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Russian agrarian reform: implementation, results and problems

(Review of an empirical study of Nizhny Novgorod restructuring approach)

Nikolai M. Svetlov¹

The paper analyses the impact of the restructuring process in Russian agriculture on economic performance of farms. The experience of the programme «Privatisation of land and reorganisation of agricultural enterprises in Russia» is studied. The restructuring process influences farms' economy positively but this influence is very small, so the farms remain unprofitable. The restructuring leads to lower losses due to reduced costs (especially wages and depreciation) and higher milk yields per dairy cow. That results from low motivation of land shares and property shares owners to actively participate in the reformation process and enter a real market under the present economic conditions.

1. Introduction

This paper is aimed at the analysis of economic changes that have resulted from the restructuring of Russian farms within the framework of the programme «Privatisation of land and reorganisation of agricultural enterprises in Russia» (called infra «Programme»), also known as «Nizhny Novgorod restructuring approach»² and «Russian land project».

The paper addresses the following questions:

1. What is the economic impact of the programme on a farm economy?
2. How does the programme influence the rural branch of the regional economy?
3. What are the factors that influence the economic effect of the programme?
4. How has the economic situation in Russia affected the consequences of the farms' reorganisation?

The results of this study are relevant to policy makers who can make use of it improving the legislation and making necessary corrections to the reformation policies. Also it is relevant to the agrarian businessmen and managers giving them a picture of costs and benefits of the restructuring processes.

The programme has been running since 1993 till 1999. Its aims were the following:

- ♦ to adapt the structure of former kolkhozes and sovkhoses, the large-scale agricultural enterprises of the Soviet epoch, and the property rights of land and assets to the present conditions of market economy in its Russian version;
- ♦ to make the property rights of land and farms transparent;
- ♦ to give owners the opportunity to gain from their property;

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² The first attempt to re-organise five enterprises on the base of a theoretically and juridically approved methodology (the pilot project) have taken place in 1993 in the Nizhny Novgorod Region under the promotion of B.Nemtsov, who was a governor that time. This event gave the name to the programme. Actually this programme was developed at the Agrarian Institute (Moscow) under the consulting support of IFC and financial aid of British Know How Fund.

- ♦ to contribute to the overall economic efficiency (in the most broad sense of this term) of Russian agriculture.

The programme is a guideline for implementation of the agrarian reform that conforms the existing legal system and provides the comprehensive toolset for executing rights for farms' land and property. The law formulates the criteria that determine whether a person who is employed or has been employed at the particular farm or at social services belated to the farm has the right to this farm land and property and how large his (her) share is. It allows the titles of these rights (called land shares and property shares) to be traded¹ but does not establish the procedure to convert these titles into real assets. However, such conversion is not prohibited. The programme suggests that the owners of the land shares are given time to be informed about the content of the programme and to trade or hire the land shares as appropriate in order to take part in a land auction. By the auction lots of the farmland are traded. The land shares are the means of payment. Only owners or leaseholders of land shares are allowed taking part in the auction. As soon as the farmland is distributed, the same procedure is undertaken regarding to the farm property. Finally, the property of the former farm is used by its new owners to create new businesses or to contribute to existing ones.

A typical parent enterprise is a relatively large farm, which uses one to several thousand hectares of land and employs fifty to several hundred workers. Most commonly the restructuring of one farm results in creating one or two relatively large enterprises (joint stock companies, cooperatives etc.) and possibly several family farms. Very commonly the restructuring leads to creating a single enterprise that leases the land and other assets, while its parent used the assets with no legal base. The cases of transforming a farm into many relatively small entities are occasional.

The programme has played a considerable role in the reformation of Russian agriculture. The problems of agrarian reforms in transitional economies draw persistent attention of many economists both in Russia and abroad. *Csaki (2000)* presents an overview of successiveness of the agrarian reforms in European transitional countries and in the former Soviet Union. The causes of successes and failures are specified, namely the development of markets, property rights of land and other assets, rural financial systems and the public institutions focused on the needs of private agriculture. *Booth & Camalyan (1999)* concentrate at the causes of the agricultural production decline for the last decade and the possibilities to improve the situation. *Pederson et al. (1998)* studies the impact of high debt on the reformation process. The authors prove that the high debt discourages the rural population to own land and means of agricultural production. *Swinnen & Gow (1997)* highlight the urgency of transformation of the rural financial system so to adjust it to the requirements of market-oriented agricultural enterprises. *Bezemer (1999)* studies the role of household production in the transitional process and the factors that lead to the increasing share of household production in overall agricultural production in Russia. However, among the international literature there is a lack of studies of the economic and social background of the transitional processes. Many different factors affect the level of adjusting the structure of a particular farm to the new economic environment, so this level varies widely. This paper begins with studying differences in the economic performance of restructured farms ('participants') and of those not yet restructured ('externals'). Having found that the difference is not very impressive, it concentrates at the restructuring process itself and factors influencing it in order to discover the causes of the low effect of restructuring.

¹ Juridical persons are not granted land shares and property shares but can buy or hire them.

The study underlying this paper has had wide coverage in Russia (*Uzun, 1998; Uzun, 1999*). This paper reviews the economic part of that study and additionally includes the results of case studies, which were taking place in 1999 and brought a more precise sight of the programme's outcome.

The rest of the paper has the following structure. In Section 2 the methodology of the study is briefly discussed. Section 3 presents the changes in the efficiency of farms and of rural sector as a whole caused by the programme. Section 4 brings to the light the processes that result in efficiency changes in the restructured farms and factors that influence these changes. The conclusions are presented in Section 5. In Appendix there are the formulae of financial coefficients and the glossary of terms relating to the programme.

The experience of the programme covers only few aspects of the agrarian reform. Nevertheless, it gives a very instructive example that brings to the light the characteristic features of the reformation process in Russian rural sector.

2. The framework of the study

The research scope and the methodologies applied are determined by available data and resources. Though this study is based on much wider empirical material than many others, many important issues remain hidden from a researcher. Therefore, all statements and conclusions in the paper should be interpreted in a following way: *considering accessible data and research results, they are more probable than the alternatives.*

2.1. Variety of programme's costs and benefits

The programme concerns the interests of many individuals and institutions. To properly judge the effect of the restructuring, different aspects of the impact of this programme should be evaluated. However, the methodologies to measure certain aspects are either not well developed or expensive.

1. Expected programme's costs and benefits

Costs and benefits	Recipients			
	Farms participating in the programme	Employees of the restructured farms	Federal and regional budgets	The national economy
Production efficiency	+	+		+
Direct costs for the reorganisation	-		-	-
Losses caused by splitting up resources	-			-
Psychological stress		-		-
Inflow of investments	+			+
Taxes and subsidies	-		+	?
Support of social services and infrastructure	+	?	-	+
The land and property shares holders' income	-	+		?
Possibility to exercise the property rights		+		+
Social changes		+		+

Source: the author's survey.

Table 1 presents experts' opinions¹ about the most significant changes induced by the programme. The presented lists of costs, benefits and their recipients are not comprehensive, so this table is rather illustrative. The plus sign (+) in this table reflects the positive effect of the programme to the given recipient, otherwise there is a minus sign (-). The question mark (?) means that the effect likely exists but its sign is uncertain. Shaded cells in the table mark those costs and benefits that have been studied with respect to the given recipients.

According to the table, many costs and benefits are not evaluated. Hence, the overall conclusion on the impact of the programme cannot be judged by means of the research. It covers only a part of effects brought to life by the programme, though this part is important.

2.2. Review of methodology²

In this study it is assumed that an economic and institutional environment, weather and soil conditions of 'participants' do not significantly differ from those of 'externals'.

The first research question mentioned in Section 1 is answered in Section 3.1 that focuses on the programme's consequences at the farm level. It requires an analysis of changes in economic parameters of 'participants' and 'externals'. Its object is four groups of farms reorganised during four successive waves. The difference between each wave and 'externals' is studied. That allows identifying the characteristic short-run changes caused by the restructuring of a typical farm economy.

The second research question (Sections 3.2 and 3.3) concentrates on impact of the programme on the regional rural economy. It assumes that the implementation of the programme is a persistent process whose effect has two components: the effect of the programme's expansion and accruing the medium- and long-run effect of previous acts of restructuring. As the production intensity of 'participants' and 'externals' is significantly different, the following procedure is used to avoid the influence of this fact on the conclusions. The farms are classified into 25 groups by fixed capital per unit of farmland (5 grades) and by number of workers per unit of farmland (also 5 grades). In every group 'participants' and 'externals' are differently weighted to allow for different production intensities. The weighting procedure is described in *Uzun (1999)*³.

To answer the third research question the technique of grouping (Section 4.3) and the study of farm-level processes conducting the restructuring (Section 4.4) are used. When grouping the data set is split into 20% groups consisting of the subgroups of 'participants' and 'externals'. The interpretation of the obtained results meets difficulties because possible dependence of motivation to take part in the programme on the factor used for splitting. The reader is assumed to allow for this fact and take into consideration that the conclusions are less certain than they could be if the mentioned dependence did not exist.

¹ The experts were the people who took part in the implementation of the programme and in the analysis of its impact on the rural sector of the economy.

² The comprehensive description of all methodologies of the studies that contributed to the paper can be found in *Uzun (1998), Uzun (1999), RosAgroFond (1999)*.

³ In *Uzun (1998)* the impact of the programme on the regional rural economy is approached without allowing for the different production intensity. That study is less precise. However, its advantage is that it reflects actual changes of economic indicators. In general, its results are in accordance to those discussed in this paper.

Weighting procedure is also desirable for the study of farm-level impact of restructuring but it is not possible because of data limitations.

The approach to the fourth research question (Section 4.5) is based on seeking for the known facts of Russian economic reality which explain the empirical results. This approach is not stringent as a variety of facts can cause the observed phenomena. However, it is productive if applied correctly. A broad discussion should provide the maximal possible compass of theoretical explanations. Having these explanations, one can easily identify additional research tasks that, being completed, shrink the set of possible explanations until the single explanation is left. The presented results are just those that are not rejected by the research in its current state.

Statistical tests for the significance of identified differences were not performed because the distribution of the variables used in this study cannot be assumed to be normal. Consequently, the methodology of testing is expected to be very complicated and specially adjusted to each particular variable. However, the discovered differences are proven to be reliably existing. First, they do exist within randomly formed subsets of the general set. Second, the same effects are observed in other regions participating in the programme. Third, the alternative studies that use the parallel methodology and different data (Golyshev, 2000) discover similar effects.

2.3. Data

The study uses the following data sources:

- ◆ 1309 annual statistical reports of all agricultural firms in the Nizhny Novgorod Region for 1994-1997;
- ◆ a private database of RosAgroFond on land and property auctions for 1993-1997 that contains the data on 497 acts of reorganisation, of that 249 relate to the Nizhny Novgorod Region;
- ◆ surveys performed in the Nizhny Novgorod and Oryol regions in 1997 (1476 respondents) and 1998 (782 respondents);
- ◆ case studies that were held in 1999 (4 parent and 6 child firm farms).

The data of the former two sources are organised in a set that is split into the subsets of 'participants' and 'externals'. In the *subset of 'participants'* the data relates to all 'participants', both parent and child enterprises, existing in the particular year. *The subset of 'externals'* consists of the enterprises that had not taken part in the programme until middle 1997.

Sometimes, with no respect to law, farms do not submit annual statistical reports. Especially often it happens to the child enterprises. In the accessible reports there are many missed and uncertain values (up to 30% for some variables).

The composition of the data set causes the following serious imperfections of the study.

- ◆ The subset of 'participants' consists of the farms that were reorganised in different years. Consequently, economic conditions, the level of support and motivation factors also were different.
- ◆ The subset of 'externals' includes, among others, the farms that for different reasons and in different ways have been reorganised without the guidance of the programme.
- ◆ The family farms are not statistically observable. Hence, the parent enterprises' resources attained by them are not accounted. However, only 3.9% of the total farmland involved in the programme have been transferred to child family farms. For the Nizhny Novgorod Region this share is 3.2%. So one can assume that the influence of this imperfection on the results is not significant.

The fact that a certain part of the land and production processes is unobservable because of missed data makes the comparison of gross values meaningless and decreases possible outcome of the study to a large extent. All conclusions are made only on the base of the relative measures.

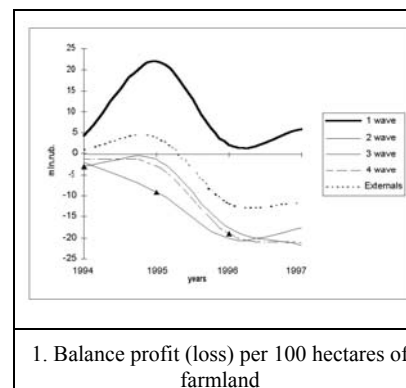
All monetary values used in this study are nominal. No corrections for inflation were made because its influence on both subsets is parallel.

3. Economic changes caused by the reorganisation

3.1. Changes in farm economy

At a farm level the reorganisation is an instantaneous event. The juridical reorganisation takes a day following several weeks of preparatory work. This section concentrates on the direct consequences of this act. To capture them, 'participants' are grouped by the waves of reorganisation.

Figure 1 demonstrate that the economic state of the farms of all waves except for the first are significantly worse compared to 'externals'. Participation in the programme has not resulted in change of their position. Contrarily, strong economies of the first wave gain from the reform.



1. Balance profit (loss) per 100 hectares of farmland

Source: Uzun (1999).

Markers show the year preceding the restructuring.

consequent years but usually does not increase (except for the entities created from the parent enterprises with strong economies, as the first wave shows).

As it follows from Figure 2, an influence of the programme on a revenue is considerable only for two earlier waves. For other waves it is rather indefinite. One can assume that after the restructuring the profitability is increasing due to reduced costs.

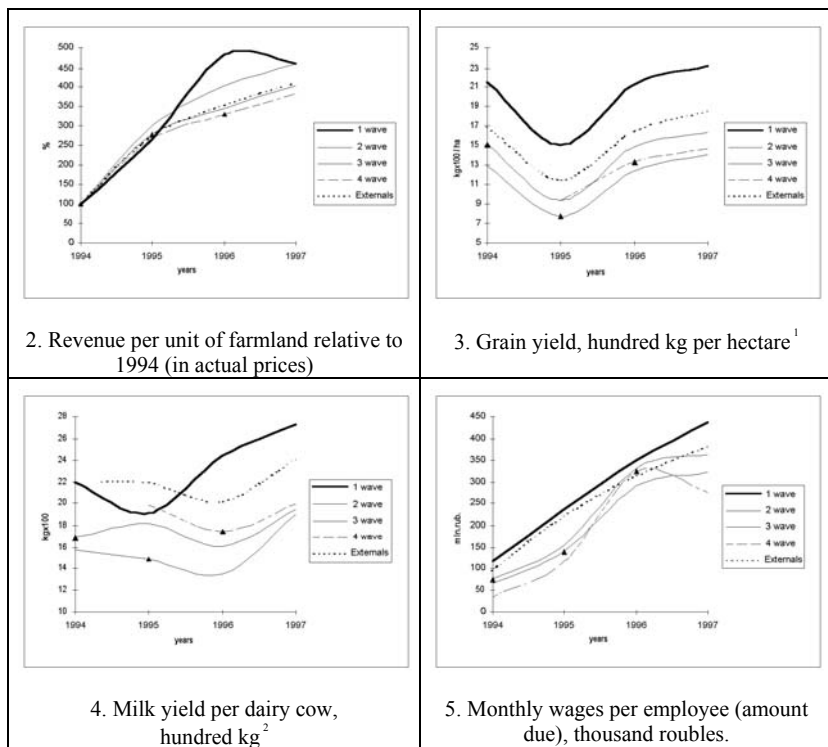
The yield of grain is indifferent to the act of the reorganisation (Figure 3). This «no result» is significant because it rejects a widely spread opinion that the influence of the reorganisation on grain yield is negative. This opinion comes from the idea that splitting of land and fixed capital leads to decreasing productivity.

Using accessible data, the author cannot make a conclusion about the influence of the reorganisation on the gross production of grain.

Regarding to the milk yields (Figure 4) the recognisable positive effect is observed. It appears in the year of the restructuring or a year later. A special case of the first wave has the following explanation: almost all livestock at one of the six farms of this wave was destroyed with tuberculosis in 1995. This negative event, however, did not have lasting consequences.

¹ The points for the years preceding the reorganisation are marked on the graphs.

The reorganisation leads to the lower wages (Figure 5). However, the surveys (Uzun, 1999) show that the reformed enterprises reduce their arrears of wages. That is why the employees of child enterprises often judge in favour of the programme in their responses. They mention that the role of the monetary wages in their budgets is increasing, the motivation to labour is becoming stronger and there is less thefts on their farm.



Source: Uzun (1999). Markers show the year preceding the restructuring.

To summarise, the reorganisation usually brings an *eventual* positive effect to a farm economy. This effect:

- ♦ is observed just in the year of restructuring;
- ♦ consists of profitability growth, savings on costs and an increased milk yield;
- ♦ does not span the revenue and the grain yield.

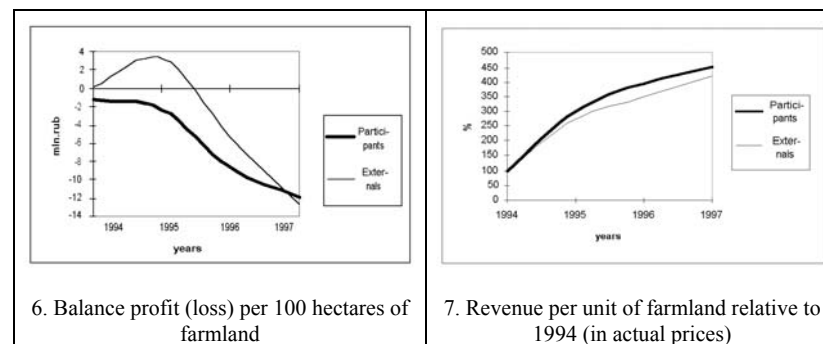
¹ The data for the fourth wave are missing for 1994.

² The data for the fourth wave are missing for 1994.

3.2. Economic impact of the programme on the regional farming sector

The year 1994 point of the line that relates to the ‘participants’ on the graphs below represents the farms that were to be reorganised in future (but six farms of the first wave that have been already reorganised). The year 1997 point relates to the farms that all have been restructured. So the graphs present the effect of the programme as an accrual effect of a persistent expanding process.

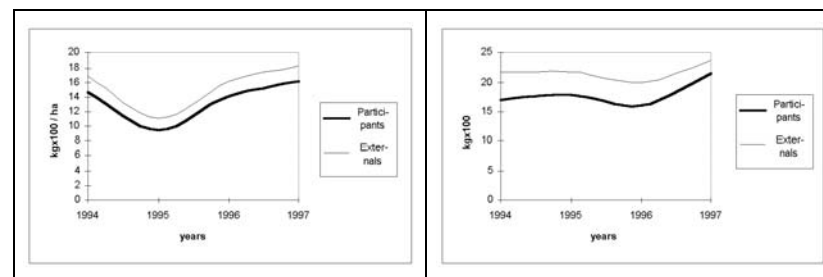
Figures 6, 8 and 9 demonstrate that the procedure of smoothing the differences between the subsets that was described in Section 2.2 is imperfect. It provides the comparison under the equal production intensity level. But it is not the sole factor which causes the difference between the subsets *before* the programme affects one of them. So we observe this difference in 1994 when only six farms out of 370 ‘participants’ have completed at least one annual production cycle after the restructuring. The difference reflects the influence of other *motivation factors* than the production intensity. They are discussed in Section 4.2.



Source: Uzun (1999)

By 1997 ‘participants’ have achieved lower losses than ‘externals’ (Figure 6). Since 1995 the profitability declines in both subsets. However, in ‘participants’ this process is slower. The restructuring is unable to withstand the external negative factors, but it helps farms to survive.

As for the revenue, it also grows faster in ‘participants’ (Figure 7). The program’s influence on the production is lower than on the profit.



8. Grain yield, hundred kg per hectare

9. Milk yield per dairy cow,
hundred kg

Source: *Uzun (1999)*

Figures 8 and 9 demonstrate that external relative to the programme factors¹ are decisive for the production efficiency. Both lines are almost identical. Still, a slight positive change in the yield of milk for the subset of 'participants' relative to the subset of 'externals' is observed. The deeper analysis based on the case studies (Section 4.4) shows the background factor, which is the faster rejection of the low-grade livestock in 'participants'.

In conclusion, it is almost sure that the opinion about the negative influence of the programme on the rural economy of the region, widely spread among Russian experts, is wrong. Instead, there are small positive results. However, the reformed agricultural businesses remain experiencing losses.

3.3. Influence of the programme on the financial position of the regional farming sector²

This part of the study was very problematic because of regular changes in the financial statistics. Due to them the analysis only covers the period from 1995 on. The comparison of 'participants' and 'externals' is performed without adjusting the level of production intensity.

Russian methodology of financial analysis is based on the national accounting system. Refer to Appendix I for the definition of coefficients used below.

The values of the *overall coverage coefficient* are almost equal for both subsets in the Nizhny Novgorod Region along three-years period. They display a declining trend (from 1.9 in 1995 down to 1.5 in 1997). Hence, the reformation does not affect the coverage of short-term liabilities with short-term assets. The level of coverage is low. If an enterprise face an urgent need to completely cover their short-term liabilities during the period sufficient for liquidation of all their assets but A_4 , the production process would be shocked as the enterprise has to liquidate more than a half of their short-term assets. The observed decline of this coefficient is explained by a large growth of $L_1 + L_2$ (534 million roubles in 1995 to 1573 million roubles in 1997 in gross value). Due to that the farms, both 'participants' and 'externals', look very insecure from a lender's point of view. Considering the trend one can warn about a possible bankruptcy of many farms in the set. Under Russian conditions the bankruptcy does not necessarily imply the relevant juridical procedures. Nevertheless the enterprises are no longer able to operate.

The *liquidity coefficient* reflects the enterprises' opportunities to perform current payments in accordance to their liabilities. In 1995 it was 3.6 for 'participants' and 4.3 for 'externals'. In 1997 it was 3.0 and 3.5 respectively. By December 31, the day the balance sheets are dated, the value of this coefficient is not alarming. As most of current year production had been sold, the farms have obtained extra liquidity. However, considering the periodic nature of the agricultural production, it is probably painful for the farms to serve their current liabilities. 'Participants' had had worse starting conditions but the difference was being reduced during these three years.

¹ E.g. weather, performance of markets and of the financial system, level of budget financing, inflation, etc.

² This stream of the research is presented in a more comprehensive form in *Svetlov (1998)* and *Uzun (1999)*. In the latter the results of the similar study undertaken in the Kirov Region are also presented. They conform with the results obtained for the Nizhny Novgorod Region.

The *coefficient of internal sources of liquidity* indicates the share of the liquid assets that is formed from the entity. This coefficient is found to be indifferent to the programme: its values are the same in both subsets during the observed period. They decline from 0.34 to 0.17. That displays the increasing dependence of the agricultural enterprises on their creditors.

The *internal sources of cash* are the profit (if received) plus the depreciation accumulated along the year minus the net loss (if take place). Because of the data limitations we can analyse the internal sources of cash only along one-year period 1996-1997. Taken per 100 hectares of farmland, they decreased from 8.7 to 5.8 million roubles in 'participants', from 19.4 to 13.2 in 'externals'. So the 'participants' to 'externals' ratio virtually did not change. The programme does not influence the internal sources of cash. Their positive value allows operating despite losses. However the absence of profits leads to de-investment processes and damages the production capabilities of the farms.

'Participants' have a considerably lower debt to be paid (taken per the unit of farmland) compared to 'externals'. It is still increasing in both subsets but the 'participants' keep the position of relatively careful debtors. Their debt per 100 hectares has increased from 12 to 45 million roubles, meanwhile the debt of 'externals' has increased from 22 to 66. Overdue has increased respectively from 5 to 14 and from 10 to 38. If the year 1996 is taken for 100% then one can see that the debt of 'participants' increases faster than of 'externals'. The reorganisation increases the trust of suppliers to the enterprise. The overdue shows the opposite relation. Hence, 'participants' are more responsible for their liabilities.

4. Processes underlying the efficiency changes

4.1 Scope, forms and directions of the property transfers

By middle 1998 the programme had resulted in the restructuring of 497 agricultural enterprises in 17 regions of Russia. 40% of parent farms are re-organised into single child farms. In 26% of cases the most of the agricultural land transfers to the largest child enterprise, so that only a small share (no more than 10%) is distributed among family farms and households. Only 2.5% of farms are reorganised so that each child enterprise attained less than 30% of the parent's agricultural land.

Newly created farms mostly use land on the base of the rented land shares. Less than 1% of land has become the property of the enterprises.

The share of land attained by family farms is 3.9%. Besides the child family farms, those that had already existed have also actively participated in land auctions. They have accumulated 32% of the agricultural land that has been transferred to family farms (both new and existing). This share proves that the family farms are interested in increasing their land properties and use land shares (own and bought) to achieve this goal under the lack of monetary sources for ordinary purchases of land. Often the existing family farms attained the land shares under more attractive terms from the point of view of the shares holders in comparison to the newly organised family farms.

The majority of the property shares holders contributed with their shares into the entity of the child farms (85.4%). About 4.2% of the property shares were attained by the family farms and the businessmen, 0.3% were sold to the enterprises. The surveys (*Uzun, 1999*) brought to light the following causes of few purchases:

- ◆ the liquidity of newly created farms and other potential purchasers is too low;
- ◆ property shares holders prefer to keep their status of partners and the right to control the management of a child enterprise;
- ◆ consultants strongly advised the holders to use their shares as contributions.

Almost 86% of 220.9 thousand land shares involved in the programme were rented to the agricultural enterprises and family farms. The holders used 1.4% of shares to expand their existing land property. A very small share (0.1%) was devoted to enlarge the household plots. A very insignificant part of land became a property of juridical individuals (1.3%). Only 0.1% of the land shares attained by juridical individuals were traded later. The buyers of the shares were mainly the family farms. They bought 72% of traded land shares meanwhile large-scale enterprises bought 21%.

This brief analysis shows that the programme's contribution into establishing a land market is low. The key idea of the programme that is to make the property rights executable is found to be insufficient for entering a real market. The obstacles in land market development are analysed in Section 4.5.

4.2. Motivation

The poor farms' economy motivates the land and property shares holders towards taking part in the programme. From the graphs in Section 3.2 one can conclude the following. Under the equal level of intensification, the farm is more motivated to take part in the programme whose farmland is less profitable and yields a fewer revenue¹. Lack of internal cash sources is also a strong motivation factor towards the programme (Section 3.3). However, the variance of the cash sources within the subset of 'participants' is very high, so this factor is not decisive.

The surveys (*Uzun, 1998, Uzun, 1999*) and, additionally, the case study presented in *RosAgroFond (1999a)* show that, despite the aim of the programme, the land and property shares holders are rather constrained in initiating the restructuring process. Usually the willingness of the director or the pressure of the local authorities is needed. The reason is that the director is much better informed than either specialists or, especially, ordinary employees. He is usually able to create wrong impressions regarding to the programme's options, costs and benefits.

If the decision to join the programme is made then five most common options are possible, as the surveys and case studies show.

1. Some land and property shares holders are well informed and realise the advantage of their juridical rights. That usually implies their experience in business and existing connections to possible business partners. The reorganisation follows the scheme that was supposed by the programme developers. It usually appears to be fruitful. Long lasting, firm and careful elucidation activities contribute to the choice of this option. The cases of such reorganisation are discussed in *Duel (1997)*. This option prevailed before 1995 and remained widespread until 1996 (*Uzun, 1999*). Later the unfavourable market environment and increased farms' debts hindered this option.
2. The director is interested in long-term co-operation with the enterprise members. Then he uses the programme as an opportunity to get rid of those members who do not participate in the decision making process and to discharge drinkers and thieves. In this case the positive effect is usually observed *before* the reorganisation. The event itself leads, first, to attracting new partners who prefer a strong juridical base for the partnership, second, to improved bookkeeping, third, sometimes, to new sources of financing. The overall result is usually positive.
3. The director concentrates on financial problems and seeks for options to deploy the enterprise's account, to improve the solvency, to arrange the relations with creditors. This motivation usually

¹ The first wave is not typical in terms of motivation. Within this wave five farms of six took part in the pilot project and therefore were specially selected.

leads to the kind of transformation when all farm land and most of other assets are transferred to a new enterprise, which is free of debt. This new entity or its certain share¹ becomes a property of the parent enterprise that transforms into a kind of holding. It has almost no assets except for its share in a new one, but holds the remaining part of the previously accumulated debt. Usually the effect of this procedure is positive but eventual as the inefficient production and management that causes the financial problems is left unchanged.

4. The director tends to strengthen his personal power within the enterprise. He uses the programme as an option to virtually alienate the land and property shares so that their holders are almost not able to use them. Manipulating the juridical norms and using specific information known to him he forces the holders to sign the agreements on their shares restricting their rights. Such a strong director can achieve certain positive results in a short run because of improved management and perfect accounting but the expenses on his personal needs hidden in the production costs can finally lead to the production decline and can damage the capital of the enterprise.
5. The director is willing to arrange the juridical status of the enterprise according to the up-to-date legislation. In that case nothing happens to farm economy.

Sometimes a certain act of restructuring is characterised simultaneously by the features of several options.

The difference in motivations causes the observed variety of the reorganisation consequences. As a result, there are a variety of opinions of incompletely informed experts about the programme. Following the results of Section 3, those motivation options prevail that lead to a small eventual positive effect.

4.3. Factors affecting the efficiency of the reorganisation

The data are not presented in this section. The tables and graphs are rather bulky. They can be found in *Uzun (1999)*. The results are the following.

- ◆ The impact of the reorganisation on profit per unit of farmland positively depends on the revenue per unit of farmland and on solvency.
- ◆ The impact on internal sources of cash per unit of farmland positively depends on the revenue per unit of farmland.
- ◆ The impact on short-run overdue per unit of farmland positively depends on the revenue per unit of farmland and negatively depends on solvency. The latter is easily explainable: the higher the solvency the lower the overdue, hence, the lower the motivation to reduce it by means of the programme.
- ◆ The impact on long-term bank credits per unit of farmland positively depends on revenue per unit of farmland. It also depends on a farmland area of a newly created farm so that the effect of the reorganisation is the greatest in the marginal groups.
- ◆ The impact on solvency and liquidity depends on a farmland area of a newly created farm so that the impact is the most significant in the marginal groups.

The influence of the amount of internal sources of cash per unit of farmland on the consequences of the reorganisation is the same as the influence of the revenue per unit of farmland.

¹ In this case other shares are distributed among creditors.

From this study the following conclusion comes: generally, the better the situation at the farm the more efficient the reorganisation. Unlikely the reorganisation can be treated as a solution for the degraded farms, many of which have taken part in the programme.

The most interesting analysis concerns the influence of the farmland area on the consequences of the reformation. The result seems to be confusing. If one studies separately the processes at the new enterprises of different sizes he will see that these processes are significantly different. Small enterprises were formed mostly from the reasonably split huge enterprises. That usually happened in 1994-1995 when the macroeconomic situation was less unfavourable, the scope of the programme was narrower, the approach to the reorganisation was deeper and the motivation was different. As for very large farms, they have considerable security for the attained financial resources. The firm agreements with the land and property shares holders do not allow them to alienate the land and property of an enterprise. This fact, combined with the clear legal status, make such enterprises relatively attractive to investors. The reform can also lead to a fruitful co-operation or integration with top-priority purchasers.

4.4. Processes inside the reformed enterprises

This section is based on the case studies that have taken place in 1999 (*RosAgroFond, 1999a*). Their programme includes a micro-survey (12 respondents were selected in each enterprise among the specialists including general director and financial directors) and an analysis of the farm economy stressed at the points of interest indicated by the micro-survey. The study spanned the following farms¹:

- ◆ The Vologda Region: a single child farm (case I) and two child farms created on the base of the same parent (case II);
- ◆ The Leningrad Region: a single child farm (case III);
- ◆ The Omsk Region: two child farms created on the base of the same parent (case IV).

The main results of the case study are presented below. In the brackets the number of case is shown that provides the given result.

- ◆ The positive changes in the profitability are caused by the assets and inventory revaluation and writing off the depreciated and missed assets (I – IV). As soon as this cause is widely spread, one can explain why the reorganisation does not affect the internal sources of cash (as it follows from Section 3.3)².
- ◆ Another source of costs reduction is a mass dismissing of the employees (II).
- ◆ A certain effect is caused by new labour contracts with employees at the reformed enterprises. That ensures the higher level of their responsibility (III).
- ◆ An overall improvement of accounting due to the reform causes fewer thefts (IV). The latter is also indicated by wide-scale surveys (Section 3.1).
- ◆ In (III) after the reform the enterprise accessed new sources of financing (as it was mentioned by respondents). However, the respondents were not sure whether the reorganisation had been conditioning for that.

¹ According to the regulations of the case study, mentioning the names of these enterprises is not permitted.

² The changes in profit that are caused by accounting tricks like revaluation do not really contribute to farm assets. So the positive effect of this kind is a virtual effect that positively influences neither production nor food supply to the consumers. The only farm's benefit of this procedure is to make better impression on lenders. That can result in more favourable conditions of debt service or (unlikely) new loans.

- ◆ In (II) and (III) the positive changes in average output prices are observed after the reorganisation. The option of output prices raise is also indicated by the accessible statistical data on prices in the Moscow and Rostov regions. The cause of this raise is not known.
- ◆ Sometimes reorganisation leads to changes in favour of the management. In (I) the wages of the employees who take part in the production process have decreased while the salaries of managers and office workers have increased; in addition, the share of the managers and office workers in total number of employees has increased. Hence, this case of the reorganisation rejects the programme principle that is free decision-making of land and property shares holders in favour of their own.
- ◆ In (II) and (IV) splitting the parent enterprise into two parts was conditioned by the willingness to improve solvency. In this situation one of the child enterprises produces nothing but has enough assets to cover the debt of the parent one. Another child enterprise keeps producing goods.

The relations of these cases to the typical motivation options mentioned in Section 4.2 are the following. Case I relates to option 4, II to 3, III to 2, IV to 3.

The case study answers the question why milk yields per dairy cow increase. The cause is that the rejection of the low-rank cows is much faster in the restructured farms. Hence, food provision per dairy cow gets better, so the yield gets higher. Additionally, farms gain from the sales of meat caused by the rejection. This reserve of increasing efficiency is obviously limited. Considering the results of the surveys, it is possible to hypothesise that this phenomenon is caused by higher decisiveness of the managers of the child enterprises and their prevailing orientation to the profit strategy rather than to saving assets (livestock, in particular).

The case study has proven that the enterprises, both parent and child, tend to hide their liquidity. For that they sometimes use very rough methods which can be easily identified by the auditors. However, the study has not identified the problems in authorities' relations to the farms. On another hand, the wide-scale surveys prove that the authorities strongly control enterprises. To some extent this contradiction could be explained by the commonly acknowledged opinion that the local authorities often operate outside the juridical framework minding their own favour.

4.5. Influence of social and economic situation in Russia on the programme implementation

The programme was expected to yield a broad positive effect over the whole agricultural branch of the national economy and to initiate a business boom in Russian agriculture. That did not happen. The following is a possible explanation.

The programme does contribute to outspread of business in the rural area. It forms the enterprises that are more adapted to the conditions of Russian market economy. As it is shown in Section 4.1, land and other farm assets have not yet entered the real market. However, the juridical and institutional preconditions for that are formed. The more intensively the new market relations spread over the rural branch of the Russian economy the more advantages of the reorganised agricultural enterprises are expected.

The outspread of market relations in the rural sector of Russian economy is hindered by the general economic situation. The losses per unit of expenses in agriculture are the greatest compared to other branches of Russian economy (*Goskomstat, 1999*). It is shown in *Zemliansky (1996)* that in Russia the investment opportunities are the narrowest in the agricultural sector. *Epstein & Tillack (1999)* found that 2/3 of farm fixed assets are lost during 1991-1997 (the case of the Leningrad Region). Most of agricultural enterprises cannot get any financing from the non-government sources. *Pederson et al. (1998)* admit that the increasing farms' debt blocks the reorganisation.

Hence, it is groundless to expect that market forces will bring investments to the agricultural sector. As long as the recently created unfavourable situation in the Russian economy persists, the only advantage of the reorganised farms will be that they take a longer period to go bankrupts.

Consequently, under the present situation free land market cannot assist land property rights shift towards the owners who have the opportunity and willingness to invest. The facts of the developed agricultural land market are sometimes observed¹ but they are exclusive. Usually the land is bought in order to use it outside the rural sector². Most of farmers get land for free. There are no means of real control (neither administrative nor economic) of their opportunities to invest in it.

Privatisation in rural sector was taking place during the dramatic collapse of agricultural production. Under these conditions the privatisation very unlikely could lead to the efficient resource allocation because during the production decline the value of land and other farm assets is close to zero and the future value is unknown.

Finally, the lag between the juridical and effective property rights still exists³ in both 'participants' and 'externals'. The effective rights are based on the informal interests of local authorities, financial structures and influential personalities⁴. To some extent people are satisfied with the current situation because they prefer living in indigence to significant losses in case of an attempt to influence managers or politicians.

5. Conclusions

1. During the period of implementation (1993-1999) the programme positively influenced the economic efficiency of the regional farming sector (Section 3.2). Several indicators of economic effect of 'participants' were increasing relative to those of 'externals', other indicators were remaining indifferent. According to the known facts, the permanent character of the positive impact is explained mostly with the increasing number of the reorganised enterprises.
2. Section 3.1 argues that usually due to the restructuring the farms obtain recognisable eventual economic effect. Like for the Nizhny Novgorod Region, this is reflected in the statistics of all regions that have participated in the programme, except for the Tula and Moscow regions in which there are only 5 of 484 'participants'. As it was shown in Section 4.4, this effect is mostly due to improved accounting, rejection of the low-productive cows and savings on wages. The stronger the parent economy the higher the positive economic effect of the reorganisation.
3. The expected positive relation between farm liquidity and the restructuring process did not get a strong approval on the data of Nizhny Novgorod (Section 3.3). However, the child farms are rather willing to reduce the debts payable compared to 'externals'.
4. The programme provides a set of tools to implement very diversified aims. The juridical freedom of the land and property shares holders' choice leads to wide variety of forms and consequences

¹ The fact known to the author relates to the Omsk Region (enterprise «Omskii bekon», which works very efficiently, actively buys land shares), also there are some examples in the Moscow Region.

² The price of the agricultural land at the auctions in the Saratov Region was 241.2 roubles per hectare while the price of land to be used for other purposes was 147100 roubles per hectare (Dvorkin, 2000).

³ Booth & Camalyan (1999) mention the ersatz nature of the privatisation. In their view it was caused by the imperfections at the policy and legal systems.

⁴ These specifics are mentioned in Nikonov (1995) and Csaki (2000).

of the reorganisation. It is caused by the influence of various information sources on the decisions of land and property shares holders and by many external factors, which are different for each particular farm. The difference between the most common options for the reformation is explained by different motivation (Section 4.2).

5. The programme has not lead to a mass creation of family farms and other small businesses (Section 4.1). The study has not provided arguments whether this fact is favourable or not with respect to the overall efficiency of the programme.
6. The contradiction between motivation and efficiency is observed: those farms display more interest to the programme that have lower expected economic effect of the reorganisation (Section 4.3).
7. The privatisation of land and of other production assets by means of the programme could lead to more efficient distribution of resources if had performed before the collapse of the agricultural production began and the investment opportunities in agriculture shrank.

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References

- Bezemer, D.J. (1999). Russian reforms: the return of the peasant? University of Amsterdam and Tinbergen Institute: discussion paper TI 99-046/2
- Booth, S. & A. Kamalyan (1999). Main problems of market reforms in Russia (the case of agriculture). *Effektivnost' i konkurentosposobnost' agrarnogo sektora Rossii* [Efficiency and competitiveness of Russian agricultural sector] Moscow, MSHA Publishing House. Vol.1, 4-15.
- Csaki, C. (2000). Agricultural reforms in Central and Western Europe and the former Soviet Union: Status and perspectives. *Agricultural Economics*, 22.
- Duel, I. (1997). *Varianty reorganizatsii sel'skokhoziaistvennykh predpriatii* [The cases of the reorganisation of agricultural enterprises]. Edited by I. Duel. Moscow.

Dvorkin, B.Z. (2000). Razvitie zemel'nykh otnoshenii na regional'nom urovne: opyt, problemy [Evolution of the relationships regarding to the land at the regional level: essays and problems]. In Rynochnaia transformatsiia sel'skogo khoziaistva: desiatiletanii opyt i perspektivy [Market transformation of agriculture: the experience of ten years and outlook]. Moscow.

Epstein, D. & P. Tillack (1999). How Russian Enterprises are surviving (financial status of large agricultural enterprises, the case of enterprises in the St. Petersburg region). The economics in transition (forthcoming).

Golyshev, M.E. (2000). Reformirovanie sel'skokhoziaistvennykh predpriatii v Nizhegorodskoi oblasti [The reformation of agricultural enterprises in the Nizhny Novgorod Region]. In Rynochnaia transformatsiia sel'skogo khoziaistva: desiatiletanii opyt i perspektivy [Market transformation of agriculture: the experience of ten years and outlook]. Moscow.

Goskomstat (1999). Rossiiskii statisticheskii ezhegodnik [Russian Annual Statistics]. Moscow.

Nikonov, A. (1995). Spirali' mnogovekovoi dramy: agrarnaia nauka i politika Rossii (XVIII – XX vv.) [The spiral of a centuries-long drama: agrarian sciences and politics in Russia from the 18th through the 20th centuries]. Moscow, The Encyclopedia of Russian Villages Publishing House. 418-438.

Pederson, G.D., K.M. Brooks & O.P. Lekhtman (1998). Russian farm enterprise performance and restructuring: a debt problem or a profitability problem? Center for International Food and Agricultural Policy: Working paper WP98-5

RosAgroFond (1999). Predvaritel'naia programma monograficheskogo obsledovaniia ekonomicheskikh posledstvi reorganizatsii sel'khozpredpriatii [Preliminary programme of the monographic study of economic impact of the agricultural enterprises reorganisation]. RosAgroFond internal document (by N.M. Svetlov). Unpublished.

RosAgroFond (1999a). Predvaritel'nye rezultaty monograficheskogo obsledovaniia ekonomicheskikh posledstvi reorganizatsii sel'khozpredpriatii [Preliminary results of the survey of economic impact of the agricultural enterprises reorganisation]. RosAgroFond internal document (by N.M. Svetlov). Unpublished.

Svetlov, N. (1998). Analiz vliyaniya reorganizatsii na finansovoe sostoyanie i investitsionnyu aktivnost' sel'skhozivstvennykh organizatsii [The analysis of the impact of the agricultural enterprises' reorganisation on their financial performance and investment intents, in Russian]. In Trydy nauchnoi konferentsii molodykh uchenykh i specialistov [The proceedings of scientific conference of youth researchers and specialists of MTAA], Moscow, VNIITEIAGroprom.

Swinnen, J. & H. Gow (1997). Agricultural credit problems and policies during the transition to a market economy in Central and Western Europe. Katholieke Universiteit Leuven (Belgium), dept. of Agricultural Economics, Policy research group. Working paper №6.

Uzun, V. (1998). Reformirovanie sel'skokhoziaistvennykh predpriatii: sotsial'no-ekonomicheskii analiz (1994-1997 gg.) [Reforming of agricultural enterprises: sociological and economic analysis (1994-1997 years)]. Edited by V.Ia. Uzun. Moscow.

Uzun, V. (1999). Sotsial'no-ekonomicheskii analiz rezultatov reorganizatsii sel'skokhoziaistvennykh predpriatii [Sociological and economic analysis of the results of the agricultural enterprises reorganisation]. Edited by V.Ia. Uzun. Moscow.

Zemliansky, A. (1996). Investirovanie ob'ektov APK pri perekhode k rynku [Investments in agro-production complex objects under the conditions of transfer to market economy]. In Ekonomika sel'skokhoziaistvennykh i pererabatyvaiushchikh predpriatii [Economics of agricultural and food enterprises], 12, 1996.

Appendix

I. Financial coefficients used in the study

The overall coverage coefficient:
$$\frac{A_1 + A_2 + A_3}{L_1 + L_2}$$

The liquidity coefficient:
$$\frac{A_1 + 0.5A_2 + 0.3A_3}{L_1 + 0.5L_2 + 0.3L_3}$$

The coefficient of internal sources of liquidity:
$$\frac{L_4 - A_4}{A_1 + A_2 + A_3}$$

A_1 is cash and short-term investments; A_2 is short-term debt receivable; A_4 is fixed assets (the dairy livestock is accounted in this segment); A_3 is the assets that are not included in A_1 , A_2 and A_4 ; L_1 is debt payable; L_2 is short-term loans; L_4 is equity; L_3 is the liabilities that are not included in L_1 , L_2 and L_4 .

II. Glossary

Child enterprise is an enterprise that was created as a result of the reorganisation of a *parent* enterprise.

'*External*' is an enterprise that has not been taking part in the *programme* by middle 1997.

Land share is the juridical form of granting rights to land. According to the law, the land share is granted to an employee (either present or former) of a collective or state agricultural enterprise. The share holder has the rights to:

- ◆ obtain a certain plot of land out of the farmland of the enterprise;
- ◆ trade the share;
- ◆ rent the share.

Parent enterprise is an enterprise which is cancelled because its assets, liabilities, rights and obligations are transferred to one or several *child* enterprises created as a result of the reorganisation.

'*Participant*' is an enterprise that has been reorganised within the framework of the *programme* before middle 1997.

Partitioning is the reorganisation scheme resulting in several farms of comparable sizes.

Programme «Privatisation of land and reorganisation of agricultural enterprises in Russia» is briefly described in Section 1.

Property share is the juridical form of granting rights to assets (other than land). The property share is granted to a present employee of a collective agricultural enterprise. The share holder has the rights to:

- ◆ obtain some of the enterprise's assets, which value is equal to his share;
- ◆ trade the share;

- ◆ contribute with it to the equity of the newly created enterprise.

RosAgroFond is the consulting foundation that was co-ordinating the implementation of the *programme* since 1997 and conducted the study of its economic and social impact.

Transformation of an enterprise is the reorganisation scheme resulting in a single *child enterprise*.

Wave of reorganisation is the period of the programme's implementation process starting in August and ending in May. The first wave covers August 1993 – May 1994, the following waves cover the same periods of the consequent years¹.

¹ There were no events of reorganisation within the programme's framework in June and July.