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Agroholdings and clusters in Kazakhstan's agro-food sector

Discussion Paper, No. 126

Provided in Cooperation with:
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Suggested Citation: Wandel, Jürgen (2009) : Agroholdings and clusters in Kazakhstan's agro-food sector, Discussion Paper, No. 126, Leibniz Institute of Agricultural Development in Central and Eastern Europe (IAMO), Halle (Saale), https://nbn-resolving.de/urn:nbn:de:gbv:3:2-11300

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DISCUSSION PAPER

Leibniz Institute of Agricultural Development in Central and Eastern Europe

AGROHOLDINGS AND CLUSTERS IN KAZAKHSTAN'S AGRO-FOOD SECTOR

JÜRGEN WANDEL

DISCUSSION PAPER NO. 126
2009

Theodor-Lieser-Straße 2, 06120 Halle (Saale), Germany
Phone: +49-345-2928 110
Fax: +49-345-2928 199
E-mail: iamo@iamo.de
Internet: http://www.iamo.de

Dr. Jürgen Wandel is senior research fellow at the Institute of Agricultural Development in Central and Eastern Europe (IAMO), Division: Agricultural Markets, Marketing and World Agri-cultural Trade, in Halle (Saale), Germany. Jürgen's current work focuses on economic transition in CIS-countries, institutions, competition and business groups.

Address:	Leibniz-Institut für Agrarentwicklung in Mittel- und Osteuropa (IAMO) Theodor-Lieser-Straße 2 06120 Halle (Saale) Deutschland
Telefon:	+49-345-2928 224
Fax:	+49-345-2928 199
E-mail:	wandel@iamo.de
Internet:	http://www.iamo.de

Discussion Papers are interim reports on work of the Institute of Agricultural Development in Central and Eastern Europe and have received only limited reviews. Views or opinions expressed in them do not necessarily represent those of IAMO. Comments are welcome and should be addressed directly to the author(s).

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ISSN 1438-2172

ABSTRACT

The paper provides an overview of the institutional arrangements on the micro level that have evolved in the agro-food sector of Kazakhstan in the course of transition. Emphasis is laid on more complex arrangements like "agroholdings" and "clusters", hitherto mostly unknown in the agro-food sectors of established market economies. It is shown that "agroholdings" are concentrated mainly in the northern part of Kazakhstan and to a large extent in the grain sector, while in the south a scattered small scale (individual) farm structure has emerged. Parallel to this market-driven development, the Kazakhstani government tries to promote other institutional arrangements that it deems to be of superior competitiveness, especially agro-food clusters. Refering to Hayek's concept of pretence of knowledge and empirical evidence of cluster facilitation policies of other countries the success of the Kazakhstani cluster initiative is questioned.

JEL: Q13, Q18, L 22

Keywords: Agroholdings, cluster, Kazakhstan, agricultural policy, institutional change.

ZUSAMMENFASSUNG

AGROHOLDINGS UND CLUSTERS IN KASACHSTAN'S AGRAR- UND ERNÄHRUNGSSEKTOR

Der Beitrag bietet einen Überblick über die institutionellen Arrangements auf Mikroebene, die sich in der Agrar- und Ernärhungswirtschaft Kasachstan im Laufe des Transformationsprozesses herausgebildet haben. Das Hauptaugenmerk liegt auf komplexere Arrangements wie "Agroholdings" und "Clusters", die bislang in den Agrar- und Ernährungssektoren etablierter Marktwirtschaft wenig verbreitet sind. Es wird gezeigt, daß "Agroholdings" hauptsächlich im Norden von Kasachstan und da im Getreidesektor konzentriert sind, während im Süden zersplitterte kleinbäuerliche Strukturen vorherrschen. Parallel zu dieser aus dem Spiel der Marktkäfte heraus entstandenen Entwicklung versucht die kasachstanische Regierung andere institutionelle Arrangements zu fördern, insbesondere Clusters, von denen sie glaubt, sie besäßen eine überlegene Wettbewerbsfähigkeit. Unter Rückgriff auf Hayeks Konzept der Anmaßung von Wissen und empirische Ergebnisse von Clusterförderungspolitiken in anderen Ländern wird der Erfolg der Cluster-Initiative in Kasachstan in Frage gestellt.

JEL: Q13, Q18, L 22

Schlüsselwörter: Agroholdings, Cluster, Kasachstan, Agrarpolitik, institutioneller Wandel.

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1 INTRODUCTION

In the middle of the 1990s and especially after the 1998 rouble crisis researchers began to register the emergence of a new type of business structure in the Russian agro-food sector which was totally different from the traditional family farms in Western market economies. This new business structure are groups of companies that were mostly created by operators from outside primary agriculture like food processors, food traders but also from the energy, financial or metallurgy sector and are often horizontally, vertically, and sometimes conglomerate integrated. In agricultural production these new organizational forms frequently control tens and even hundreds of thousands of hectares. In the literature they are often called "agroholdings".

The emergence of integrated business groups rather than smaller family farms as most western scholars and advisors have expected (see e.g. WORLD BANK, 1992) raised the question for the reasons for these failed anticipations. Since the empirical information about this phenomenon is still scant there are only a few and uncertain theoretical explanations. These usually refer to insights of concepts of New Institutional Economics like the transaction cost approach, property-rights-theory, principal-agent-theory but also Douglass North's theory of the path dependency of institutional change (1990, 1994) or what WILLIAMSON (2000) called embedded institutions. It is suggested that the creation of agroholdings might basically be the reflection of a specific set of formal and informal (or embedded) institutions in Russia at the given period (see HOCKMANN et al., 2003; KOESTER, 2005; RYLKO, 2005; WANDEL, 2007). If this were so one could expect to find a similar development in other CIS-countries that share the same Soviet heritage in political and economic terms and followed a comparable transition strategy. Such a country is Kazakhstan. Kazakhstan is the second largest CIS-country in territorial terms and experienced between 2000 and 2007 an economic boom that similar to Russia was driven by high world market prices for oil and other natural resources and whose political structure also resembles Russia (POMFRET, 2006, p. 2, 7). The share of the hydrocarbon sector of the GDP rose from 11 % in 1990 to to almost 35 percent by 2007. In 2007 the hydrocarbon sector accounted for 57 percent of the country's total industrial output and 70 percent of export (AGENCY OF STATISTICS OF THE REPUBLIC OF KAZAKHSTAN, 2006, p. 125; AGENCY OF STATISTICS OF THE REPUBLIC OF KAZAKHSTAN, 2007, p. 209, 295; CHULANOVA, 2007, p. 12).

As a first step in order to find out whether agroholdings are a unique Russian phenomenon or not this paper examines the business structures that have evolved in the agro-food sector of Kazakhstan. For this section 2 briefs at the outset the major phases of economic reforms and development of Kazakhstan in general and in the agro-food sector in particular in order get some insights in the institutional and macroeconomic environment. Then section 3 provides an overview of the institutional arrangements that emerged on the micro level in Kazakhstan between the actors in the agro-food chain. It will be shown that agroholdings in fact did appear in Kazakhstan. However, it will be argued that in comparison to Russia they are less in number and more concentrated only in certain regions and branches, namely in the grain sector of Northern Kazakhstan. Section 4 analyses in more depth these grain holdings. While their emergence can be considered as a market-driven process, the government has launched in the context of the country's intensified efforts to diversify the economy in 2004 an initiative that shall promote clusters throughout the economy, including the agro-food sector. Against this background section 5 discusses this government program and whether this may boost the development of integrated business groups or lead into a totally different direction. The paper ends with concluding remarks on the possible perspectives of the correspondent business structure in Kazakhstan's agro-food sector (section 6). Since the evolution of business structures is an ongoing and recent process the paper mostly relies on anecdotal (Russian-speaking) evidence and interviews with local scholars and officials.

2 INSTITUTIONAL AND MACROECONOMIC FRAMEWORK

2.1 Overall transition strategy

The transition to a market economy in Kazakhstan passed several stages. The first stage from 1992-1994 can be characterized as a phase of disorientation. Following Russia's example most prices were liberalized in January 2002 and privatization started. The latter was a mix of Czech and Russian voucher privatization scheme (POMFRET, 2006, p. 44f). In addition first updates of the legislative basis have begun. However, macroeconomic stabilization was not achieved resulting in hyperinflation that reached its peak in 2004 with 1,900 % (EBRD, 2001, p. 16). As POMFRET (2006, p. 6) argues this might have been caused among others by the long retaining of the ruble as a common currency with neighbouring Russia in an attempt to maintain existing commercial and political links. Only in November 1993 a new national currency – tenge – was introduced which was a prerequisite for gaining control over inflation and hence enabling relative price changes to perform their allocative function.

In the next stage, from 1995-1997, the government tightened fiscal and monetary policy leading to a decrease of the budget deficit from 11 to 4 % and of inflation down to 17 %. At the same time this together with the increased application of bankruptcy procedures imposed hard budget constraints on enterprises and banks (KULEKEEV, 2003, p. 20). Also in this period the privatization method was changed from the voucher scheme to asset sales under individually negotiated agreements. According to OLCOTT (2002, p. 139) this, however, turned out to be the most corrupt stage of privatization. Not only was there a lack of transparency but also a high speed with which many of the deals were concluded.1 These circumstances favoured the emergence of big business groups. Today, about ten megaholdings are said to control over four-fifth of the economy (POMFRET, 2006, p. 7). Nevertheless until the end of 1997 all small and most medium-scale enterprises were privatized.

The third reform period from 1998 to 2005 is regarded as a stage of overcoming the consequences of the August 1998 Russian Crisis and to lay the foundation of a more sustainable economic development. This objective was already proclaimed in the 1997 development strategy "Kazakhstan-2030" but after the crisis underscored. In this third stage the government began to concentrate its efforts more on institutions (WORLD BANK, 2005). A framework for public resource and civil service management was introduced and, in mid-2001, the National Fund of the Republic of Kazakhstan (NFRK) was set up for the management of oil revenue. The fund is to be invested in low-risk foreign securities and be audited by a foreign firm. Between 2001 and 2003 Kazakhstan put 63 % of its oil revenues in this fund, which witnesses of a tight fiscal policy (DOBRONRAVIN et al., 2006, p. 221). In the latest address the president has confirmed the goal to transform Kazakhstan's institution according to standards of the most successful economies. This includes also the battle against corruption. Parallel to this the government has intensified efforts to diversify and develop the economy by means of industrial policy. For this in 2003 the government passed the "Innovative Industrial Development Strategy of the Republic of Kazakhstan for 2003-2015" which outlines quantative goals, a timetable and priorites for diversifying the economy for fears of the so called "oil curse". [2] One year later, the government launched the project "Diversification of Kazakhstan's Economy through

[1] According to Sander Thoenes in an article entitled "Kazakhstan's sale of the century": "Speed differentiates Kazakhstan's privatization more than anything. One company asked a consultancy to submit a proposal for a three-week legal and commercial investigation for a bid. Two days later the consultancy found that the company had already won the bid" (Financial Times (London), October 25, 1996, quoted in KALYUZHANOVA, 1998, p. 78).

[2] For a more detailed discussion on whether there is evidence of a resource curse in Kazakkstan see POMFRET (2006, p. 56f. and p. 165ff.).

Cluster Development in Non-Extraction Sectors of the Economy" revealing thus how this goal shall be reached: By means of the promotion of clusters, i.e. a particular form of industrial organization where firms and associate institutions are linked in some ways and are geographically proximate.

In conclusion, privatization has proceeded farther in Kazakhstan than in any other Central Asian country. In 2007 70 % of GDP was produced by the private sector (EBRD TRANSITION REPORT, 2007, p. 37). Due to vigorous banking and pension reforms together with further internal and external liberalization, financial institutions are much better established than elsewhere in the CIS. Large state-owned companies continue to operate, however, in energy, transportation, communication, and other "strategic" industries. Despite official welcomes and visual improvements, other private and foreign investments, outside of banking, real estate, and energy, still suffer from an unstable and corrupt system of regulation and law enforcement, as well as from incompetent personnel (KALYUZHNOVA, 2003; POMFRET, 2006). By 2005, Kazakhstan ranked 107th of 158 countries in the Corruption Perception Index of Transparency International, although the 2005 Business Environment and Enterprise Performance Survey, commissioned by EBRD, has shown some improvement in these areas since 2002 (www.info.worldbank.org/governance/beeps).

2.2 Economic growth performance

From 1991 to 1995 real GDP fell by 39 percent and exports collapsed. Besides slow reforms this figure reflects the economic shocks faced by Kazakhstan through the dissolution of the Soviet Union in 1991. Supply links and demand sources were disrupted by new national borders and attempts to retain resources within these borders. Kazakhstan was one of the most tightly integrated republics into the USSR economy. It was mainly a supplier of primary products like minerals, oil and grain which were processed elsewhere in the Union. In the absence of any tradition of nationhood and the need to create new national institutions compounded these difficulties (POMFRET, 2006, p. 5).

The decline in GDP by over two-fifths between 1991 and 1995 was halted in 1997, but was buffeted again in 1998 by the August Russian Crisis. According to POMFRET (2006, p. 11) Kazakhstan had difficulties to weather this external shock because of missing and/or ill-functioning institutions required for a market economy. Instead "central planning appeared to being replaced by a rentier economy in which insiders live off the resource rents rather than generating new output". However, following large currency devaluation in 1999 and an upturn in oil prices Kazakhstan entered a boom period led by a boom in foreign trade fuelled by exports of oil but also steel, copper, gold and grain (POMFRET, 2006, p. 41). Since 2000 Kazakhstan experienced double-digit economic growth averaging 10 % p.a. In 2005 and 2006 the income and wealth effects associated with high oil prices lifted also non-oil output growth to 11 percent in 2005. Particularly rapidly expanded construction and financial services output (by 40 % in real terms) and to a smaller degree the food industry and business services. The unemployment rate declined further to 8.1 percent (8.4 percent in 2004). In May 2000 the government paid off its debts to the IMF ahead of schedule and in 2005 and 2006 the state budget was in surplus (AGENCY OF STATISTICS OF THE REPUBLIC OF KAZAKHSTAN, 2007, p. 341). However, inflation picked up from 6.9 % in 2004 to 7.6 % in 2005 (IMF, 2006, p. 18) and jumped to almost 19 % in December 2007 as credit growth accelerated to over 70 %, external borrowing by banks surged and rising incomes increased demand. Following the world liquidity crises GDP growth slowed down to 8 percent in 2007 and an estimated 5-6 percent in 2008.[3]

[3] For more detail see IMF (2006), IMF (2007) and ASIAN DEVELOPMENT BANK (2008).

2.3 Reforms in the agro-food sector

Between 1992 and 1995 input prices were liberalized while important output prices (bread, oil products) remained controlled until the end of 1994 leading to farm losses. Direction by local authorities led farms concentrating on activities which were loss-making while the continued extension of loans to loss-making farms sunk them ever deeper into debt. Reversal of the price squeeze began in 1999 when the government introduced a price support system for wheat and extended it to other goods.

2.3.1 Enterprise privatization and land reform

Privatization in the food industry in Kazakhstan proceeded the same way as described above. In agriculture also share privatization has been applied along with restructuring corporate farms and forming family (peasant) farms. Share privatization started in 1993 when the collective form of property was eliminated in Kazakhstan's legislation (ESIRKEPOV, 1999). In-kind distribution of property shares was to take place at the initiative of the intended beneficiary with the agreement of the farm director. The 1995 law "On land" confirmed the principle of state ownership of land, with private use rights under long-term leases (99 years). The 1995 Land Law specified that lands of restructured agricultural enterprises were to be divided into conditional land shares on paper. These shares were to be granted in permanent tenure (not ownership) to certain groups of people who resided in rural areas.[4] Holders of conditional land shares had the right to:

- Transfer the land share right to the base capital of a business enterprise or as a unit share of a newly formed production cooperative,
- Withdraw a land plot in kind to form a family farm or for commercial farm production,
- Transfer or lease the land share right,
- Lease out the conditional land share right, or
- Abandon the conditional land share right.

By 1997, some 2,277,000 conditional land shares of an area of 118 million hectares had been granted to recipients without charge. By 2002, owners of conditional land shares exercised their rights in the following ways (DUDWICK et al., 2007, p. 46):

- 18 % of shares were transferred as base capital to newly formed corporate farms. The shares were primarily those of former managers and specialists of state and collective farms, members of their families.
- 29 % of shares were transformed into physical land plots to be used for forming family farms. The holders of those shares were primarily specialists who were from collective or state farms or who had agricultural machinery and financial resources.
- 4 % were sold to commercial farms.
- 3 % were transferred (given) to other persons.
- 18 % remained unclaimed or were returned to the government. The shares were those of rural residents who either never claimed their shares or abandoned them because they had migrated to cities or other countries.

[4] These groups consisted of members of liquidated and restructured collective and state farms, workers of state-owned agricultural units, and pensioners, as well as those who were employed in production or the social and cultural spheres of these farms.

- 28 % were leased out. Those shares were primarily the ones of pensioners, social and cultural workers (doctors, teachers, and the like), the poor, and people employed in other businesses.

In 2003, the government of Kazakhstan passed a new Land Code[5] allowing private ownership of agricultural land with all property rights, hence including the free sale and purchase of land plots. The perhaps most important consequence is that this gives smaller (family) farms a valuable collateral that might ease the access to credits. At the same time the Land Code outlawed share subleasing (affecting 28 percent of conditional land shares in the last category listed above), effective since January 1, 2005. Land not already in family farms can be obtained only by purchase. Article 170 of the 2003 Land Code states that the land shares were to be returned to the government on January 1 if the owners did not purchase their land share, transform the land share into a physical plot in order to establish a family farm, or transfer their share into a corporate farm by that date. The World Bank argues that Article 170 is a logical continuation of the bankruptcy process. The aim has been to do away with share privatization and to concentrate corporate farm ownership and management, while avoiding a breakup of large farms through land distribution. However, Article 170 might also raise the costs to small farmers of operating in Kazakhstan and reduce the amount of land in family farms, which were the subleasers of land (DUDWICK et al., 2007, p. 48).

2.3.2 Farm structure

In the course of privatization and farm restructuring that began in 1993 the number of farms increased from 5.000 in 1990 to 161.962 at the beginning of 2006. This number consists of 4919 privatized former collective and now corporate farms, 156.978 peasant farms and 65 state farms, which are exclusively experimental stations. In addition there are more than 2 mln personal subsidiary plots and nearly 3 mln garden plots (AGENCY OF STATISTICS OF THE REPUBLIC OF KAZAKHSTAN, 2006a, p. 175). The number of corporate farms in Kazakhstan has thus fallen from 7,000 as well as their average size from 29,000 to 12,000 hectares. Such farms are still far larger than even the largest categories of (family) farms found in the United States, which are on average 800 hectares (DUDWICK et al., 2007, p. 47f.). The average size of a family farm in Kazakhstan in 2006 was 248 hectares (AGENCY OF STATISTICS OF THE REPUBLIC OF KAZAKHSTAN, 2007, p. 242). The area under farming in Kazakhstan by corporate farms also shrank to 51 % in 2006. The area of land under family farms grew rapidly and has resulted in 48,1 % of cultivated land being in individual farms. Household plots use about 0,7 % of all agricultural lands (table 1).

Table 1: Structure of agricultural lands by categories of land users (as % of total)

	2001	2002	2003	2004	2005	2006
Agricultural enterprises	66,1	63,1	60,3	57,1	54,2	51,2
Peasant (private) farms	35,5	36,4	39,2	42,4	45,4	48,1
In personal use of households	0,4	0,5	0,5	0,5	0,4	0,7

Source: AGENCY OF STATISTICS OF THE REPUBLIC OF KAZAKHSTAN (2006b, p. 243) and (2007, p. 240).

There is a marked geographical pattern in the form of farm ownership, with the majority of legally registered peasant farms located in the southern and eastern oblasts of Almaty, Atyrau, Zhambyl, South Kazakhstan and East Kazakhstan. The portion of land in those oblasts that was in individual (family and household) farms averaged 69 percent in 2002. The majority of

[5] See Government of the Republic of Kazakhstan (2003). For a detailed discussion of the new land code see also Centr sistemnykh issledovaniy Administracii Prezidenta Respubliki Kazakhstan; GTZ (2004).

large-scale corporate farms in the legal form of Joint Stock Companies (JSCs) and Partnerships with limited liability (PLLs) are situated in the wheat-growing northern oblasts of Akmola, Kostana, and North Kazakhstan. There the portion of land in individual (family and household) farms averaged only 30 % (DUDWICK et al., 2007, p. 48).

Table 2: Structure of agricultural output by types of farms (at current prices, as % of total)

	2001	2002	2003	2004	2005	2006
Agricultural enterprises	26,7	22,3	23,1	24,5	23,9	24,8
Peasant (private) farms	25,0	26,2	26,8	25,5	21,9	21,7
In personal use of households	48,3	51,4	50,1	50,0	54,2	53,5

Source: AGENCY OF STATISTICS OF THE REPUBLIC OF KAZAKHSTAN (2006b, p. 245) and (2007, p. 243).

The diminished importance of large-scale farms in Kazakhstan's agriculture is also reflected in the shares of the different farm types on overall agricultural output. In 2005 large-scale agricultural enterprises accounted for only 25 % of all agricultural prodcution, while household plots for 54 % and peasant farms for 21 % (table 2). However, the picture is different when looking at the main branches of production – crop and livestock production (table 3). Almost 83 % of the output produced by agricultural enterprises and 84 % by peasant farms are crops and only 17 % resp. 16 % animal husbandry products, while household plots are predominantely engaged in animal production (78 % of their output). Roughly two-thirds of grain is produced by large-scale enterprises, followed by sunflower (32 %), sugar beet (26 %) and eggs (49 %). Peasant farms grow mainly raw cotton (95 % output of farms of all types), sugar beet (70 %), sunflower (64 %) and grain (34 %) while household plots produce milk (91 %), meat (83 %), potatoes (79 %), fruits (74 %) and vegetables (64 %) (AGENCY OF STATISTICS OF THE REPUBLIC OF KAZAKHSTAN, 2007, p. 245).

Table 3: Structure of agricultural output by branches of production (at current prices; as % of agricultural output)

	2001	2002	2003	2004	2005	2006
Farms of all types						
Plant growing	61,0	58,4	57,8	56,0	52,4	50,7
Animal husbandry	39,0	41,6	42,2	44,0	47,6	49,3
Agricultural enterprises						
Plant growing	88,5	85,3	85,2	85,9	83,5	82,4
Animal husbandry	11,5	14,7	14,8	14,1	16,5	17,6
Peasant farms						
Plant growing	93,0	92,7	91,7	90,0	86,0	84,3
Animal husbandry	7,0	7,3	8,3	10,0	14,0	15,7
Household plots						
Plant growing	29,3	29,2	27,0	24,0	25,1	22,3
Animal husbandry	70,7	70,8	73,0	76,0	74,9	77,7

Source: AGENCY OF STATISTICS OF THE REPUBLIC OF KAZAKHSTAN (2006b, p. 245) and (2007, p. 243).

2.3.3 Performance

Agricultural production in Kazakhstan fell from 1993 to 1998. Since then both crop and livestock production has been growing (see AGENCY OF STATISTICS OF THE REPUBLIC OF KAZAKHSTAN, 2006b, p. 247). An important reason for this increase is the simultaneous rise in agricultural prices (especially for grain) and GDP after 1999, reflecting the rise in oil prices and the growth of Kazakhstan's regional trading partners of the past few years (DUDWICK et al., 2007, p. 48f.). The most successful branch in agriculture is grain production. In 2007 Kazakhstan gathered a bumber crop with 20,1 mln tons which is 22 % more than in 2006. Wheat alone accounted for 16,6 mln tons in 2007, in 2006 13,5 mln 2006. This allowed Kazakstan to become one of the ten largest grain exporting country. Exports of unprocessed grain rose in 2005 by 47,6 % and that of flour by 30,3 %. Besides favourable weather conditions this increase is attributed to the rising use of modern production technologies as well as state support (MINSTRY OF AGRICULTURE 2008a; MABIEVA, 2008, p. 1).

Nevertheless by 2006 39 % of all corporate farms were still unprofitable (AGENCY OF STATISTICS OF THE REPUBLIC OF KAZAKHSTAN, 2007, p. 241). By 1998 the correspondent figure was even 78,5 % leading to a debt crisis and demonetization of transactions (DUDWICK et al., p. 77). In order to solve this debt crisis the government relied on bankruptcy proceedings, which allowed debt writeoffs, buyouts of large farms by large, vertically integrated grain companies (processors), which sometimes brought in new management and access to capital; and further concentration of land and property shares under management control (GRAY, 2000, p. 8ff.; ESIRKEPOV, BEISEMBAEV, 2001). However, qualitative information gathered by the World Bank indicates that those measures did not go as far in really breaking soft budget constraints (DUDWICK et al., 2007, p. 46).

The food industry saw a similar economic development. Between 1990 and 1999 overall output fell almost by two thirds. Then since 2000 production rose on average every year by 11 % and by 2005 reached 53 % of the level of 1990 (KAZAKHSTAN ZA GODY, 2006, p. 193). Food processsing in Kazakhstan is in fact a weak link in the food chain. In 2007 still almost 80 % of all food products sold to the final consumer was unprocessed (EXPERT KAZAKHSTAN, 2008, p. 13). In the meat sector the share processed agricultural raw products amounted only to 29 %, in the dairy sector to 28 % and in the grain sector 43 %. Only oil seeds are nearly to 100 % processed whereas the corresponding figure in fruits and vegetables is insignificant (MINSTERY OF AGRICULTURE, 2008). Food processing enterprises have started to modernize equipment and introduce new products and thus broaden the assortment of goods. Reflecting adaption to rising income and thus changing demand patterns the fastest growing branches are involved in secondary processing like alcoholic and non-alcoholic beverage production. Other branches, however, like grouts, flour, bread, meat and canned vegetables producers have reduced production since 2000. Besides backward production technologies and import competition[6], one major problem for food processors is the lack of sufficient high-qualitative agricultural raw materials (EXPERT KAZAKHSTAN, 2008, p. 13). As a result there are excess capacities. For example in the dairy and fish industry only one quarter of all processing capacities are utilized, in the meat industry one third and in gouts production only 15 % (AGENCY OF STATISTICS OF THE REPUBLIC OF KAZAKHSTAN, 2006a, p. 197).

[6] In 2007 20 % of all food products sold to the final consumer in Kazakhstan were imported, in bigger cities the share amounts to 60 %. The proportion of imports in the supply of condensed milk is 83 %, of canned meat prodcuts 52 % and butter 40 % (EXPERT KAZAKHSTAN, 2008, p. 13).

2.3.4 Actual agricultural policy

Kazakhstan's actual agricultural policy is explicitly aimed at import substitution in order to achieve the so called food security, i.e. relatively high independence from food imports, and to increase exports of food products (NARENOVA, 2008, p. 59).[7] For this both the volume and efficiency of food production shall be increased. What measures are deemed necessary to achieve this goal is outlined in the government "conception for the sustainable development of the agro-industrial complex" of 2005 for the period 2006-2010. It is held inevitable (1) to regulate the internal market, (2) to industrialize agricultural production, (3) to develop a modern infrastructure for the whole sector and (4) to promote branche clusters (GOVERNMENT OF THE REPUBLIC OF KAZAKHSTAN, 2005a, Section 2).

Government regulation of the agro-food markets shall avoid food shortages and enhance exports. For this subsidies as well as tariff policy shall be used (EXPERT KAZAKSTAN, 2008, p. 20). In Kazakhstan, the agricultural budget has increased sevenfold since 1998. Under the State Agro Food Program for 2003-05, 8 % of the state budget is earmarked for support of agriculture, while in 1998 only one percent of the national budget was spent on agriculture (WORLD BANK, 2000, p. 24). The state supports mainly the purchase of farm inputs such as fuel, lubricants, seeds, and fertilizers with a 40 percent subsidy. In addition there are tax privileges both for peasant farms and corporate farms. Peasant farms pay a unified land tax which amounts to 0,1 % of the cadastre value of the land in use and corporate farms have to pay only 20 % of the whole tax debts of the enterprise (AGROFAKT, 2006). Moreover all farms can lease agricultural machinery at subsidized interest rates. Finally since 2005 the Ministry of Agriculture provides subsidies for the interest rates of credits ranging to KZT 20 billon. This allows on average 200-200 agricultural enterprise to get credits at interest rates of 5 % p.a. (URMANOV, 2007).

The grain market is regulated via the state-owned procurement corporation AO "Prodkorporaciya". This corporation handles about 10 % of the nation wide grain production. The main goal of the state company is to stabilize prices on the domestic markets through interventions and to keep private traders from so called speculative actions. This became evident in 2007 when high world market prices increased grain exports and politicians feared an increase of the price for bread that could lead to social unrest. In order to better control the outflow of grain and keep more of it on the domestic market they introduced in 2007 export licenses and in April 2008 a temporary export ban until the next crop in September 2008 (MABIEVA, 2008, p. 1).

DUDWICK et al. (2007. p. 44) claim that the government set institutional framework in Kazakhstan seems to be more supportive for large farms. Most credits from commercial banks are said to be directed to large farms. The same seems to hold for the leasing of agricultural machinery at subsidized interest rates. CSAKI and ZUSCHLAG (2004) maintain that often bureaucratic requirements alone seem to create a disincentive for small farms to access those subsidies. This development however could also be explained by pure economic reasons, namely the better credit worthiness of larger farms. This argument seems to be especially convincing until the passing of the new 2003 Land Code which only then allowed for private ownership of farm land and the possibility to mortgage agricultural land (see chapter 8 of the Land Code). While bigger farms could offer other assets as collateral small farms often missed this possibility. Nevertheless, there is more evidence in recent time that government officals indeed do seem to prefer larger farms, especially with regard to the scattered farm structure in livestock production (KARADZHAEVA et al., 2007 p. 24). President Nazarbaev himself has emphasized in his address to the nation in 2007 the need for larger farm units which prompted the government to direct more support to larger, prospective enterprises (URMANOV, 2007; ZAKON.KZ, 2007). However, as URMANOV (2007)

[7] According to Kazakhstan's minister of agriculture food security is reached when the share of imports in domestic supply is lower than 20 % (EXPERT KAZAKHSTAN, 2008, p. 19).

points out besides the belief in the comparative advantage of larger farms this may also be caused by purely practical reasons, since it is easier for the government to realize its support measures with fewer but larger entities than with a fragmented structure.

Similar support measures as in agriculture exist for the food industry. The state also subsidizes the interest rates of credits given by commercial banks to food processors. In 2006 the state budget provided for this purpose KZT 2.9 billion. This is said to have enabled 419 processing enterprises in 2006 and 140 in 2007 from all 14 oblasts of the Republic to get cheaper commercial credits in the range of KZT 42.1 billion (USD 351 million), resp. KZT 16.4 billon. In addition KZT 3.1 billion were assigned under the program of equipment leasing during 2003-2006 to 32 processors of meat, milk, leather and wool, fruit and vegetable from 10 regions of the country that process. Moreover, since 2006 the government subsidizes the costs for the development, introduction and certification of quality and safety management systems basing on the international standards ISO 9000 and HACCP. For this purpose in 2006 KZT 40 million and in 2007 KZT 100 millon were disbursed out of the state budget (MINISTRY OF AGRICULTURE, 2008b).

Under the term "industrialization of agricultural production" the government means in the first place the modernization of productions technologies since most machinery on farms and in processing enterprises are outdated but also the need for family farms to expand their size in order to increase comptitiveness. The latter was emphasized by the president in his address to the nation in 2007 and the government tries to direct more support to larger, prospective enterprises (URMANOV, 2007; ZAKON.KZ, 2007; DUDWICK et al., 2007, p. 47). As URMANOV (2007) notes it is easier for the government to realize its support measures with fewer but larger entitites than with a fragmented structure.

The development of a modern infrastructure not only includes the building of roads in rural areas but also the establishment of a network of veterinarian and phyto-veterinarian services, procurement organizations, wholesale markes, information and marketing services as well as financial and insurance institutions. Clusters are regarded as the most progressive form of industrial organization (ABDIL'DINA, KERIMOVA, KUSAYNOVA, 2008, p. 44) and to serve as "catalysts to raise productivity and quality in the agro-food sector on the basis of vertical and horizontal integration" (GOVERNMENT OF THE REPUBLIC OF KAZAKHSTAN, 2005a, Section 2). Yet, integrated structures have already appeared by themselves in the cource of transition. The next section will provide an overview.

3 INSTITUTIONAL ARRANGEMENTS IN THE VALUE-ADDED CHAIN

The relations between all actors in the food chain are governed by a similar multitude of institutional arrangements in the continuum between markets and hierarchies as in Russia.[8] This starts from the spot market, goes over contractual arrangements and ends in complex integrated structures. However, there is no statistical information available on the importance of individual institutional arrangements.

3.1 Contractual arrangements

According to AKIMBEKOVA (2006, p. 78) the most widespread type of governance structure are contractual arrangements. Often they are short-term, non-permanent sale-purchase agreements between service companies, agricultural producers, processors and traders. In these contracts between farmers and processors as well as between processors and traders they fix quality requirements, the volume and time of delivery and the price. Most common is this type of contract in the oil seed, fruit and vegetables, meat and sugar branch. In sugar, larger processing companies often provide support for sugar beet growers in purchasing needed inputs like seed, fuel,

[8] For on overview in the Russian case see e.g. RYLKO (2005), HOCKMANN et al. (2003), WANDEL (2007).

fertilizers, agricultural chemicals and machinery. They give them monetary or commodity credit, provide guarantees to input suppliers or sometimes lease machinery from own machinery-technological stations or provide custom farming services (AKIMBEKOVA, 2006, p. 79).

There are also cases where larger processors have a constant raw material basis which they complement with short term contractual arrangement with other suppliers (AKIMBEKOVA, 2006, p. 81). The constant raw material supply may be based on long-term joint production agreement (production contract) or the processing company itself produces agricultural raw materials. Such arrangement can be found in particular in fruit and vegetable and meat production. For example the fruit and vegetable processor TOO "Baldyrgan" in the Almaty oblast cooperates with three family farms on a long-term production contract and provides them inputs, technology and management services. Another example is the successful meat and bread company "Bekker & Co." in Almaty who raises itself about 1000 own pigs. However, about 90 % of the raw materials (beef, sheep and horse meat) are purchased from independent suppliers on a contractual basis where the price in dependence of the fulfillment of exact quality requirements is fixed (UTESHEVA, 2006).

3.2 Integrated formations

Integrated formations in Kazakhstan appear in various forms, which are also similar to those in Russia. One can find forward integration of agricultural producers into primary processing or of processing companies into retailing, agrofirms and holding companies or financial-industrial groups. In the case of forward integration of agricultural producers into primary processing the farms establish small processing facilities trying to capture more of the value-added. As in Russia this phenomenon could be observed mainly in the early years of transistion when after price liberalization the price scissors widend in favour of the downstream sector. Today, such forms can be found in the agro-food sectors with a scattered farm structure, i.e. in fruit and vegetable and livestock production (mostly slaughtering). However, processing equipment is reported to be quite primitive and the final product not deeply processed. As a result the food quality is not very much competitive. The other form of integrated processing was founded by independent entrepreneurs noticing profit opportunities in food production and selling. These firms are mostly small or medium scale processing firms often with integrated direct retailing to the final consumer (AKIMBEKOVA, 2006, p. 95). More prominent examples for this form can be found in dairy production, for instances TOO "Agroprodukt" or the Kazakh-Izraelian Joint Venture (SP) "Camoni" in Almaty which employs about 70 people.

Agrofirms are fully integrated companies covering the whole production cycle primary production – processing – retailing (AKIMBEKOVA, 2006, p. 103). The individual links of the value added chain merge into a single firm losing without any legal and economic autonomy. Examples for agrofirms in Kazakstan are Agrofirma "Bereke" which produces and markets fruits and vegetables, and the dairy agrofirm OAO APK "Adal", both from the Almaty Oblast.

Like in Russia the terms holding and financial-industrial groups are often used as synomyms, for many financial-industrial groups are organized as holdings. In Kazakhstan such business groups can mainly be found in the grain sector, and to a lesser degree in the oilseeds, sugar and milk branches (IRBAEV, FRANGULIDI, 2006, p. 14). However, there is no information about the exact number. This is because a holding company is no legal form of its own. Often the holdings officially do not show up as a consolidated group so that it is impossible for outside observers to find out which enterprises are subsidiaries of a group, and which really independent players are. AKIMBEKOVA (2006, p. 108) estimates that about 40 holding companies operate in the grain sector. They shall control ca. 30 % of grain farm land and provide for about two thirds of all grain sold both on the domestic and foreign market.

The most prominent agroholding outside the grain sector is the dairy company AO "Food Master". It is the biggest dairy producer in Kazakhstan with a reputation comparable to Wimm-Bill-Dann's one in Russia. Its market share in Kazakhstan accounts 30 % and in the capital Astana 80 % (AKIMBEKOVA, 2006, p. 113). In contrast to most grain holdings "Food Master" is however not engaged in own primary production. It is mainly a horizontally and only to a small degree vertically integrated goup. It has four subsidiaries which are specialized in different regions and/or categories of dairy products: "Food Master Esik" produces whole milk products, yoghurts, yoghurt drinks and ice cream for the ragion of Esik, "Food Master Aspetik" juices, long-life milk, "Food Master NS" (full milk, yoghurts and kefirs) and "Food master Shymkent" produces butter, quark and gout cheese. About 80 % of the final produce is sold through big independent retail and supermarket chains and only 20 % through own retail outlets (AKIMBEKOVA, 2006, p. 113).

In the following a closer look is taken at the grain sector, where most agroholdings in Kazakhstan can be found.

4 AGROHOLDINGS IN THE GRAIN SECTOR

IRBAEV, FRANGULIDI (2006) differ between big and smaller holdings. Their internal structure, the degree of freedom for the subsidiaries are as different as in Russia.

4.1 The big players

The number of big grain holdings is estimated on about 15. Examples for this category are such companies as "Ivolga Holding", "Alibi", "Grain Industry" (Zernovaya industriya), "Agrocentr Astan", "Batt", "Bogvi", "Cesna Astyk" or "Karasu". These holding constantly expand their business and reorganize their group structure. Most of these big players have their origin in grain trading and only a few in grain production. The latter however also engaged in trading and there earned the capital for further expansion (IRBAEV, FRANGULIDI, 2006, p. 14). Some agroholdings are themselves part of diversified comglomerates. This holds for "BATT-Grain" and TOO "Censa-Astyk". The "Corporation BATT" is a business group with divisions in oil and gas, construction, trading business and food industry, namely liquor production. "Cesna-Astyk" belongs to the investment corporation "Cesna". This corporation was already founded in 1988 in the Gorbachev-era and has until now expanded into construction (" Concern "Nayza-kurylys"), financial service (Cesna-Bank, Casna-Capital) and media business (Medet-Holding, TOO "Gazeta Info Ces") as well as small wholesale and retail trading (cash & carry supermarkets "Astykzhan" and supermarkets "Bereke") and agro-food business. The agro-food business was started as early as in 1992 with the acquisition of an elevator in Akmol oblast. Today the the agro-food branch contains grain production and processing into mixed feed, flour, bread and macaroni products and in beer brewing. The grain business is carried out by the group subsidiary TOO "Kontsern Cesna-Astyk" which controls again 14 subsidiaries. For the distribution of food products an own subsidiary was founded – the TOO "Alma-Ces". The beer divison was established in 2002 and enlarged in 2003 with the Baltic Beverages Holding. The concern produces the most popular Kazakh beer brands "Derbes", "Irbis", "Alma-Ata" and "Turborg".

A common characteristic of these big grain holdings is that they have been established in an evolutionary manner with a functioning service and marketing infrastructure. For their agricultural business they mostly acquired indebted former collective farms and for the reorganized farms the holding company or/and the major downstream firms often act as guarantee for bank loans. Today their expansion goes on in horizontal, vertical and/or diversified direction. This is often done through acquisition of more farm land and elevators. The most prominent example for this strategy is one of the biggest Kazakh agroholding and grain exporter "Ivolga Holding", which since 2002 also operate in Russia.

Ivolga-Holding was founded by the former sovkhoz director, Vasiliy Rozinov, who still is the only owner of the group. The starting capital for further investment he earned in grain trading, for which alraedy in 1992 he established the small trading company MP "Ivolga". In the course of time he realized that trading can be more successful if one has own storage capacities, for this allows to put together appropriate parties to sell and better to react on price changes on the market. So he bought a first elevator in Kostanay. Then they met the problem of unreliable grain supply which drove into own grain growing. In the further course of time the group integrated further forward the grain value added chain into mixed fodder and flour production. It also maintains own service companies like oil stations, plants for land machinery and spare parts ("Agrotekhmash", "Dormash", "Ural'skiy agregatno-mekhanicheskiy zavod") and even a firm for computer equipment ("Ivolga-Rastr"). Grain is harvested in a custom farming style. Combiners from the group's regional machinery-technological stations harvest the fields of the holding from south to north (OSIPOV, 2007).

Since 2005 the group is also engaged in sugar and raw milk producing in Russia. The expansion into sugar happened according to Rozinov by chance. Three sugar plants in the Oblast Kursk were not able to pay back their debts to the Kazakh bank "Turan Alem". As a consequence the sugar plants were handed over to the bank. Turan Alem Bank was then looking for a purchaser and found it in Ivolga-Holding, one of its constant clients. The holding bought the sugar plants including surrounding sugar beet farms for together 75 mln. $. Another sugar plant was acquired in Voronezh, but in 2007 sold again. Like grain the sugar division is also vertically integrated with about 80 % of the raw material being supplied by own farms.

The agroholding has good access to credits from commercial banks. In Kazakhstan they closely work together with Turan Alem Bank and in Russia with Sberbank. In Kazakhstan Ivolga has a credit line of more than 100 mln $. In Russia, the group, however, does not participate in the Russian National Agricultural Project that provides financial support for investments into mainly livestock production. Ivolga considers the subsidies offered to be insufficient and bureaucratic procedure to qualify for the program too complicated. Yet, they use credits with subsidized interest rates that Sberbank offers outside the National Program. In Kazakhstan they enjoy like any other company in which agricultural production accounts at least for 60 % of all production an 80 % deduction on all tax payments.

Ivolga-Holding controls about 1 mln ha of farmland in Kazakhstan and another 140,000 ha in Russia. They export on average 500-700 tsd. tons of grain (IRBAEV, FRANGULIDI, 2006, p. 14). In Russia they have 10 elevators (3 in the oblasts Kursk and Orenburg, 2 in Ul'yanovsk and 1 in the oblast Chelyabinsk and Kray Krasnodar) and in Kazakhstan 11. Together they account for 2 mln t storage capacities, all of which are said to be fully utilized. The whole group employs 50,000 people. In 2006 they report earnings from sales of agricultural produce in the range of 300 mln $. Other financial indicators are not revealed (OSIPOV, 2007).

A similar development path followed TOO "Alibi-Agro", which exports between 250-300 tsd. tons of grain through the port terminal Ventspils in Latvia. Other big grain agroholdings diversified in crop production, mostly into oil seeds and started to integrate into livestock production. Examples are "Maslodel" and "Vita Soy", leaders of the oil seed business. A third group of big grain players integrated forward into secondary processing (bread products, macaroni) with own brands and distribution and retail networks. The most prominent example are "Cesna-Astyk" and "Grain Industry". They farm comparatively modest areas of "only" 40,000 resp. 100,000. ha.

The TOO "Grain Industry Group" (Gruppa kompaniy ‚Zernovaya industriya") was founded in 1996 on the basis of the milling combinat Kostanay (AO Kostanayskiy melkombinat) which still is the core of the agroholding. The group has integrated the whole vertical value added grain chain: Grain production, processing and distribution of grain and grain products all over Kazakhstan and

abroad. On average they sell 400,000 tons of grain per year. Part of the group are the biggest agricultural enterprises, in particular the TOO "Ak-Biday-Agro" with 100,000 ha in the Kostanay oblast, which appears as an own subsidiary of the group. It performs milk cow production and seed growing. Grain is stored and dried in 4 elevators: AO "Toguzakskiy elevator", AO "Dzharkul'skiy elevator and AO "Tobol'skiy elevator" all the in Kostany oblast and the TOO "Peremetinsksiy elevator" in the oblast North Kazakhstan. Grain is processed into flour, bread products and maccaroni in three enterprises. Exports are performed through an own port terminal at the Caspian Sea. Farm inputs are supplied by TOO "Agrokhimprodukt" and TOO "Agroexpert" carries out quality control of grain and grain products.

4.2 Smaller grain agroholdings

Whereas big agroholdings expand their activities smaller grain holdings are reported to grow in number (IRBAEV, FRANGULIDI 2006, p. 14). Most of them also started in grain trading and then integrated vertically and diversified into related businesses. In contrast to bigger holdings their processing capacities are smaller and access to exports is more limited. Their common features are that they control several farms, but only possess on average one- two elevators for grain storage with integrated primary processing facilities and/or a milling plant. Examples are "TNK", "KazAgroTrade" or "Kunaykhleboprodukt" or "ElInvest". "ElInvest", e.g. has one elevator, one mixed feed plant but controls four grain farms with a total sowing area of 36,000 ha. "ElInvest" have started to integrate into related livestock production and processing. It has a poultry plant (TOO "Agrokombinat Dostyk"), a pig-breeding complex (TOO "Pavlodarskiy ptitsefabrika") and a meat processing plant (TOO "Meatline"). In addition the group has a subsidiary as machinery-technological station for the input supply of the agricultural enterprises.

In spite of the smaller size some of them actively attract outside capital through the issue of shares or bonds on the Kazakh stock exchange (KFB). For instance, "ElInvest" has won the big investment company "Investfond Kazakhstana" as a core shareholder to finance investments in livestock production, grain storage and processing of grain and meat. "KazAgroTrade" issued a 2 bln tenge bond to finance new grain elevators and the purchase of new production technologies and working capital. The main features of selected agroholdings are summarized in table 4.

Table 4: General characteristics of selected grain holdings

Company	Year of foundation	Investor/Initiator	Main segments of operation
TOO "BATT-Grain"	1992-2006	Diversified conglomerate (oil, gas, construction, trading operations)	Grain production, processing (feed, flour, bread products), trading; since 2007 only alcoholic and non-alcoholic beverages
TOO "Cesna-Astyk"	1992	Investment Company "Cesna" (diversfied business group: Finance, construction, media)	Grain production and processing (flour, bread products, maccaroni), trading; beer brewing, wholesale and retail trade
Ivolga-Holding	1992	Grain Trading (Vasiliy Rozinov)	Grain production, processing and trading (flour, mixed feed), sugar, milk cow breeding (in Kazakhstand and Russia)
TOO "Grain Industry Group"	1996	Milling combinat	Grain production, processing (flour, bread, maccaroni), trading and distribution, minor milk and seed production.
AO Agroholding "ElInvest"	2004	Mixed feed planz	Grain production, processing (mixed feed), pig and poultry production, meat processing.

Source: Own compilation according to Kazakh journal and internet resources.

4.3 Explanation for the dominance of agroholdings in the northern wheat belt

As the case studies have shown there are powerful economic reasons in the given circumstances why this type of agribusiness is dominant especially in the grain sector which is located mostly in the North of Kazakhstans. The principal advantages they have are the following (see also GRAY, 2000, p. 25f.; IRBAEV, FRANGULIDI, 2006, p. 19):

- They have access to bank lending, apart from their own liquid resources, on the basis of non-agricultural assets with high collateral value western which allows them to finance working capital and modern western technologies[9];
- They enjoy economies of scale, arising notably from specialist staff economies, bulk purchase of inputs economies;
- The former state farms comprise ready-made units that are already large enough to yield some of the economies of scale and it is a simple process to consolidate groups of adjacent entities;
- Their vertical ownership in the grain market allows them to purchase inputs at the source (e. g. the refinery for fuel), to a assure a reliable supply and the right quality of the agricultural raw material, and to ensure their produce reaches the final consumer, including in export markets;
- They are able to attract and install professional management;
- They are able to dispense with non-required labor costs and can pick the best workers;
- They are able to spread or pool risks by careful selection of entities in multi-entity enterprises and by crop and activity diversification;
- They have no risks of default from tenants since they control the production process directly;
- They can command the large mechanized fleets essential to complete sowing within the prescribed 15 day period and to effect the harvest on time which significantly reduces risk of low yield and
- They wield political influence with the local akimat which eases the access for state support, when needed.

Yet, that agroholdings in the sense of large scale full vertically integrated structures are concentrated in the northern wheat belt shows that is is obvious no general solution for the many different farm situations in Kazakhstan. Even in the northern grain growing areas agroholding constantly adapt their structure to market conditions and some of the large agroholdings are leaving agricultural production. This holds for "Bogvi", "Agrocentr Astana", "Alibi-Agro" and "BATT Grain" (IRBAEV, FRANGULIDI, 2006, p. 15). Managers of "Alibi-Agro" and "BATT-Grain" who already have left point to the experience in the USA with bonanza farming in the late 19th century and corporate farming in the beginning of the 20th century. After some time these groups dissolved giving way to smaller agricultural entities and concentrated instead on processing and marketing. Due to the similar natural environment and stage of development it is interesting to take a short look at the bonanza farms in the USA. Their emergence was favoured by similar factors as in Kazakhstan, namely (DRACHE, 1964, p. 204):

- Rising demand and prices for wheat in the 1870s and 1880s;
- Favourable weather conditions at the end of the 1870s and beginning of the 1880s;

[9] As the general director of "ElInvest" explains holdings often prefer western technology over Russian because yield losses are up to 20 % lower and they need fewer repairs (IRBAEV, FRANGULIDI, 2006, p. 19).

- Technological innovations favouring large scale farming to exploit economies of scale;
- Easy access to outside long-term capital and the ability to store wheat until market conditions improved and to cover losses from other spheres of businesses;
- Professional farm management, that tried and adapted technological innovations
- Cheap farm land (provided by the government in the context of railroad building to attract settlers).

The following factors contributed to their dissolution (DRACHE, 1964, p. 204f.):

- Falling wheat prices and rising production costs;
- Rising prices for farmland stimulated the sale of land which brought more profits than wheat growing;
- Drastic changes in the weather conditions (constant droughts since the end of the 1880s);
- Decreasing soil quality due to monoculture grain growing;
- Technological innovations have been taken over by smaller family farms, thus reducing the comparative advantage of bonanza farms;
- Rising corporate and land taxes;
- Difficulties in getting enough good labour forces;
- Conflicts of interests within the bonanza management;
- Growing public distrusts into bonanzas, because their owners were not locate at the production location.

As the director of "BATT Grain" Evgenij Karabanov explains one has also carefully take into account transaction and agency costs within an agroholding. "I think that I as a direct owner and manager cannot effectively control more than 10,000 ha of land. Beyond that I have to delegate management. But it is extremely difficult to find good, trustworthy managers that want and can control such an area and want take upon themselves all the problems of agri-business" (quoted in: IRBAEV, FRANGULIDI, 2006, p. 15). This view confirms the owner of the successful independent grain farm TOO "Dostyk-06", Meyram Sagimbaev. According to him agency problems occur to control the proper qualitative farming of the land and the workers to keep them from theft. Batt Grain (TOO "Agro-Invest") is said to have found more attractive profit opportunities in oil and real estate developing business. Today it only produces alcoholic and non-alcoholic beverages. The same holds for "Agrocentr Astana". The dissolution is of further big holdings is expected to happen in an evolutionary way when market conditions will change so that it becomes less and less profitable to subsidize primary production via other business fields. Yet, the government together with conservative agricultural scholars do not want to rely fully on competition as a discovery process (HAYEK, 1968) for the most efficient business structure, but try to propel it into a direction that they deem to be of superior competitiveness – the formation of agro-food clusters.

5 AGRO-FOOD CLUSTERS

In the economic literature and practical economic policy the cluster approach has been put forward by Harvard Business School's Michael Porter who also acts as academic adviser for the Kazakh government to develop competitiveness in the non-oil sector of the economy (see PORTER, 2005).

5.1 What is a cluster?

It is also PORTER (1998, p. 197; 2000, p. 254) from who stems the most prominent definition of clusters. He understands clusters as geographically proximate groups of interconnected companies and associated institutions (for example, universities, standards agencies, and trade associations) in a particular field, linked by commonalites and complementarities in particular fields that compete but also co-operate. Porter claims, that clusters promote innovative behaviour, productivity and thus raises competitiveness of firms, sectors and as a result of the economy as a whole. From this the normative statement is derived that governments should boost the development of clusters.[10]

The problem with this but also other more or less similar definitions (for more detail see MARTIN, SUNLEY, 2003, p. 17) is that the meaning of clusters is so vague in terms of inter-sectoral and inter-firm linkages and geographical scale that it has no self-defining boundaries.[11] This gives policy advisors and makers unlimited scope in their application and to view them through political lenses. PORTER (1998, p. 202) himself points out that drawing cluster boundaries is "often a matter of degree, and involves a creative process informed by understanding the most important linkages and complementarities across industries and institutions to competition."[12] This is why in Kazakhstan politician and scholar apply clusters mainly in the sense of a form of vertical integration. It is hoped that this will lead to more exports and that the export revenues will be reinvested to develop agricultural raw production and the incomes of all actors of the whole value added chain thus making up for losses that are seen to have been caused by the disparity between farm-gate prices and prices for industrial products (GOVERNMENT OF THE REPUBLIC OF KAZAKHSTAN 2005a, Section 2; ABDIL'DINA, KERIMOVA, KUSAYNOVA, 2008, p. 44). Even President Nazarbaev in October 2004 called for the creation of a cotton-textile cluster in the south of Kazakhstan arguing that the prodcution cycle was not completely closed. In order to close it is advised to built two plants for producing cotton yarn as supplier for domestic cloth (tissue) production (SAKENOV, 2005). Interviews of the author with the leading agricultural economists from the Research Institute for Economics in the Agro-Industrial Complex in Almaty on that matter comfirmed this interpretation of agro-food clusters (see also AKIMBEKOVA, 2006, p. 85).

5.2 The selection of sectoral agro-food clusters

In the official documents, the agro-food was considered one of the most prospective branches that could enhance its competitiveness by means of clusterization due to a high demand for Kazakh food products and the geographical proximity of the potential participants of the clusters (ABDIL'DINA, KERIMOVA, KUSAYNOVA, 2008, p. 44). The emergence of clusters is however not left to the competitive market process but government-induced process. In order to identify the most prospective subsectors of the agro-industrial complex the Ministry of Agriculture set up

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[10] For a more detailed discussion of the theoretical foundations of clusters see WANDEL (2008).

[11] As MARTIN, SUNLEY (2003, p. 17) have worked out the definition leaves unspecified (1) at what level of industrial aggregation should a cluster be defined, and what range of related or associated industries and activities should be included? (2) How strong do the linkages between firms have to be? (3) How economically specialised does a local concentration of firms have to be to constitute a cluster? (4) At what spatial scale, and over what geographical range, do clustering processes operate?

[12] PORTER (1998, p. 2002) suggests that "the strength of 'spillovers', and their importance to productivity and innovation determine the ultimate boundaries"; that "cluster boundaries should encompass all firms, industries and institutions with strong linkages", whereas "those with weak and non-existent linkages can safely be left out". But the problem is that it is left unspecified exactly how the "strength" of different sorts of linkages and spillovers should be measured, and where the cut-off between "strong" and "weak" ties falls. Also unspecified is the requirement of "geographical proximity". PORTER (1998, p. 205) maintains that "the appropriate definition of a cluster can differ in different locations, depending on the segments in which the member companies compete and the strategies they employ".

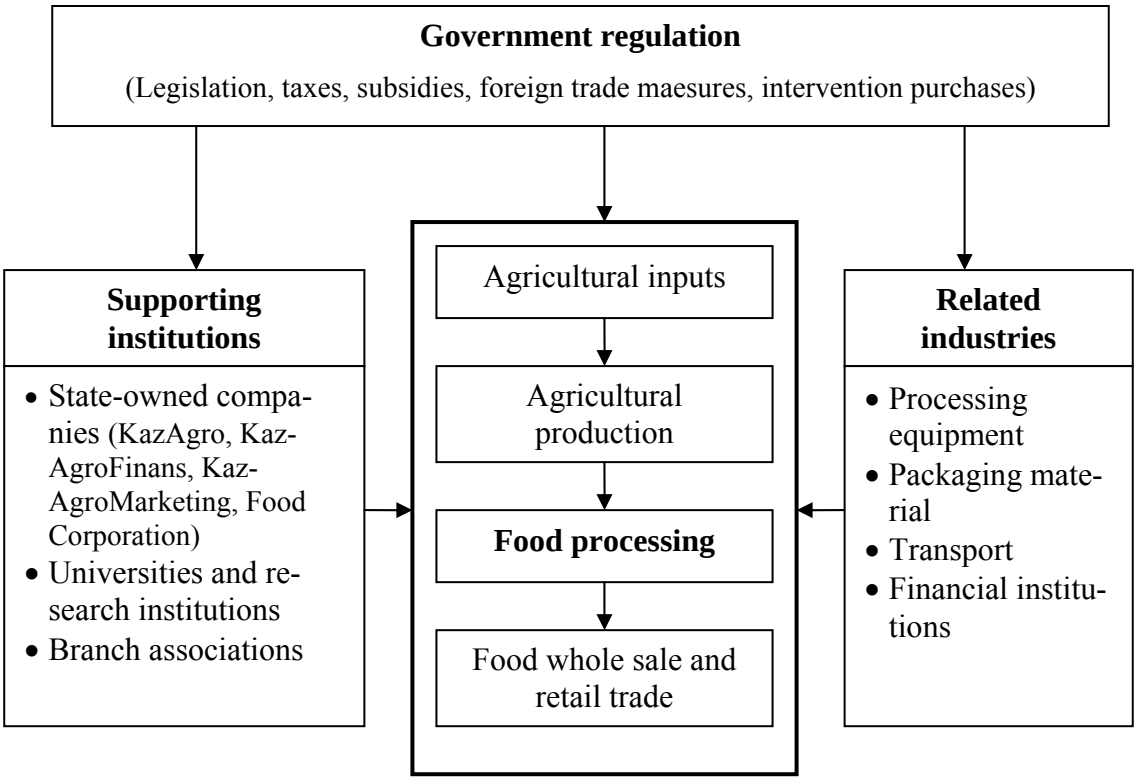
a working group. For selection it took not only into account the current level of development of the enterprises, the current and future level of domestic demand and the export potential, but also the "importance of the individual branches for the whole agro-food sector" in the sense of food security. While the estimation of future demand and export potentials is always linked with great uncertainty because preferences and relative prices might change unexpectedly, the factor importance for the agro-food sector is a clearly political-set goal which pre-determines the end result of the selection process. In the end the following agro-food branches were choosen: Grain processing in the oblasts Akmola, Kostanay and North Kazakhstan, dairy production also in these northern oblasts and in the oblasts Almaty and East Kazakhstan, fruit and vegetable production in Almaty, Zhambyl and South Kazakhstan, meat processing in Kostanay, Pavlodar and North Kazakhstan, fish production in Atyrau, East Kazakhstan and Karaganda and cotton production in South Kazakhstan. In order to bring the relevant cluster participants (farmers, processors, traders, research and government institutions) together coordination councils on the republican level and on the oblast level have been set up (MALYJ I SREDNYJ BIZNES KAZAKHSTANA, 2007, p. 7). In addition, agricultural policy promised to support this process with tax relieves and subsidies to introduce quality management systems and to qualify skilled workers.

In the following three of these agro-food clusters will be described in more detail. It shall be noted, that none of them has yet passed the intital set up phases, so that no information about their performance is yet available. Although differing in details the general structure of the clusters is as depicted in Figure 3. All clusters consist of four basic parts: (1) Enterprises of the whole vertical value added chain, i.e. from the upstream service sectors, agricultural raw production, the food industry and wholesale and retail trade. (2) Enterprises from related industries such packaging material, processing machinery or transport, (3) supporting institutions, e.g. research institions, financial institutions and state-owned companies for economic development and market regulation like AO "Kazsgromarketing", AO "Kazagrofinance" or AO "Prodkorporaciya" and (4) the government in his function as provider of a legal framework. The first part indicates that clusters in Kazakhstan's agro-food sector are obviously understood as some form of vertical cooperation. The third part which explicitly includes state-owned companies that function as tool for market regulation and economic developmentt and executers of government programs shows that the government tries to propel the sector in a certain direction.

5.3 Grain processing cluster

The grain processing cluster is seen as most prospective due to already relatively high exports in view of high world market prices for grain and flour (NARENOVA, 2008, p. 59). It is set up in the northern oblasts of Kazakhstan and shall cover the whole vertical value added chain. The cluster is built around the following processing and trading enterprises: TOO "BATT-Kokshe-Astyk", a subsidiary of the diversified business group "BATT" and TOO "Shchuchinskiy milling combinat" from the Akmol Oblast and from the main grain producing area Kostanay Oblast AO AO "Mel'kombinat", TOO "Kostanay flourmilling combinat" and TOO "KazAgro-Trade". Moreover, government officials negotiate with one of the leading diversified and vertically integrated agroholdings in Kazakhstan, TOO "Ivolga", about joining the cluster. Yet, no positive results are reported so far. The supporting institutions of the cluster consist of the Research Centre for the Grain Sector A.I Baraeva and the Research Institute for Grain and Processed Products, local commercial banks and all major state-owned players of the agro-food sector and general innovation policies: AO "Kazagromarketing", the leasing company AO "Kazagrofinance", the credit institution AO "Agrarnaya kreditnaya korporaciya", the microcredit and insurance company AO "Fond finansovoy podderzhki" and the procurement company AO "Prodkorporaciya". In addition to this big cluster, an extra smaller cluster is built around the vertically integrated and diversified bioethanol factory "Biochin" in the Oblast Northern Kazakhstan. It is intended to comprise not only the whole vertical production

Figure 1: General scheme of the agro-food clusters



Source: Own depiction.

cycle but also to be diversified into grain storage and milling, animal feed as well as livestock production and meat processing.

The main goal of the grain clusters is to facilitate the modernization of the production facilities in the key players of both agricultural production and processing and raise the volume and quality of more deeply processed grain products like maccaroni products and confectionary. For the latter aim efforts shall be undertaken to introduce international quality standards like ISO and HASSP. An additional goal is to develop wholesale markets for flour. The working group recommends the government to support the clusters with more preferential credits, subsidized transport tariffs as well as export guarantees.

5.4 Dairy cluster

Also in the northern oblast of Kostany shall be established the biggest dairy cluster. It is planned to integrate 42 large and medium-scale raw milk producers, 13 farms for breeding cattle, 14 processing enterprises (among them TOO "DEP", TOO "Kosmis", TOO "Milks") and major producers of packaging material as well as distributors and traders and scientific institutions. The state-owned AO "KazAgrofinans" shall finance the introduction of new production technology and of international quality standards both in raw milk producing and processing firms, which are regardede as the weakest elements of the cluster. In addition, it is envisaged to support the creation of cooperatives in the range of KZT 150 mln in order to coordinate the interests of the scattered milk farmers with processors. The government intends also to promote the creation of larger units of raw milk producers through offering subsidies for animal breeding and attracing investments into the development of an appropriate feeding basis (MINSTERY OF AGRICULTURE, 2008c). Further detailed measures to be undertaken until 2010 for this regional cluster are currently being worked out.

Two other milk cluster are about to be established in the Almaty Oblast. This oblast produces around 13 % of Kazakhstan's raw milk, also almost exclusively (95 %) by small individual farms and household plots. Milk is processed in 30 plants which are all placed near urban centres (MALYJ I SREDNYJ BIZNES KAZAKHSTANA, 2007, p. 17). Common to both clusters is that they are built around one big food processing and trading company. The centre of the first milk cluster, which has been initiated in early 2007, is the milk processing company TOO "Rayymbek Agro" in the Iliy Rayon with processing capacities of 150 tons of milk per day. The enterprise maintains 19 procurement points from whicht it buys raw milk. The economic relations are based on delivery contracts with 20 individual farms and several household plots. The contracts fix quality requirements, prices, payment modalities, duties and the duration of the cooperation. The procurement price for one litre raw milk has been fixed between 32,2 and 38,9 tenge taking into account production costs of farmers in the range from 29.32 tenge per litre (MALYJ I SREDNYJ BIZNES KAZAKHSTANA, 2007, p. 17). Participants of the Almaty milk cluster are in addition 12 packaging material producing enterprises and 15 distributing companies. TOO "Rayymbek Agro" produces long life (UHT) milk and yoghurts that are sold also in neighbouring Tajikistan and Kyrgyzstan. As in the whole dairy sector the major problem "Rayymbek Agro" faces is the lack of high qualitative raw milk which in turn is caused among by the low quality of fodder. This is why Rayymbek Agro itself plans to integrate backward into the own production of raw milk (MALYJ I SREDNYJ BIZNES KAZAKHSTANA, 2007, p. 8). The second milk cluster in the Almaty oblast is planned around the big food company AO "Food Master" from the Enbekshikazakh rayon. This plant processes 150 tons milk per day. It maintains 36 procurement points. Relatively stable procurement agreements exist with 46 individual farmers as well as household plots. Final products are sold all over Kazakhstan, Russian and Kyrgszstan.

In the case of dairy clusterization shall be used not only to support major food companies but also to propel the farm structure into a direction that political decision makers and agricultural scientists deem to be most apporiate. However, if currently livestock production is mostly done on small farms this only reveals that it is at the *given* time and circumstances not (yet) profitable for many bigger agricultural enterprises.

5.5 Fruit and vegetable cluster

Another subsector that has a scattered small scale farm structure is fruits and vegetables. In order to increase competitiveness the ministry of agriculture has charged the national holding AO "KazAgro" to promote mini-clusters with processing firms as centres and stable linkages to small scale primary producers. The processing plants are also intended to channel direct some of the financial support to farmers. However, it is left unspecified in what manner (URMANOV, 2007).

In the beginning of 2007 in the Almaty Oblast such a fruit and vegetable cluster was initiated by the decision of the oblast parlament (maslikhat) Nr. 35-261 "Programma sozdaniya I razvitiya plodoovoshchnogo klastera v Almatynskoj oblasti na 2007-2012 gody". Fruit and vegetables play an important role in the Almaty region. In 2006 almost 22 % of all vegetables in Kazakhstan were grown in the Almaty oblast. As in the dairy sector most vegetables (96,3 %) and fruits (98,4 %) in the region are produced by small individual farms and household plots.[13] The most important region for vegetable production in the Almaty oblast is the rayon Enbekshikazakh. There are also concentrated 19 processing plants. The biggest and most modern enterprises are AO "PlodEks" and TOO "Kompaniya Food Master Aseptik", followed by ZAO "Gold Produkt" and TOO "BioTech".

The principal structure of the Almaty vegetable and fruit cluster is the same as in the region's dairy clusters. It will be established around one big vertically integrated enterprise – the AO

[13] This and all further information stem from MALYJ I SREDNYJ BIZNES KAZAKHSTANA (2007, pp. 15-16).

"PlodEks", which was founded only in 2003 in the rayon Enbekshikazakh. AO "PlodEks" grows itself vegetables, processes them into fruit and tomato juice, jam and canned vegetables. In addition, it buys vegetables and fruits from 355 family farmers and 135 household plots with which exist delivery contracts. There it is fixed, that the company pays the farmers 50 % of the contracted raw products in advance, the rest upon delivery. On the marketing side the company has sales contracts with 81 distributing enterprises and dealers that sell the final products to the final consumer and with 10 secondary processing enterprises that buy semifinished products. In addition to all these enterprises from the vertical production chain, the cluster shall include packaging material producers (mainly glass and cartons) as well as producers of food concentrates.

From the central government the state-owned JSC Investment Fund Kazakhstan takes part as one major supporting institution. It provides financial support to AO PlodEks which carries out the investment project "Modernization and development of the existing processing plant in the village Bayterek in the Almaty Oblast", initiated by the local government. Investments are also planned to develop the marketing of fruit and vegetable products and to ensure a better utilization of existing processing capacities. For this two municipality-owned procurement and marketing companies have been founded that shall operate in the southern regions of Kazakhstan as well as in Kyrgizstan and China. In addition, two (private) procurement-marketing cooperatives "Bayterek" and "Shanalgan" have been organized. The republican ministry of agriculture has offered to co-finance the construction to storehouses. In addition, since 1 January 2007 it has reduced the overall tax burden for fruit and vegetable processors by 70 % and has started to pay subsidies to fruit growers to stimulate the growth of raw production. The ministry offers e.g. for 1 ha with newly planted apple trees 402.000 Tenge and for vineyards 855.000 tenge (MALYJ I SREDNYJ BIZNES KAZAKHSTANA, 2007, p. 7).

5.6 Summarizing assessment

The cluster iniative in Kazakhstan's agro-food sector shows that the government trusts less into the competitive market process in his function as discovery procedure (HAYEK, 1968/94) to generate a competitive market oriented agro-food sector but rather on government intervention and picking desired branches, firm structures and winners. It explicitly provides targeted subsidizes and protection to propel the sectors into a certain direction. This direction seems to be (1) to create some sort of vertical cooperation and integration, (2) to overcome the scattered small scale farm structure especially in the dairy and fruit and vegetable sectors and (3) to boost the introduction of modern production technology.

The preference for such a strategy could be explained by the prevailing mental models of most decision makers' which were shaped in Soviet times, i.e. by the underlying beliefs that influence how people behave and how they think the world works (LINDSAY, 2000). In fact, interviews with policy makers and agricultural economists often reveal a lacking understanding of the market process and preferences for Soviet-like governing methods and industry structures. As in Russia[14], in Kazakhstan one encounters indeed the widespread belief that the government has to intervene in the sector for food security reasons, that large-scale agriculture and closed vertical production cycles have per se a comparative advantage and that the use of sophisticated modern technologies is the key to success. And large integrated agro-industrial associations have already been propagated and tried in the 1980s. So clustering could be interpreted as a sort of path dependency in the sense of DOUGLASS NORTH (1990, 1994).

Empirical studies show that government initiated cluster based economic development strategies in other parts of the world failed (see WALLSTEN, 2001). Whereas none of the successful

[14] See also e.g.KOESTER (2005); WANDEL (2007).

clusters was protected from international competition or engaged in so called "strategic trade policy" as the Kazakh government does in the agro-food sector. Rather it was the openness of the markets and favourable institutional conditions for entrepreneurship that has allowed for successful economic development (BRESHNAHAN et al., 2002, p. 27f.).

6 CONCLUDING REMARKS

As has been shown in Kazakhstan there are also vertically integrated agroholdings and other integrated formations, which are similar to those in Russia. However, in comparison to Russia, they are obviously less in number and highly concentrated in the northern part of the country and to a large extent engaged in the grain sector. In the south a scattered small scale (individual) farm structure has emerged and so far prevails. In this part of the country the food companies with a holding structure are horizontally integrated food processors that sometimes also are engage in retailing but only to a small degree operate in primary production like Bekker or Food Master. However as representatives of the dairy company "Rayymbek Agro" have mentioned they think about integrating backward into its own production of raw milk to economize on high agency and transaction costs with primary producers due to the low raw milk quality and the scattered farm structure which yields high search costs. This process would thus also be market driven like in the north, i.e. alert entrepreneurs in the Kirznerian sense15 notice and use profit opportunities taking into account the special economic and instituonal circumstances of the given time. If these circumstance change a process of disintegration as it can be observed in the case of some grain holdings cannot be excluded. As GRAY (2000) underscores the emergence of integrated business groups mostly in the North is confined to specific areas with the best growing conditions. Even within the same oblast the drier areas are attracting no such investment. Hence, market forces unhampered by the government are leading to the survival of the best and most profitable areas. Yet, while large integrated and industrial agriculture is so far the most effective model in the wheat growing belt, it cannot provide a general solution for the many different farm situations in Kazakhstan.

Nevertheless the government's efforts to increase the competitiveness of the agro-food sector by promoting clusters go in the opposite direction. Real world cluster facilitation policy has so far nowhere in the world achieved the results that its promoters were seeking. This same is to be expected for Kazakhstan. So far the country's clustering process has not left its initial stage and the participating enterprises have only been formally united into a branch cluster. The fact, that as NARENOVA (2008, p. 58) reports, many government programs for general and sectoral economic development have often remained declarative and did not have much real impact, gives reason to expected that the same might happen to clustering. This expectation was also expressed in interviews with Kazakh agricultural scholars.

In fact, parallel to clustering since 2006 the Kazakh government tries to boost development in all spheres of the economy through the creation of state holdings following the example of Temasek in Singapore and Khazanah in Malaysia. The first state holding "Samruck" (JSC Kazakhstan Holding for Management of State Assets) was founded in January 2006. Further three state holdings were established one year later: "Kazyna" (JSC National Fund for Sustainable Development), "Samgau" (JSC National Scientific and Technological Holding) and JSC "KazAgro" for supporting the agro-food sector. The holdings are members of the National Council on competitiveniss and export orientation that coordinates the nation wide modernization activites. These holdings consolidate unite several other state-owned companies and shall carry government development programs.

[15] See for more detail on that KIRZNER (1973, 1997); KIRZNER, SAUTET (2006).

The latest of such programs was passed in February 2007 and is called "The Programs of 30 Corporate Leaders of Kazakhstan." It officially shall complement the cluster initiative. The aim is to create 30 big players in several branches of the economy, among them also food processing. They shall be made both nationally and internationally competitive and thus serve as locomotives for the rest of the economy. The corporate leaders shall carry out concrete government investment projects in selected branches for which they will be provided financial support. This seems to be turn back via big business groups and is as much about picking winners as the cluster approach, since the government favours again a certain form of business organization (GOVERNMENT OF THE REPUBLIC OF KAZAKHTSAN, 2007; ISAEV, 2007, p. 6ff.).

The National Holding "KazAgro" has been founded on the basis of the presidential decree of 11 December 2006 №220 "On some questions to develop to agro-industrial complex" and operates since the beginning of 2007. KazAgro unites seven other state-owned companies and agencies that operate in the agro-food sector:

1. The JSCs "Food Contracting Corporation" (AO "NK 'Prodovol'stvennaya kontraktnaya korporaciya'");
2. JSC "KazAgrofinance" for crediting the purchase and leasing of farm inputs;
3. The Agrarian Credit Corporation for the disbursement of microcredits and the development of credit cooperative in rural areas;
4. JSC "KazAgroGarant" (Risk Insurance in the Grain Sector);
5. JSC "KazAgroMarketing";
6. JSC "Fund for financial support of agriculture" and
7. JSC "Mal oenimderi korporatsiyasy", to support the development and exports of livestock products.

The sole stakeholder is the government of Kazakhstan, represented by the Minister for Agriculture. In addition to him, the ministers of economy and finance as well as the director of the National Holding and other independent directors form the board of directors. The charter capital was in 2007 KZT 300 mln provided by the state budget. The Holding is responsible for carrying out the state development programs, improve corporate governance in its subsidiaries, to attract private investment for priority projecs and to help "KazAgroGrant" to introduce a credit guarantee policy.

Still in 2007 the national holding for the agro-food sector "KazAgro" has financed three so called pilot "breakthrough project" in the dairy sector with the agro-companies TOO "Agrofirma Rodina" and KT "Zenchenko & Co." that shall built large scale barns for milk cows and with the business group "Otes-Atil" to promote organic fish and livestock production (MABIEVA, 2008, p. 1). Further strategic agro-food branches deserving government attention and support is livestock and oilseed production and processing as well as fruit and vegetables. Because the latter is considered a sector with traditionally small scale farms KazAgro shall promote mini-clusters of processing firms with linkages to small scale primary producers. The processing plant shall direct financial support to farmers (URMANOV, 2007).

Although private players especially on the grain market appreciate the contribution of the AO "Prodkorporaciya" to stabilize prices on a higher level than they were 5 years ago (with 50-70 $ per ton), they consider the activities of the state companies and now the new state holding KazAgro as not very efficient and transparent and thus corrupt. While the emergence of agroholdings in Kazakhstan is the result of alert private entrepreneurs' actions to grasp profit opportunities, both the concept of national holdings and the Programs of 30 Corporate Leaders of Kazakhstan is

as much an attempt of erroneous constructivistic social engineering as the cluster approach. As HAYEK (1937, 1945, 1967/94) argues, given the incurable limits to our knowledge the best industrial structure at one given point in time and space can only be found through entrepreneurial trial and error in the market process as discovery procedure. From this follows the normative conclusion for Kazakhan's economic development and agricultural policy that policymakers should take every step possible to avoid hampering or distorting its course and directing it into a certain direction, not necessarily desired by consumers. HAYEK has already in 1968 (chapter 6) pointed out that "if even in highly developed economies competition is important primarily as a discovery procedure whereby entrepreneurs constantly search for unexploited opportunities that can also be taken advantage of by others, then this is true of course to an even greater extent as far as underdeveloped societies are concerned…. where competition was previously limited. …it seems incredible to me to hold that we can determine in advance the future structure of a society in which the major problem is still to find out what kinds of material and human productive forces are present, or that we should be in a position, in such a country, to predict the particular consequences of a given measure".

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