

DISCUSSION PAPER

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Kazakhstan's cotton sector reforms since independence

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ABSTRACT

With the goal of reducing the dependency on oil revenues, the Government of Kazakhstan has recently increased its budget allocations to prop up the domestic agricultural sector. Yet, many observers agree that it is less the amount of public spending that induces long-term growth than the quality of the regulatory environment. Against this background, the current paper analyses the nature and effects of state regulation in the cotton sector. In the early 2000s, it was considered to be the only example of private vertical coordination in Kazakhstani agriculture, which contrasted sharply with the state mandates imposed on producers in Uzbekistan and Turkmenistan. However, in 2007, regulation in Kazakhstan forced ginneries to use a complex warehouse receipt system without making sure that it was accepted by stakeholders and without appropriate institutions for implementing it in place. At the same time, it imposed financing restrictions on ginneries, which were major loan and input providers to farmers. Further measures included the establishment of a special economic zone to host a “cotton cluster”. In the following years, private producers and investors turned away from cotton, and cotton area and output fell substantially. We argue that the cotton sector performance after 2007 shows how ill-designed regulation and government interference can turn a promising economic sector into decline. As an unintended side effect, the regulation promoted more diversified crop rotations based on high value crops.

JEL codes: O13; O25; P23; Q15

Keywords: Cotton, Kazakhstan, public regulation, commodity finance.

ZUSAMMENFASSUNG

DIE REFORMEN DES KASACHSTANISCHEN BAUMWOLLSEKTORS SEIT DER UNABHÄNGIGKEIT

Um die Abhängigkeit von den Einnahmen aus Rohölverkäufen zu verringern, hat die Regierung der Republik Kasachstan in den vergangenen Jahren die Unterstützungszahlungen für den einheimischen Agrarsektor erhöht. Doch viele Beobachter stimmen darin überein, dass weniger die Höhe der öffentlichen Zuwendungen als die Qualität der staatlichen Regulierung das langfristige Wachstum befördert. Vor diesem Hintergrund untersucht der vorliegende Bericht die Beschaffenheit und die Auswirkungen der staatlichen Eingriffe im Baumwollsektor. In den frühen 2000er Jahren wurde dieser Sektor als das einzig vorhandene Beispiel rein privater vertikaler Koordination in der kasachischen Landwirtschaft angesehen, welches in starkem Gegensatz zu den in Usbekistan und Turkmenistan verbreiteten Anbauverpflichtungen für Produzenten stand. Im Jahre 2007 zwang ein neues Gesetz die Baumwollverarbeiter jedoch dazu, ein kompliziertes System der Einlagerungsscheine (warehouse receipts) einzuführen, ohne sicherzustellen, dass die beteiligten Akteure es akzeptierten und ohne die nötigen institutionellen Voraussetzungen dafür zu schaffen. Gleichzeitig erschwerte das Gesetz die Finanzierung der von den Landwirten eingesetzten Vorleistungen, die bisher vorwiegend von den Verarbeitern bereitgestellt wurde. Weitere Maßnahmen betrafen die Einrichtung einer Sonderwirtschaftszone zur Schaffung eines „Baumwoll-Clusters“. In den Folgejahren wandten sich die privaten Produzenten und Investoren von der Baumwollproduktion ab und sowohl die Anbaufläche als auch die Erzeugung fielen deutlich. Aus Sicht der Autoren zeigt die Entwicklung des Baumwollsektors nach 2007, wie fehlgeplante Regulierungen und staatliche Eingriffe einen vielversprechenden Sektor in den

Abschwung stürzen können. Als unbeabsichtigter Nebeneffekt führte die Regulierung zu stärker diversifizierten Fruchtfolgen, die nun zunehmend Produkte mit hoher Wertschöpfung beinhalten.

JEL Codes: O13; O25; P23; Q15

Schlüsselwörter: Baumwolle, Kasachstan, staatliche Regulierung, Rohstofffinanzierung.

Резюме

РЕФОРМЫ ХЛОПКОВОГО СЕКТОРА КАЗАХСТАНА С МОМЕНТА ОБРЕТЕНИЯ НЕЗАВИСИМОСТИ

С целью уменьшения зависимости от нефтяных доходов, в последние годы Правительством Казахстана были увеличены расходы бюджета на поддержку отечественного сельского хозяйства. Тем не менее, многие обозреватели сходятся во мнении, что долгосрочный рост сектора обеспечивается скорее качеством регулирования, а не бюджетными расходами. В этом контекста, в данной статье представлен анализ природы и последствия государственного регулирования в хлопковом секторе. В начале 2000-х годов, этот сектор считался единственным примером вертикальной координации частного сектора в сельском хозяйстве Казахстана, который кардинально отличался от государственных поручений, налагаемых на производителей в Узбекистане и Туркменистане. Несмотря на это, в 2007 году новый закон заставил хлопкоперерабатывающие заводы перейти на использование сложной системы хлопковых расписок. Новое законодательство не учитывало в должной мере мнение заинтересованных сторон, а также отсутствовали соответствующие институты, которые бы способствовали его реализации. В то же время, этот закон установил ограничения на финансирование фермеров хлопкозаводами, для которых последние были основным источником финансирования и производственных ресурсов. В дополнение, была создана специальная экономическая зона для размещения «хлопкового кластера». В последующие годы, частные производители и инвесторы отвернулись от хлопка, а его площадь и производство существенно сократились. Мы утверждаем, что показатели хлопкового сектора после 2007 года указывают на то, как плохо разработанное регулирование и государственное вмешательство могут привести перспективный сектор экономики к упадку. В качестве непреднамеренного положительного эффекта, регулирование способствовало более диверсифицированному сельскохозяйственному производству на основе высокотоварных культур.

JEL Codes: O13; O25; P23; Q15

Ключевые слова: Хлопок, Казахстан, государственное регулирование, финансирование продукции.

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1 Introduction

After the collapse of the Soviet command system, Kazakhstan entered independence with a search for market institutions that establish new forms of relations between the government and private economic actors. Despite a rapidly changing regulatory landscape, the analysis of its impact is still in its infancy. Within 25 years of independence, the government has tested various types of regulation, support and restrictions in all economic areas. After a decade of neglect, agriculture has received increased government attention since the beginning of the 2000s (Petrick and Pomfret 2016). Facing the decline of agriculture and supported by increasing oil revenues, the government began to increase support for agriculture. This was highlighted by the billion dollars allocated to the 2003-05 Agriculture and Food Program and the subsequent “Agribusiness 2020” program (OECD 2013). However, as international observers of Kazakhstan’s economic progress have repeatedly stressed (Nellis 2014; Petrick et al. 2014), it is less the amount of government spending that induces long-term growth than the quality of the institutional and regulatory framework the government develops and maintains. Despite a number of regulatory initiatives in the agricultural sector, little effort has been made to assess the effects of these initiatives hitherto.

This paper attempts to address this gap by evaluating Kazakhstan’s experience of cotton sector regulation since independence. In Kazakhstan, there are only two agricultural sectors, namely grain and cotton, which are regulated by “tailor-made” legislation. The grain sector has been considered a backbone of Kazakh agriculture since independence, generating the highest revenues, exports and occupying vast areas of the country, particularly in the Northern provinces. Cotton has been considered an important sector at a regional level rather than a crop of strategic national importance. Cotton production is geographically limited to two out of 14 provinces – South Kazakhstan and Kyzylorda. Moreover, within these two provinces, only Maktaaral and Shardary districts used to be the major cotton producing regions. The sector’s significance could be explained by its social rather than economic contribution since a considerable share of the populations’ income is linked to cotton industry revenues. The population of South Kazakhstan province is around 2.7 million people, of which 700 thousand people live in Maktaaral. Following land reform in the mid-1990s, cotton growing has been based on small, family-run farms (Pomfret 2008).

Cotton’s low share in total agricultural output left the industry out of the government’s scrutiny during the transition period of the 1990s. The void was filled by a privately coordinated system of vertical coordination among cotton market players. The cotton sector used to be the only example of private vertical coordination on a large scale in Kazakhstani agriculture. In the early 2000s, local and international observers widely regarded the cotton sector in Kazakhstan as a success story. According to Sadler (2006), the decision-making rights over land use, the agricultural production process and the post-harvest manufacturing and marketing of the produce lied primarily with the farmers themselves, resulting in decentralized production and marketing approaches. The competitiveness of the sector was partly explained by the participation of Russian investors wishing to access cotton for export directly to textile mills in Russia, and also by the increased demand for ginning services in southern Kazakhstan due to large-scale smuggling of raw cotton from Uzbekistan (Pomfret 2008). It was an example of private sector development in the absence of government interference, which contrasted sharply with neighboring Uzbekistan and Turkmenistan, where national governments rigorously control the cotton sector (see e.g. Shtaltovna and Hornidge 2014).

In Kazakhstan, the small, independent farmers thus have the freedom to engage in cotton production without any mandates imposed by the government. However, they have limited access to loans and therefore depend on the processors (ginneries) for funding their operations. While this may initially have strengthened the bargaining position of the ginneries, their monopsonistic power was considerably muted by unregulated entry and fierce competition for raw cotton in the first decade after the land reform (Sadler 2006). As a result, farmers enjoyed favorable cotton prices. Subsequently, these favorable conditions for farmers led several ginneries into bankruptcy and apparently induced the remaining ones to form an informal cartel after 2005 (Pomfret 2008). According to some observers, complaints by farmers about unfair pricing after 2005 was one factor that led to the subsequent regulation of the sector. Moreover, the idea was promoted in some government and donor circles to introduce cotton warehouse receipts as a modern funding instrument (Höllinger and Rutten 2009), following the positive experience of warehouse receipts in grain (OECD 2013). Another factor likely was the government's obsession to create industry clusters in various sectors, one of them cotton (Wandel 2010).

Against this background, the "Law on the Development of the Cotton Sector" (in the following also called the "cotton law") was enacted in 2007. In this paper we argue that it seriously damaged the existing privately coordinated cotton chain, rather than contributing to its positive performance. It forced ginneries to use a fairly complex warehouse receipt system without making sure that its introduction was accepted by the relevant stakeholders and without appropriate institutions for implementing it in place. At the same time, it imposed restrictions concerning other funding instruments on ginneries, which were major loan and input providers to producers. Further measures were the establishment of a special economic zone supposed to host a future "cotton cluster" and the creation of the state company KazMakta, an analogue to the Food Contract Corporation in the grain sector, which was launched with the purpose of purchasing raw cotton from producers and regulating the price. The new regulation and the performance of the state enterprises never fulfilled the initial expectations. In the following years, private producers and investors turned away from cotton, and the cotton area and output fell substantially. It was only in 2015 that the regulation was relaxed. The effects of the new amendment remain to be seen. From today's perspective, the development of the cotton sector after 2007 is a lesson in how ill-designed regulation and government interference can turn a promising economic sector into decline.

The information and analysis presented in the following are based on publicly accessible data and a series of interviews the first author conducted during field visits to South Kazakhstan in 2010, 2012 and 2016. Section 2 explains how political reforms have shaped the agricultural sector in the region. Section 3 describes the development patterns of the cotton supply chain. Section 4 provides an overview of existing government regulation, particularly the Law on the Development of Cotton Sector (2007). Section 5 describes main developments after the enactment of the Law. The paper concludes with a discussion of policy options.

2 The context of agricultural reform in Kazakhstan

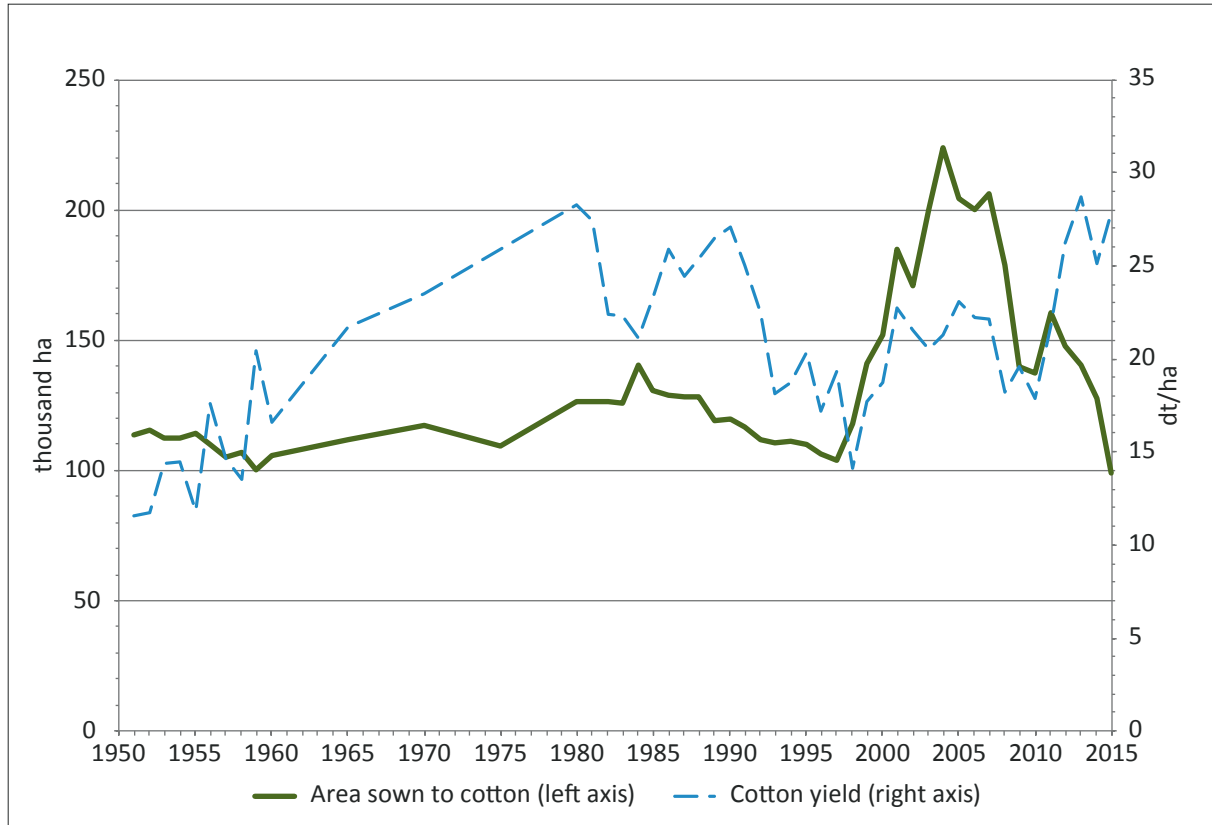
Agricultural production in Kazakhstan is characterized by regional differences. Northern regions are areas of grain production. Eastern regions produce the largest output of oilseeds. Cotton is produced in southern Kazakhstan; rice is grown in Kyzylorda region. Almaty region has a mixed agriculture: irrigated agricultural lands are concentrated in southern part, and rain-fed farming is carried out in eastern foothills. Livestock production dominates in western and north-eastern parts of the country.

2.1 The cotton sector during the Soviet period

The cotton industry in Kazakhstan dates back to the Soviet period, when the interest in cotton of Central Asia was high resulting in construction of cotton growing and irrigation infrastructure, development of cotton varieties and expanding area under cotton. Southern Kazakhstan became a part of the Central Asian cotton economy, although the Kazakh SSR was a much smaller cotton producer than its Soviet Central Asian neighbour republics. In the 1920s, a significant amount of funds was earmarked for irrigation development in South Kazakhstan. This was followed by a five-year plan for the reconstruction of the water systems for all cotton growing areas in Central Asia. South Kazakhstan became a focal point for cotton production in the Soviet Union from November 1, 1924 onward, when a major seed development farm called 'Pakhta-Aral' was established there. The Soviet era led to significant advances in cotton breeding, irrigation, land development, and attempts at mechanisation of the cotton harvest (Dukhovny and Schutter 2011).

With regard to cotton, the Soviet period after the Second World War can be broadly described by an increase of cotton area and cotton yield until ca. 1980 and a subsequent decline (Figure 1). Craumer (1992, 145) cites increasing salinity of irrigated land, a decline of soil quality due to monoculture and lacking organic fertilizer as well as plant diseases such as cotton wilt as major reasons for the cotton yield decline during the last decade of the Soviet Union. Moreover, lower administrated cotton prices and a deteriorating financial situation of cotton farms as symptoms of the emerging economic crisis in rural areas contributed to it as well (Gleason 1991, 343).

Figure 1. Area sown to cotton and cotton yield in South Kazakhstan 1950-2015



Source: Statistical Yearbook 50 Years Start of the Virgin Lands Campaign (1953–2002); Azhimetova (2011); Data tables published at www.stat.gov.kz. Data between 1960 and 1980 included in five-year intervals.

2.2 Agrarian reform after independence

At the time of political independence in 1991, large state and collective farms still dominated the agricultural sector in Kazakhstan, accounting for 96% of the total agricultural land. In 1992, the government introduced the “Law on Privatization of the Property of State Agricultural Enterprises”. The Law aimed at overcoming the monopoly in the production of the agricultural commodities by creating various forms of property and management, creating conditions for the transition to the market economy in agriculture, promoting free competition among producers, stimulating free enterprise for the purpose of increasing the efficiency of agricultural production and the improvement of the delivery of commodities and food to the population.

In 1995 the President of Kazakhstan signed the “Decree on Land” that officially recognized private land ownership in Kazakhstan. Citizens could privatise land plots in rural households as well as land used for dacha gardens. It also became possible to transfer ownership rights to private legal persons, including foreign ones. However, private ownership rights did not apply to agricultural and some other lands (OECD, 2013). It was only in the late 1990s that individual farms were created on a significant scale, often by taking over land from former collective farms that had gone bankrupt (Petrick et al. 2011). In 2003 Kazakhstan adopted a new Land Code. The Land Code established private ownership of land, allowing for the use of land as collateral. However, land not already in family farms could be obtained only through purchase. Moreover, owners of land use rights would no longer be allowed to sublease their rights for farming. The widespread practice of subleasing land plots received under previous privatization steps was prohibited.

Whereas land sales are now possible in principle, land users prefer to base their operations on land rentals from the government at a low normative price determined by law (Petrick et al. 2011). Moreover, land sales transactions require large capital investments and a long-term planning horizon. Both conditions are often not met, so that land sales remain rare.

In 2016, the government initiated amendments to the Land Code, which allowed land to be sold and rented via auctions, and prolonged leasing terms for foreigners from 10 up to 25 years. The latter caused public discontent and protests (BBC 2016). To prevent insurgency, the government suspended the implementation of the amendments to the Land Code until 2021.

3 The unregulated cotton sector prior to 2007

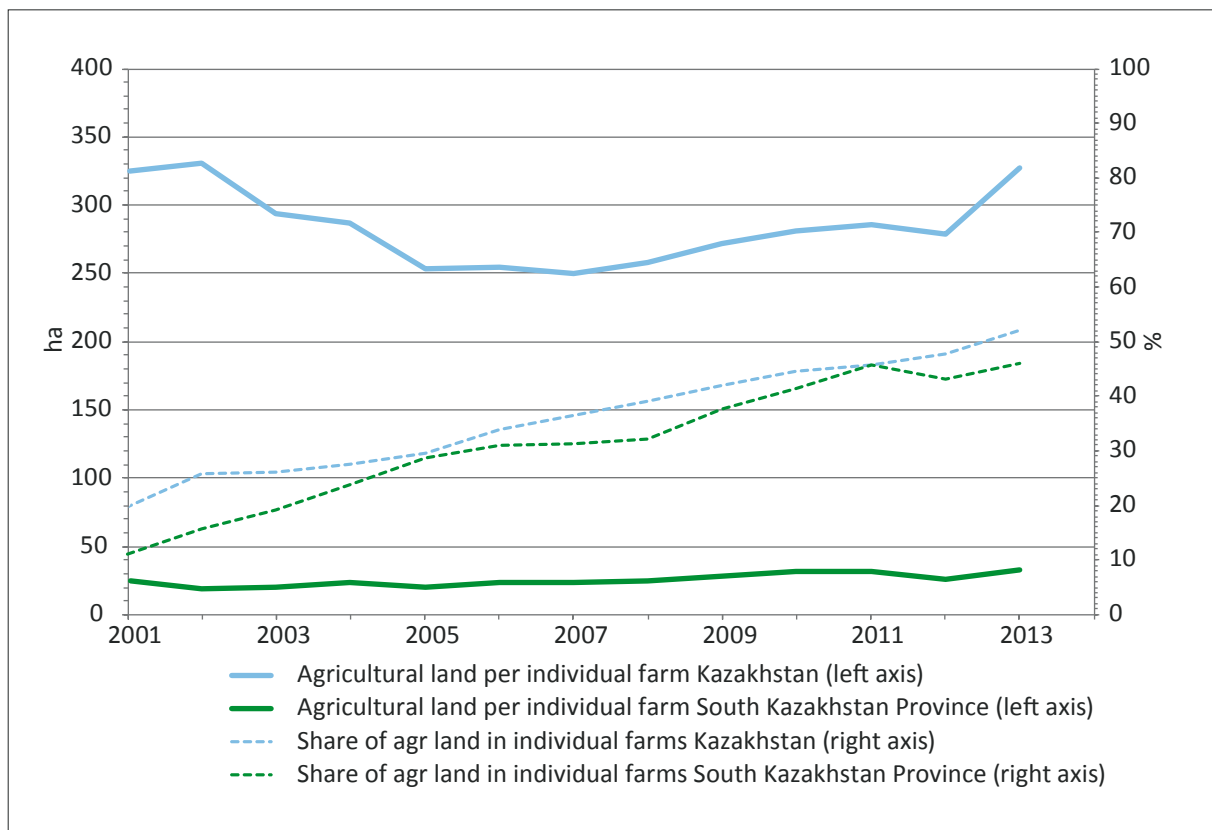
3.1 The emergence of a privately coordinated cotton export chain

Up to the late 1990s, the Kazakh government was preoccupied with investments in the oil sector (Kalyuzhnova 1998). Agriculture and particularly the cotton sector were not a focus of government activity. After the collapse of the Soviet Union and the removal of government control, both cotton producers and cotton processing plants (ginneries) were free to establish their own relations. Despite the fact that the Central Asian countries pursued different policies in their cotton sector in the post-Soviet era, there is one common feature among these countries: producers have fallen into a dependent position within the supply chain in these countries unlike other leading cotton producers, for example, USA and Australia. Sadler (2006) argues that this happened due to the effects of the fragmentation of the production base that was inherent in the land reform process and privatization of the previous state farm system. Sadler (2006, 101) identifies two main reasons why the ginnery and not the producer is the dominant link in the chain:

1. Land privatization and dissolution of the collective farming system, which led to the creation of a large number of independent farmers with small land holdings. The atomization of producers is exacerbated by the high population density in southern Kazakhstan.
2. Differential access to funding. Farmers are hardly able to attract commercial loans, whereas the gins are. This places the bargaining power in the chain into the hands of the ginners.

Similar to other provinces in Kazakhstan, individual farms in South Kazakhstan province began to occupy a significant share of total agricultural land by the turn of the millennium (Figure 2). This share increased consistently over the years, so that now about half of the land is used by individual farms. The remaining land remains in state farms or private agricultural enterprises. However, on average, individual farms in South Kazakhstan are endowed with only about one tenth of the land of similarly organized farms in the rest of the country.

Figure 2. Average farm size and share in total agricultural land of individual farms, Kazakhstan and South Kazakhstan province, 2001-2013



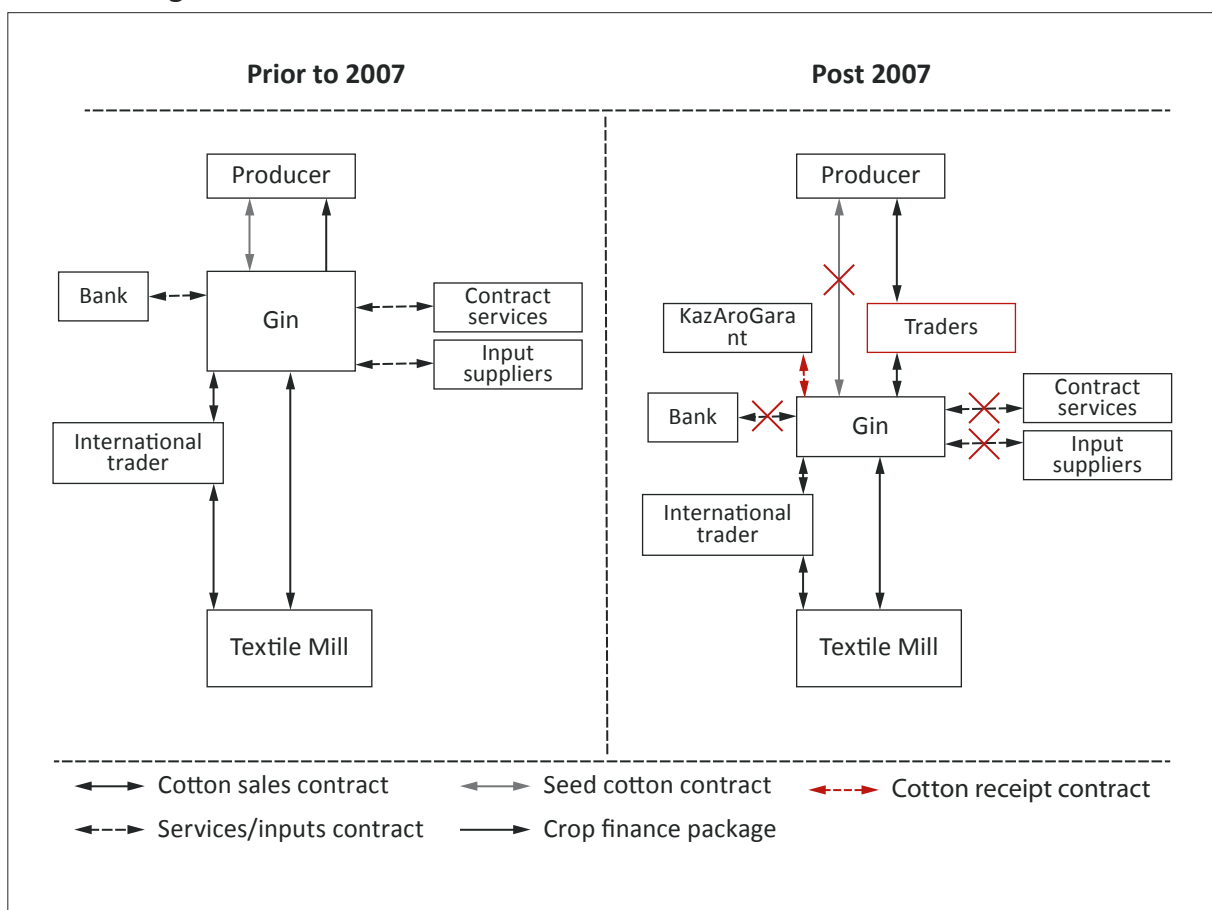
Source: Agency of Statistics of the Republic of Kazakhstan.

In the mid-1990s, cotton farmers in Kazakhstan faced unfavorable relative prices compared to neighboring countries due to a mixture of monopsony power of the cotton ginners, quality differences and transport and other costs of getting the cotton to the border, rather than policy-induced distortions against farmers. However, between 2000 and 2002, the ginners sector had become more competitive. The key relationship was between the cotton farmers and cotton gins, and the farmers' market position improved as the number of cotton gins increased in the early 2000s (Pomfret 2008).

Ginneries had become fully privatized by 1998. The majority of the gins in Maktaaral district only began operating after 1998. By 2005 there were 15 ginneries operating in Kazakhstan. Pomfret (2008) explains the increase in ginning plants in Kazakhstan with two factors. First, the gins owned in conjunction with Russian companies were accessing the local market so that they can export directly to Russian textile mills. Second, because of the availability of smuggled raw cotton from Uzbekistan, large amounts of cotton were available for purchase in Kazakhstan without the provision of crop finance and as spot cash purchases.

Ginneries were ensuring crop financing, as cotton producers had little collateral and were therefore unable to obtain commercial bank credit. Based on farm survey data, Sadler (2006) states that 89% of respondents received finance from their gins. A large part of this finance was provided in the form of physical inputs (fertilizers, fuel, etc.). Ginneries financed the producers in the absence of any collateral guarantees and relied on a signed contract for repayment of the loans (Figure 3, left panel).

Figure 3. Schematic representation of the cotton supply chain before and after the 2007 legislation



Source: Authors based on Sadler (2006, 102).

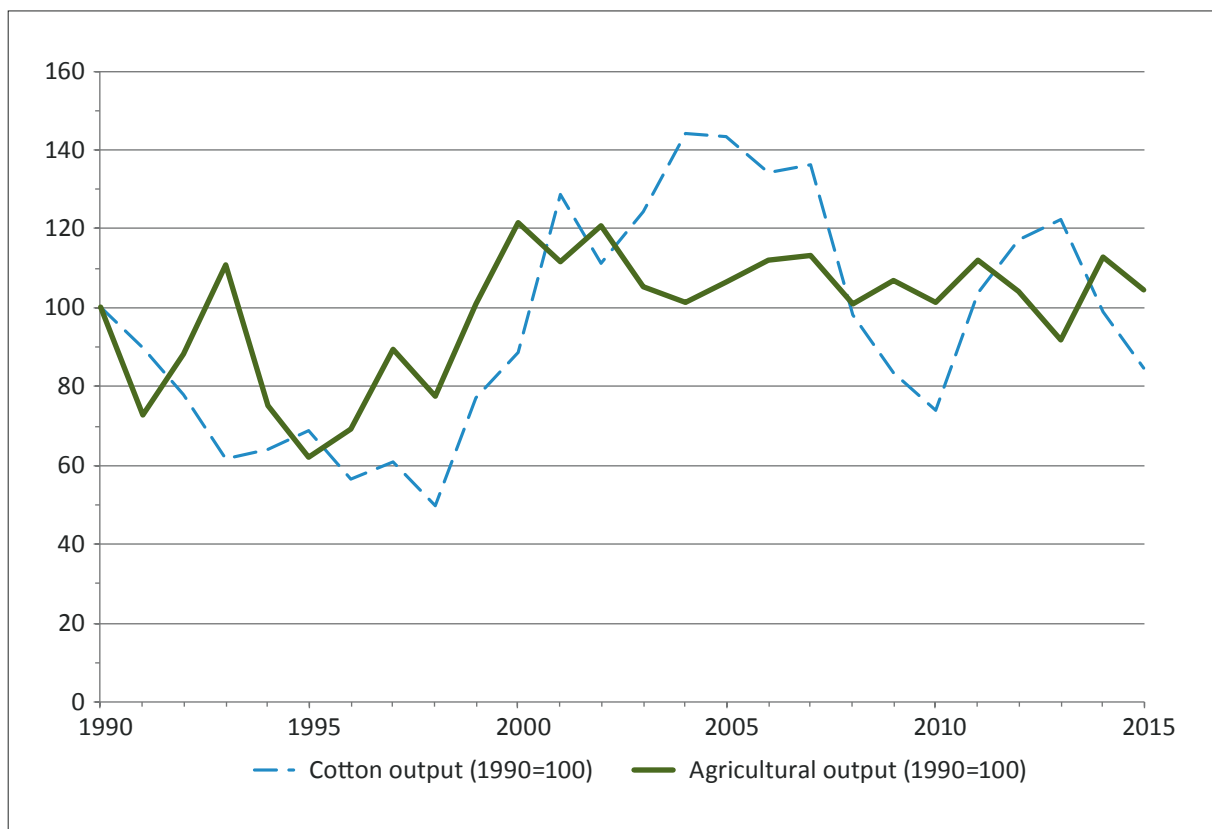
The ginneries in their turn obtained finance from three sources: trader finance, domestic banks, and their own cash reserves. Trader financing took the form of forward sales of cotton, against which the ginneries received a percentage of the value of the cotton that was due to be delivered under the contract. This system worked well, with ginneries and traders having established

good trading relations. The ginners also developed financing relations with domestic commercial banks. Previously, the amount of finance available from this source was hampered by the ginner's ability to provide cash and collateral cover to the domestic bank. Also initially the cost at which these banks were prepared to offer finance was very high (generally, around LIBOR plus 15-20%). However, this cost subsequently dropped and the credit volume was increasing (Sadler 2006). Producers entered into a contract to supply a gin with a fixed amount of cotton, for which they would receive a price linked to a world price index at the time of delivery. They did so in order to obtain pre-finance, which used to be provided 30% on signing an agreement to deliver a certain amount of cotton, 40% at harvest and 30% upon delivery.

3.2 Performance of the sector before the regulation

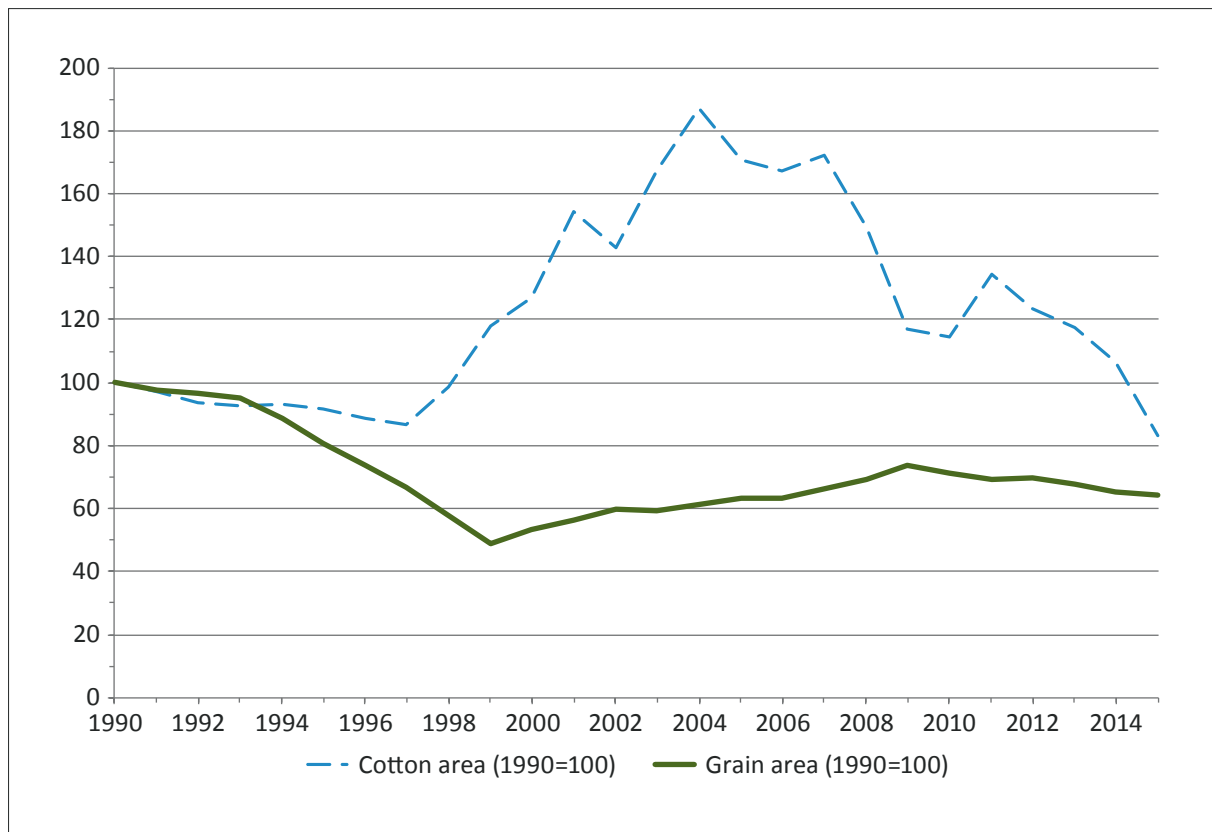
After a decline in the first years of transition, the cotton sector developed very well. Following an all-time low in 1998, physical output doubled within three years and output growth even outpaced the rest of agriculture (Figure 4). A major factor in rising output was the expansion of sown area (Figure 1). After 2000, output levels were consistently higher than in the last years of the Soviet Union, and also higher than in agriculture on average.

Figure 4. Physical output of agriculture in total and cotton in particular in Kazakhstan, 1990=100



Source: Authors based on data tables published at www.stat.gov.kz.

Notably, the cotton sector outperformed the grain industry in the country. Up to the mid-2000s, the area under cotton grew dynamically, whereas grain area consistently declined (Figure 5).

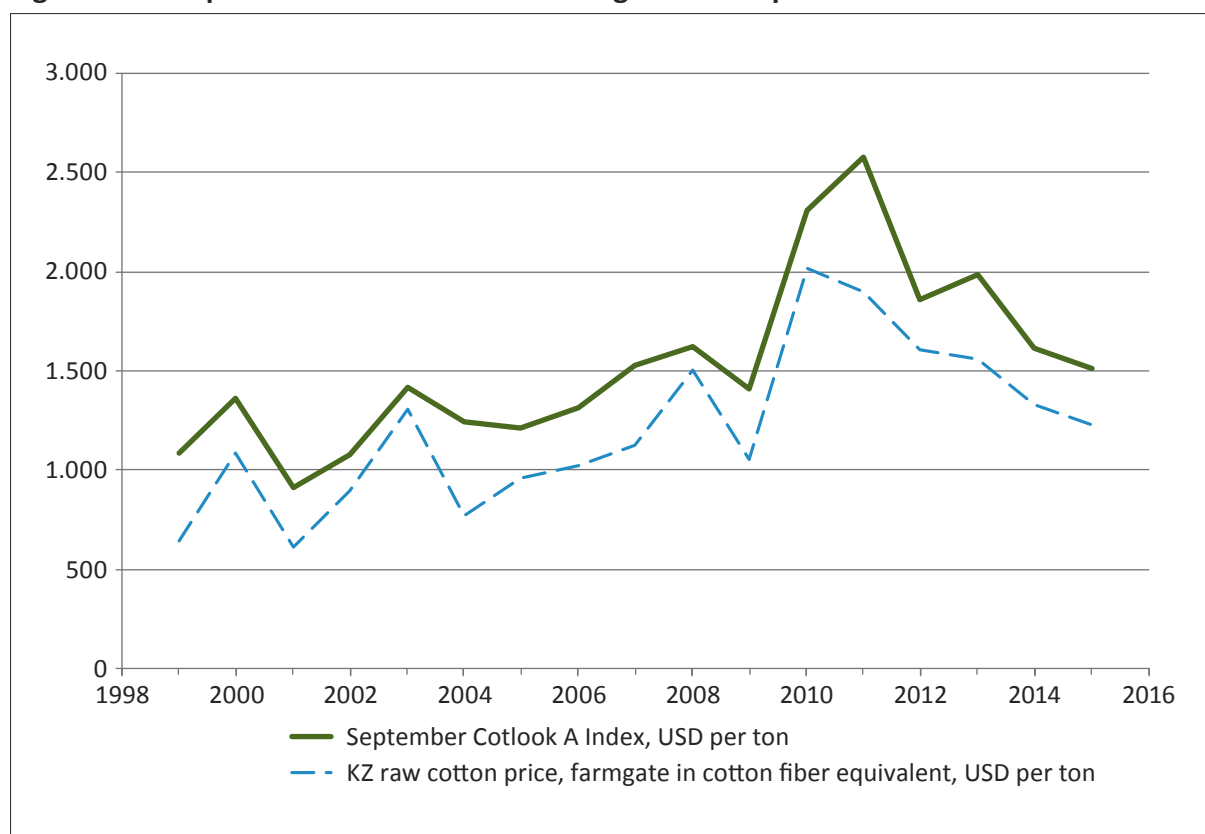
Figure 5. Cotton and grain area indices Kazakhstan, 1990=100

Source: Azhimetova (2011); Data tables published at www.stat.gov.kz.

Under the forward contracting scheme, the cotton ginneries eventually developed different types of contracts. Since the cotton industry is an export-oriented sector, the ginneries linked the contract price to the world market price, in this case the Liverpool Cotton Association price. The price formula in the contracts changed over the years, with the formula in 2004 being based on the “A” index at the time fixation (delivery or later) minus 10%, minus the cost of ginning (at 150 USD/ton) and a ginning outturn of 32%. The ginning outturn (i.e., the cotton fiber received after ginning) determines the economically valuable part of the raw or “seed” cotton.

However, it should be noted that there is a two-tier cotton market operating in Kazakhstan – the price that is paid for raw cotton covered under the above agreements and the price that is paid for production which is in excess of the original agreement (“free seed cotton”). In 2003, when the “A” index was at the 74 c/lb level, ginners were paying an average of 500 USD/ton for free seed cotton, that is more than 1500 USD/ton in cotton fiber equivalent. Prices for free seed cotton actually reached up to 600 USD/ton, 21% more than the price paid for contracted cotton. The premium was due to the competition between the ginners to secure volumes of raw cotton. Both international and local prices were constantly growing from 2001 up to 2003, which encouraged the expansion of cotton production (Figure 6).

Two underlying reasons for the success were the growing world price of cotton fiber and the introduction of a vertical coordination system, which ensured smooth operation of the sector from the production point up to export. In the mid-1990s, Southern Kazakhstan cotton ginneries established a system of forward contracting. Both producers and processors had been freed from government control for several years. Gins were fully privatized by 1998 and afterwards

Figure 6. Comparison of the world and farm-gate cotton prices

Source: Agency of Statistics of the Republic of Kazakhstan; National Cotton Council of America.

many new gins were established. The resulting competition and reduced transport costs benefited (small) farms. Gins provided crop finance, as well as inputs, irrigation (water) and some agricultural services. Penalties prevented opportunistic behavior by farmers, as ginners shared black lists of farmers who were side-selling. The gins used their assets as collateral to obtain loans. The loans were used to finance cotton producers further down the supply chain by providing production inputs or cash. This had created a win-win situation for all market participants.

4 The 2007 “Law on the development of the cotton sector”

Prior to the Law on the Development of the Cotton Sector there was no specific regulation of the cotton sector. According to official statements, the purpose of the Law was the improvement of the competitiveness of the domestic cotton industry through the introduction of science-based innovation, technical regulations and the industrialization of cotton production, its integration with the textile and food industries and regulation of relations between the participants of the cotton market.

The Law regulates the manufacture, processing, storage and trade of cotton. It contains 7 chapters defining (1) state support; (2) licensing the primary processing of cotton; (3) technical regulation; (4) testing of cotton fiber quality; (5) monitoring the cotton market; (6) monitoring cotton crop rotation; and (7) legislative regulation of the cotton industry. According to the Law, trade of cotton fiber that is not accompanied by a cotton quality certificate shall be prohibited; producers of cotton fiber shall have the right to receive state subsidies and incentives and cotton processing companies must participate in a cotton receipt guarantee scheme.

4.1 Context factors leading to the adoption of the cotton law

In hindsight, the confluence of a number of context factors provides a plausible explanation for why the government interfered in an apparently well performing, privately coordinated cotton value chain. First, due to a number of bankruptcies of independent ginneries, the remaining processors managed to set up an at least temporary informal cartel, which depressed local producer prices in 2004 and increased the margins of cotton processors (Figure 6). Complaints by farmers to local government officials about these circumstances were finally reported to the central government in the capital, which saw a need for action. During a visit to South Kazakhstan in September 2006, President Nursultan Nazarbayev called cotton ginneries to pay decent cotton prices, otherwise the government would set up its own cotton processing plants.

Second, at this time, the government had already made positive experience with a regulated warehouse receipt system in grain trading (Höllinger and Rutten 2009; OECD 2013, 145). International donors were advocating the implementation of a similar system in the cotton sector (Sadler 2006, 111; World Bank 2007, 72, 75). A warehouse receipt system is a form of commodity finance that allows farmers to store their harvest in a public or private warehouse. The warehouse certifies the receipt and quality of the commodity in store that is owned by the producer. This receipt can be used as collateral by the farmer to obtain funding for his production operations. While similar systems have a long tradition in Western countries, experts point out that its success crucially depends on factors such as the availability and integrity of public warehouses in rural areas and the quality of the legal and regulatory environment (Höllinger and Rutten 2009).

Third, these cotton-specific factors resonated well with an overall political imperative to establish state-mandated industry clusters in various sectors, to promote the diversification of the Kazakhstani economy (Wandel 2010). As such, the cotton sector was a welcome target for applying the government's principles of an industrial policy governed by "state guided capitalism" (Baumol et al. 2007; Petrick et al. 2014). In practice, this strategy typically involves the establishment of state-managed enterprises in key sectors of the economy and it used to be based on a general skepticism concerning the viability of small businesses, particularly in agriculture.

4.2 The establishment of a state-mandated cotton cluster

In 2005, the government established the Special Economic Zone (SEZ) "Ontustik", located near the city of Shymkent, thus about 250 km away from the cotton growing area in Maktaaral district. The cluster was aimed at promoting the development of the textile industry, in particular the production of readymade garments, stimulating the integration of Kazakhstan's national economy into the world market, encouraging international trademark owners to set up manufacturing of readymade textiles in Kazakhstan, setting up high-tech manufacturing facilities, and expanding the range of produced textile goods.

The government offered tax exemptions to ginners and the SEZ was designed to become a textile cluster in the Southern Kazakhstan region. It was initially planned to attract 1 billion USD of investments in three years and to build 15 processing factories, which would compose a full cotton processing cycle. Up to date, the SEZ is actively promoted at <http://ontustikinvest.kz>.

In addition, in 2007, the government established KazMakta, a subsidiary of the state-owned Food Contract Corporation. KazMakta was supposed to engage in cotton procurement, processing and cottonseed production.

4.3 Mandatory certification of cotton fiber

According to the new law, the examination of cotton fiber quality was mandatory and was carried out for each bale of cotton fiber. Mandatory certification was performed by a state-run certifying organization and the costs of one certification were to be covered by means of the state budget. Producers could re-examine the quality of cotton at their own expense.

Each bale of cotton was assigned a quality passport based on the results of tests. An owner could request a common quality passport for several bales of the cotton of the same quality. A certifying organization had to issue a quality passport no later than seven working days after the collection of cotton fiber samples at a cotton processing plant. Trade of cotton fiber that was not accompanied by a cotton quality certificate was prohibited.

4.4 The forced introduction of cotton warehouse receipts

According to the law, the warehouse receipt system was supposed to work as follows: The cotton processing organization issues a cotton receipt to confirm the receipt of cotton under a contract for storage and/or processing services. A cotton receipt consists of two parts: a warehouse certificate and a pledge certificate, which may be separated from one another, if required. A cotton receipt is considered an order non-equity security. Each part of a cotton receipt must contain a code of a cotton processing organization assigned by a licensor; the series and number of the cotton receipt's form; a name, location, and business identification number of a cotton processing organization receiving the cotton; information on the cotton's owner; address; identification number; details of the document certifying varietal and sowing characteristics of seeds; and the qualitative and quantitative characteristics of cotton. The cotton receipt is issued for each batch of cotton of a uniform quality. The owner of the cotton determines the number of cotton receipts. A ginner has to issue a cotton receipt no later than three calendar days following the formation of a batch and the cotton producer's application. The transfer of rights on an undivided cotton receipt is carried out by posting an endorsement on a warehouse certificate. Cotton can be released at the request of a holder of cotton receipts in exchange for originals of warehouse and pledge certificates. Holders are entitled to demand partial release of cotton. In this case they receive a new cotton receipt for the remaining amount of cotton in exchange for the original receipt.

Cotton processing companies must participate in a guarantee system for cotton receipts. This participation is ensured by signing an agreement with the state company KazAgroGarant, a subsidiary of the Agrocredit Corporation, which was established in 2003 to ensure payments under the grain receipts system.

A cotton-processing organization (ginnery) is defined as a provider of warehouse services issuing cotton receipts. The law defines the requirements to the premises, equipment and machinery of a ginnery. A ginnery must ensure the availability of at least one cotton reception center; equipment for the primary processing of raw cotton into the cotton fiber; weighting equipment; ventilation equipment; handling mechanisms; fire-fighting equipment; and a technological laboratory required to check the quality of cotton as well as storage facilities.

Article 15 of the Law concerning "Limitations on the Activity of a Cotton Processing Enterprise" was the most controversial part of the law. Two main "limitations" imposed in 2007 were:

1. The prohibition to engage in business activities which were not related to warehouse services with the exception of production and marketing (sale) of the products and by-products of cotton processing and free warehouse services.
2. The prohibition to issue guarantees and to use their property as collateral under loan agreements with third parties.

Both prohibitions fundamentally undermined the previous function of the ginneries as providers of inputs and services to farmers and as providers of commodity finance using their own assets as collateral.

4.5 Opposition to the law

The cotton law was developed in 2005 and adopted in 2007. As Dosybieva (2007) reports, it was in no way received uncontested. It faced fierce opposition from representatives of the incumbent processing plants organised in the "Kazakh Cotton Association" as well as from farmers:

"Nurlan Kanybekov, the head of Nimeks, one of the biggest cotton companies in the region, called the 'Law on the Development of the Cotton Industry' ... the 'law on hindrances to cotton processing plants.' He added: 'Suddenly, the government decides to make a law today, which was necessary in 1991. At that time all of us experienced difficulties. And the present-day project will allow corrupt officials to satisfy their ambitions through legal means. Seventy per cent of the law's essence is about ways to restrict cotton processing plants. Neither producers nor processors of cotton need this law. The appearance of the 'Provision Corporation' [the department responsible for governmental purchase] interested in cotton has coincided with the development of this project'" (Dosybieva 2007, 128-9).

According to media reports, representatives of the cotton association had complained as early as August 2005 that their opinion and expertise on cotton processing was not taken into account by the working group drafting the law in the Ministry of Agriculture (Caravan.kz 2005). Representatives of parliament were aware of the potentially detrimental consequences but could not stop the legislation to come into force.

Moreover, "officials from the oblast already started discussing the necessity of a regrouping of small farms during their meetings at the beginning of 2005. They explained that small farms (5–10 ha) do not observe the rotation of crops and the land becomes overused and infertile. They also argued that large farms can take bank loans to facilitate their development and upgrade their equipment. However, many farmers think that the unification of smaller farms will take them back to forced collectivization. 'Why would I unite with somebody?' said a farmer, Dosjan Beibitov. 'I have five hectares of land and I have been growing cotton for five years. We gather 3,000 kilograms of cotton per hectare. I buy quality seeds. I've never made any losses. I can afford to utilize machinery. I am the owner of my land now. But I do not have any confidence that I will own my land in the future.' ... 'I do not want to enter any unions,' said Kairat, a farmer. 'I am quite happy with going to my investor. I know he can always help me. If farmers need money for weddings or funerals, investors never refuse. Of course, we pay back all debt in the form of harvest, but we are fine with this. They say that investors will be prohibited from giving us money. Is this the government's way to reward those who helped the cotton industry?'" (Dosybieva 2007, 129-30).

5 The cotton sector after 2007

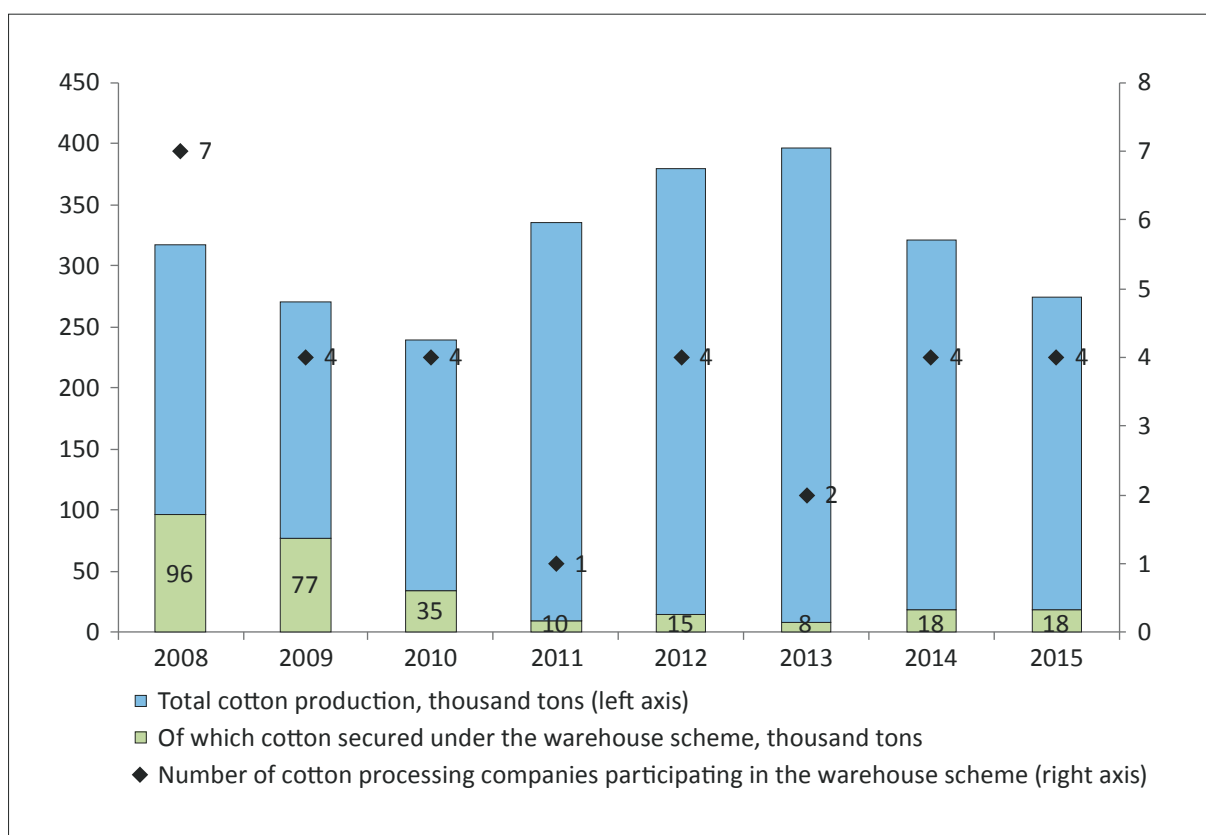
5.1 Failure of the cotton receipt system

As explained in section 3, a specific feature of the cotton market before the adoption of the law was to attract short-term loans by cotton ginneries secured by assets and the conclusion of forward contracts with producers. The cotton industry was the only example of such widespread use of vertical coordination in Kazakhstan.

In the post-2007 situation, ginneries no longer deal with banks to finance cotton production, and they do not provide contract services and inputs anymore (Figure 3, right panel). Instead, a new player – the trader – appeared in the cotton market. According to experts, traders are in most cases affiliated with the ginneries and were launched by the latter to comply with the cotton law and facilitate the procurement of raw cotton from producers.

However, cotton receipts, which ideally should have provided cotton growers with the opportunities to attract financial resources, in fact, failed to gain widespread acceptance. It was claimed that one of the reasons for lacking interest in the warehouse scheme was the high annual fee. In 2008, the annual fee amounted to 126 KZT per one ton of raw cotton, i.e. 0.2% of the market value of cotton in Kazakhstan at that time. Following the complaints of the processing compa-

Figure 7. Number of enterprises and amount of cotton secured under the warehouse scheme



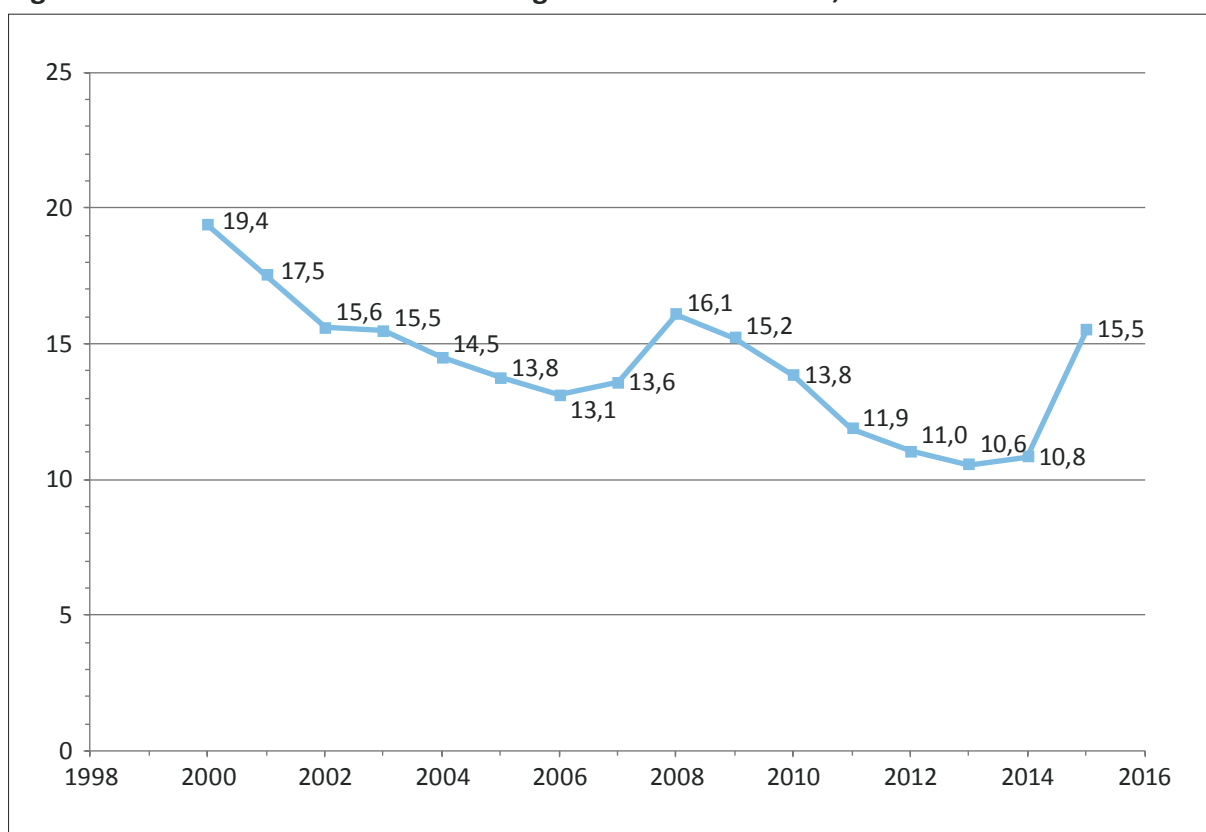
Source: Agency of Statistics of the Republic of Kazakhstan; KazAgroGarant.

nies, the tariffs were reduced by almost half, down to 64 KZT. Nevertheless this reduction did not boost the participation rate.

In recent years, no more than 4 out of 18 processing enterprises have signed contracts with KazAgroGarant, whereas the share of cotton under the guarantee scheme in the total cotton output went down to 18 thousand tons (about 7% of total output) in 2015 (Figure 7). The participating organizations are large-scale enterprises, namely the cotton processing plant Myrzakent, LLP with 6,000 tons of guaranteed cotton; Hlopkoprom-Yug (1,138 tons), the Cotton Contract Corporation (6,934 tons) and AIIG-Kazakhstan which owns two ginneries with a total capacity of 4,000 tons.

The central idea of introducing cotton receipts was that it could be used by cotton growers as collateral for obtaining loans directly from a bank. Probably due to a lack of experience and trust and a weak regulatory framework, commercial banks refused to accept cotton receipts as collateral under loan agreements. Since the ginneries could not use their property as collateral anymore, the financing of producers ceased. Another problem was that the new system did not overcome the seasonality problem in financing production. Cotton farmers receive cotton receipts after submitting cotton to the processing companies, i.e. in autumn; however farmers need cash during spring fieldwork, in February and March. Farmers were not used to or not wanting to store cotton and rather preferred on-the-spot settlement of their financial dealings with cotton gins (OECD 2013, 145).

Figure 8. Commercial bank loans average annual interest rate, %



Source: National Bank of Kazakhstan.

The global financial crisis of 2007/8 further deteriorated the framework for cotton producers. It may be hypothesized that even if the old scheme of forward contracting were in place, ginners would have faced problems in obtaining loans anyway. However, despite the fact that interest rates on commercial bank loans increased in 2008, they gradually decreased ever since and returned to its pre-crisis level in 2010.

In summary, the following factors contributed to the failure of the cotton receipt system:

- Cotton producers were not familiar with the storing system and had no demand for storage, producers rather preferred on the spot payment in cash,
- initially high fees for participating in the warehouse system discouraged them to participate,
- many warehouses failed to comply with public certification of their warehouse operations or did not even apply,
- banks did not accept receipts as collateral, and thus
- the forced introduction of the warehouse system failed to overcome the seasonal mismatch of demand for and supply of funding cotton planting operations by farmers.

Kazakhstan is considered as operating a mature and well-functioning warehouse receipt system in grain (Höllinger and Rutten 2009). It seems evident that the government was inspired by the success of this system. Why, then, did the warehouse receipt system work in grain but not in cotton? This question would require a deeper, comparative analysis of the two systems. At the moment we can only speculate about some of the reasons:

- The Kazakhstani grain sector is dominated by much larger producers which may be more willing and able to carry the fixed cost of participating in the system.
- Grain storage in big warehouses (elevators) has been an established practice for decades, and producers are familiar with it.
- There was previous experience with a grain receipt system based on the Soviet era “Form 13” warehouse certificate, which was combined with collateral management by the banks or their agents (Höllinger and Rutten 2009, 6).
- While the grain warehouse system received seed funding of up to 100 million USD from the European Bank for Restructuring and Development (EBRD), the cotton system did not. The government made available a comparatively modest down payment of 4 million USD for the cotton system to the public guarantee scheme KazAgroGarant (OECD 2013, 145).

5.2 Declining private activity in the sector and the failure of the cotton cluster

Prior to 2007, ginners used to facilitate the growth of production, attracting investments from domestic and foreign investors and obtaining loans from commercial banks. They would use these funds to finance producers under futures contracts. When processing companies were banned from commercial activity and loans, this immediately led to an outflow of capital from the sector. Moreover, due to declining cotton area and output, a problem of overcapacity in processing emerged. In 2015, only 12 out of 23 existing ginneries were operating.

On the other hand, the SEZ Ontustik was criticized for being too remote from the main cotton producing areas. The project was also considered as unfeasible due to the low quality of Kazakh cotton, which is normally of the third grade and can, at best, reach the second grade, whereas textile products of high quality are made primarily from cotton fibers of the first and the highest grade. The latter is not present in a sufficient amount in Kazakhstan. One reason for the low

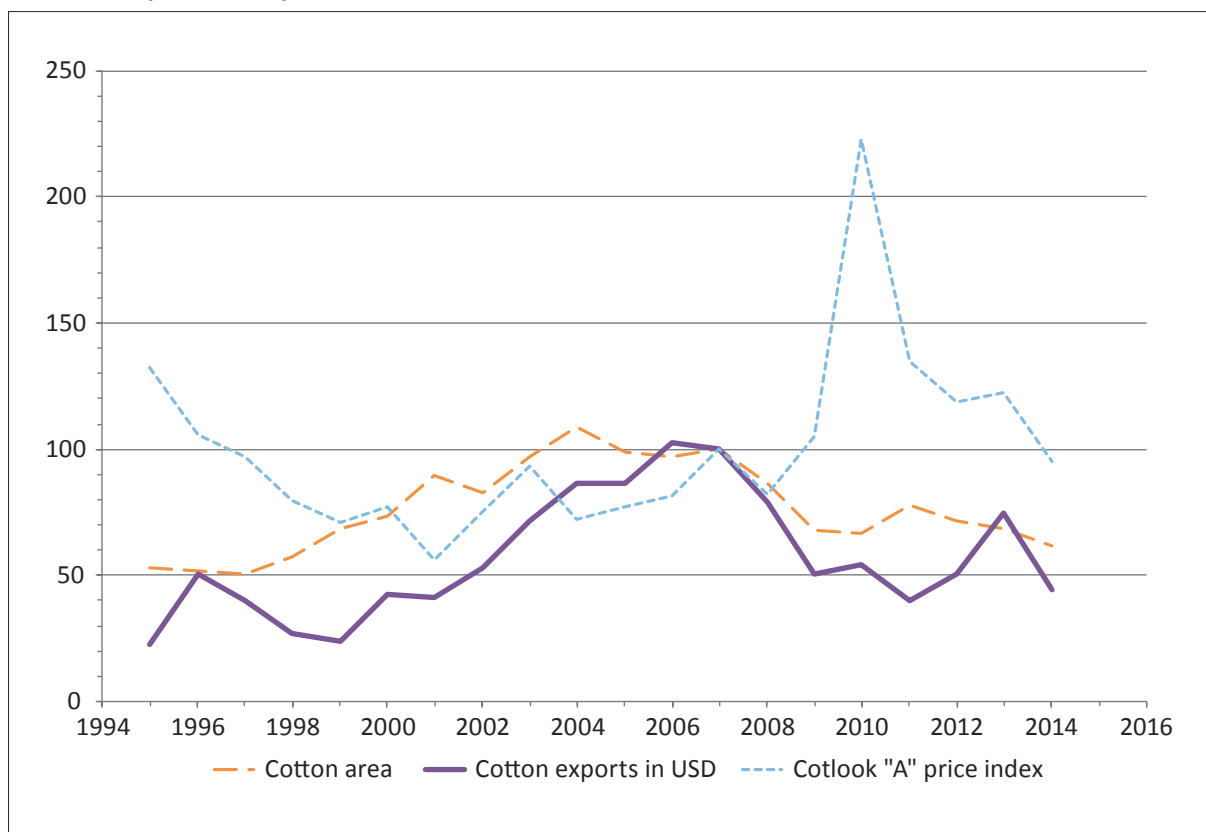
quality of cotton is the absence of elite seed. Farmers can either buy seed from the ginneries or import if from abroad via traders. But according to local interviews, low-quality seed is also often smuggled from Uzbekistan and offered at a very low price to cotton producers. In the absence of a seed selection and cleaning infrastructure, varieties are often mixed and the transparency of the seed market is low (Dosybieva 2007).

In 2011, the first textile factory Khlopkoprom-Tselyuloza began operating in the SEZ. However, in 2015, it was sold to private investors. At present only eight out of 15 factories are operational in Ontustik. The amount of investment reached 150 million USD coming mostly from semi-government loans. The amount of processed cotton is 140 tons only, which is considerably lower than the expected level. The management of the special economic zone is now considering diversification options.

5.3 Declining cotton area and exports

Cotton area and output steeply declined after the introduction of the cotton law in 2007 (Figure 1, Figure 4). In 2015 total sown area stood at merely a half of the level in 2004, although hectare yields have been picking up recently. Figure 9 shows how cotton area and exports were effectively delinked from the world cotton market after the introduction of the law. Between 1998 and 2007, the world cotton price, cotton area and cotton exports in Kazakhstan broadly moved in parallel. However, since 2007, area and exports moved in opposite direction to the

Figure 9. Kazakhstani cotton area and cotton exports and cotton world market price (2007=100)



Source: Agency of Statistics of the Republic of Kazakhstan; UN Comtrade (2015) and Cotton Outlook (2015).

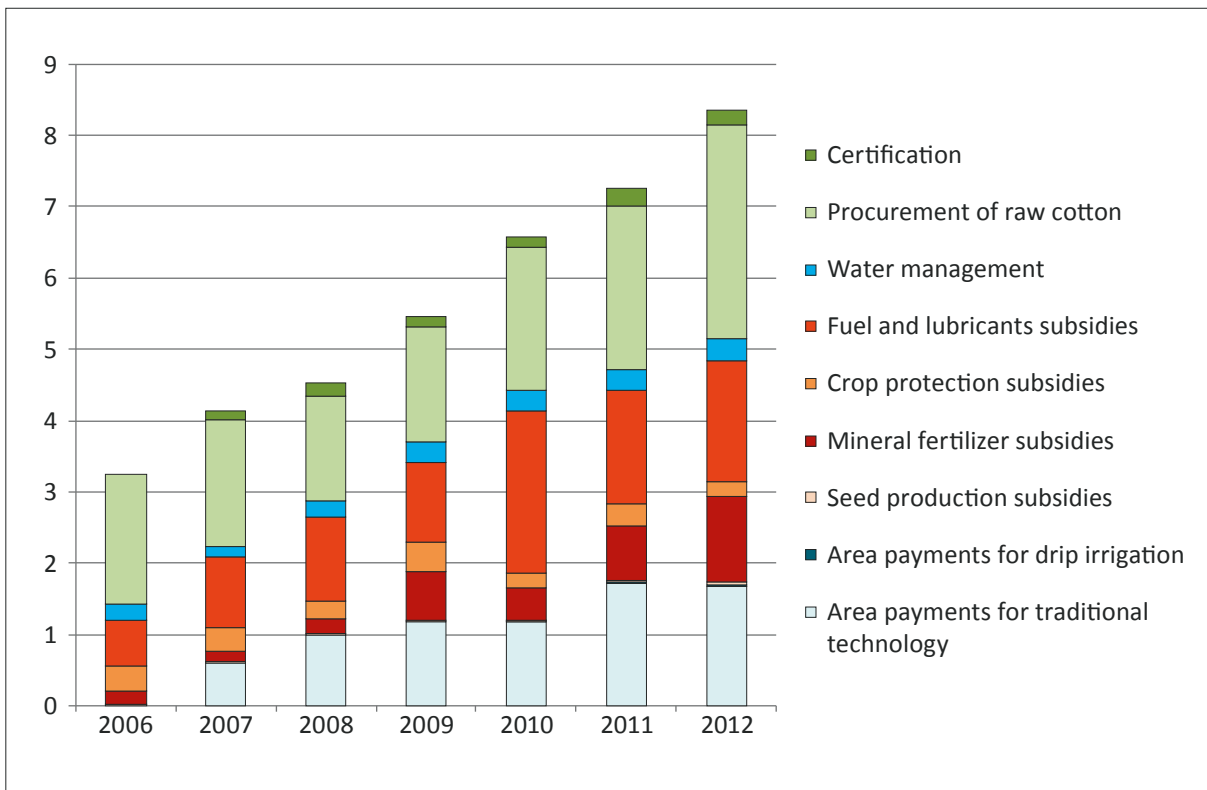
cotton price. Cotton area in Kazakhstan reached a 12-year low just at the time when cotton prices were skyrocketing in 2010.

5.4 Increasing government spending on cotton in the face of an eroding regional tax base

Starting in 2007, the government has provided cotton farmers with hectare-based subsidies. The rate of the subsidies exceeded 60 USD per ha and even 160 USD per ha when it was produced under drip irrigation (OECD 2013, 135). In addition, cotton farmers benefit from a range of other subsidies that are typically linked to input use or involve the procurement of raw cotton by the state-owned enterprise KazMakta (Figure 10). The subsidy programs existed before 2007, but in terms of nominal spending they were significantly extended afterwards.

At the same time, the public budget suffered from a decrease in revenues from the cotton processing plants. For example one of the leading cotton processing plants, Ak Altyn Corporation,

Figure 10. Structure of government support to the cotton sector, bn KZT



Source: Ministry of Agriculture of the Republic of Kazakhstan (unpublished).

paid 20-25 million KZT as taxes each year prior to 2007. The amount of tax paid by the company has subsequently decreased by half as a result of its reduced scope of activities. According to parliament representatives, some of the newly emerging traders and middlemen evade taxes, which led to a further decline of the public budget.

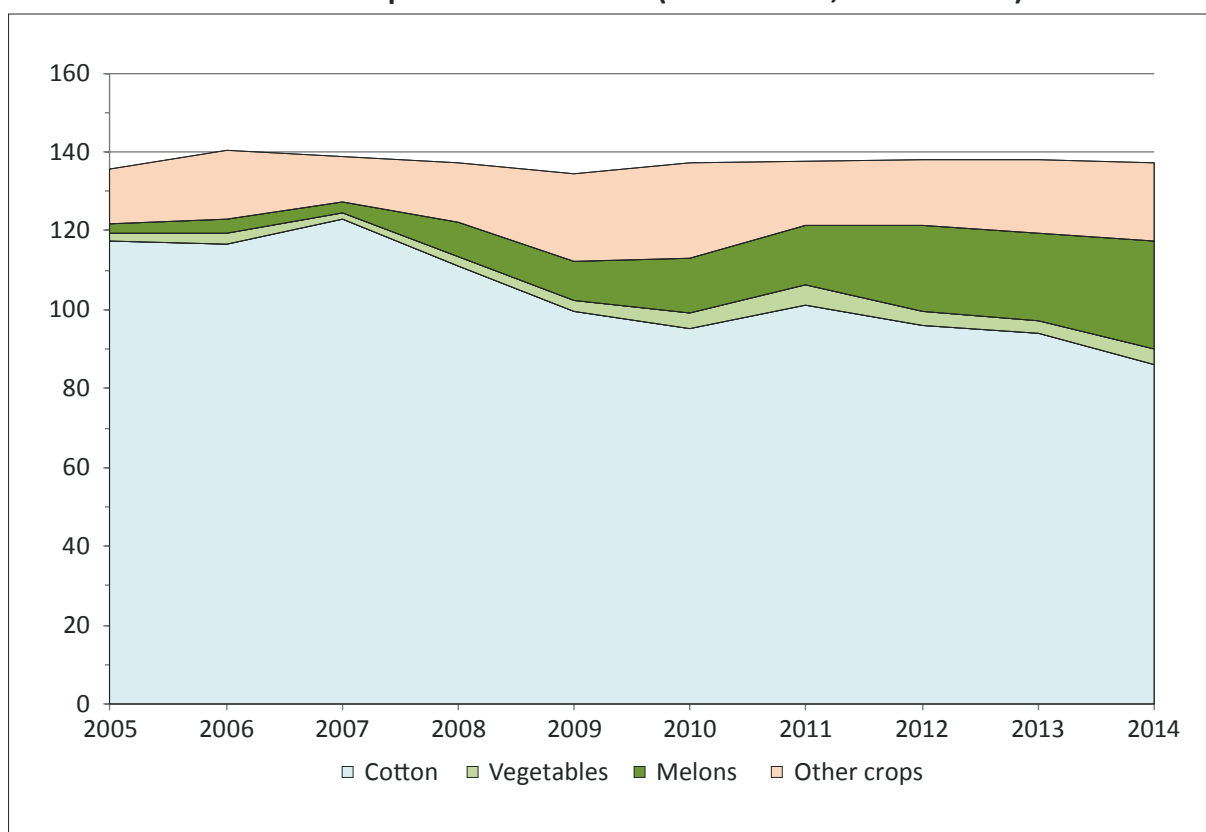
5.5 Water shortage and crop diversification away from cotton

While the failure of the cotton regulation likely contributed to the decline of cotton production in a significant way, two other factors reinforced this trend: a perceived shortage of irrigation water and the government strategy of active crop diversification away from cotton.

The natural scarcity of water resources has recently been exacerbated by increasing supply uncertainty due to political tensions with neighboring Uzbekistan. The crucial source of irrigation water for South Kazakhstan farmers is the Syrdarya river originating in the Fergana valley of Uzbekistan. The main supply is provided by the artificial Dostyk ("friendship") Canal. This canal is an unlined earth canal that diverts water from the Syrdarya river at the Farkhadskaya Hydroelectric Complex located in Uzbekistan across the border to the South Kazakhstan cotton region. In 2008, Maktaraal district of South Kazakhstan province faced a critical shortage of water. The daily water intake from Dostyk Canal had fallen to 20 m³/second, less than half of the 70 m³/second guaranteed by a memorandum that had been signed by the Kazakhstan and Uzbekistan governments in 2000. Local authorities in Maktaaral were forced to appeal to the national government. The issue was solved after the government issued a warning to the Uzbek side (RFE-RL 2008). The water supply was restored to adequate levels; however, farmers learned the lesson about the uncertainty of water supply.

Moreover, to promote crop diversification in South Kazakhstan, the province government had drafted a comprehensive plan for the diversification of cropland in Maktaaral district. The main

Figure 11. Area sown to cotton, vegetables, melons and other crops in Maktaaral district, South Kazakhstan province 2005-2013 (thousand ha, stacked data)



Source: Department of Statistics of South Kazakhstan province.

stimulating instrument was a hectare-related payment for the production of alternative crops, in particular vegetables and melons. It went along with an information campaign carried out by local authorities explaining to the farmers the possible benefits they can get by switching to other crops other than cotton (Kazinform 2013). Indeed, since 2008, the area under melons and vegetables has consistently been growing in Maktaaral, the major cotton producing district (Figure 11).

In South Kazakhstan province in total, vegetables and melons together occupied about one quarter of the arable land allocated to cotton in 2005. Since 2012, cotton has been grown on less land than vegetables and melons together.

Yet, there are constraints on the expansion of other cash crops on lands previously occupied by cotton. First, cotton land is often saline, which limits the choice to salinity-tolerant crops. Rehabilitating these lands would require investments into drainage infrastructure which is mostly operated using electric pumps. It is thus expensive for small family-operated farms. Implementing a complex program of crop diversification and soil rehabilitation, state agencies have taken over the management of irrigation and drainage systems recently, after failed attempts to install decentralized water user associations (Zinzani 2015). Even so, the current agricultural development program “Agribusiness 2020”, which was adopted in 2013, continues to stimulate crop diversification by paying higher subsidies for priority crops and supports farmers by promoting moisture-saving technologies (drip irrigation and no-tillage), compensating costs of mineral fertilizers and herbicides and partially reimbursing lease payments.

5.6 Follow-up reform in 2015

In July 2015, the government responded to the problematic situation in cotton financing by ratifying the law “On introducing amendments and additions to some legislative acts of Kazakhstan on the development of the cotton industry”. This time, members of a parliamentary committee were able to convince the Minister of Agriculture of the proposed changes. The key modification was to lift the ban on complementary business activities of cotton processors codified in Article 15 of the law (Table 1). However, the ban on using property as collateral was kept in place.

Table 1. 2016 amendment of Article 15 of the cotton law

Version 2007-2015	Version 2016
“Cotton processing organizations shall be prohibited to carry out an entrepreneurial activity, not related to the activity of rendering of services on warehouse activity with issuance of cotton receipts, as well as to issue a guarantee and use their property as collateral under obligations to third parties.”	“It is forbidden to alienate basic assets without which providing warehouse services becomes completely impossible or significantly deteriorates, as well as to issue guarantees and (or) use assets as collateral under the obligations to third parties.”

6 Conclusions

Two and a half decades of economic transition to market economic principles have witnessed a spectacular growth and an almost equally spectacular decline of cotton production in Kazakhstan. The turning point was marked by the 2007 adoption of the “Law on the development of the cotton sector”, which for the first time after the demise of Soviet central planning reintroduced

comprehensive government regulation in the cotton chain. However, rather than improving vertical coordination and stimulating output growth, the available evidence suggests that it had the opposite effect. The state-mandated cotton cluster did not take off. Cotton area declined, despite significantly increased subsidy levels offered to cotton farmers in the post-regulation period. So what went wrong with the regulation of the cotton sector?

- The (possibly well-intended) warehouse system was imposed on the cotton chain against opposition by the key stakeholders. It was forced upon the chain by effectively outlawing the previous, privately managed funding system.
- However, the institutions necessary to make the system work were either not in place or were not trusted by the stakeholders in the system. It turned out impossible to establish a sufficient number of certified warehouses, and the producers and banks were not willing to rely on the credibility of the warehouse receipts.
- A state-controlled cotton processing cluster was established in a logistically suboptimal location and it failed to take into account the subprime quality of Kazakhstani cotton.
- To a certain extent, the provincial government thwarted the cotton cluster strategy by subsidizing farmers to diversify into other crops, such as vegetables or melons.

Taken together, a functional, privately operated value chain was distorted by the implantation of a set of poorly managed state enterprises and institutions. Instead of benefiting from market opportunities, producers are now alimented with subsidies. The main consequences of the cotton sector regulation were a shrinking area sown to cotton, decreasing cotton output, declining processing capacity, falling exports, disenchanted investors, and an increase in government spending. Factors mostly exogenous to the cotton regulation reinforced the downward trend, such as the global financial crisis and the increasing perception of irrigation water scarcity in the region.

In retrospect, there seemed to be no evident need for imposing strong regulation on a privately operating sector. Reacting to complaints about market power of gineries, a more reasoned policy would have strengthened the bargaining position of the small producers, for example by improving market information and encouraging the establishment of storage capacities.

The Kazakhstani government is well known for preferring a top-down industrial strategy administered by bureaucrats and pushed by generous subsidies funded from oil revenues (Petrick et al. 2014; Wandel 2009). The recent experience in the cotton sector provides yet another example how such a strategy, coupled with distrust in independent entrepreneurial initiative and market coordination, fails to reach its possibly well intended goals of stimulating economic growth and diversifying the economy. As argued before (Petrick et al. 2014), the quality of regulatory measures turns out to be more important than the availability of massive state funding for production lines that were hand-picked by the cabinet of ministers. In this case the result is even more lamentable, as the lost value added by the previous export chain must be added to the cost of wasted government resources.

The evidence presented here suggests that a liberal reform of the cotton law that relaxes the constraints on processor funding might restore the vibrancy of the cotton sector. It could leave a possibly modified institutional set-up for voluntary warehousing still in place. Furthermore, it seems the government would fare better in leaving it to private entrepreneurs to find out about the best investment options in the cotton chain, including the location of processing plants.

After all, the gin managers had shown once before how to turn a formerly state controlled and run-down sector into a dynamic segment of the rural economy.

Whether ginning operators could replicate this exercise in a different regulatory environment remains uncertain, though. Farmers may have come to appreciate the advantages of a more diversified cropping pattern in the meantime. Crop diversification has many economic and ecological benefits (Bobojonov et al. 2013), such as diversifying the income risk of farmers, reducing water consumption or increasing water productivity, and levelling the peaks of seasonal labor demand during harvest time. As an unintended side effect of the cotton law, the evident diversification path chosen by farmers in South Kazakhstan may still produce more sustainable economic and ecological outcomes in the long run than a return to the cotton monoculture.

The widespread salinity of the soils and the continued need for irrigation may require additional regulatory effort on the side of the government, even if farmers decide to turn away from cotton. Healthy crop rotations should include fodder crops, which raises questions concerning the future of livestock production in the region. Lacking food quality and safety standards and absent domestic meat and dairy value chains call for careful public regulation (OECD 2013; Petrick et al. 2014). Similar efforts are required to ensure a sustainable irrigation water supply in the future (Zinzani 2015).

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Chronicle of policies that affected agriculture in South Kazakhstan province after 1991

Dauren Oshakbayev and Regina Taitukova, July 2016.

Date	Title of the legal act	Type	Description	Impacts
14.01.92	Law on Privatisation of the Property of State Agricultural Enterprises	Farm restructuring	The Law is aimed at overcoming the monopoly in the production of the agricultural commodities by creating various forms of property and management, creating conditions for the transition to the market economy in agriculture, promoting free competition among producers, stimulating free enterprise for the purpose of increasing the efficiency of agricultural production and the improvement of the delivery of commodities and food to the population.	<ul style="list-style-type: none"> The process of privatization involved 853 state farms in 1994. This increased the total number of privatized farms to 1,490, what constitutes two-thirds of the total number of all state farms of 2,120 designated for privatization. In 1995 the privatization of 477 agro-farms was assumed. In September 1995, 349 of them were privatized which constitutes 149% of the assumed plan for the first half year. This policy, however, has led to little (other than nominal) farm restructuring so far due apparently to delays in titling. Certificates of ownership had been distributed for only 65 farms by the end of 1994. In practice, most farms continue to operate collectively as many technically specialized farm workers have yet to acquire the necessary skills to run a private family firm (Jermankowicz et al, 1996).
22.12.95	Presidential Decree On Land	Land reform	<p>The Presidential Decree on Land officially recognized private land ownership in Kazakhstan. Citizens could privates land plots in rural households as well as land used for dacha gardens. It also became possible to transfer ownership rights to private legal persons, including foreign ones. However private ownership rights did not apply to agricultural and some other lands (OECD, 2013).</p> <p>The law "On land" 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. 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. Holders of conditional land shares had the right to: A) Transfer the land share right to the base capital of a business enterprise or as a unit share of a newly formed production cooperative, B) Withdraw a land plot in kind to form a family farm or for commercial farm production, C) Transfer or lease the land share right, D) Lease out the conditional land share right, or E) Abandon the conditional land share right (Dudwick et al, 2007).</p>	<ul style="list-style-type: none"> By 1997, some 2 277 000 conditional land shares of an area of 118 million hectares had been granted to recipients. By 2002, owners of conditional land shares exercised their rights in the following ways: <ul style="list-style-type: none"> A) 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, and other persons who were better informed or were entrepreneurial. Those persons gained access to the assets of newly formed farming companies. B) 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. C) 4% were sold to commercial farms. D) 3% were transferred (given) to other persons. E) 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. F) 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 (Dudwick et al, 2007).

Date	Title of the legal act	Type	Description	Impacts
27.09.96	Law No. 36-1 On Ratification of The Loan Agreement (Irrigation and Drainage Improvement Project) Between the Republic of Kazakhstan and The International Bank for Reconstruction and Development on June 25, 1996	Water reform	<p>Main development objectives were to: A) promote sustainable irrigated agricultural production through irrigation and drainage rehabilitation, improved water management, and better operation and maintenance; (B) introduce improved agricultural practices and farmers' information services; and (C) strengthen irrigation and environmental agencies.</p> <p>The project included three components: Component 1 – Rehabilitation of Irrigation and Drainage Systems (\$108.14 million); Component 2 – Promoting Agricultural Development in Privatized Farms (US\$2.27 million); Component 3 – Institution Building (US\$5.65 million).</p>	<ul style="list-style-type: none"> • The project involved rehabilitating irrigation and drainage infrastructure on 32,000 ha in 9 oblasts. • The crop yields have increased between 12-200%. Overall the cropped area has doubled with the Project. • Annual water savings in the rehabilitated subprojects are substantial (1,300 cubic meters per hectare on average). • The procedure for forming WUAs was developed as part of a detailed study. • For the "training of trainers," twelve training modules with 22 courses were designed. For "farmers' training," 39 training courses were provided to over 1,000 participants in various locations in the field. For demonstration and field days, 10 demonstration plots were developed. • Challenges remained in the areas of performance of RCCs and WMOs and adequacy of O&M arrangements, primarily due to a lack of post-project institutional and extension support (World Bank, 2005).
31.03.98	Law No. 214 On Peasant Farming	Farm restructuring	<p>The law is the main legal framework for family farms, allowing both temporary (leasehold) and permanent use arrangements. Owners must be members of the same (extended) family. Although many of them are actually involved in significant commercial activities, individual farms are regarded as non-commercial farms and are not subject to enterprise legislation (Gray 2000).</p>	<ul style="list-style-type: none"> • Since the law provided advantaged to peasant farms (PF), many people prefer to form these kinds of farms, even if their farms are not small and are commercial enterprises. Land in the south is scarce due to high population density. The farm sizes are at 3–6 hectares. However, in the north, east, and west, where grains are the major crops, the PFs are more diverse in size and business activity, ranging from 50–2000 hectares (USAID, 2005).
05.06.02	Presidential Decree On State Agro-Food Program of the Republic of Kazakhstan For 2003-2005	Agricultural development	<p>The program includes measures to intensify the agrarian economy, reduce costs through the use of science-based agricultural technologies, which will inevitably lead to an additional release of people employed in the industry in the future. To realize the state program of development of rural areas KZT 121,6 billion has been allocated. Of these, KZT 40,5 billion were allocated from the national budget, KZT 53.8 billion from local budgets and KZT 27,2 billion from other sources.</p>	<ul style="list-style-type: none"> • The adoption of the program has become a turning point in the development of the agricultural policy, which marked the shift to active policies to stimulate agricultural growth. The budget of the Ministry of Agriculture was increased, its share in the republican budget increased from 2,5% in 2001 to 6,5% in 2005 (OECD, 2013). • The funds of the Program were used to construct or renovate about 4,200 community facilities and engineering infrastructure, provide gas to 94 settlements, repair more than 600 kilometres of roads and set 579 km power lines in the countryside. Energy supply increased by 17% (Akorda). • The program initiated two particular breakthrough ideas, which significantly affected agriculture. First, through leasing through KazAgroFinance, which allowed for an update of the agricultural machinery. Second, the establishment of credit cooperatives through the AgroCreditCorporation. As a result 131 rural credit cooperatives had been established by 2005. They issued credits totalling KZT 13,3 bn .

Date	Title of the legal act	Type	Description	Impacts
08.04.03	Law No. 404 on Agricultural Water-User Cooperatives	Water reform	Laid a basis for the irrigation management transfer (IMT) with the help of the international donors.	<ul style="list-style-type: none"> • The IMT in South Kazakhstan region has not reached its aims; the WUAs are characterized by a top-down approach; no efficient governance structures; no elections for directors and administrators and a significant lack of water users' participation in decision-making processes. • The support for a fairly executed IMT process has been partly lacking both from the water users and the state authorities; the water users, instead of self-promoting bottom-up practices, participation and support for water fee collection, have preferred water control ensured by the state organizations, albeit with lacks. • The government, which gave the farmers the possibility of establishing WUAs and recognized the recent associations' failures, nowadays despite encouraging private farmers' action and new WUAs' establishment, is supporting, both financially and politically, the state enterprises (Zinzani 2015).
20.06.03	Land Code of The Republic of Kazakhstan No. 442	Land reform	Provides for establishment of foundations, the conditions and limits of, modification and termination of ownership of land and land-use rights, about the rights and responsibilities of landowners and land users, regulation of land relations in order to ensure the rational use and protection of land, reproduction of soil fertility, conservation and improvement of the environment, creating conditions for equitable development of all forms of management, protection of land rights of individuals and legal entities and the State, the creation and development of the real estate market, strengthening the rule of law in the field of land relations.	<ul style="list-style-type: none"> • The Land Code allows for private ownership of land, a move that is perhaps more important for small farms for collateral. However, land not already in family farms can be obtained only by purchase. Moreover, owners of land use rights will no longer be allowed to sublease their rights for farming. Those stipulations of the 2003 Land Code seem to raise the costs to small farmers of operating in Kazakhstan (Dudwick et al., 2007). • The widespread practice of subleasing shares or demarcated land plots received under previous privatisation steps was outlawed. On 1 January 2004, of the 23 million ha of agricultural land in the North Kazakhstan, shares equivalent to 4.8 million ha and 6.3 million ha of land plots were under sublease and 18 thus affected by this regulation. • Whereas agricultural enterprises benefitted from the new legislation, individual farms were discriminated against, as they could not acquire land shares from rural residents via the interim provisions. Moreover, the swift formal implementation of the land code was accompanied by a campaign apparently promoted by governmental officials recommending the merger of small farms into limited partnerships (called "merging small farms campaign" by USAID 2005, 23, 31). • Some farmers established new types of organisations in the legal form of a simple partnership. Such simple partnerships are regarded as natural persons with a status similar to an individual farm (USAID 2005). However, no family ties were required to form the partnership. Former parties in a lease contract could thus rescue this relationship in a legally acceptable manner by transforming it into a simple partnership. • Whereas land sales are now possible in principle, such transactions require large capital investments and a long-term planning horizon. Both conditions are often not met, so that land sales remain rare. Land users rather prefer to base their operations on land rentals from the government at a low normative price determined by law (Petrick et al., 2011).

Date	Title of the legal act	Type	Description	Impacts
09.07.03	Water Code Of The Republic Of Kazakhstan No. 481	Water reform	<p>The objectives of water legislation of the Republic of Kazakhstan are the regulation of water relations of the purpose of rational and sustainable water use, the protection of water resources from pollution and exhaustion, and the improvement of the legal framework with respect to water relations.</p> <p>The document was founded on international principles of fair and equal access of water users to water. The priority was given to the drinking water supply.</p>	<ul style="list-style-type: none"> An important innovation of the Water Code was the strengthening of the basin principle of water management. For example, the role and goals of Basin Water Departments, previously defined by the Water Resources Committee, are now included in the Water Code. In order to define and coordinate the activities of various governmental and non-governmental entities of water relations, such as associations of water users, non-governmental water organisations etc., the Water Code provides for them to enter into basin agreements on the rehabilitation and protection of water sources and basin councils. A basin council is an advisory body set up at the basin level to jointly resolve issues of water fund use and protection and implement signed basin agreements. In addition, the Code focused more attention on trans-boundary waters and included a special section on international cooperation in this area (UNDP, 2004).
06.07.05	Decree of the President of Kazakhstan on July 6, 2005 № 1605 On creation of special economic zone Ontustik	Agricultural development	Aimed at promoting development of the textile industry, in particular the production of readymade garments, stimulating the integration of Kazakhstan national economy into the global market economy system, encouraging international trademark owners to set up manufacturing of ready-made textiles in Kazakhstan, setting up high-tech manufacturing facilities, and expanding the range of produced textile goods.	<ul style="list-style-type: none"> SEZ Ontustik was criticized prior to its launch for remoteness from the main cotton producing areas (about 250 km). The project was also considered as unfeasible due to low quality of Kazakh cotton, which is normally of the third grade and can, at best, reach the second grade, whereas textile products of high quality are made primarily from cotton fibres of the first and the highest grade. The latter is not in a sufficient amount available in Kazakhstan.
08.07.05	Law No. 66 on State Regulation of the Development of Agriculture and Rural Territories	Agricultural development	Focused on enhancing rural productivity in agricultural and non-agricultural activities, and on helping farmers to introduce improved food standards.	<ul style="list-style-type: none"> It has become the framework law on agricultural policy that set out the principles and key definitions related to agricultural policy, defined competencies and the division of responsibilities between the state authorities at different levels in policy formulation and implementation, and identified key support mechanisms and instruments. This law remains today the basic legal document guiding the formulation and administration of agricultural policy in Kazakhstan (OECD, 2013).
21.07.07	Law on the development of the cotton sector	Agricultural development	The law was expected to expand access of the farmers to cheaper finance by creating a system of circulation of the cotton receipts among participants of the cotton market similar to grain receipts, which allowed for opening of the credit lines of the several international financial institutions via Kazakh agent banks.	<ul style="list-style-type: none"> Analysis of the socio-economic impact of the Law, as well as analysis of law enforcement practice demonstrated low efficiency of the law. Up until 1997 area under cotton has been relatively stable and amounted to approximately 110 thousand ha. The area has been continuously expanded in 1998-2004 and reached 224 thousand ha by 2007. This growth was driven by 2 main factors: (1) increasing world price of cotton; (2) established system of financing producers by processors – cotton processors took short-term loans secured by assets and signed forward contracts with producers. The cotton industry was the only example of the widespread use of vertical coordination. The law of 2007 prohibited crop processors to carry out “entrepreneurial activity as well as to issue guarantees and to provide their property as collateral to the third parties». The vertical coordination was thus destroyed. By 2012 the area under cotton has shrunk to 147,8 thousand ha. Analysis of legal practice of the Law has shown that the basic idea on the introduction of cotton receipts which were intended to give cotton growers the opportunities to attract financial resources, in reality proved to be an ineffective measure. Cotton producers and representatives of local administration confirmed low efficiency of cotton receipts. The banks refused to take cotton receipts as collateral for loans.

Date	Title of the legal act	Type	Description	Impacts
06.05.09	Government Decree On approval of rules (procedures) pricing of cotton fibre	Agricultural development	Cotton is included in the list of exchange commodities.	<ul style="list-style-type: none"> • Cotton is subject to a special control over transfer pricing, and cotton exporters are subject to systematic checks.
18.02.13	Government Decree No. 151 On Program Of Agricultural Agribusiness – 2020	Agricultural development	<p>The Agribusiness 2020 program formulates a single overarching policy objective; that is, to create conditions to enhance the competitiveness of agri-business. In contrast to the previous agricultural program, no specific self-sufficiency targets are set. The new program maintains the policy orientation taken since the early 2000s to boost agricultural production as part of the strategy to diversify the national economy. More recently, additional emphasis was placed on assisting local producers to face competition in view of integrating international trade. Other objectives associated with agricultural development, such as the sustainable use of resources and rural development, are not mentioned. The principal domestic support mechanisms are carried over from the previous program, including interventions in the grain market, output subsidies for livestock producers and area payments for crop growers. Various support based on variable inputs and capital investment will continue, including concessional credit. The new components of Agribusiness 2020 are the measures concerning the financial rehabilitation of the sector, as well as proposals on the reform of the state-supported credit system. Agricultural producers will continue to benefit from considerable tax concessions, although several tax reforms are under discussion.</p>	<ul style="list-style-type: none"> • Gross agricultural output in 2014 amounted to KZT 2.5 trillion, which is slightly higher than in the previous year by 0.8%. • Food production increased by 2.9% in 2014 compared to the previous year. • Due to the investment subsidies total investments in fixed capital in agriculture in 2014 increased by 14.4% compared to the previous year and amounted KZT 166,4 bn. (Ministry of Agriculture of Kazakhstan).

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