LAND REFORM AND DEVELOPMENT OF AGRICULTURAL LAND MARKETS IN RUSSIA

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Abstract

Russia has experienced dramatic changes in land ownership and tenure since 1991: agricultural land has been largely privatized, individual landowners now have legal rights to most agricultural land in the country, and prohibitions on buying and selling of land have been recently removed. The necessary pre-conditions for the development of agricultural land markets have been met and we are beginning to witness transactions that involve individual landowners, and not only the state. Further development of the land market is circumscribed by the inadequacy of the administrative and technical infrastructure. The paper discusses the evolving legal framework for land reform, considers the impacts on privatization and ownership structure of agricultural land, and analyzes the development of land market transactions. The analysis uses official statistical sources and the results of a 2003 survey in three regions.

Keywords: land reform, land market, land leasing, transition.

JEL classification: P23, P26, P31, P32, Q15.

This paper examines the dramatic changes in land ownership and land tenure that have occurred in Russia since the dissolution of the Soviet Union at the end of 1991. We start with a discussion of the legal framework for land reform that crystallized in the early 1990s and has continued to evolve dynamically ever since, consider the impacts of land reform on privatization and ownership structure of agricultural land, and analyze the development of land market transactions. The analysis is based on official national sources and the results of a questionnaire-based survey conducted by the authors in 2003 a part of a BASIS/CRS research project (referred

to as 2003 BASIS survey in the text). We conclude with a review of the existing constraints on land transactions and some policy recommendations.

1. Legal Framework and Land Reform Outcomes

Russia's agricultural land area has remained remarkably stable at 220 million hectares since 1990. On the other hand, agricultural land used by producers (both corporate and individual farms) dropped from 214 million hectares in 1991 to 195 million hectares in 2003 – a decrease of 16% during the transition. Most of this "missing" land was transferred to the state land reserve, which is a pool of land available for allocation to producers but not currently in use. Table 1 shows the structure of agricultural land resources by users in 1991 and 2003. In addition to the features discussed above, it demonstrates the substantial transfer of land from corporate farms (former kolkhozes and sovkhozes) to the individual sector: corporate farms lost 59 million hectares, or nearly 30% of their total land endowment in 1991, while the individual sector gained 40 million hectares (the remainder was absorbed in the state reserve and by user reclassification).

Table 1. Structure of agricultural land by users 1991 and 2003 (beginning of year)

	Million hectares		Percent	
	2003	1991	2003	1991
Total agricultural land	220.9	222.1	100.0	100.0
Used by farms	194.6	213.8	88.1	96.3
corporate farms	150.4	209.8	68.1	94.5
peasant farms	17.0	0.1	7.7	0.0
household plots	11.8	3.9	5.3	1.8
municipal meadows and pastures in household use	15.4	0	7.0	0
Reserve land	13.8	1.8	6.2	0.8
Other users	12.5	6.5	5.7	2.9

Source: Goskomstat (2003a).

Reform Legislation

Land in Russia (and in other parts of the former czarist empire) was nationalized within days of the Bolshevik revolution in October 1917, as Lenin's Decree on Land (*Dekret o zemle*) transferred all land to the state and prohibited private land ownership. Land nationalized was

followed in 1929-30 by forced collectivization, and by the end of the 1930s a relatively small number of "socialized" farms (about 30,000 in total) controlled 98% of agricultural land. Despite pervasive collectivization and monopolistic state ownership of land, private agriculture persisted in the form of millions of small household plots of less than 0.5 hectare cultivated by rural residents.

After more than seven decades of state monopoly in land ownership, the first signs of readiness to reform the Soviet land-tenure system appeared in 1989, when the traditional policy of giving state land in use rights only was relaxed and a new category of lifetime inheritable possession (*pozhiznennoe nasleduemoe vladenie*) was introduced. Security of tenure was formally ensured, but land transactions (including subleasing) were absolutely prohibited. In October 1990, more than a year before the dissolution of the Soviet Union, Russia passed the Land Reform Law and adopted a constitutional amendment that actually recognized the right of private ownership in agricultural land. As a compromise, however, the amendment imposed a 10-year moratorium on buying and selling of land in private ownership and restricted alienation of land to the state (and not to other landowners). This legal restriction remained in force until 2003.

The trail-blazing constitutional amendment was followed by the Russian Law on Peasant Farms (December 1990), which legalized private farming, allowed distribution of collective land in the form of paper shares to members, and provided the option of withdrawing land plots for the establishment of an independent peasant farm outside the collectivist framework. Russia's new Land Code passed in April 1991 formalized these various legal initiatives and laid the road for mass privatization of agricultural land.

Land ownership is an emotionally charged issue in Russia. The passage of reform-oriented land laws was accompanied by dramatic political debates, and the sharply opposed positions of the reform-minded executive and the highly conservative legislature prevented the development of a full-fledged legal privatization mechanism for more than a decade. The main sticking point was the right to buy and sell privately owned land – a basic inalienable right associated with private land ownership in market economies. The two branches of government could not agree on this point, and all the legal advances since mid-1991 were realized in the form of presidential decrees and government resolutions – temporary instruments that required ultimate codification in permanent laws. Ownership rights in agricultural land (including buying and selling) were finally normalized in January 2003, when the Law on Agricultural Land Transactions came into force.

In 1991, agricultural land held by collective and state farms began to be distributed in the form of land shares to individuals, who could then withdraw their land allocation for the establishment of a peasant farm. Alienation of land in peasant farms was allowed only to the state (in practice, to local authorities), not to other individuals. Starting in early 1992, land shares still held in the form of paper certificates could be sold to other members of the collective or to the collective farm as a legal body; physical land plots could be sold only under special circumstances (when the landowner retired, when the plot was passed in inheritance, when the peasant farmer relocated to another region, or when the seller undertook to use the proceeds from the sale of land for the establishment of a non-farm business). Procedures adopted in March 1993 allowed buying and selling of land for household plots and other individual uses (dachas, gardening, individual housing).

In practice, the legal ban on buying and selling of agricultural land was bypassed even before January 2003 by presidential decrees and government resolutions. These decrees and resolutions allowed buying and selling of land shares (first to other members of the collective, and since October 1993 practically to any buyer). Having purchased a land share, the new shareowner could request its conversion into a land plot. The transferability of land shares has led to substantial redistribution of land ownership and land use in former collective farms. Presidential decrees and government resolutions also allowed (since October 1993) conversion of land shares into physical plots for household farming. Once the ownership of the new addition to the household plot was officially registered, it could be sold and bought in accordance with the different rules applicable (since May 1993) to land in household plots. A market has thus emerged for relatively small plots created through conversion of land shares by family members. The national average land share was about 10 hectares, and some regions actually allowed expansion of household plots to the combined size of the land shares held by all family members. In principle, the size of a household plot in the fields outside the village limits could thus reach several tens of hectares, which is comparable with the average size of a peasant farm.

Beyond the psychological opposition to buying and selling of land, other emotional issues included the concern about concentration of land ownership in the hands of few physical persons or corporations ("latifundiazation" of agricultural land), the fear of excessive fragmentation of land during privatization, loss of land holdings by former collective farms due to their weak financial situation and danger of bankruptcy, and that perennial bogey, the sale of Russian land to foreigners. The provisions of the 2003 Law of Agricultural Land Transactions were designed to address these concerns. While buying and selling of land plots (as well as land shares) was allowed, the state retained a preemptive right on land purchases; regional governments could

impose limits on physical concentration of land by a single owner (typically 10% of the agricultural land in the district), on the one hand, and also limits on the minimum size of physical plots that could be surveyed and registered for farming purposes (household plots were exempt from this restriction); foreigner and companies with majority foreign capital could only lease agricultural land, not own it.

Land Privatization

Contrary to the Baltic states and most countries in East Central Europe, Russia chose to privatize agricultural land by distribution to users, not restitution to former owners. The initial legislation in 1989-91 focused on the principle of private ownership of land and the procedures for distribution of state land for individual farming (household plots, small-scale gardeners and vegetable growers, peasant farmers). Mass privatization was launched in 1991-92, when large chunks of state land were privatized into joint ownership of the rural people who lived and worked in collective and state farms. This formal privatization affected most of the agricultural land in collective and state farms, while the rest of agricultural land and other rural land (including land under farm buildings, for instance) remained state property (creating the so-called redistribution reserve for future municipal and farming needs). The privatized land was then divided into equal shares, and each adult – collective farm worker, pensioner, or employee of rural social services – received one land share. The size of the share was determined by land availability in the district and was rigidly controlled.

A land share is a paper entitlement of fractional ownership in the agricultural land transferred by the state to the collective. This mechanism created a new ownership category that became known as "joint shared ownership". This was no longer state ownership (hence the use of the term "privatization"), but it was not individual ownership either. The reform laws typically

allowed shareowners to withdraw physical land plots from joint shared ownership into individual ownership, but the requirement to survey and register the plot (with all the attendant costs and administrative complications) was deferred to the time in the future when the shareowner would actually decide to withdraw his or her land from the common pool of owners.

Russian land privatization quickly produced 11.9 million shareowners with land shares covering 117.6 million hectares, or 9.9 hectares per share. By 1995 the state had privatized through land shares fully 56% of the original 209.8 million hectares controlled by former collective and state farms at the beginning of reform. The remaining land was transferred to the state redistribution reserve, which provided the pool of land for future creation of peasant farms, expansion of household plots, and various municipal needs.

The distribution of land shares immediately placed the shareowners in a decision node: they could choose to start an independent business by withdrawing their land from the collective; on the other hand, they did not have to do that, as they could simply leave their land shares in joint cultivation by the existing collective farm (which meanwhile had reorganized as a corporate farm in one of the standard organizational forms, such as shareholding company, limited liability company, partnership, or agricultural cooperative). It was clear from the outset that most shareowners would not start an independent farm and instead would prefer to keep their land shares in the collective. It suffices to mention that in 1992 half the shareowners were elderly pensioners. With time, rural people developed mixed conversion strategies, with several members of the same family or groups of relatives and neighbors pooling their paper shares to receive one contiguous land plot in return. One of the villages in Leningrad Oblast provides a typical example of such “home-made consolidation”: 6 families holding jointly 17 land shares were allotted 6 consolidated plots, with each family receiving a single plot of appropriate size,

regardless of whether its individual members had 2, 3, or 5 land shares. This share consolidation strategy is a natural response to the concerns about excessive fragmentation of individual land plots. In retrospect, distribution of land shares has proved more effective and less costly for land consolidation than distribution of physical plots. This is evident from any comparison with the experience in East Central Europe, where land fragmentation and consolidation efforts are still a major issue after nearly fifteen years of transition.

The privatization process itself provided the trigger for the first land market transactions in Russia. The former collective and state farms, now reorganized as corporate farms of various types, were formally left without any land for farming. They had to turn back to the newly created shareowners and lease their land shares or alternatively entice them to invest their land shares in the equity capital of the corporate farms. Initially, it was not too difficult to persuade the new shareowners not to withdraw their land and to let the corporate farm continue using it. However, as time went on and people began to get used to the new market mechanisms, some shareowners would withdraw their land from the former collective farm and lease it to another producer offering more competitive terms. A shareowner actually could avoid the bureaucratic hassle of withdrawing a land plot and simply lease out the land share. The lessor would then negotiate for a specific plot with the manager of the collective farm where the share was originally used. A two-tier leasing system has thus developed: leasing of land shares from individual shareowners (either by the original corporate farm or by other producers) and leasing of land plots from individuals who have independently converted their land share into a plot. All in all, it seems that the Russian land privatization strategy, based on distribution of land shares instead of the more conventional (to the Western observer) distribution of individual land plots, has had clear beneficial effects on the level of transaction costs, although possibly it delayed the

productivity improvements normally associated with individual ownership and control of land. The 2003 Law on Agricultural Land Transactions has interfered with this established process by prohibiting leasing of land shares and requiring that a land share be converted into a physical plot before it could be leased. However, the conversion of land shares into plots involves substantial costs and bureaucratic complications (see section 3).

In addition to transactions in private land, there are naturally transactions involving state-owned land. Original distributions of state land to peasant farmers and households (up to specific limits) were free. After that, state land has to be leased or purchased. Both types of transactions for state land legally require an auction or at least a bidding process, but in many cases this requirement is bypassed in practice.

Land Ownership Structure

The structure of agricultural land ownership that has emerged as a result of privatization is presented in Table 2. The share of state-owned agricultural land dropped from 100% before 1990 to around 40% today. Nearly 60% of agricultural land is now privately owned, but most of this land (51%) is represented by land shares – abstract (though transferable) pieces of paper corresponding to virtual plots. Only 6% of agricultural land is in the form of physically demarcated plots, most of it owned by individuals (household plots and peasant farms).

Table 2. Agricultural land ownership 2003

	Million ha	Percent
Total agricultural land	220.9	100
Privately owned (as reported)	127.5	58
Individuals: land shares	112.7	51
Individuals: plots[1]	12.1	5
Corporations[1]	2.7	1
State owned (by difference)	93.4	42

Source: Total agricultural land from Goskomstat (2003a); breakdown by ownership fromRoszemkadastr (2002a), pp. 49, 57, 100, 109, and Roszemkadastr (2004), pp. 13, 253, 604, 616.
[1]About 2.5 million hectares held in peasant farms registered as legal bodies has been moved from the category of corporations (where it is formally reported) to the category of individual plots.

Examining the structure of land ownership by three main categories of users (corporate farms, peasant farms, and household plots), we see an astonishing similarity between corporate farms and household plots (Figure 1). For both types, about 30% of the land is state-owned and close to 70% is land owned by private individuals; land in corporate private ownership (leased from other corporate farms or invested by shareowners in the equity capital) accounts for a negligible 1%-2%. However, there is a huge difference in the kind of individual land ownership between corporate farms and household plots: virtually all individually owned land in corporate farms is in the form of land shares owned by the local rural population, while in household plots this is physically demarcated private land. Peasant farms have a smaller component of individually owned private land (about 40%, all of it in the form of physical plots) and they rely to a greater extent on land leased from the state and on land shares leased from outside owners who are not family members. This component of land leased in the form of shares from outsiders accounts for 18% of total holdings in peasant farms (shown as "other" in Figure 1). Some of the state land in individual farms is still reported in the old tenure forms (use rights or possession). Eventually this land will be transferred to private ownership of the users, increasing the

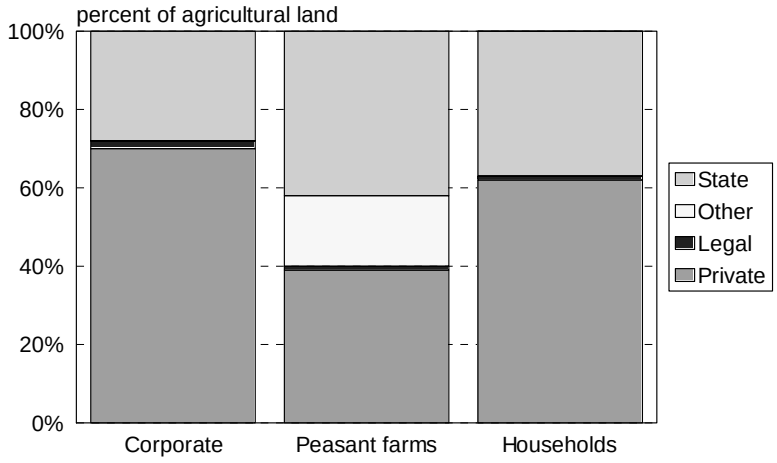

Figure 1. Structure of land ownership by farm type 2001.

component of individually owned land by as much as 25% in household plots and 15% in peasant farms.

Since 88% of privately owned land is represented by land shares (Table 2), it may be instructive to look at the disposition of land shares in corporate farms. According to Roszemkadastr data for 2004, 64% of the land shares are leased by corporate farms from individuals and 12% are given to corporate farms in use rights. The remaining 24% is represented by unclaimed land shares of beneficiaries who have died, left the village, or failed to exercise their right for other reasons (e.g., did not want to pay for the share certificate). The local corporate farm continues to use the unclaimed land shares by default.

The basic land privatization mechanism—distribution of land shares accompanied by the option of individual or group withdrawal with land—has created the basis for redistribution of agricultural land among users. In Lodeinopl'skii Raion in Leningrad Oblast, a local financial crisis provided a stimulus for a spate of reorganizations, which included creation of new corporate farms as well as expansion of peasant farms and household plots. The process did not involve any buying and selling of land and it was enabled by a flow of land shares from owners to new users. Among the six former collective farms in the district, more than 50% of land resources were redistributed by land share transfers. Most of the land was absorbed by new corporate farms (primarily through leasing), but about 10% of the land shares were taken up by peasant farms and household plots with the purpose of expanding their holdings. The remaining 48% of the land shares did not find new users, in part because the shareowners had died or left without assigning their use rights (about 20% of the shares). By default, these shares continue to be used by the (greatly downsized) former collectives. This example with half the land shares

transferred to new users and the other half remaining by default with the original user—a former collective farm—is typical of agriculturally poor regions, where the demand for land is weak.

2. Emergence of Land Markets

Land market transactions are divided into two main categories: buy-and-sell transactions that involve transfer of legal ownership; and leasing transactions that involve transfer of use rights from owner to tenant without change of ownership. The existing registration procedures ensure a fairly complete record of transactions in state land (both leasing and buying), but they do not capture any leasing transactions between individuals – whether plots or land shares. Buying and selling of land plots between private individuals and corporations is in principle covered by the statistics, but only to the extent that the buyers and sellers choose to go through the bureaucratic difficulties of registering the transaction (see section 3). Table 3 presents the structure of transactions in agricultural land, which constituted one-third of the total number of 5.6 million transactions in 2001.

Table 3. Transactions in agricultural land 2001: national statistics

	Number of transactions, '000	Percent
Leasing of state land to households	1,695.6	93.0
Leasing of state land to agricultural producers	81.4	4.5
Sale of state land to households	2.6	0.1
Sale of private land to households	44.5	2.4
Total transactions in agricultural land	1,824.1	100.0

Source: Estimated from Roszemkadastr (2002b), pp. 46, 52, 78, 84, 111, 113, 115. Data for later years not available.

Buying and selling of agricultural land by individuals is miniscule compared to land leasing from the state and shareowners. Statistics record 150,000 land-sale transactions annually between private landowners in villages, and the amount of land transacted is about 0.5% of their total holdings.

Land transactions and land market constraints cannot be studied only on the basis of official sources because no statistical data are available on transactions in agricultural land and land

shares and there is absolutely no information on the terms of land transactions, on the composition of buyers and sellers, or on supply and demand. At the present stage, the required data can be obtained only through specially designed questionnaire-based surveys. We carried out such surveys in three regions – Rostov, Ivanovo, and Nizhnii Novgorod – that differed by natural conditions, economic development, and the level of policy reforms. The surveys covered agricultural producers of three basic organizational forms (Uzun, 2005) – farm enterprises (a corporate form of organization), peasant farms, and household plots (two individual forms of organization). The discussion in the following subsections is based on the survey results.

Land Market Activity

The survey shows that only household plots rely mainly on owned land, while leasing is widespread among both corporate and peasant farms (Table 4). In corporate and peasant farms, the share of leased land is on average 60% of the total area of agricultural land used. In corporate farms, three-quarters of the leased land is in the form of land shares, and only one-quarter is leased as land plots. Peasant farms, on the other hand, tend to lease land plots to a greater extent (more than 40% of all leased land). The owned land in peasant farms consists of land shares and land plots allotted without payment to the members of the farm during land privatization (land in joint shared ownership), as well as land shares and land plots purchased in the market. The owned land of corporate farms consists of land shares invested by members in corporate equity capital. The share of owned land in corporate farms (36% in Table 4) is overestimated in part due to the incorrect interpretation of survey questions by the managers, who improperly regard leased land shares as land shares invested in their corporate farm's equity. According to official national statistics, the share of owned land in corporate farms is only 1.3% (see Roszemkadastr (2003b), p. 13).

Table 4. Sources of land in the survey (percent of the total area)

	Corporate farms (n=136)		Peasant farms (n=222)		Household plots (n=190)
Average farm size	4100 ha		270 ha		2.6 ha
Leased land	61		57		3
Leased land shares		(46)		(32)	--
Leased land plots		(15)		(25)	--
Owned land	36		42		93
Purchased land shares		(2)		(30)	--
Purchased land plots		(1)		(11)	--
Land shares invested in equity		(33)		(1)	--
Other	3		1		4
Total	100		100		100

Source: 2003 BASIS survey.
*The numbers in parentheses are rough estimates based on part of the respondents.

Respondents in 553 farms of various organizational forms in three regions reported 97 land transactions during one year. The frequency of transactions was virtually the same in farms of different organizational forms. There was only one case of selling land. All other transactions involved land leasing. Strengthening the data in Table 3, this shows that land leasing is a dominant form of transaction in land markets across Russia, and yet most of these transactions remain outside the scope of official statistics.

The survey did not detect any dependence of the frequency of land transactions on the distance from the regional center in the three oblasts studied. Yet we are witnessing a particularly active land market in areas close to Moscow and in Moscow Oblast, where land is bought for non-agricultural purposes. This subject requires a special study.

Reported Land Transactions

The incidence of land transactions in the sample is not very pronounced and basically only leasing transactions are reported. A total of 96 respondents (17% of the sample) report engaging in land lease transactions of some kind in 2001. Of these, 57 respondents (10%) report that they lease in additional land, 34 respondents (6%) report that they lease out land, and 4 respondents (1%) report both leasing in and leasing out of land.

Table 5. Lease-in transactions and prices by source of land (including leasing of plots and land shares)

Source	Number of transactions	Ha – mean	Ha – median	Number of price data	Price/ha – mean	Price/ha – median
Plots:						
Corporate farms	22	112	5	17	480	324
Private individuals	18	298	29	13	576	362
District administration	10	163	142	8	42*	48
Other	6	1,102	425	2	100-143	
Total plots	56	287	28	40	405	212
Plots from corporate farms and private individuals	40	196	16	30	522	343
Land shares from private individuals	13	1,198	524	13	607	420

Source: 2003 BASIS survey.

A total of 61 respondents (11% of the sample) reported acquiring additional land by **leasing in** 2001. The distribution of the frequency of transactions across the three organizational forms was not significantly different from uniform. The transactions included 56 instances involving leasing of physical plots and 13 instances involving leasing of land shares (land shares can be leased from private individuals only).

Table 5 shows the distribution of transactions by main sources of land and the estimated prices per hectare per year (mean and median). The prices reported for land leased from the district administration (40-50 rubles per hectare) were significantly lower than the prices paid to corporate farms and private individuals (400-500 rubles per hectare). There were no statistically significant differences in prices paid to private individuals for land leased in the form of plots or paper shares. This issue requires further study in a larger sample, as one would normally expect surveyed plots to fetch a higher price than land shares that involve additional transaction costs before conversion into physical land ready for cultivation (see also section 3).

The average amount of land per farm acquired through land shares is significantly greater than the amount of land acquired by leasing of physical plots. On the other hand, there are no statistically significant differences in the size of physical plots leased from different sources. The median plot areas in Table 5 seem to suggest that smallest areas are acquired from corporate

farms and largest from the district administration and other sources**.** However, the differences are not statistically significant.

Table 6. Distribution of farms of different organizational forms by sources of land

	Corporate farms (n=23)	Peasant farms (n=24)	Household plots (n=22)
Corporate farms	22	21	55
Private individuals – plots	22	21	36
– land shares	26	29	0
District administration	17	21	5
Other	13	8	4
Total	100	100	100

Source: 2003 BASIS survey.

There are no significant differences in access to different sources of land for corporate farms and peasant farms (Table 6). Unlike corporate and peasant farms, household plots do not lease land shares: they only lease land plots – mainly from corporate farms and to a certain extent also from private individuals. Their transactions with the district administration are minimal. This is also in contrast to corporate and peasant farms, for which more than 25% of lease transactions are with the district administration. These differences in the pattern of leasing sources, and specifically the preference of household plots for leasing land from corporate farms, may explain the observation in Table 5 according to which the smallest plots are acquired from corporate farms.

In addition to 61 respondents who lease in land, 38 respondents (7% of the sample) report **leasing out** land. It is mostly corporate farms that lease out land (13%), presumably because of lack of profitability and inadequate business opportunities. At the other extreme, only 1% of peasant farms lease out land – for exactly the same reasons, but in reverse. Household plots fall in between, with 9% leasing out land. A working hypothesis suggests that these are probably plots of older families, although lack of household demographic data in the survey instruments makes it impossible to check this hypothesis. The survey only reveals that farms lease out land predominantly because they are unable to cultivate it themselves. This is the reason provided by

32 out of 38 lessor farms. Yet these responses are equally distributed among corporate farms and household plots and we cannot learn anything about the specific reasons for leasing out land by household plots.

Table 7. Lease-out transactions and prices by source of land

Source	Number of transactions	Ha – mean	Ha – median	Number of price data	Price/ha – mean	Price/ha – median
Corporate farms	29	163	13	15	467	350
Private individuals	10	262	139	8	361	238
Other	2	100-191		2	24-158	
Total	41	186	28	25	403	310
Corporate farms and private individuals	39	188	18	23	430	325

Source: 2003 BASIS survey.

The average size and the average price received in leasing-out transactions are given in Table 7 (means and medians in the sample). The general pattern is essentially the same as for leasing-in transactions (see Table 5), except that district administration is not included. Household plot operators lease out land exclusively to the local corporate farm. Corporate and peasant farms lease out land to other corporate farms and private individuals in roughly equal proportions (in such a small sample percentage frequencies are meaningless). In this sense, the leasing-out and leasing-in patterns are identical.

Payment for Land

Prices of leased-in and leased-out land were compared for transactions involving corporate farms and private individuals as lessees and lessors (see last line in Tables 5 and 7, respectively). The differences in prices are not statistically significant. The median price in the sample for all leasing transactions in these channels is 330-340 rubles per hectare. Supplementary data were obtained by analyzing the lease payments for land shares (median 420 rubles) and separate partial responses of lessees and lessors on structure of lease payments (which give 450 rubles/ha for leasing in and 440 rubles/ha for leasing out; the difference is not statistically significant). The

various numbers suggest median lease payments of 350-450 rubles per hectare in the sample (excluding transactions with the district administration, which command much lower prices).

Table 8. Lease payments estimated from the survey

Types of lease payments	Lessees, %	Structure of payments for leased-in land, %	Lessors, %	Structure of payments for leased-out land, %
Land tax	45	2	13	1
Fixed, in cash	25	20	22	17
Fixed, in-kind	52	57	17	22
Share of output	9	18	43	59
In services	9	3	13	1
Total	*	100	*	100
	56 respondents	451 rubles/ha	23 respondents	441 rubles/ha

Source: 2003 BASIS survey.
* Adds to more than 100% because of multiple answers.

Most lessees made lease payments in kind; payment in cash was less common. Many lessees assumed the responsibility for the land tax. Lessors also indicated that lease payments were typically a share of the output. The mean lease payment was 440-450 rubles/ha (Table 8). Lease payments estimated separately for land shares gave a median of 420 rubles/ha, while the median of all leasing transactions in the survey was 340 rubles/ha. Thus, the lease payments range between 350-450 rubles/ha, excluding the transactions in state land. The lease payments to the district administration for state land are much lower (about 50 rubles/ha, see Table 5). The differences in lease payments across farms of different organizational forms are not statistically significant.

Leasing is often for medium or long term. About 50% of both lessees and lessors report leasing terms longer than 4 years (and in some cases even longer than 10 years).

Potential for Land Transactions

The potential for land transactions was examined by exploring the perceived need in farms for additional land (Table 9). Nearly 30% of respondents desired to increase their landholdings. This potential for future land transactions should be compared with the actual frequency of land

leasing in 2001, which covered 11% of respondents (uniformly distributed over the three organizational forms). The greatest need for additional land is expressed by peasant farmers: 50% of respondents in this category desire more land, compared with less than 20% among household plots and corporate farms. Peasant farmers who would like to increase their holdings typically have less land than the rest, although the difference is not dramatic (225 hectares compared with 314 hectares for those who do not need more land). A similar situation is observed for corporate farms (3,350 hectares compared with 4,320 hectares). Among household plot operators, on the other hand, the difference in land holdings between those who say they need more land and the rest is not significant.

Table 9. Potential and actual land transactions (percent of respondents)

	Potential: desire additional land	Actual: acquired additional land in 2001
All sample	29	11
Corporate farms	18	13
Farms	49	9
Plots	13	11

Source: 2003 BASIS survey.

In principle, we can expect the demand for land to depend on the financial situation of farms. However, the only indicators of financial performance in the survey were sales revenue and surplus – a very crude profit-like measure of financial sources in excess of uses. Neither of these financial indicators showed a clear association with the perceived demand for land.

The most common option for acquiring additional land is by leasing a plot from a private individual (40% of respondents with perceived need for additional land). Other accessible options (in multiple-choice answers) include getting a plot from the state in leasehold or use rights (35%), buying land shares (18%), and even buying a land plot from a private individual (17%). There are clear differences in potential access patterns of different organizational forms to various sources of land (Table 10). While corporate farms and peasant farms envisage mainly leasing from private individuals and the state, household plots primarily intend leasing from the

corporate farm and buying from individuals. Buying of land shares is envisaged as a viable option only by peasant farms.

Table 10. Perceived sources for acquiring additional land (percent of respondents)*

	All respondents (n=161)	Corporate farms (n=25)	Peasant farms (n=111)	Household plots (n=25)
Lease plot from individual	44	32	52	16
Lease from the state	35	28	40	20
Buy land shares	18	8	23	4
Buy plot from individual	17	0	19	24
Lease from corporate farm	16	28	9	32

Source: 2003 BASIS survey.
*Percentages in each column add up to more than 100% because multiple answers are allowed; "lease" includes also taking land in use rights.

Buying land is thus not perceived as impossibility in the current environment. Indeed, fully 30% of respondents indicate that they would be able to get additional land in private ownership as needed. However, leasing is clearly perceived as the most accessible option, with more than 60% indicating that they would be able to lease additional land as needed.

As there are no observations of buy-and-sell transactions in the survey, it is unfortunately impossible to analyze the role of access to credit and other farm-related factors as potential constraints in land market development. Still, it is encouraging to note the emergence of land leasing transactions as a first stage and the positive perception of buying and selling of land as the second stage of land market development in some undefined future.

Estimating the Demand for Agricultural Land

The holdings of existing agricultural producers, including the leased component, formed a long time ago, so that the observed situation does not necessarily reflect a true satisfied demand for land. The survey has shown that the demand for land and thus the potential for land transactions vary by region and by type of farm.

In all three regions surveyed, peasant farms revealed a greater demand for land than corporate farms. Thus, 30%-70% of peasant farmers indicated a demand for land (Table 11).

Among corporate farms, on the other hand, the maximum demand for land (30% of respondents) was reported in Rostov (a region with a highly developed agriculture), whereas in the less developed Ivanovo and Nizhnii Novgorod oblasts corporate farms showed a much lower demand for land.

Table 11. Land users' intentions to reduce or enlarge their land (percent of responses)

	Ivanovo			Nizhnii Novgorod			Rostov	
	Corporate farms	Peasant farms	Household plots	Corporate farms	Peasant farms	Household plots	Corporate farms	Peasant farms
Reduce	43	10	1	26	0	7	3	1
Enlarge	3	30	14	11	67	12	30	50
Total ag land, ha	98,000	420	80	99,000	460	141	271,000	57,000

Source: 2003 BASIS survey.

In Ivanovo (an example of an agriculturally depressed region), 43% of corporate farms plan to reduce the use of land and only 3% plan to enlarge it (Table 11). A similar trend is observed in Nizhnii Novgorod (an example of a region with medium agricultural development). This suggests that corporate farms in agriculturally less developed regions will probably shed some of their land when they begin re-registering their use rights in state land and lease contracts for land shares, as mandated by the new law. Some of the released land will be absorbed by peasant farmers, who in general seek to enlarge their holdings, but the growth potential of this segment is not particularly large: while corporate farms control tens of thousands of hectares in each oblast, all peasant farms combined have less than 1,000 hectares in Ivanovo and Nizhnii Novgorod. Due to the absence of other interested parties, much of the land released by corporate farms may remain unused. The opposite situation will probably occur in Rostov with its highly developed agriculture and a different specialization (more crops, less livestock). There will be no unused agricultural land in this oblast (Table 11), and unsatisfied demand for land can actually arise.

To conclude, we see that there is a demand for land for large-scale agricultural production in some regions (the Rostov example). In all regions, however, peasant farmers and household-plot

owners show less intention to reduce their holdings and more willingness to enlarge their land than managers of large corporate farms. This tendency does not depend on natural and climatic conditions. In all three regions surveyed, peasant farmers demonstrate a greater demand for land even than household-plot operators. Nevertheless, the physical potential of peasant farms and household plots in Ivanovo, Nizhnii Novgorod, and similar less developed regions is not sufficient to absorb the surplus land that will be released by corporate farms.

Factors Determining Land Transactions

We have tried using Rozsemkadastr regional data to model land transactions in a cross section of Russia's 71 regions (omitting those where private land ownership is prohibited and where data are suspect). The registered transactions are a mixture of different types, but the main category includes transactions that involve leasing of state land outside the village limits by corporate and peasant farms. Household plots are not included in this category, since they generally lease land from municipalities inside the village limits.

Our modeling exercise was subject to severe restrictions imposed by the availability of regional data. We have tried a model in which the total number of leasing transactions is explained by the following independent variables:

- The number of potential lessees, i.e., the number of corporate and peasant farms in the region. The expectation is that a higher number of potential lessees will have a positive impact on land leasing transactions. To allow for the possibility of differential effects of farms from the two categories, the number of corporate farms and the number of peasant farms were introduced separately.
- The quality of agricultural land, the expectation being that better land will increase the scope of leasing transactions. Land quality was represented by two alternative measures:

the so-called "cadastral price", which is a value calculated on the basis of local fertility of land (Model 1), and partial productivity of land calculated as regional agricultural product per hectare of agricultural land (Model 2).

- Availability of agricultural land in the region: more agricultural land should lead to more leasing transactions.

Other a priori relevant factors, such as the financial situation of farms (farms that are better off would tend to engage more in leasing transactions), could not be used for lack of data.

Table 12. Regression modeling of land lease transactions in a cross-section of 71 regions (2001)

	Model 1		Model 2		Mean value
	Coefficient	*p*-level	Coefficient	*p*-level	
Dependent variable: number of transactions					1,131
Number of corporate farms	-1.35	0.214	0.25	0.827	347
Number of peasant farms	0.11	0.032	0.21	0.000	3,374
Agricultural land in farms, '000 ha	0.48	0.001	0.33	0.031	2,081
Cadastral price, ruble/ha	0.13	0.000	--	--	10,950
Land productivity, ruble/ha	--	--	0.07	0.080	7,360
R^2	0.545		0.42		

Source: Transactions from Roszemkadastr (2002b), pp. 46-47; agricultural land in farms from Roszemkadastr (2002a), pp. 113-129, 199; number of farms and productivity from Goskomstat (2001).

The regression results are presented in Table 12, which also gives the mean values of the variables across 71 regions. On the supply side, both availability of agricultural land and land quality have a significant positive effect on the number of lease transactions. On the demand side, the number of peasant farms has a positive effect on the number of transactions, while the effect of the number of corporate farms is not statistically significant. This result is understandable because peasant farms exist in much larger numbers (nearly 3,500 peasant farms in the average region) and accordingly engage in more numerous transactions. The few hundred corporate farms in each region (350 on average) cannot produce a noticeable impact on the total number of transactions.

Land transactions are naturally driven by additional factors that could not be formalized for analysis due to lack of data. Three groups of factors appear to be conducive to the development

of land transactions in rural areas. These factors include the general poverty of the rural population, which often drives families to sell their property for cash in response to the first offer made by outsiders; the inability of current land users to pay competitive rates, which encourages rural landowners to look for new clients for their land; and the emergence of cash-rich non-agricultural companies looking for new investment opportunities in agriculture (see Rylko and Jolly (2005) for more details on the latter phenomenon).

3. Constraints on Land Transactions

Analyzing the 2003 BASIS survey and Roszemkadastr data on sources of land used by agricultural producers, we conclude that farms of all types heavily rely on leased land and some even purchase land from individual and corporate owners. Yet the state land registry contains records of relatively few transactions that represent a very small portion of agricultural land. Two main groups of reasons may be responsible for this curious state of affairs. First, there is a general lack of market information pertinent to land transactions. The agents do not have sufficient knowledge of mechanisms and procedures necessary for registration of land transactions. Many rural people still do not know that land transaction are allowed and prefer to deal informally; many do not know how to draw up a contract or where to get standard forms for this purpose. Second, the legal registration procedures are very cumbersome, costly, and time-consuming. People may be avoiding land registration because of such bureaucratic barriers.

These groups of obstacles have been suggested by the analysis of the survey responses as summarized in Table 13. It may be instructive to note some differences across farms of different organizational types. Thus, the large corporate farms and the small household plots both feel that they can disregard the registration requirements. This is much less so for peasant farms, who are apparently much more sensitive to the protection they get through land registration. At the same

time, peasant farmers complain much more frequently of high registration costs and complex procedures. Somewhat paradoxically, however, more than one-third of the peasant farmers report that the registration procedures are clear and they have no problems in that respect (last line in Table 13).

Table 13. Main constraints to registration of land transactions (percent of respondents)

	All respondents (n=558)	Corporate farms (n=142)	Peasant farms (n=214)	Household plots (n=202)
No need to register	42	44	17	69
Lack of information	18	23	11	23
High costs	19	10	34	7
Complex procedures	16	15	25	6
Clear procedures, no problems	23	23	36	9

Source: 2003 BASIS survey; numbers do not add up to 100% because multiple answers were allowed.

Lack of Market Information

The respondents in the 2003 BASIS survey were asked if land transactions were permitted, if they knew the land prices, if they knew where to find a standard lease contract form and how to register a transaction. With the exception of Rostov peasant farmers (12%), 22%-32% of respondents indicated that lack of information on these matters was a problem for engaging in land transactions. Land price information and transaction registration procedures were mentioned as the most important obstacles.

The respondents did not know the prevailing land prices. The survey showed that many (though not all) knew the land tax rate: 33%-50% of respondents in different groups knew what the land tax was because they paid it once or twice a year. However, most respondents could not answer the other questions. The response rate was highest among the peasant farmers in Rostov, where land transactions were more frequent and the interest in the enlargement of holdings greater (Table 14). The fact that most respondents did not know the prevailing land prices apparently means that there are no established prices for land. There is no benchmark that could help rural people with the decision to sell or lease land.

Table 14. Frequency of responses to land-price questions (percent)

	Ivanovo			Nizhnii Novgorod		Rostov	
	Corporate farms	Peasant farms	House-hold plots	Corporate farms	Household plots	Corporate farms	Peasant farms
Lease payment for state land	20	20	3	8	11	14	46
Lease payment for land share	17	50	2	5	12	26	49
Land tax	40	70	34	49	45	53	47
Price of land share	3	0	1	3	1	9	27
Price of state land	0	0	0	0	2	0	2
Price of land in corporate farms	0	0	0	3	2	1	1
Number of respondents	35	10	94	39	93	70	209

Source: 2003 BASIS survey.

The issue of market price of land is of special importance because the 2003 Federal Law on Agricultural Land Transactions mandates the use of market prices in the process of the partition of a land in joint shared ownership (i.e., when converting land shares into plots). According to this law, disputes between withdrawing and remaining owners are resolved by applying the market price of specific land plots (on a per share basis). If the agricultural land market is not developed and there are no consistent land prices in the district, it is impossible to speak of the market price of specific fields and plots. This is a severe barrier to the partition of joint shared land and to the withdrawal of share owners with land plots for individual farming.

High Registration Costs and Complex Procedures

Expert judgments suggest that high registration costs and complex procedures are an obstacle to land transactions. This view is confirmed by the responses of the Rostov peasant farmers, who have the strongest tendency toward land enlargement. Most of the peasant farmers in Rostov (84%) indeed regard these two issues as a major problem (Table 15; in other regions, where land markets are less developed, a much smaller percentage of respondents addressed these issues).

The analysis of registration procedures shows that government bodies have created numerous administrative and organizational restrictions to land registration. The current system

suffers from at least two serious problems. The first problem is the refusal of the cadastral chambers to issue registry extracts for land plots in joint shared ownership. In theory previously issued certificates of land ownership rights have the same validity as new entries in land registers, but in practice each new transaction requires full registration of the previous rights. As a result the whole area in joint shared ownership (often several thousand hectares) has to be surveyed. This is not only a very expensive operation (500 rubles per hectare), but it also takes a long time to complete (at least two months). The second problem is the multi-step and absolutely opaque operation of the registration and cadastral chambers, especially regarding the requirements for documents. These bodies develop internal instructions that are not always compatible with the relevant law and require additional documents that were not envisaged by the law. These administrative barriers involve additional expenses for the applicants and lead to a sharp increase of transaction costs.Personal experience suggests thatthe withdrawal of a single land plot from joint shared ownership requires up to one year of constant occupation. The cost of the entire procedure of converting a land share into a plot of land can be estimated by comparing the market price of a land share with the market price of a registered plot in the same area. In Volokolamsk near Moscow the price of a plot is double the price of a land share before conversion.

Table 15. Are high registration costs and complex procedures an obstacle to land transactions? (percent of yes responses)

Regions	Peasant farms and household plots	Corporate farms
Ivanovo	10	12
Nizhnii Novgorod	15	5
Rostov	84	58

Source: 2003 BASIS survey.

While the registration procedure is determined by law, the law does not specify the precise requirements for documents. That is why officials at the local level set their own demands. In Moscow Oblast, nine out of the ten steps that an applicant has to complete are not prescribed by

the law, require submission of additional documents, or are part of a list of verbal requirements that are not listed in any official document. In this situation, corporations that can afford to hire advisors and have specialized staff responsible for transaction registration are in an advantageous position. This is a typical example of market asymmetry, where some agents have more information than others by virtue of their official position, greater financial possibilities, or the ability to hire experts. Land-share owners, peasant farmers, and traditional corporate farms are weak players in this process: they have to spend so much time and money on registration that they often simply give up their rights or use land that is not legally registered.

In order to simplify the land purchase procedure, buyers resort to general power of attorney or give the land away as a gift. With general power of attorney, the seller gets the money and empowers a third person to sell the land share and complete all the necessary arrangements. With a gift of land, there is no need to offer the share to other pre-emptive buyers (the joint owners, the oblast government, or the municipality). These "under-registration" mechanisms are risky for the buyer, as a power of attorney can be revoked before the registration of rights transfer to the buyer is completed, and a gift can be annulled as a fictitious transaction. Still, buyers are willing to take the risk because the prices of land grow so fast (the price of land in Mozhaisk near Moscow increased by a factor of 20 between January 2003 and June 2004).

4. Conclusions

Russia has met the necessary pre-conditions for the development of agricultural land markets: agricultural land has been largely privatized, individual landowners have legal rights to most agricultural land in the country, and previous prohibitions on buying and selling of land have been removed by recent laws. Land markets have responded positively to these changes and we are beginning to witness transactions that involve individual landowners, and not only the

state. While the Russian media, politicians, and scholars generally argue that market development is restricted by the low demand for agricultural land, our survey results seem to indicate that this is not really so: a substantial proportion of farms in some regions are actually interested in expanding their holdings.

However, further development of the embryonic land market is severely circumscribed by the inadequacy of the administrative and technical infrastructure. There is no public registry of plans and maps that can be used to complete the transactions, the bureaucracy has created numerous procedural obstacles that complicate land transactions, and the agents effectively do not have access to market information about land prices or demand and supply of land. All these factors contribute to very high transaction costs in land markets. In the absence of competitive demand for agricultural land in many regions, landowners have no motivation to complete the required procedures for registration of their property rights, be it registration of land shares or physical plots. The actual costs are simply not justified by the expected benefits from making their property "ready for the market".

Market constraints – both legal and administrative – exist in all countries in the world. The Treaty of Rome, which governs the accession to the European Union, recognizes the right of member countries to keep their national property rules, and the new members have received a special permission to maintain constraints on land markets during the next decade. Yet restrictions on transferability of land and general non-transparency from which land markets so often suffer throughout the world (and not only in Russia) are serious obstacles to achieving economic efficiency. In Russia, particular attention is required to creation of adequate market information systems and significant reduction of transaction costs. Measures in these areas hopefully will alleviate the main barriers to land transactions in this huge, land-rich country.

References

Goskomstat (2001). *Statistical Yearbook 2001*, Moscow: Goskomstat.

Goskomstat (2003a). *Statistical Yearbook 2003*, Moscow: Goskomstat.

Goskomstat (2003b), *Sotsial'noe polozhenie u uroven' zhizni naseleniya Rossii*, Moscow: Gostkomstat.

Goskomzem (2000), *Svedeniya o sdelkakh s zemlei*, Moscow: Goskomzem.

Roszemkadastr (2002a), *Zemel'nyi fond Rossii 2001*, Moscow: Roszemkadastr.

Roszemkadastr (2002b), *Svedeniya o sdelkakh s zemlei i platezhakh za zemlyu*, Moscow: Roszemkadastr.

Roszemkadastr (2003a), *Gosudarstvennyi (natsional'nyi) doklad o sostoyanii i ispol'zovanii zemel' v Rossiskoi Federatsii v 2002 g.*, Moscow: Roszemkadastr.

Roszemkadastr (2003b), *Zemel'nyi fond Rossiiskoi Federatsii na 1.01.03 g.*, Moscow: Roszemkadastr.

Roszemkadastr (2004), *Zemel'nyi fond Rossii 2003*, Moscow: Roszemkadastr.

Rylko, D. and Jolly, R. (2005). "Russia's New Agricultural Operators: Their Emergence, Growth, and Impact," *Comparative Economic Studies*, 47(1) (March).

Uzun, V. (2005), "Large and Small Business in Russian Agriculture: Adaptation to Market," *Comparative Economic Studies*, 47(1) (March).