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Kazakhstan's Agriculture after Two Decades of Independence*

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Agriculture plays an important part in Kazakhstan's self-image, and continues to be a significant economic sector, employing about a third of the workforce. In the two decades since independence, agriculture has experienced dramatic swings in performance and in public policy. During the 1990s the sector suffered from external shocks, reduced public support, and inchoate land tenure reform, while providing a safety net for families suffering from the transitional recession. Since the turn of the century, the booming economy has seen rural-urban migration and substantial public funds devoted to the agricultural sector.

Key Points

Kazakhstan is among the world's ten leading grain exporters. The agricultural sector remains the major employer, and an important source of exports.

During the 1990s farming provided a safety net for many families during the transitional recession. At the same time, state support for agriculture was terminated and amid a tortuous land reform program many farms became heavily indebted.

With revenues from the oil boom the government has since 2002 provided substantial support, which has helped to revive farm output, but has also been inefficient in "picking winners."

In the twenty-first century, agricultural performance has improved substantially and tenure arrangements are more transparent. However, the reform process remains incomplete. The path to land reform has left a legacy of weak land markets and difficulty in using land as collateral. The institutional arrangements are inadequate for coherent agricultural and rural development. While farm output has increased, interventionist policies and distrust of market mechanisms lead to resource misallocation and hamper productivity growth. In times of plenty, resource misallocation can seem a minor problem, but if a goal of diversification is to make the non-oil sector more resilient, then inefficient policies that promote an output mix determined by officials will not succeed in achieving this goal.

Agriculture's Role in the Soviet Era

Until the mid-1800s agriculture in the territory of Kazakhstan was traditionally pastoral and nomadic. With increasing Russian control, Slavs settling in the rain-fed lands of the southeast introduced sedentary farming, and some nomads began to plant winter grain. South Kazakhstan became part of the Central Asian cotton economy, although Kazakhstan remains a much smaller cotton producer than its Central Asian neighbors. After the 1917 revolution, the most dramatic change was the enforced collectivization of 1928–29, which was resisted and accompanied by a huge reduction in the number of livestock and by famine.

The second important policy decision in the Soviet era was the Virgin Lands program introduced in the 1950s in northern Kazakhstan. The program brought about 25 million hectares into cultivation (i.e. over 60% of current arable land), and Kazakhstan became a major producer of wheat and barley. Variable climatic conditions led to volatile harvests, and the soils in some of the new lands (about 30%, according to the World Bank) were unsuited to long-term cultivation.

In the late Soviet era, agriculture was favored by budget subsidies, input and market support, as well as by subsidies (such as cheap fuel and transport) that were not agriculture-specific. During the final decades of the Soviet era, grain and cotton farmers received favorable relative prices, and a prime aim of Soviet policy was to increase the output of the livestock sector in order to increase living standards through higher consumption of meat and dairy products. Meat output in the Soviet Union increased by 60 percent during the 1970s and 1980s, supported by the import of feed grains and soybeans from the United States and elsewhere. In the 1980s Kazakhstan exported 300,000 tons of meat per year, 250,000 tons of milk, and 150 million eggs to other Soviet republics.

In 1991 just over a quarter of the workforce was formally employed in agriculture, although agricultural output accounted for less than 15 percent of GDP. Of 39 million hectares of cultivated land, 65 percent was devoted to cereals and 33 percent to fodder crops. Although less important in terms of total acreage, rice and cotton were significant crops in the south, and cotton was Kazakhstan's third largest export to non-Soviet markets after mineral fertilizers and coal. Oil crops, regionally important in two eastern regions, supplied 40 percent of domestic demand.

Agricultural Reform during the 1990s

In December 1991 the Soviet Union was dissolved. The farm sector, like the economy as a whole, was affected by the disruption of supply chains both for inputs and to markets. In January 1992, other Soviet successor states, still using the ruble as a common currency, had to follow Russia's price reform. Price and trade liberalization changed the incentive structure, and most farmers were operating in undistorted product markets during the second half of the 1990s.

Policy toward agriculture in the 1990s was largely one of neglect, as the government addressed other more pressing priorities. Trade policy was fairly liberal with moderate tariffs on imports and few tariff peaks or non-tariff barriers to trade in agricultural products. OECD producer support estimates for agriculture in Russia and Ukraine are highly positive up to 1991, and then fall dramatically in 1992 to around zero or to negative values. A similar picture almost certainly applies to Kazakhstan, as price liberalization removed the benefit of receiving key inputs at below world prices. During the 1992–94 hyperinflation, farmers' input prices increased by at least twice as much as output prices.[1] Subsidies for agriculture declined from 10–12 percent of GDP before 1991 to 2–3 percent in 1993, and between 1995 and 1999 subsides for agriculture were negligible. Some farmers faced locally monopsonistic buyers for their outputs (e.g. cotton gins, dairies, grain merchants, or flour mills) and for all producers trade costs were high.

As the decade progressed, farm reform and restructuring added to the pressures for change in the agricultural sector. Privatization in principle broke up large farms, but in practice many farms remained essentially unrestructured. When farms went bankrupt during the second half of the 1990s, farmers, mechanics, and others in the rural economy received land or equipment in lieu of wages. The sector was characterized by the continuing power of former state-farm managers and of local authorities, and by the Soviet-era phenomenon of household plots producing a large share of output, especially of milk and meat and of fruit and vegetables.

Output of all agricultural products fell substantially after 1990. According to World Bank data, the annual growth rate of agricultural value-added between 1990 and 2001 was minus 3.22 percent. Grain production in 1998 was 6.5 million tons compared to 30 million tons in 1992. The trend is difficult to determine due to the volatility and generally poor climatic conditions of the 1990s, but average output was 50 percent lower in 1996–2000 than in 1987–1991 (Table 1).

Large-scale livestock farming almost disappeared as animal stocks became concentrated in small household plots, and meat, milk, and eggs became essentially non-traded goods. The number of cattle fell from nine million to less than four million. In addition to the disorganization and shift in the relative price of inputs to outputs, this was an adjustment to the policy of the previous two decades that had encouraged meat production and consumption to a level that was far higher than in other countries with similar income levels. The drastic decline in livestock numbers explains the pattern of grain production and trade in Table 1, where output fell dramatically but net exports did not. What was being reduced was the demand for feedstock, which had been met by domestic production or by imports, while output and exports of higher quality grains for human consumption held up much better.

Despite the dismal output performance of agriculture during the transition of the 1990s, the number of people dependent on farming may have increased. As other parts of the economy collapsed, people returned to their villages or used their dachas to become self-sufficient. Policymakers were inclined to see the decline of the agricultural sector as a problem, both because they believed that Kazakhstan had a strong comparative advantage in many farm products and also because of social issues associated with a large population with rural connections.

Table 1: Grain and Meat Production and Net Exports, 1987–2010, million metric tons

	Grain		**Meat**	
	Production	**Net Export**	**Production**	**Net export**
1987–91	21	4.6	1.1	0.2
1992–95	19	5.7	0.9	0.1
1996–2000	11	4.3	0.5	(0.0)
2001–5	14	4.6	0.5	(0.1)
2006–10	17	7.4	0.7	(0.2)

Source: USDA.[2]
Notes: figures for grain are averages for five marketing years (July-June) and for meat of five calendar years; grain excludes rice, sorghum, and pulses, and meet covers beef, pork, and poultry broilers. Numbers in parentheses are net imports

The Tortuous Path of Land Reform

Although economic reforms were sporadic during the 1990s, Kazakhstan had a market-based economy by the end of the decade. After an uncertain start in the 1990s, macroeconomic management has been good since the turn of the century. In the twenty-first century, the European Bank for Reconstruction and Development gives Kazakhstan high marks for progress in small-scale privatization, price liberalization, and trade and forex system, slightly lower scores for large-scale privatization and competition policy, and low marks on its financial sector, infrastructure, and, especially, enterprise restructuring. The farm sector reflected this aggregate pattern, with a slow and difficult process of land reform.

Initial land reforms in 1991 asserted state-ownership of land and lifetime use rights. Over the next dozen years, the government was cautious about deciding whether land belonged to the state or whether to embrace private ownership of land, and hesitant about restructuring large agricultural enterprises, equating size with efficiency. The 1995 law "On Land" set out the principles of state ownership of land with private use rights under 99-year leases. The lands of restructured agricultural enterprises were distributed among workers and pensioners and 2,270,000 shares covering 118 million hectares had been allocated in 1997, but by 2002 less than 30 percent of the share-owners had exercised their rights to form individual family farms. A 2001 decree changing the length of leases to 49 years and mixed signals from the state about the desirability of sub-leasing created further confusion about land rights, until in 2003 a new Land Code allowed private ownership with full property rights.

The reforms led to an increase in the number of individual farms, but the process was slow and sub-sectors remain dominated by large enterprises run by the former state farm managers (grain) and by household plots (meat, milk, and eggs). The number of farms increased from 5,000 in 1990 to 161,962 in 2006, of which 4,919 were corporate farms (average size 12,000 hectares) and 156,978 family farms (average size 248 hectares); the remaining 65 state farms are all experimental stations. In 2002 corporate farms accounted for 63 percent and family farms 36 percent of agricultural land use, but by 2006 these shares were almost equal (51% and 48%).[3]

There is, however, large variance between the northern wheat-growing regions, where family farms accounted for only 30 percent of land, and southern and southeastern Kazakhstan, where family farms accounted for about 70 percent of land use. There is also a correlation with output mix; in 2006 agricultural enterprises produced about two-thirds of grain output while family farms produced 95 percent of cotton, 70 percent of sugar beet, and 64 percent of sunflowers. The five million household plots produced 91 percent of milk, 83 percent of meat, 79 percent of potatoes, 74 percent of fruits, and 64 percent of vegetables.

The slow and at times uncertain reform of land tenure led earlier analysts of farm restructuring to emphasize lack of genuine change, while later analysts see an ongoing and incomplete process.[4] By the turn of the century there had been a paper reform of agriculture, whose consequences were still being worked out in the context of pervasive farm indebtedness; as late as 2006, two-fifths of all farms were still unprofitable. The 2003 Land Reform legalized private land ownership and restructuring continues, but it is slow in part due to the absence of an active land market in which enterprising farmers can expand by purchasing neighboring property. Leaseholders paying a low rent to the state on a 49-year lease are often unwilling to take out the option of private ownership. Thus, even as the number of individual farms increases, there is still not a well-functioning land market.

Agricultural Policy after 2002

The turning point in agricultural policy dates from the *aul* (village) program initiated in 2001, or more definitively the billion-dollar 2003–5 Agriculture and Food Program (AFP) announced in 2002. The driving force was the oil boom, which provided revenues for public support, as well as causing concerns about lack of economic diversification. The Ministry of Agriculture's budget increased from 26 billion tenge in 2001 to 81 billion in 2005, and its share of the total central budget went from 2.5 percent to 6.5 percent.

The AFP's stated objectives were to ensure food security, establish an efficient agro-industrial system, increase sales of farm products in domestic and foreign markets, and optimize state support for agriculture. The AFP provided general services support to agriculture aimed at improving infrastructure and product quality. Input subsidies (e.g. on fertilizers, fuel, and seeds) and price support schemes aimed to stimulate output. Price support was provided through increased funds for the Food Contract Corporation (FCC), which had been established in 1997 and which purchased 1.5 million tons or 20 percent of the grain harvest in 2002, and for a parastatal created in 2001 to provide producer support for the livestock sector.

The situation of the livestock sector improved dramatically after 2000 as the government took steps to end neglect of the sector and to reverse the decline in quality that accompanied the disintegration of large production units. The nominal rate of assistance to livestock producers went from minus 15 percent in 2000 to plus 31 percent in 2004.[5] Wheat producers in the early 2000s had negative market price support—that is, farm-gate prices were below a reference (border) price; the price gap was due mainly to high trade costs, rather than lack of public support. Conditions in the market-based cotton sector are far better than in neighboring Uzbekistan, and trade costs are lower than for wheat farmers due to the more concentrated location of farmers in the south. In sum, the pattern was of increased support, especially to livestock farmers, as agricultural policy became much more favorable for farmers in Kazakhstan between 2000 and 2005.

Evaluation of the AFP in 2006–7 pointed to institutional weaknesses.[6] Implementation of the subsidy programs for grain and livestock producers was plagued by discrimination and inefficiency. Fuel subsidies encouraged corruption as farmers requested more gasoline than they needed and sold the surplus for profit. The fertilizer subsides were paid only to domestic suppliers, acting in a similar trade-distorting way to local-content requirements.

With growing evidence of a financial market bubble, associated distrust of market mechanisms, and increased economic nationalism in the oil and gas sector, the reaction was to reorganize rather than reform institutions. After the collapse of several large banks, the holding company Samruk-Kazyna was created in October 2008, with affiliates producing over half of GDP. This strategy was mirrored in the agricultural sector in 2007–8 with the consolidation of policy-related institutions, first under the aegis of the Ministry of Agriculture and then under the KazAgro holding company, which had been established in December 2006 to amalgamate seven institutions providing support to agriculture. The Ministry of Agriculture's budget continued to increase, to 139 billion tenge in 2008, of which some 45 percent went to KazAgro. In the 2008–9 crisis program, KazAgro received 120 billion tenge. The KazAgro budget is dominated by price support and financing (92% of the budget in 2011), while a separate entity, KazAgro Innovation, is responsible for promoting technical change.

In sum, the level and composition of Ministry of Agriculture spending changed dramatically after the turn of the century. The share of subsidies increased from 6 percent in 2001 to 24 percent in 2008 and 39 percent in 2009, and the majority of this goes to area (i.e. per hectare) subsidies. In the same period, the share of spending on infrastructure fell from 16 to 5 percent and on crop and livestock services from 19 to 17 percent.

Policy Challenges

The current state planning system was adopted in 2009. Agriculture is a priority development area for the decade to 2020, and the Ministry of Agriculture is focusing on eight subsectors (fruit and vegetables, grain, meat, milk, oil crops, poultry, sugar, and wool), which have priority over other products such as honey or cotton. Since October 2009 these subsectors have received priority loans from KazAgro, and larger subsidies or lower interest rates on loans/leasing. Regions are responsible for implementation, but central control ensures coherence. Evaluation of policies is primarily in terms of quantitative targets, mostly for output, with little concern for allocative efficiency. Socio-economic and environmental concerns are referred to, but do not appear to have a high priority in practice.

Agricultural policy is almost entirely supply-side oriented. KazAgro Marketing has two main functions: price monitoring (which is also done by the State Statistical Agency) and consulting services that mainly provide advice on how to obtain state support. The FCC buys grain, but does little to help farmers to increase the unit value of their sales by creating international awareness of Kazakhstani quality standards or by improving supply chains. The 2010 customs union with Russia and Belarus reinforces this pattern with, for example, quantitative targets for supply of beef from Kazakhstan to Russia.

Some goals are poorly articulated or inconsistent. Although reference is made to public good provision, the share of funds devoted to infrastructure has fallen. Food security is defined by a minimum level of domestic supply (80% for each food product), rather than in terms of the ability of households to obtain food (allowing for substitution from goods with increasing prices). WTO accession is made more difficult by the subsidy policy, under which too many agricultural subsidies are in the amber box of WTO-incompatibility; Kazakhstan is seeking developing country status at the WTO, which would allow it to exceed the subsidy guidelines, and is not acknowledging the costs to itself of such subsidies. In providing subsidized credit KazAgro works with the commercial banks, but by directing credit to specific producers it is crowding out independent commercial loans; because government loans are at pre-determined interest rates, this may be reducing the prospects of financing for riskier but potentially high-return projects.

Implementation is bureaucratic, and policies are poorly coordinated. Farmers complain of the difficulty in knowing what support is available and how to obtain it. Even when subsidies or other support are provided they are often delayed—for instance, arriving after the farmer has purchased inputs for sowing and fertilizing—and apparently transparent rules on subsidy scales appear to be discretionary when applied at the local level. In order to increase production of tomatoes, cucumbers, and so on, in semi-arid regions, drip irrigation is promoted, but its success depends upon use of high-quality fertilizers, which is discouraged by the subsidies for using domestic fertilizers, which are not of top quality.

Division of responsibilities among government ministries is not accompanied by coordination. The Ministry of Education finances fundamental research, but the Ministry of Agriculture funds applied research. Implementation is largely by regional administrations that can augment schemes with their own funds, leading to regional inequities and cross-regional inefficiencies. To facilitate consolidation of farms in order to realize scale economies, the Ministry of Employment is responsible for providing alternative jobs for self-employed farmers, for example by providing microcredit or relocating people from regions with poorer economic prospects. Land improvement is financed by the Ministry of Ecology.

Conclusions

Kazakhstan's economic history since independence is divided into that of a grim decade of transitional recession and a boom era since 1999. Agriculture followed these developments, while also offering an important coping mechanism during the depths of the recession. In the twenty-first century the government has sought to use revenues from the oil boom for future security, investment in human capital, improved infrastructure, and economic diversification. Farming and agri-business have been given an important role, especially in economic diversification. This paper illustrates the steps taken to consolidate and improve Kazakhstan's position as a major agricultural producer and exporter, while also highlighting the shortcomings of current policies. A feature of policymaking in Kazakhstan is the government's flexibility in learning and adapting policies; this will be tested in the evolution of its agricultural policies.

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* Parts of this paper are related to work done as a consultant to the Organization for Economic Cooperation and Development and to the World Bank. All of the information referred to in the paper is in the public domain (full documentation is available on request) and the views expressed are my own.

[1] Mark de Broeck and Kristina Kostial, "Output Decline in Transition: The Case of Kazakhstan," *IMF Working Paper WP/98/45*, International Monetary Fund, Washington D.C., 1998.

[2] Reported in William Liefert and Olga Liefert, "Russian Agriculture during Transition: Performance, global impact, and output," *Applied Economic Perspectives and Policy* 34, no. 1 (2012): 37–75.

[3] A group of some fifteen very large grain holdings had also emerged by the mid-2000s, e.g. Ivolga-Holdings controlled about a million hectares of farmland and owned eleven elevators in Kazakhstan (as well as 140,000 hectares and ten elevators in Russia) and accounted for 500,000–700,00 tons of grain exports from Kazakhstan per year. See Jürgen Wandel, "Agroholdings and Clusters in Kazakhstan's Agro-food Sector," *IAMO Discussion Paper No.126*, Leibniz Institute of Agricultural Development in Central and Eastern Europe, Halle, Germany, 2009.

[4] See, for example, John Gray, "Kazakhstan: A Review of Farm Restructuring," *World Bank Technical Paper* No. 458, World Bank, Washington D.C., 2000; Zvi Lerman, Csaba Csaki, and Gershon Feder, *Agriculture in Transition: Land policies and evolving farm*

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[5] Estimates in this paragraph are from Richard Pomfret, "Kazakhstan," in Kym Anderson and Johan Swinnen, eds., *Distortions to Agricultural Incentives in Europe's Transition Economies* (World Bank: Washington D.C., 2008), 219–263.

[6] In, for example, the 2006 report, *Kazakhstan - Agricultural Policy Assessment*, by the Joint Economic Research Program of the World Bank and the Government of Kazakhstan in collaboration with USAID and FAO, and the 2009 World Bank report, *Kazakhstan: Public Expenditure and Institutional Review for the Agricultural Sector*.