

Agrarian Transition in the Former Soviet Union

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Résumé

Dans l'ancienne Union Soviétique, durant la première moitié des années 90, des changements significatifs ont eu lieu. On a assisté à un processus de privatisation des exploitations agricoles - rapide en Géorgie, en Arménie et dans les pays baltes, lent dans les autres pays. Des exploitations de types différents tant d'un point de vue institutionnel que de gestion apparaissent : incluant des grandes et petites exploitations individuelles, de nouvelles formes de coopératives et des sociétés commerciales. La plupart du temps, les changements institutionnels ne sont pas suivis de restructurations effectives des exploitations. Beaucoup d'exploitations demeurent des anciennes grandes fermes collectives. Le morcellement excessif des nouvelles exploitations individuelles empêche le progrès technique. La dérégulation partielle du marché agricole et la libération des prix sont contrés par le maintien d'intervention et de subsides de l'Etat. Les baisses des investissements et des productions, particulièrement de la production animale, ont été accompagnés de la croissance de la main-d'oeuvre agricole. La productivité du travail et les rémunérations diminuent. L'inégalité des revenus et la pauvreté rurale s'accroissent.

Summary

In the Former Soviet Union, during the first half of 1990s, significant changes took place. There occurred a process of gradual privatisation of farming — fast in Georgia, Armenia, and the Baltics, slow in the remaining countries of the region. Different institutional and managerial types of farms emerged, including small and large individual farms, new forms of co-operatives, shareholder associations and joint stock companies. Most of the time the institutional changes were not followed by effective farm restructuring. Many units remain as very large old collective farms. Excessive fragmentation of newly created individual farms (often enlarged family plots) impede technical progress. Partial deregulation of the agricultural market and price liberalisation were stymied by continuation of heavy state intervention and subsidies. Declines in agricultural capital investment and output — especially in animal production — were accompanied by increases in farm labour force. Labour productivity and wages decreased. Income inequality and rural poverty increased.

Mots-clés : agriculture, ex-Union Soviétique, transition postcommuniste

Key-words : *agriculture, former Soviet Union, post-communist transition*

I. INTRODUCTION

In the Former Soviet Union (FSU) a main achievement of transition has been that, in contrast to supply shortages of the former regime, food supplies are now sufficient across the region, and that more flexible and

pluralistic types of farm management are visibly spreading (Nazarenko 1997, p. *v*). Because of the rising importance of private plots and private vegetable farming, nutrition is sufficient even in the war-torn areas (World Bank 1995). The nutrition gap has been reduced between urban and rural dwellers. In the case of the latter, direct

access to food production gave them an important advantage during crisis conditions. Yet, the initial economic effects of transition include rapidly increasing income inequality and deteriorating overall rural conditions. The *nouveau riche* stratum shifted its tastes towards high quality imported goods. The poor had to reduce their food purchases to a low subsistence level. Problems of rural poverty and basic human needs are difficult and costly to resolve. The shortfall of revenues has often prevented governments from extending social safety nets to rural dwellers. Incomplete privatisation and failed restructuring has led to the degradation of rural facilities and structures and falling agricultural output.

II. THE INITIAL CONDITIONS

Since the early 1930s Soviet agriculture was dominated by farm co-operatives (*kolkhozy*) and state farms (*sovkhozy*) under central planning authorities. In the 1970s, through the so called «agro-industrial integration», most *sovkhozy* and *kolkhozy* were combined with different industrial-type activities into very large production units with centralised management. Despite great efforts of Soviet authorities and ever increasing state subsidies, the productivity of the agro-industrial complexes remained very low through the break up of the USSR. No private property of land was allowed. A large proportion of food output was produced by rural families on privately used small plots — typically about half an acre each (Hunter and Szyrmer 1992 Gregory and Stuart 1997).

Central planning in agriculture relied on fixed prices of inputs as well as the prices at which state monopolies would purchase farm output. Purchase prices were set at a low level, compared to production costs as a means for providing cheap food to the population. Retail prices were also fixed by a governmental agency. They were maintained at a relatively constant level, and tended to be identical across the USSR and across different channels of distribution. There was a separate range of prices at co-operative markets, basically producer markets with some price flexibility, but here too prices were controlled and ceiling prices of the main traded products were set on a daily basis (Nove 1969).

Through the Council for Mutual Economic Co-operation (CMEA), foreign trade relations were based on long-term agreements and on annual protocols for exchange and payment. Barter trade was widely used. Foreign exchange was tightly controlled and a multiple exchange-rate system was used. The official exchange rates implied substantial overvaluation of domestic currency. The

relative and absolute performance of agriculture was linked to farm product exports.

III. PRIVATISATION AND STRUCTURAL REFORM

De-collectivisation and price liberalisation were accomplished simultaneously after the fall of communism. Price liberalisation, often simultaneous with the drop in subsidies, tended to be sequenced somewhat ahead with all of the complex and co-ordinated adjustments required on every level of government so that the microeconomic recovery process would not be confounded by regulated prices. The liberalisation has been only partial. The state procurement prices have been kept at a relatively low level. Also prices of energy and many other farm inputs remained under state control. Most of the time they were underpriced.

Privatisation and restructuring in agriculture are slower than in other sectors. Making agriculture more productive requires decentralised redistribution of resources. Local officials and former state and collective farm members led the process, and, on the whole, they lacked both the required price information and the radical new understanding necessary to agree with or carry out the tank Reform is most effective when rules are clear and discretionary involvement is limited which rarely happens in transition agriculture, where government intervention remains extensive. While the reform procedure was being carried out, output had to be maintained, and this requires compromise. The degree of compromise is a measure of how little compensation and incentives could be offered to farm management due to fiscal stringency. In rural areas, former farm directors and administrative officials blocked the privatisation procedures and, at the government level, lobbies stand in the way of legal and regulatory changes in land ownership.

Agricultural production can be improved only in connection with upstream (supply) and downstream (processing) industries, as well as services used for storing, handling, and marketing agricultural products. Privatisation of food processing has given preference to workers and local organisations through the distribution of shares to employees and investment funds. The preference for domestic purchasers has slowed down the overall restructuring process, including upstream and downstream privatisation, by discouraging foreign investment and know how transfers (OECD 1997).

Other constraints are imposed on the privatisation process by the procedures required for transfer and registry of titles and by the slowness of complementary reforms. In Baltic

States (absorbed into the USSR just at the outset of World War II) property restitution created additional complications. Land was divided there among many claimants which resulted in a high farm fragmentation and weak management (Swinen et al 1997).

In all FSU countries, much of privatisation was accomplished by mass distribution of titles to first-time owners of shares of land. The most extensively privatised farmlands are in Armenia, Georgia, and the Baltics. The least privatised farmlands are in Uzbekistan, Turkmenistan, and Belarus. In Russia, Ukraine, Moldova, and Kazakhstan the reform was only partial — many farm members received shares and titles (on the basis of position and experience), but they did not actually receive the land, and therefore, they have not acquired effective full property rights. The central feature of successful de-collectivisation, as in China, is the shift of basic decision-making from the collective farm to the household (Sicular 1993). In the FSU, most of the time privatisation has essentially meant re-registration of large farms as associations or joint stock companies.

In Ukraine, for example, individual users now cultivate only a small fraction of agricultural land, while various collective enterprises and shareholding farms still dominate, with over 65% of the land. There are great many organisational forms, but all still face the task of internal reorganisation. Essentially, much of land cultivated by collective enterprises and individual farmers is also state-owned. Private farming at first grew, but to date, private farms cultivate only 2% of the land (Csaki 1997).

Table 1: Land use in Russian agriculture,

| | 92 | 93 | 94 | 95 |
|---|------|------|------|------|
| Total number of enterprises in agriculture on January 1 (thousands) | . | 121 | 287 | 335 |
| Total agricultural land (million hectares) | 651 | 687 | 699 | 695 |
| Used by (percent): | | | | |
| Kolkhozy | 12.7 | 9.9 | 9.4 | 9.1 |
| Sovkhozy | 47.9 | 38.0 | 34.8 | 31.7 |
| Shareholding farms | 18.9 | 26.6 | 28.0 | 30.2 |
| Private individual farms | 8.4 | 4.8 | 4.7 | 5.2 |

Source: Goskomstat 1996

Table 1 presents the institutional transformations in Russian agriculture in the years 1992-95. During this period the average farm size decreased significantly. The

total number of enterprises (farms) almost tripled. The shareholding farms increased their share of agrarian land from 18.9 percent to 30.2 percent, while the shares of all other major types of farms shrank, including that of private individual farms which decreased from 8.4 percent to 5.2 percent (4.7 percent in 1994).

Rapid and complete land privatisations occurred in Armenia and Georgia. Armenian agriculture, de-collectivised in 1991, has led to the situation where private farmers cultivate all but 20 percent of arable land. In Georgia, private farms cultivate 49 percent of arable land, the rest, although field by collective and state farms, is almost unused, because those farms have essentially ceased production. In both countries farms are small, typically about 1.5 and 0.75 hectares, respectively. They are enlarged private plots where farmers grow mainly corn, vegetables, fruits, and grapes, as well as milk, meat, and eggs. These farms market up to 40% of their output, and they have restored agriculture to profitability (World Bank 1995). Transfers of ownership of land and the break-up of large farms led to spontaneous privatisation of assets, a consequence of confusion due to lack of clarity in the process. The livestock was often immediately seized by farm households, a fact that has played a large role in the drop in livestock production. The pace of improvements was hampered by the low accessibility to elite seeds and good stock. Excessive fragmentation of small farms has been an impediment to technical progress.

In general, throughout the FSU institutional change has been slow. At the policy level, a considerable part of the burden of reform was placed on spontaneous forces and local initiatives because of parliamentary obstacles to reform. In the Russian Federation, lack of budgetary resources for procurement and subsidies left the federal government with few policy instruments. Regional governments have therefore strengthened to the point that their spontaneous initiatives in land reform and overtures to foreign investors hold out more promise than federal policy. In Ukraine, a unitary state, the scope for regional action is far more limited, but possibly increasing, for the same reasons. Parliamentary lack of action seems decisive in impeding reform at present, but there is evidence that public opinion favours faster reform, and with greater resources at the regional level, local policy may begin to reflect local preferences.

In many countries the old production norms are still used to attempt to control macroeconomic balances. Old planning structures inhibit resource mobility. Studies of the structural evolution of agriculture in modern growth show that where rural communities offer a variety of

economic activities, the agricultural sector's contribution to the economy, and therefore to employment, is considerable (Timmer 1991). Agricultural growth then increases income and foreign exchange earnings, makes a contribution to investments in related industries, and releases labour for other sectors as the requirement for an agricultural labour force contracts (Kydd *et al* 1997). In this circumstance, economic growth will inevitably decrease the share of agriculture in GDP and the share of the total work force engaged in agriculture (Johnston and Kilby 1975). Across the FSU, because of the collective farm regime and centrally supplied inputs and services, there is little economic opportunity outside of agriculture in rural areas. The extensive commercial production that is now beginning on private plots will be the mechanism for development of these services, if the collective farm regime ceases to be the provider of inputs for private plots.

IV. OUTPUT DECLINE

Agricultural output decline can be destabilising for the economy, depending on the size of the agricultural sector. In the FSU this size ranges from 7 percent of GDP in Russia to 67 percent of GDP in Georgia. Agriculture accounts for 13 percent of labor force in Estonia but 41 percent of labor force in Tadjikistan (World Development 1997). Also, growth or contraction in agriculture would have a significant impact on export earnings and import replacement, affecting the trade balance and hard currency reserves. Decline and fluctuations of agricultural output and falling rural incomes must affect production of agricultural machinery, fertilizers, other rural production and consumption goods. These fluctuations affect the level of food prices and therefore the real purchasing power of all the population, especially where export restrictions create a wedge between domestic and world prices (Kydd *et al* 1997).

Between 1992 and 1996, the four main food producers and consumers — Russia, Ukraine, Belarus, and Kazakhstan¹ - experienced cumulative agricultural output decline from about 20 percent in Belarus, 30-50 percent in Russia and Ukraine, to 45 percent in Kazakhstan. This decline has mainly been due to downsizing of the livestock sector, which was affected by the rising costs of inputs, the sharp decline in consumer demand, and the inefficiency of the processing industry. That animal husbandry shifted from livestock centres to private plots, where production is for household consumption rather than sale has contributed to decline. Total animal numbers have since their peak levels by about 40 percent in Russia and Ukraine, and about 50 percent in Kazakhstan

(ERS October 28 1997). Despite positive terms of trade for the agricultural sector, aggregate animal numbers fell for six consecutive years. Some positive indicators are that in 1996, compared to 1995, the rate of decline in the estimated production of animal products has lessened and that hog inventories on private plots have risen (ERS May 28 1997). Also, the decline in meat consumption has stopped, which may mean that consumers have adjusted their purchases to higher prices and lower incomes. A slight improvement in feed conversion rates and animal productivity may be an indicator of the beginning of recovery. In general, markets are strengthening, albeit slowly, despite government regulation.

Table 2 presents the data on annual output changes in Russia, 1992-95, in percent. In dollar terms, food exports and imports remained relatively stable. Yet, given a fast purchasing power depreciation of the dollar during this period of time, in real terms, food exports and imports declined very significantly (if a ruble GDP deflator were applied).

Table 2 : Russia, agricultural output and trade,

| | 92 | 93 | 94 | 95 |
|--------------------------------|------|------|------|------|
| Output change, percent: | | | | |
| Industry | -18 | -14 | -21 | -3 |
| Agriculture | -9 | -4 | -12 | -8 |
| Animals | -12 | -5 | -13 | -11 |
| Crops | -5 | -3 | -10 | -5 |
| Food – export (\$ billion) | 1.6 | 1.6 | 2.3 | 2.3 |
| Percent of total export | 3.9 | 3.8 | 4.3 | 3.4 |
| Food – import (\$ billion) | 9.6 | 5.9 | 8.6 | 9.6 |
| Percent of total import | 26.0 | 22.2 | 30.5 | 28.9 |

Source : Goskomstat 1996

In Russia, failure to achieve anything close to target levels of procurements (which largely continue as before 1991) has resulted in non-state grain prices becoming more subject to market forces and reflecting domestic supply and demand conditions. In the last few years, there has been greater price differentiation between different crops and different classes of grain. World market prices are increasingly influencing price levels and movements in all FSU countries. The long-term prospects, however, are unclear. In part because of political instability, in part because of the disadvantages of lack of global integration, and in part because it is unlikely that these governments will be willing to discontinue soft credits and accelerate privatisation and meaningful farm reorganisation, recovery could be slow.

V. RURAL POVERTY AND EMPLOYMENT

Almost across the entire region, the agricultural sector has diminished as a share of GDP while rural employment as a share of total employment has generally increased. This is indicative of low levels of productivity and intensive activity on private plots. Rural areas have been adversely affected by macroeconomic stabilisation policies, which have led and will continue to lead to dislocation and unemployment. Adverse terms of trade, the drop in domestic and foreign demand and the reduction

of subsidies to farms have resulted in large farm arrears, which translate into non-payment of already low wages. Table 3 illustrates the changes that occurred in Russia between 1992 and 1995. While investment and output were shrinking, employment increased. The relative wages in agriculture declined significantly — from 66.7 percent of average all-sector wage in 1992 to 46.8 percent in 1995. In real terms, the average wage in agriculture in 1995 was equivalent to about one half of that in 1992. An increasingly larger percentage of farms generated losses and the indebtedness of agriculture grew.

Table 3 : Russia, agricultural inputs and profitability, 1992-95

| | 1992 | 1993 | 1994 | 1995 |
|---|------|------|------|------|
| Investment in agriculture, percent of total investment | 10.8 | 7.9 | 5 | 3.5 |
| Labor in agriculture, percent of total labor | 14.3 | 14.6 | 15.4 | 15.7 |
| Average nominal wage (thousand rubles) | | | | |
| All sectors | 6 | 59 | 220 | 484 |
| Agriculture | 4 | 36 | 111 | 226 |
| Agriculture to all sectors, percent | 66.7 | 61.0 | 50.5 | 46.8 |
| Loss generating enterprises, Percent of total number of enterprises | | | | |
| Industry | 7.2 | 7.8 | 22.6 | 26.8 |
| Agriculture | 14.7 | 10 | 58.7 | 57.2 |

Source: Goskomstat 1996

Table 4 shows consumption of selected foods per capita per year in two types of families in Russia. Between 1990 and 1995, the rural households reduced their consumption of bread and meat. In the case of bread, this was predominantly a substitution effect, due to a significant increase of the relative prices of bread. In the case of meat, this was predominantly an income effect

generated by a significant decline of rural revenues. The consumption of potatoes, and fruits and vegetables increased. During the time of crisis the rural population, despite its lower monetary incomes, could take advantage of its direct access to food production. This obviously made the economic hardships less painful and enabled millions of people to survive the crisis.

Table 4 : Russia, food consumption, urban and rural households, 1960-95 (kilograms per capita)

| Years | Bread | | Meat | | Potato | | Fruits and Vegetables | |
|-------|-------|-----|------|-----|--------|-----|-----------------------|----|
| | U | R | R | U | U | R | U | R |
| 1960 | | 184 | 174 | | | 98 | 57 | 31 |
| 1970 | 120 | 164 | 159 | 122 | 120 | 106 | 63 | 45 |
| 1980 | 104 | 161 | 142 | 109 | 127 | 107 | 73 | 61 |
| 1990 | 88 | 139 | 133 | 86 | 120 | 115 | 71 | 67 |
| 1995 | 96 | 160 | 119 | 95 | 111 | 119 | 52 | 57 |

U = urban households (or urban workers households) R = rural households (or kolkhoznik households)

Source: Goskomstat 1996

An increasing number of farms became unprofitable — about 58% of all farms in 1994-95, a rate twice as high as in industry (26.8 percent in 1995). Low monetary

incomes forced rural population to turn to a subsistence natural economy — high self-sufficiency of rural households and barter of rural goods and services.

By 1993, the Gini coefficient, which is used as a standard measure for income inequality, reached 50 in Russia. This is a very high level, given that for the USSR (1973) this coefficient was calculated at 27, and for the USA (1970) it amounted to 34-40 (Komai 1990).

The EBRD transition report divides the CEE countries into three categories by levels of poverty. All FSU countries, except the Baltics, belong to the third group, the poorest, where the pattern of income inequality is similar to that typically found in the developing world (EBRD 1997). Both output and earnings possibilities have been improved in those rural areas where privatisation has been most complete and effective.'

VI. CONCLUSION

In the FSU, in the short run, the continuation of a slow recovery in agriculture is expected. Hazards of conducting trade in an environment virtually without market-based credit, market-oriented farm management, and competition in input supply, complicate predictions about the long-term direction of change. Agriculture's share of GDP has fallen and agriculture's share of the labour force has tended to be higher than either the share of output or the share of fixed assets, which implies a labour-intensive agriculture with low-average labour productivity and consequently lower income levels in agriculture. These are clear indicators of rural poverty.

VII. NOTES

1. These four countries account together (in 1992) for 92% of the grain, 88 per cent of the meat and 89% of the milk production in the FSU.
2. Especially peripheral regions, underendowed with good land, human and physical capital, are severely hurt, as transport and energy subsidies are reduced.
3. In the case of labor income, in all CEE countries access to private sector employment outweighs all other factors, including educational level and skills (Milanovic 1997, EBRD 1997).

VIII. BIBLIOGRAPHY

- CSAKI, Cs., 1997. *Land Reform in Ukraine: The First Five Years*, The World Bank, Washington, D.C.
- EBRD, 1997. *Transition Report 1997*, London.
- GOSKOMSTAT Rosit, 1996. *Rosssya v tsifrakh*, Moskva
- GREGORY, P. & STUART, R., 1997. *Russian and Soviet Economic Structure and Performance*, 6th ed., Addison Wesley, Reading.
- HUNTER, H. & SZYRMER, J.M., 1992. *Faulty foundations. Soviet Economic Policies, 1928-40*, Princeton University Press, Princeton, NJ.
- JOHNSTON, B. F. & KILBY, P., 1975. *Agriculture and Structural Transformation*, Oxford University Press, New York.
- KORNAL, J., 1990. *The Socialist System. The Political Economy of Communism*, Princeton University Press, Princeton, NJ.
- KYDD, J., DAVIDOVA, S. & MACKAY M., 1997. *The Role of Agriculture in the Transition Process Towards a Market Economy*, Ed. THEA MECH. United Nations, Geneva.
- MILANOVIC, B., 1997. Explaining the growth in inequality during the transition. *Inequality and poverty in transition economies*, London, 23-24 May 1997, EBRD, London.
- NAZARENKO, V., 1997. Results and consequences of the transition so far, Summary of Presentations, *The Role of Agriculture*.
- NOVE, A., 1969. *An Economic History of the USSR*, Penguin Books, Middlesex, U.K..
- OECD, 1997, *OECD in Figures. Sectoral Contributions*, Electronic publication at <http://www.oecd.org/publications/figures/sectcont.html>.
- SICULAR, T., 1993. The Quest for Sustained Growth in Chinese Agriculture. *Current Issues in Agricultural Economics*, Ed. A.J. Rayner and D. Colman, The Macmillan Press Ltd., London, 1:127-153.
- SWINNEN, J. F. M. (ed.), 1997. *Political Economy of Agrarian Reform in Central and Eastern Europe*. Ashgate, Aldershot.
- TIMMER, C. P., 1991. Agricultural Employment and Poverty Alleviation in Asia. *Agriculture and the State: Growth, Employment, and Poverty in Developing Countries*, Cornell University Press, Ithaca and London : 123-155.
- WORLD BANK, 1995. *Armenia: World Bank Country Study*, The World Bank, Washington, D.C..
- WORLD BANK, 1997. *World Development Indicators*, The World Bank, Washington, DC..