3767**	**-5**	**6938**	**7**	**1740**	**-2**
	Of which households and private farms							
Azerbaijan	99 %	2	99 %	2	67 %	4	96 %	2
Armenia	99 %	1	99 %	2	95 %	46	100 %	2
Belarus	11 %	-7	24 %	-9	29 %	-0.3	94 %	-0.8
Georgia	100 %	-3	100 %	-1	100 %	-2	97 %	2
Kazakhstan	**94 %**	**5**	**96 %**	**3**	**87 %**	**1**	**94 %**	**7**
Moldova	94 %	-3	97 %	-2	90 %	18	96 %	-2
Russia	48 %	-3	55 %	-5	45 %	-6	76 %	0.6
Tajikistan	94 %	5	97 %	5	83 %	0	84 %	11
Ukraine*	**63 %**	**-1**	**77 %**	**-3**	**63 %**	**-0.2**	**85 %**	**-2**

*** Not including private farms**

The bottom section of Table 8 clearly points out the situation in cattle farming in many CIS countries: majority of the livestock heads are owned by households and small scale private farms. In some cases this causes challenges to food processors willing to for example establish a local supply base in the dairy sector. Only Belarus demonstrates a low indicator in this respect, with additionally Russia and Ukraine also with lower shares. Still for example the data from Ukraine with 63% of total cattle owned by households vividly demonstrates the challenging task of managing local sourcing in the country. Development is however towards large and viable private agricultural enterprises as was elaborated on earlier.

5 Food processing

5.1 Ukraine

According to the USDA, Ukraine's food processing industry has experienced an average growth rate of over 15% during the last five years, with output last year alone increasing by 13.7%, resulting in output of 8.2 billion EUR. Some 20% of all manufacturing undertaken in the country is food processing related, with more than 19 000 firms providing related services. In the food service sector, restaurants and fast-food establishments (McDonald's, Sbarro etc.) are gaining foot-hold due to the rising purchasing power of the population: in 2005, 56 600 restaurants were reported to operate in the country. Key to the strong growth is the increasing tourist interest in the country: an estimated 17.6 million visited the country last year (CEE-foodindustry.com; EIU).

The strong development, facilitated largely by potential access to raw-materials (although dependable supplies may be difficult to establish) and the previously elaborated on tourism increase, provides the industry with possibilities of becoming a production base from which other CIS countries may be serviced, a prospect which some international food processors are already acting upon. However, care must be taken in the consideration of foreign trade disputes between some of the countries. For example the relationships with Russia has been strained in terms dairy products (whole milk) exports the past months, with veterinary specialists inspections from Russia granting export permits to selected Ukrainian dairy companies. In addition Ukraine has banned some meat imports from for example Belarus, Poland and New Zealand due to violations of veterinary standards and suspects on meat smuggling. These kinds of trade disputes may effectively raise obstacles to establishing and operating international food supply chains in the CEE region.

In total Ukraine's food industry comprises of about 22 000 enterprises, that employ 1 million workers. More than 40% of FDI in the country has been directed to the food processing industry, encouraging the previously stated growth. Obstacles to further growth lie in the areas of not properly enforced quality standards, lack of established wholesale purchasing networks, and poor state of machinery in many enterprises. Despite these obstacles the industry currently features many established domestic

and international brands. The following Table 9 depicts the most significant (top 25) in terms of turnover food manufacturing firms registered in Ukraine.

Table 9 Top 25 food processing companies in Ukraine (Amadeus)

	Company name	NACE primary code	Reporting year	Employees	Turnover (M USD)	Profit/Loss (M USD)	Shareholders, Country (%-share)
1	KRAFT FUDZ UKRAINA ZAO	cocoa; chocolate and sugar confectionary	2005	1468	226	21	Kraft General Foods International, US (98.77); Small Shareholders (1.22)
2	OLIYNOEKSTRAKCIYNYY ZAVOD ZAO	refined oils and fats	2004	570	194	1	Oleyna Holding, CH (87.52); Small shareholders (12.47)
3	KONDITERSKAYA KORPORACIA ROSHEN	cocoa; chocolate and sugar confectionary	2005	315	187	7	Dneprovskie Lasoshti, UA (100)
4	AVK ZAO	cocoa; chocolate and sugar confectionary	2004	1895	137	6	Valeriy Kravets, na (37.02); Small shareholders (29.59); Vestern Enayes Interprayz Fond (25.10)
5	POLOGIVSYKIY OLIYNOEKSTRAKCIYNYY ZAVOD ZAO	crude oils and fats	2004	778	108	0,4	Fonn Zass AG, CH (78.58); Small shareholders (21.40)
6	KIEV KONTI VO ZAO	rusks and biscuits; preserved pastry goods and cakes	2004	2795	103	8	Small shareholders (80.09); Yuriy Chertkov (9.94); Sergey Kiy (9.94)
7	SVITOCH LYVOVSKAYA KONDITERSKAYA FIRMA ZAO	cocoa; chocolate and sugar confectionary	2004	1651	88	<0,1	Nestle SA, CH (96.33)
8	KARAVAY OAO	bread; fresh pastry goods and cakes	2004	4470	76	0,8	Pervyy Ukrainskyy Mezhdunarodny Bank, UA (37.77); Hlib, UA (24.82)
9	ZAVOD PO IZGOTOVLENIYU KRUP I KOMBIKORMOV OAO	grain mill products	2004	727	76	<0,1	TD Mironivskiy Hliboprodukt, UA (66.08); Small shareholders (17.90); State of Ukraine (16)
10	ZAPORIZKYY OLIAZHIRKOMBINAT ZAO	crude oils and fats	2004	1189	74	<0,1	Mayldenholl Ltd, BS (21.92); Mortondeyll Essets, BS (21.70); etc.
11	PRODOVOLYCHA KOMPANIA YUNKERS ZAO	meat and poultry meat products	2004	392	68	<0,1	Azov Crew Management Company Ltd., GB (100)
12	CHUMAK ZAO	fruit and vegetable products and preserves	2004	1481	65	<0,1	Manheset Investment Ltd, CY (49.62); Chumak Holdingz GMBH, AU (38.91); ING Bank Ukraina, UA (11, 46)
13	ODESSKIY MASLOZHIROVOY KOMBINAT OAO	crude oils and fats	2004	778	63	0,4	Small shareholders (90.16); Manaton Holdings Ltd, CY (9.82)
14	HARYKIVSYKA BISKVITNA FABRIKA ZAO	rusks and biscuits; preserved pastry goods and cakes	2004	1368	63	4	Small shareholders (100)
15	POLTAVAKONDITER OAO	cocoa; chocolate and sugar confectionary	2004	2276	57	3	Ukrn I New Capital Growth Company Ltd, CY (44.93); Ukrn II Future Capital Growth Company Ltd, CY (44.93); Small shareholders (10.14)

16	KIEVSKIY MISYKYY MOLOCHNYY ZAVOD 3 OAO	dairies and cheese making	2004	812	56	<0,1	Lianozovskiy Molochniy Kombinat, RU (68); Small shareholders (30.50); Wimm-Bill-Dann, UA (1.5)
17	A V K DNEPROPETROVSK KONDITERSKAYA FABRIKA ZAO	cocoa; chocolate and sugar confectionary	2004	2354	55	1	Small shareholders (100)
18	MYASOKOMBINAT YUBILEYNYY OOO	meat and poultry meat products	2004	1328	51	<0,1	Agrotehbiznes, UA (90); Viktor Starostenko (10)
19	GALAKTON OAO	dairies and cheese making	2004	1036	50	<0,1	Unimilk, RU (80%); etc.
20	ZHITOMIRSYKI LASOSHTI ZAO	cocoa; chocolate and sugar confectionary	2004	1593	46	4	Kobisko Yunikon Inc., US (77.05); Small shareholders (18.43); Gennadiy Plaksiy (4.51)
21	DUBNOCUKORAGRO ZAO	sugar	2003	108	44	0,4	na
22	FUDSTAR OOO	condiments and seasonings	2004	309	43	0,3	Din Kuang Vin, na (34); Do Hung, na (33); Nguin Thi Hoang Iin, na (33)
23	ZHITOMYRSKYY MASLOZAVOD OAO	dairies and cheese making	2004	1261	43	2	Petr Rud, na (41.93); Small shareholders (26.73); etc.
24	AGROEKOPRODUKT ZAO	fruit and vegetable products and preserves	2004	1237	42	0,6	Shoreline Investments, US (70), Prodinvest, UA (30)
25	TEHNOKOM OOO	macaroni, noodles, couscous etc.	2004	740	42	2	Small shareholders (100)

The top firms in the food processing business in Ukraine seem to operate in the confectionary sub-sector, which has also attracted the most foreign investments. The US multinational Kraft Foods is in the top position, with 5 million USD coffee packaging factory in Kiev (capacity to produce 4000 tonnes of coffee annually), and a confectionary plant in Sumy and Trostyanets, with aims to produce its key brands Siesta and 3Bit chocolate bars for the Ukrainian market. The company aims for 10% of the market (BMI). Key local producers in the confectionary sector include Roshen (No. 3), AVK (No. 4) and Kiev Konti (No. 6), who together hold the three top positions in the market, with a total market share of 50%. Each of the companies plan for expansion to Russia, with production sites already purchased. Nestlé has also established foothold in the market with majority share in Svitoch (No.7), with a production facility in Lvov.

Dairy operations are perhaps the second most significant food processing sub-sector in Ukraine. The top dairy producer in our list is the Kievskiy dairy factory 3 (No. 16), which is the subsidiary of the Russian dairy champion Wimm-Bill-Dann. In Ukraine, the Russian parent company also owns Kharkov Dairy Plant and Burynsky Milk Powder Factory. The group enjoys some 6.2% of the market (BMI). Recently the

company opened an 8.1 million USD production line in the Kharkov plant, and is planning to spend some 2.7 billion USD on modernisation of facilities in Kiev. The second largest dairy firm is the Galakton dairy (No. 19), which is a subsidiary of Russian Unimilk (80% share), which in turn is the subsidiary of the Planeta Management holding company, which owns operates several retail chains in Russia. The 2004 merger of Galakton with the local dairy producer Pavlograd, is set to create the country's largest dairy group with a 20% market share.

Other interesting subsectors are the bakery sector and the meat processing sector. In bakery products, one company stands out, namely Karavay (No. 8) which operates a more than 20 strong network of bread factories all around the country. In meat processing Yunkers (No. 11) and Yubileinyy (No. 18) hold significant positions in an industry that reflects growing stability due to increases in domestic production of carcases, facilitated by the previous years' investments into production machinery and capacity. However, Ukrainian meat packing plants experienced a 150% price-hike in raw-materials in 2004-2005.

Following up on the recent developments of the sector, gives valuable insight to the current state and dynamics of the industry. Major food processing industry related investment and developments projects include for example the following during the first half of 2005:

- "IFC may provide a large cheese producer, Kiev-based Cheese Club, with a 20 million USD loan from IFC's own accounts and 10 million USD in equity so that Cheese Club can carry out an expansion project. The total cost of the project is estimated at 83.4 million USD. Cheese Club said it would spend the loan on completing the expansion and modernization of its existing cheese plants in Svetlovodsk and Kanev; the modernization of the Karlovka and Talnoe dairies and the installation of cheese production lines of 25 tonnes per day at each one; upgrading powdered milk, whey and butter production facilities at the Bobrovitsa, Mironovka, and Korsun Shevchenko plants; refinancing debt; and providing permanent working capital. Cheese Club is currently in the process of obtaining ISO 9001 quality management certification for its existing cheese production operations at Kanev and Svetlovodsk, the press release says. Cheese Club, which was founded in 2003, is one of the leading domestic producers of hard cheese in Ukraine and the leading exporter of Ukrainian cheese to Russia." (Interfax)

- "McDonald's plans to invest almost 5 million USD in the development of its chain in Ukraine in 2006. In particular, investment will be spent on the construction of four restaurants in Dnipropetrovsk, Lviv, Kyiv and Odesa in addition to upgrades at its existing facilities. The upgrades at the existing facilities include an increase in seating capacity and the installation of modern cash registers with the latest technologies, the company said. In addition, the company, alongside with its beef provider Eska Food Solutions, plans to invest 0.9 million USD in the development of a joint project for special raising of livestock at farms. Galakton, McDonald's dairy products provider, plans to install additional equipment to produce dairy mixtures. As of the beginning of 2006, a total of 54 McDonald's stores were working in 16 Ukrainian cities. The company has invested 87 million USD in development in Ukraine since it came to the country in 1997. McDonald's Ukraine employs more than 4,000 people." (Interfax)
- "Sweden's Alfa Laval has received an order for 13 state-of-the-art processing lines for a refining and modification plant for vegetable and tropical oils at the Illichivsk Oil and Fats Combine in Ukraine. The equipment is valued at 14 million USD. The deliveries will take place in 2006-2007. Alfa Laval said this equipment would make the company the largest producer in this industry in terms of production lines in Ukraine and Eastern Europe. The Illichivsk Oil and Fats Combine in August 2002 announced it was launching construction on Ukraine's first industrial port complex for the production of soybean oilcake, food additives and tropical oil at the seaport of Illichivsk. According to the planned specifications, the complex is expected to process 160 000 tonnes of tropical oil per year and 540 000 tonnes of soybeans supplied by sea. The complex plans to process 1000 tonnes of soybean oilcake, 100 tonnes of protein-containing food additives, 350 tonnes of tallow, up to 170 tonnes of cacao butter substitutes, about 120 tonnes of ground sunflower seed husks, four tonnes of fatty acid distilling agents and eight tonnes of lecithin. Alfa Laval is a leading global provider of specialized products and engineering solutions based on its key technologies of heat transfer, separation and fluid handling. In 2005, Alfa Laval posted annual sales of 1.8 billion euros. It assesses its share in the supply of refining equipment for the oil and fats industry in Ukraine at about 60%. Alfa Laval opened a representative office in Kyiv in 1993." (Interfax)

5.2 Kazakhstan

The food processing industry in Kazakhstan is currently among the leading and most rapidly developing economic sectors in the country. In 1H2004 it grew 10.6%, with food consumption rising by 20% annually since 2002. Favourable developments in the Kazakhstan economy have enabled an increase in consumer spending as well as changes in consumer preferences towards high-quality processed and packaged goods, increasing prospect for local food manufacturers, who consequently strive for improvements in the quality and presentation of their products. As a result several brands have appeared in the market (USDC).

The food processing industry in Kazakhstan is a recipient of government and international financing organisations' support. Cluster oriented thinking is prevalent in the sector, with potentially strong agricultural sector, strong consumer base in surrounding CIS and Middle Eastern markets, and the potentiality of being part of global agribusiness supply chains providing rationale for investments to food cluster development. The food processing industry in Kazakhstan consists of more than 30 specialized sectors, sub sectors and separate manufactures. It includes about 5151 plants and manufactures, 80% of them small and medium –size enterprises (SME). The number of employees in the industry reaches up to 69.4 thousand people on average, making 10.3% of total employees in all Kazakhstan industries. The major segments of the food processing industry in Kazakhstan are: soft drinks manufacturing, flour-and-cereals industry, plant and animal oils production, meat processing, dairy, fruits and vegetables processing. The core of the sector is formed by the companies in the meat processing, dairy, juice production, and fruit and vegetable processing sectors (Cluster.kz). In our analysis of the industry, we will concentrate on the former three particular subsectors.

In general, from the point of view of the food processing sector's development constraints in Kazakhstan, the lack of human resources and technologies is prevalent in spheres like R&D and processing, especially in the cases of SMEs. Additionally the packaging industry is considered to be insufficient in terms of capacity and technological sophistication. However, transportation, wholesale, and retail businesses are seen as capable enough to support and facilitate the food cluster development, as no specific technological or human resource gaps can be detected. Naturally these distributive sectors may be enhanced and made more efficient for the

benefit of the total food supply chain. The volume of Kazakhstan food processing industry is estimated to be worth of up to 2.5 billion USD, with expectations on growth. However, the food cluster regards international expansion as a strategic goal in order to reach good levels of economies of scale necessary in the food industry, and thus support general economic development in Kazakhstan (Cluster.kz).

The meat processing subsector experiences strong demand from consumers with developing preferences for different types and brands of meat. Currently though, the growth of the meat processing industry is unable to exceed 5-7% annually due to the lack of raw material carcasses and effective processing technologies. Additionally, producers are unable to expand product ranges and ensure quality standards for their products. Overcoming these constraints would facilitate further growth in the subsector (USDC).

The Ust-Kamenogorsk Poultry Factory (UKPF) is located in North-East Kazakhstan. The company has long background from the Soviet Union days, when it was one of the largest poultry farms. Due to the poor financing situation (debts, lack of working capital), the company was in a verge of bankruptcy. Investment from the Russian Eagle Venture Partners (disbursed in January 1998) assisted the company in renovating the production premises, purchase new bird stock from Holland, and construct a new feed mill and buy modern equipment. UKPF is a vertically integrated broiler factory that markets and distributes frozen and cooled chicken, chicken sausages and smoked chicken, with facilities for breeding, egg hatchery, broiler houses, feed milling and broiler processing. UKPF has developed a distribution network, with their UKPF brand name well recognized amongst Kazakhstan consumers. Currently, UKPF accounts for over 40-45% of all of the chicken produced in Kazakhstan, and generates annual sales figures of over 12 million USD (Evp.ru).

In the dairy subsector, Almaty and Kostanai regions are mentioned as pilot cases for the development of dairy cluster in Kazakhstan under the country's industrialization strategy, and in the course of development will present opportunities for other subsectors in agribusiness. The Kostanai region supplies 50% of the dried milk in the domestic market, a significant ingredient for the dairy industry. Some of the well-known dairy producers are located in the region, such as DEP, Kosmis, Milch. The lack of quality raw-materials, especially whole milk is one of the major problems seriously impeding the development of the dairy subsector. For example, the leading

dairy producer FoodMaster imports some 30 % of production input from the Kyrgyz republic during the winter season. In response to the problem the company has invested to local milk farms, as was elaborated on previously (USDC).

FoodMaster is the most significant dairy company in Kazakhstan, with annual sales of over 20 million USD. The company owns a leading brand in locally produced dairy products in Kazakhstan, and through vertical coordination controls the whole supply chain, from milk farming to distribution of final products. The company processes milk at four plants located in four urban locations: Issyk (cultured dairy products), Astana (cultured dairy products), Chimkent (soft cheeses) and Kurdai (hard cheeses). The company's product range includes the following: milk, kefir, sour cream, yogurts, cheeses and ice cream. In July 1999, the Company initiated production at a new facility, producing fruit juices and UHT milk. In May 2002, the Company began the production of ice-cream at the new plant, located in Almaty. The company is increasingly moving into higher value added products such as yogurts, yogurt drinks, bio-kefir, bio-milk etc. (Evp.ru). In 2004, the company sold its dairy plants to French operator Lactalis that also acquired dairy plants belonging to FoodMaster International in Moldova and Ukraine.

The juice production subsector in Kazakhstan is referred to one of the most dynamically developing segments of the food processing industry. The market for juice is dominated by large domestic and foreign producers marketing under various brands such as Juicy (by Raimbek Bottlers), Piko (by Coca-Cola Almaty), Da-Da and Gracio (by RG brands), Moya Semya and Champion (by Nidan Ecofruit), as well as J7 and 100% Gold (by Wimm-Bill-Dann). During the last 10 years, with increasing tendency during the last 3, the market for Tetra-packed juices has been growing in terms of volume and share in the food segment. JSC RG Brands is the leading beverage producer and consumer goods distributor incorporated in Kazakhstan. The Company consists of four production companies producing juices, soft drinks, tea packaging and milk as well as two distribution companies in Kazakhstan and Kyrgyz Republic (EBRD; RGbrands.kz).

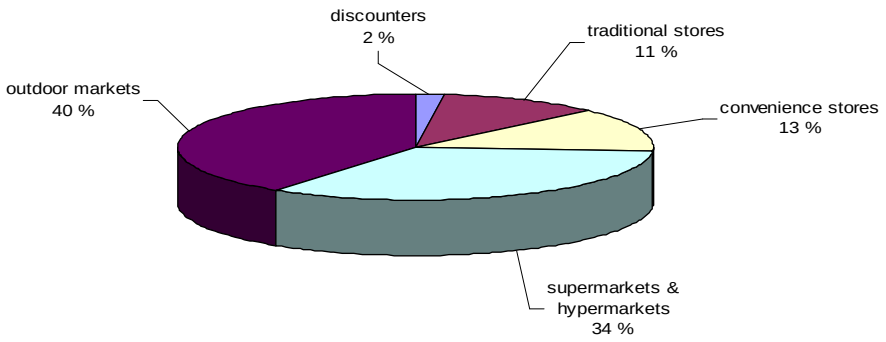
6 Grocery retailing

6.1 Ukraine

The consulting firm AT Kearney has identified Ukraine as one of the most promising emerging retail markets in the world. The Global Retail Development Index (GRDI) measures for example such variables as country and business risk, retail sales per capita, population, and business efficiency, which are highly relevant for all the consumer good supply chain incumbent firms, and ranks the world's emerging markets in terms of market attractiveness. Ukraine first appeared in the ranking in 2003, with 20th position. The following years saw position rise to 11th in 2004 and 3rd in 2005, with peaking window of opportunity urgency. The latest ranking is 4th (2006), with speculation about sustained attractiveness or a start of the decline. However, the good development in the sector is good news for the food supply chain in general, as structured and modern retail sector will undoubtedly boost opportunities for efficient distribution of food products in the second largest emerging European country with some 47 million people.

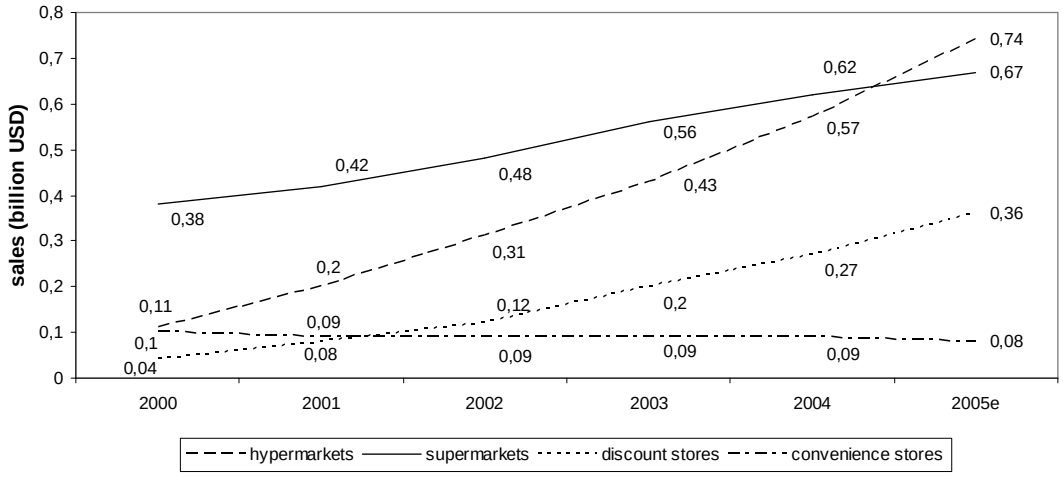
As in many CEE markets, the structure of the retail sector specifically in terms of retail formats has been a headache for the international marketers. The heritage of the communism and the disruptive transition gave rise to the bazaar economy with a variety of traditional retail formats servicing the needs of the population. In recent years the development towards the spread of modern retail formats has been strong, facilitating the need for brand supporting retail environment. Figure 4 depicts the format structure of the Ukraine mass grocery retail (MGR) industry.

Figure 4 Formats in the Ukraine MGR sector



While outdoor bazaars still slightly dominate the retail business, other formats are catching up, with the supermarket segment looking especially strong. Still traditional stores account for some 11%, bringing the share of traditional retail to 51%, a slight majority. From the foreign food processor entrant's point of view, the development of the modern MGR market may be of particular interest, as was elaborated on previously. Figure 5 depicts the development of sales in terms of modern retail formats.

Figure 5 Sales by format in Ukrainian MGR (BMI)



From the start, the Ukrainian consumer has favoured shopping in small convenience stores that well support the consumer preferences on low prices and access without car. In addition the lack of funding for local entrepreneurs has decreased opportunities for launching large scale development projects for hypermarket introduction, with long payback periods; thus the past preference on convenience stores. However, with the entry of foreign retailers, improving access to finance and changing consumer preferences with a mindset for recreational hypermarket shopping, the super/hypermarket segment has increased sales during the past years. In general the market share of modern retail chains is increasing, having reached 15% of total sales in Kiev, the capital, while for total Ukraine the share is as low as 9%. The respective figure in the US and EU is around 60% (AT Kearney).

Table 10 lists the major players in the MGR market. Notable is the fact that the market is dominated by domestic companies, having been established in the very beginning of the transition era. Foreign companies include for example German Metro with cash and carry operations in Kharkov, Dnipropetrovsk, Odessa and soon

in Donetsk, Lviv and Zaporizhia. In 2005 the company saw its sales triple from previous year, sales reaching 338.5 million EUR. German Rewe has established eight supermarkets, and Dutch Spar has opened 8 supermarkets and one hypermarket in Kiev and Vyshgorod. Expected entries may soon come from Wal-Mart (US), Auchan (France) and HIT (Germany). Most interesting foreign players are however the Russian with somewhat of a "homemarket" advantage. So far Paterson and Pyaterochka have been the most active, with the last one expanding its store network rapidly with franchise based discount supermarkets. The company has set its sights for 10% of the market in two years. Paterson has plans to establish 10 stores in Kiev and another 10 stores in the regions by 2009 (BMI). Supermarket operator Perekrestok (recently aquired by Pyaterochka) has also a foothold in the Ukraine market.

Table 10 Major retail firms in Ukraine's MGR sector (BMI)

Company	Country of origin	Sales (M USD)	Brands	Format	No. of outlets	Year of est.
Rainford	Ukraine	275	Rainford	Supermarket	na	1992
			Rainford	Cash & carry	7	
DC Fozzy	Ukraine	290	Fora	Discount stores	20	1997
			Fozzy	Wholesale hypermarkets	3	
			Silpo	Supermarkets	81	
			Da! Market	Supermarkets	10	
			Dnepryanka	Grocery stores	22	
			Bud Zdorov	Drugstore	8	
Garantiya Trade	Ukraine	170	Furshet	Supermarkets	40	1992
ATB Market	Ukraine	160	ATB	Discount stores	100	1993
Kviza-Trade	Ukraine	70	Velyka-Kyshenya	Supermarkets	11	na
Rewe AG	Germany	62.2	Billa	Supermarkets	8	2000
Spar	Netherlands	43.2	Spar	Supermarkets	8	2001
			Interspar	Hypermarkets	1	
Euromart JSC	Ukraine/USA	28.3	Euromart	Supermarkets	5	1997
				Discount stores	2	
Megamarket	Ukraine	23.3	Megamarket	Supermarkets	3	na
Maxi Ltd	Ukraine	11.2	Maxi Mart	Discount stores	1	na
Metro	Germany	338.5	Metro	Cash & Carry	8	2003
Karavan	Ukraine	na	Karavan	Hypermarket	1	2003
Kraina	Ukraine	na	Kraina	Hypermarket	1	2003
Trading House	Ukraine	na	Trading House	Supermarket	5	na
Paterson	Russia	na	Paterson	Supermarket	1	na
Pyaterochka	Russia	1360*	Pyaterochka	Supermarket franchises	5	2005

* total group sales in 2005

As was established earlier, domestic players dominate the market. In the following, concise descriptions of the three major retail chains' operation will be given. First, the

Fozzy Group is the market leader with sales of some 290 million USD in 2005. The company operates a number of store brands in Kiev, Odessa and other major urban centres. The group has utilized mergers and acquisitions (M&A) in its expansion, taking over for example the “Da! Market” in early 2005. Fozzy hypermarkets employ around 8000 square meters in displaying more than 50 000 products for sale. The major vehicle for regional expansion is the Silpo store brand with 28 store openings around Ukraine during 2005.

Second, Rainford operates a network of supermarkets and cash and carry stores, with a sales volume of 275 million USD in 2005. Rainford is also the leading importer of foodstuffs with a European wide supply base (for example from Germany, Belgium, France, Holland, Austria, Spain, Italy and Russia). Rainford is present with outlets and warehouses in Dnepropetrovsk, Kiev, Zaporozhye, Kirovoy Rog, Dneprodzerdzhinsk, Melitopol and Simferopol. Rainford has also diversified into food production, with processing facilities in canned products, distillery, winery and bakery subsectors.

Third, Garantiya Trade operates some 40 domestic supermarkets under the storebrand Furshet, with some 170 million USD sales in 2004. The company currently enjoys a 25% share of the MGR market, with focus on Kiev and surrounding localities. Garantiya Trade has been the trailblazer in the areas of private labels, with tinned vegetables and fish, as well as in telephone and Internet based home deliveries. It is well known of importing some European premium brands.

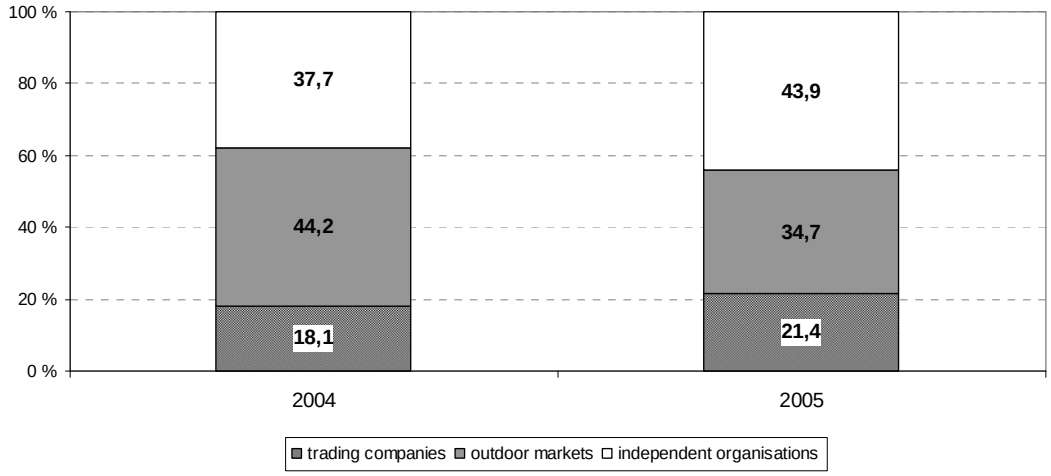
All in all, the Ukraine retail business is fast developing, and makes an interesting expansion target for international retailers, as relatively high profitability, fast payback period, scarce competition and close proximity to the EU increase potential. Local chains are still underdeveloped and do not offer opportunities for M&A based entry. Other challenges are scarce availability of land plots (especially in Kiev), and scarcity of trained retail employee pool. With access to finance and technology foreign entrants may compete effectively with local players. For food producers the general development of the sector is good news, as the modern distribution channel offers opportunities for efficiency in the form supply chain cooperation and technology implementation.

6.2 Kazakhstan

In the GRDI of 2006 (AT Kearney), Kazakhstan makes its first appearance, taking the last position, namely 30th. According to the ranking results, Kazakhstan is a country to watch with below average market potential and below average country risk. Undoubtedly, the country's increasingly well-to-do population of some 15 million present an opportunity for food industry supply chain incumbents. The most publicized event in the Kazakhstan MGR business has been the Russian retailers' expansion to the market. We will return to this topic later, going first over some main indicators of Kazakhstan retailing.

The volume of retail trade increased from 2004 to 2005 by 13.5% reaching the level of 1408.7 billion tenge (some 10.98 billion USD). Of this volume 65.2% is non-food and 34.8 food sales. Top 4 regions/cities in terms of retail volume were in ranked order as follows: the city of Almaty (41% of total Kazakhstan volume), region of Karagandinskoy (10.4%), region of Vostochna-Kazakhstanskoy (9.3%) and the city of Astana (5.8%). Of food products sold in retail more than 80% were of domestic origin. The organisations in the industry and their volume generation, is depicted by type in Figure 6.

Figure 6 Structure of retail trade volume by organisation type (Kazakhstan Statistics)



Outdoor markets and bazaars have a large share of the market, while the share decreased significantly from 2004 to 2005. Trading companies (retail chains) have some 20% of the market with slight increase y-o-y. Independent organisations (stores not affiliated with retail chains) have the largest share in the business. From the point

of view of modern retailing the market is highly underdeveloped, as for example in Almaty there are some 57 square meters of retail space per 1000 people. The same number is on the level of 200 in Prague and 350 in Warsaw. The strong development of purchasing power amongst the Kazakhstan population has encouraged some CIS based foreign retailers to enter and develop the market before the WTO membership encourages global retailers to entry. The strategy of these early entrants is to drive small scale local retailers from the market or expand by M&A. The consumer trend of switching from outdoor market to shops is expected to proceed to the phase where retail chain established store brands encourage the consumers to shop in the store network outlets. Local chains include such establishments as Dastarkhan, Gros, City-Center and Silkway City. As little information is available on these companies, we will concentrate on presenting two concise cases of foreign entrants.

First, the Russian supermarket operator Pyaterochka is set to launch its stores in a number of Kazakhstan largest cities. The St. Petersburg based discounter, has been trying to reach an agreement with the local Astana Motors holding, which in addition to automobile sales has diversified business in agricultural industry and shopping centres construction. The retailer plans to open its stores in Mega shopping centres which are to be launched in Almaty (70 000 sq. metres), Astana (31 000 sq. metres) and Chimkent (22 500 sq. metres) during 2005-2006. As Pyaterochka does not have logistics assets in Kazakhstan, its operations are not on the level of its local competitors Ramstore, Gros and City-Centre. Pyaterochka will diversify its concept in Kazakhstan by introducing franchising based supermarkets discounters in 7-8 stores in 2006, with plans of expanding the store network 45-50 by 2008. Each store will have 300-400 square meters of space.

Second, Turkish-Kazakhstani consortium is expanding its operations with the help of IFC financing. The latest development project involves two Turkish companies, Migros Turk T.A.S. (Migros) and Ram Dis Ticaret A.S. (Ram), and a Kazakh company, Butya Holding (Butya). The companies own respectively 42%, 28% and 30% of Rambutya LLP, the holding company. Migros and Ram are both members of the Koc Group, Turkey's largest private sector group. Ramstore has constructed two additional stores: one in the Tastak area of Almaty, and one in Astana, inside a new building (Astana Tower). Both sites are in urban areas of Almaty and Astana, the two major cities in Kazakhstan. Rambutya, a limited liability company, is one of Kazakhstan's largest retailers. Operating under the name Ramstore, the company

currently owns one hypermarket/mini-mall and two small supermarkets. Together the hypermarket and supermarket buildings have approximately 29 700 square meters of enclosed space, including shopping malls, warehouse facilities and Ramstore's corporate offices. This project involves the expansion of a retail hypermarket in Almaty, Kazakhstan, for which the 11 million USD IFC loan was approved, committed, and fully disbursed in 1999-2000.

Ramstore is so far the only major investment by a foreign grocery retailer in a sector that remains highly underdeveloped. Through its investment, Ramstore is making available low-cost, high quality foods and other consumer goods. At the same time the company is advancing its state-of-the-art inventory management, marketing, and sales techniques. As the only supermarket chain in Kazakhstan, the company is maybe able to provide a demonstration effect for retailers in Almaty and Kazakhstan generally. Indirectly, the expansion project may contribute to the development of the distribution and wholesale sectors as well as primary food processing. At present, Ramstore is sourcing approximately 85% of its product from the local market, working closely with domestic suppliers to increase the probability of securing a consistent supply of high quality produce.

7 Conclusions

The heritage of the Soviet Union and the disruptive transition from command economy to market based economy contributed to the dysfunctioning food supply chains and consumer good supply chains in general in the CIS. The unsynchronized development of the food supply chain sectors may not contribute to the general functioning of the chain, as disruption and inefficiencies in some parts raise the costs in others. The development of CIS food supply chains is by no means an easy task for policy makers and entrepreneurs, as coordinated efforts are needed in this relatively capital intensive sector. After some 15 years of market economy, we are beginning to see well established companies in all the value adding phases of the supply chain in major CIS countries that are oriented towards agribusiness due to their favourable endowments on natural resources and conditions. Ukraine and Kazakhstan are good examples of this development, with potential of becoming significant parts in global agribusiness supply chains as well as more regionally and locally oriented ones. Foreign interest on these markets is on the rise and will most probably only increase, as impediments to international trade are overcome, through for example the WTO negotiations.

Some major trends are worth mentioning. Favourable economic development in general has contributed to the sustainable growth in purchasing power in both Ukraine and Kazakhstan. This trend is the driving force in the development of modern food supply chains. More sophisticated consumer preferences create demand for branded products with modern settings for shopping. Both retail sector and the food processing sectors are responding to this call by developing marketing and logistics operations. The procurement of raw-materials is problematic however in many cases, as low returns on investment has not encouraged investors to enter the agriculture business, giving rise to two phenomena: (1) imports of raw-materials despite home country potential in agricultural production, and (2) vertical integration by larger companies to establish own farms for securing consistent supply base for production. These large vertically integrated agro-holdings are evident in many subsectors, with high rates of concentration of market share and power. Both of the focus countries have been recipients of international financing for agribusiness development, and with the sustained government support the “food clusters” in both Ukraine and Kazakhstan may eventually become strong players in the European and

Middle Eastern markets, as indeed their geographic locations are extremely favourable for such a role.

Both countries have their specific characteristics in terms of the food supply chain, some of which are elaborated on in the following. Ukraine has a large consumer base on its own, making its domestic market alone an attractive market opportunity. The consumer potential is further boosted by the strongly developing tourism sector in the country. Grain production is overall strong, while livestock production has been ailing. However, poultry is the rising star of the Ukraine livestock sector, with strong domestic and foreign (for example Danish) players. In processing, confectionary subsector is strong, somewhat characteristically to a developing market, as low-cost impulse products, with good margins, sell well in these kinds of environments in their initial phases of development. Dairy sector is the other champion in the Ukraine food processing, with significant amounts of Russian capital. Mass grocery retail sector with modern concepts is fast rising in Ukraine, with already significant domestic players expanding store networks in the urban centres of the country. Foreign entrants from Germany, Netherlands, and most importantly Russia compete with the locals. As usually is the case with prominent emerging markets, the entry of multinational retail giants is widely speculated, with local players contending for the most attractive M&A target status.

Overall, for example for the foreign food producers (e.g. in Finland), the Ukrainian market offers interesting opportunities with M&A targets as well as prospects for greenfield investments. Careful consideration must be taken together with the aims of the entry and the aimed supply chain operations. While Ukraine offers good base for producing branded products for the CIS, Middle Eastern, and EU markets, possible trade impediments must be reviewed together with logistics related issues, such as port and road infrastructure and border crossing procedures. The country has strong potential for local sourcing as well as international distribution. Entirely local supply chains (domestic supply, domestic distribution) are also lucrative, as agriculture and retail continue on their development paths.

In Kazakhstan the situation is somewhat similar to Ukraine although differences exist. Retailing is significantly more underdeveloped with much smaller consumer base in comparison to Ukraine. The whole food sector is strongly subsidized by the government, with cluster oriented thinking in sustaining the strong development in the

sector so far. Again the champions in the Kazakhstan food processing can be found in the dairy subsector, with investments for example from France, and poultry subsector, with investments for example from Russia. Saudi-Arabian capital has been flowing to the edible oil subsector. Juice processing is one of the most dynamic processing businesses in Kazakhstan, with many established brands and foreign capital. Grain production is one of the pillars of the Kazakhstan food cluster, with large state-owned, as well as private agriholding company involvement.

Finnish companies should consider strategic sourcing operations from Kazakhstan, in addition to servicing the consumer market from for example their possibly already operating Russian supply chain. Companies planning for increasing market share in the Russian markets should take into consideration the competition that is breeding in both Ukraine and Kazakhstan, as it is enhanced by the support of both foreign and domestic capital and consequently developing rapidly. Totally local supply chain establishments in Kazakhstan are hardly attractive for Finnish food producers due to distance from home base and relatively low consumer base. In possible considerations of operations establishment, the constraints on the sector must be reckoned with, as the lack of trained personnel has been hampering the otherwise promising growth.

With time, both Ukraine and Kazakhstan are bound to take their share in the global markets for food supply, and develop viable food clusters. From the Finnish point of view, participation in these developments, by utilizing the accumulated food sector specific know-how in R&D, supply chain management and marketing, may turn out to be a good investment in the long-term.

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