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**Efficiency without Sustainable Growth
(‘Mixed Salad’ Policy of the «Market Fundamentalism» and Pragmatism)**

DAVID EPSTEIN

North – West Institute for Agricultural Economics, St. Petersburg,
Phone +7 921 942 33 94 , epshtein@DE1150.spb.edu



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Agricultural Economics and Transition:

**„What was expected, what we observed,
the lessons learned.“**

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ABSTRACT

The paper is devoted to the influence of ‘market fundamentalism’ on the Russian agrarian policy in 1992 - 2006. On the basis of analysis of two stages of economic and agrarian policy is concluded that "mix" of ‘market fundamentalism’ and some pragmatism has not allowed achieving sustainable growth of agricultural production. Resource potential of the agriculture is reduced by high rates, however there is an essential increase of an economic efficiency: the expenses for unit of gross agricultural production in the comparable prices are reduced by rather high rates. In the future the forms of the state support of the agricultural producers should help to provide the profitability, which is necessary for extended reproduction in zones of commodity manufacture.

1. WHAT WERE THE EXPECTATIONS FROM THE REFORMS?

In the period before the start of the market reforms in the USSR (1987-1991), most economists had a fairly clear distinction between the objective and the means of the reforms, including between those of agrarian reforms. The objective was to build a sustainable growing agrarian sector that increases its efficiency by introducing innovative technologies. The means was to create a mixed economic system based on private property, numerous forms of enterprises, properly functioning competitive markets with a regulating role of the state. The key words characterizing the objective are sustainable growth and increasing efficiency. After fifteen years of reforms in the Russian agriculture, it can be stated that the basic institutions of market economy have generally been established. Since 1999, after seven years of an unprecedented decline of production, there has been a certain increase, both in the economy in general and in the agrarian sector in particular. However, this growth in agriculture has not been sustainable. The average rate of gross output growth in agriculture in 2002-2005 was 2 per cent and mostly in plant production, while the real rates of increase in the incomes of the population exceeded 6-8 per cent. There is a certain efficiency growth, and we will focus on the indicators of this growth in due course. We will also mention here that employment at large enterprises is decreasing by about 10 per cent each year, the decrease in cultivated areas being 4-5 per cent a year.

What is then the reason that sustainable growth has not been achieved? Why the efficiency has largely been growing at the expense of reducing resource potential, i.e. of dying out of the weakest enterprises?! In our opinion, the main reason is that an appropriate system of governmental regulation has not been formed, including a system of regulating agriculture. It is the practice based on the ideology of ‘market fundamentalism’ (MF) well established in the Russian state governance that prevented such system from emerging. What do we mean by ‘market fundamentalism’ then?!

2. WHAT IS ‘MARKET FUNDAMENTALISM’?

‘Market fundamentalism’ as a term is widely used by J.Stieglitz in his work on the negative aspects of globalization, although no specific definition thereof is given.¹ However, it is clear from the text of the cited work that what is meant is a concept that overestimates the possibility of market relations and competition as such and underestimates the regulating role of the state, including that of creating a well-balanced system of institutions that would help the economy to function for the benefit of sustainable development and in the interests of all population of the society.

With this in mind, we treat ‘market fundamentalism’ approximately as the following point of view on the necessity of numerous institutions of modern market economy and the role of the state: for a normal development and functioning of modern market economy it is sufficient to ensure the existence of private

¹ At first this term appears in the book in connection with a criticism of the belief of the International Monetary Fund’s decision makers in the positive impact of privatization, irrespective of creating conditions for effective work of future private enterprises. Quoted by the German edition: Joseph Stiglitz, 2002. *Die Schatten der Globalisierung*. Siedler Verlag, Berlin. 2002. 304 S., c. 75. (Original issue *Globalization and its Discontents*. 2002. W.W. Norton & Co., New York. 2002). Further on Stieglitz says that Russia faced a change of religions with Marxism replaced by the new religion of free market (P.220). “At the same time, it is widely agreed that the state makes an important contribution to the formation of productive and humane society and economy” (P.251)

property rights and protection thereof, as well as competition. The main task for the state is exactly to protect private property rights and competition. The social task of the state is also to 'pick up the fallen and the deceased' in competitive activities, i.e. to provide only a minimum level of social support.

The fact that modern market economy is itself a complex system of institutions coordinating and supporting producers, with the role of utmost importance among these institutions is being that of the state that develops and implements a concept of development, monitors international and internal sectoral markets and creates an environment for sustainable development, is not taken into account by the supporters of MF. The MF supporters also pay little attention to the idea that the state should promote a regular functioning of the markets by means of disseminating market information, implementing a sensible customs policy, regulating financial system, including banking system, etc.² With regard to the transition process, MF insisted on single-stage, 'shock' way of price liberalization, on fastest privatization possible and ignoring the 'social costs' of the reforms. In fact, for the market fundamentalists the objectives and the means were mixed up, as the objective for them was a maximum expansion of the market sphere, and not at all finding a solution to certain socio-economic issues.

3. "MARKET FUNDAMENTALISM" AND THE CRISIS OF 1998

Market fundamentalism was to a large extent responsible for the decline of production output in Russia between 1992 and 1998, when the GDP decreased by 40 per cent, industrial production – by 52 per cent, and gross agricultural production – by 42 per cent³. Trying to harness the inflation caused by a single-stage price liberalization, the government proceeded from **the principle of minimizing the state influence** and minimizing the circulation of cash resources. Therefore it opted for a sharp decrease in state expenditures that had been supporting the centralized economy by state orders. The economy started to decrease rapidly. Later on the government would practice massive non-payment of its debts to the enterprises for already accomplished (!) state orders. Financing of science and the social sphere was sharply reduced. Apart from cutting expenditures, there was a permanent practice of long-standing, for up to 6-8 months, arrears in the state paying its debts, including wages in the social sphere and payments for production orders. This excessive compression of cash resources in circulation could by itself cause a sharp and unmanageable decline of production, as well as a decrease in the incomes of the majority of the population. However, this was accompanied by hasty privatization processes, which, with hyperinflation in mind, led to further disorganization of economic links.

According to the logic of 'market fundamentalism', financing of the social sphere on the part of the state was not aimed to compensate the losses in wages of the employees of this sector or to finance its quality development, which resulted in its impoverishment and a massive decrease in the quantity and quality of social services, as well as to a collapse of the corresponding sectors.

Privatization was accompanied by a jump in the growth of differentiation in wages. Wages of enterprise directors and top managers exceeded the average wages at the enterprise by hundreds and thousands of times, while the withdrawal of the state from any control in the sphere of income distribution resulted in an almost triple decrease in the purchasing capacity of the population compared to the pre-reform period. It is obvious that with such a decline in customer demand and the state demand the economy could not avoid the 'vicious circle': decline in the economy – decrease in the incomes of the population and taxes – decrease in demand – decline in the economy and so on.

² Stieglitz says it is impossible to introduce capitalism in both fast and successful way at the same time, without building a fundamental institutional infrastructure. Giving an example, he says that before creating stock exchanges, it is necessary to establish a corresponding framework of general economic conditions, including a system of genuine, not would-be, banks that would need, in their turn, a separate legal framework. Another his example of this is the Russian agricultural producers that, in the market conditions, should have an opportunity to purchase resources and sell their products without difficulties (and losses – D.E.), as well as a system of social institutions. Joseph Stieglitz, 2002, P.167.

³ Russian Yearbook of Statistics - 2001. M., 2001.

This vicious circle was aggravated by a decrease in production efficiency resulting from a fall in the scale of production and its disorganization. By 1998 over 90 per cent of agricultural enterprises and over 53 per cent of industrial enterprises were unprofitable.

Another negative aspect of ‘market fundamentalism’ could be seen in the sphere of currency policy. With the objective of fighting the inflation, the government was maintaining the exchange rate of the rouble to US dollar at the level of 5-6 roubles per dollar for two and a half years. From the end of 1994 and until mid-1998 the dollar exchange rate grew by 1.75 times, although the consumer price index and the average prices of Russian producers increased by 4 times. Within this period, starting with 1995, the exchange rate of the dollar was at the level of 5-6 rubles to a US dollar. However, this did not stop the inflation, while the competitiveness of Russian goods, compared to the cheap imports, faced a sharp decline by 1998, which furthered a deepening in unprofitability and a decline of production. Tax proceeds shrank, and the capacity of the government to repay foreign currency loans decreased. At the same time, the government attracted more loans, having issued state bonds with the appalling interest rates of up to 100 per cent. They were repaid by new loans with even higher interest rates. Finally, this ‘financial pyramid’ collapsed, and the dollar exchange rate grew up from 6 to 21 rubles per US dollar within the period from August till December 1998, i.e. by more than three times.

4. NON-PAYMENT, BARTER, MUTUAL OFFSETS OF DEBTS AND ‘RED DIRECTORSHIP’

In the situation of enormous deficit of cash resources created by the above-mentioned circumstances, enterprises became unable to provide for timely payments for the goods delivered. Mutual delays in payment reached six months and even more. Such arrears should have led to an increase in the number of bankruptcies, but this was not happening. Domestic and foreign advocates of ‘market fundamentalism’ believed this is going on due to the bad will of ‘red directors’ that intend to make the country collapse due to their non-payments, thus ‘discrediting the progressive reforms and the reformers’. They were demanding a stricter legislation on bankruptcies and an expansion of state-initiated insolvencies. However, in this situation the state itself should be declared bankrupt as the main non-payer of its debts, which was exactly what happened in the end (the bankruptcy of the Russian government in August 1998). The behavior of the enterprises seldom going to the court of arbitration against the companies in debt can be considered fairly rational. Indeed, in case an enterprise in debt goes bankrupt, there was a strictly fixed order of paying debts. Debts to the suppliers were not considered a priority. The chances of receiving any compensation from the bankrupt were slim. But the debtor was ready to pay with the products it was producing or, for instance, with raw resources available. In full compliance with the exchange nature, in the lack of a unified means of payment, any goods available may become such means of payment. The negative sides of barter are fairly obvious. The exchange proportions in case of barter include transaction costs related to the necessity of further series of exchange to obtain the needed goods or cash. In this situation the risks are increasing. This results in a significant distortion of market signals and reduces production efficiency. However, on the part of the enterprises, this was a fairly rational response to the irrational functioning of the institutional system.

Regional authorities and heads of regions were trying to relieve the social situation in order to provide enterprises with an opportunity to sell their products and the workers – to receive their wages. Therefore in many regions systems of mutual offsets were established that made it possible to partially settle interpayments. Sometimes these systems were based only on offsets in goods. Sometimes it was sufficient to allocate a small amount of money and to wire it through the long chain of non-payments in order to repay all these payments in chain.

‘Market fundamentalism’ advocates treated this use of barter and mutual set-offs as ‘an attempt to reestablish natural distribution and a Soviet-type power over the producers in the region’. Yet, in our view, this was a fairly rational and socially responsible reaction of regional authorities to the deadlock created by the inadequate economic policy at the federal level. It was not by pure accident that after the crisis of 1998 and a change of the monetary policy in favor of a more pragmatic one, barter and mass non-payments disappeared within two years.

5. MARKET FUNDAMENTALISM AND AGRICULTURAL PRODUCTION BEFORE 1998

In terms of the agrarian sector, 'market fundamentalism' resulted in: 1) a decrease in the level of tariff protection down to one of the lowest in the world, in combination with an overstated ruble exchange rate; 2) a refusal, in the situation of high disparity of prices for industrial and agricultural production⁴, to establish any legally institutionalized and stable system of state support of agriculture with clear objectives; a decrease in support per hectare down to a radically lower level than in developed countries.

The economically unjustified support of the dollar exchange rate at the level of 5-6 rubles per US dollar between 1995 and mid-1998 reduced the prices for imported products in the domestic market. This was furthered by a decrease in the level of tariff protection. This had the most adverse effect on cattle breeding. By 1998 the imports of meat amounted to 33 per cent of its consumption. The imports of milk powder and dairy products lowered the production of milk, as well as profitability thereof. Meat cattle breeding, raising and fattening of cattle and poultry in particular, became unprofitable. In 1996-1998 the profitability of milk production was between -35 (minus 35) per cent and -42 (minus 42) per cent, while the profitability of meat production amounted between -40 (minus 40) per cent for pork production and -60 (minus 60) per cent for cattle. As most farms were involved in both crop production and cattle breeding, agriculture in general became unprofitable.

This unprofitability was for the government the reason to withdraw from any support of agriculture. The governmental authorities started calling agriculture 'a black hole'. The generally known sectoral specificity of agriculture, familiar to any qualified economist, that make such support necessary were not taken into account by market fundamentalists. However, there was still certain 'pragmatic' support, although constantly decreasing, of agricultural producers due to corresponding demands from the State Duma [Parliament] dominated by left-wing parties.

The share of expenditures for the state support of agriculture in the consolidated budget decreased from 15 per cent in 1991 to 2.7 per cent in 1998. In this period 13 per cent of the population were employed in agriculture, while the share of agriculture in GDP in 1997-98 amounted to 6 per cent. By 1996-98 the share of subsidies in the revenue of agricultural enterprises amounted to 10.5-11 per cent, decreasing down to 7.2 per cent in the total costs. Interestingly, evaluating the level of state support of the prices for agricultural production by the price subsidy equivalent indicator, as of 1995 Russia was at the level of developed countries. The reason for that was that the ruble exchange rate in this period was seriously overstated.

Table 1: Level of price subsidies of agricultural producers, in per cent⁵

Countries	1993	1994	1995	1996	1997
Russia	-26	-9	21	32	26
Canada	31	25	22	22	20
EC ⁶	49	48	49	43	42
Check Republic	27	21	15	14	11
Hungary	24	31	21	15	16
Poland	15	20	19	23	22
USA	23	19	13	15	16
Estonia	-30	-6	3	7	9
Latvia	-38	9	8	7	8
Lithuania	-33	-8	6	14	18

⁴ Compared to the pre-reform year of 1991, by 1998 prices for industrial production consumed by agricultural producers grew by 5 times more than those for agricultural production.

⁵ Source: Reviews of Agricultural Policies. Russian Federation. OECD. 1998., PP. 189, 264, 272.

⁶ EC – 12 till 1994, EC – 15 since 1995.

In this situation net investment in agricultural production almost stopped, with the withdrawal of main assets exceeding their inflow by four times. By the end of 1998, the total debts of agricultural enterprises exceeded annual revenues by 52 per cent, with the coefficient of own circulating assets supply decreased from 36 per cent in 1995 down to – 20 (minus 20) per cent in 1998.

At the same time, despite the situation of market competition, the efficiency of agricultural production did not increase over the period of ‘market fundamentalism’ domination in Russia. We evaluated the costs per unit of gross output in the comparable prices of 1995 and⁷. It turned out that the costs per unit of output in 1995 exceeded the costs of 1990 by 42.7 per cent (in the prices of 1990), while the costs per unit of gross output in 1998 exceeded the costs of 1995 by 3 per cent⁸. We can see here that after a sharp decline in efficiency, in 1996-98 enterprises somewhat adapted to the new situation. However, the overall increase in cost per unit in comparable prices amounted to 47 per cent in 1998. Thus as a result of the first stage of reforms, lasting seven years and over in 1998, the expectations of those who treated market relations as an aim, not as a means, were not justified either in terms of growth of agricultural production, or in terms of increase in efficiency.

6. MODERATE MARKET FUNDAMENTALISM AND AGRICULTURE AFTER 2000

It is common knowledge that on 18 August 1998 the Government of Russia declared itself insolvent, i.e. incapable of repaying its debts, at the same time ‘releasing’ the dollar, which led to a radical change in the macroeconomic situation in the country, as well as to changing the Government. The living standards of the population again decreased by approximately two times. However, the Primakov Government, pragmatic and strange to ‘market fundamentalism’, was strikingly fast in tackling most difficult issues of the socio-economic crisis and providing the economy with circulating assets, repaying wage arrears and eliminating a significant share of the accumulated non-payments between enterprises. It was apparently for this reason that this Government was dismissed by President Yeltsin, who himself soon resigned having nominated Vladimir Putin as the successor.

The macroeconomic situation was characterized by an increase in the dollar exchange rate, followed by the cost of all imported products, by 3-4 times over a few weeks from August 1998, which made all imports, including imported foodstuffs, inaccessible to the majority of the population for a long period of time. This immediately ‘made room’ for the Russian producers both in the economy in general, and in the agrarian sector in particular. The prices for domestic products, including foodstuffs and agricultural products, significantly increased, while the salaries were growing at a much slower pace. In 1998 the growth of agricultural and foodstuff prices was even faster than that of the prices for industrial products. This means that the revenue of agricultural and processing enterprises radically increased, with a much slower growth of costs. Over 50 per cent of agricultural and processing enterprises became profitable over a few months. This made them attractive for investment. The capital of various sectors, including that gained by importing foodstuffs, accumulated in earlier years was being actively invested in the processing industry and later, with the objective of ensuring supplies of raw resources, in agriculture. This created good macroeconomic conditions for growth, which even further improved after a 50 per cent increase in the oil prices in the world market in 2000 with their subsequent growth.

However, the increase in the oil prices led to excessive money supply, which the new government, afraid of a growth of inflation rate, did not find appropriate to use within the country. Market fundamentalism demonstrated itself at the macrolevel by an attempt to ‘sterilize’, i.e. to withdraw from using in the economy, the enormous resources gained from oil and gas. Nevertheless, starting with 2003, US dollar

⁷ This indicator can be treated as ‘total factor productivity index’.

⁸ D. Epstein, 2001. Financial crisis of agricultural enterprises in Russia// International Agricultural Journal, Issue 3, 2001. PP. 20-21. On Russian. (Эпштейн Д.Б., 2001. Финансовый кризис сельскохозяйственных предприятий России.// Международный сельскохозяйственный журнал. № 3. 2001. С. 20-21).

began falling in price due to excessive dollar supply in relation to import demands. Together with dollar, less expensive became the imported goods. It repeated the situation of 1995-98.

Market fundamentalism also maintained in the sphere of the agrarian sector, too. Among its manifestations were: 1) earlier practices of reducing state support for agriculture compared to budgetary expenditures – they fell from 2.5 per cent in 1998 to 1 per cent in 2006; 2) withdrawal from legally establishing any system of state regulation of agriculture with clear objectives and tools.

However, due to an increasing interest of the Russian society and the President in developing domestic production, market fundamentalists became more careful and moderate in denying the needs of agriculture presented actively by the Ministry for Agriculture.

Starting with June 2002, the Ministry for Agriculture initiated the implementation of a financial recovery program for agricultural enterprises, which was in writing off penalty fees, and fines of the enterprises. They had to take the obligations of timely repayment of their current debts and to carry out these obligations. Agricultural enterprises were allowed to shift to the so called ‘unified agricultural tax’ which, in fact, resulted in a certain decrease of tax burden and a simplification of the taxation system. The state introduced subsidies to cover the interest for short-term loans for agricultural producers at the level of two thirds of the Central Bank rate. This made the loans used more widely.

Starting with 2000, the agrarian policy on the whole might be called the policy of forced minimum support in the situation of anticipatory growth of foodstuff imports. The support was at the minimum level since it allowed keeping an average profitability slightly above zero, but the only noticeably expanding form of this support was subsidizing the interest for the loans. Quotas for poultry imports and higher taxation for raw sugar imports were also used. Both measures of import restriction had a positive impact on the dynamics of output of these products. This support was **forced** because otherwise we would have witnessed an absolute decrease in the agricultural output, which would adversely affect the image of the authorities.

However the key issue – ensuring the profitability of agriculture at a level sufficient for production development and stable growth – was not tackled. The average ratio of the profits (including subsidies) to the revenue over the period between 2000 and 2004 amounted to 4.7 per cent, while the ratio of the profits to the self-cost of the products sold amounted to 5.1 per cent, which was too low to provide for a sustainable growth. As a result, the agricultural output growth rate decreased from 6.4 per cent in 1999-2001 to 2.1 per cent in 2002-2005, with the cattle breeding output decreasing by 3 per cent over 2003 and 2004 and increasing by a marginal 0.3 per cent in 2005 accompanied by a very high livestock decreasing rate. Such growth can hardly be called sustainable.

7. DECREASE IN RESOURCE POTENTIAL AND GROWTH OF PRODUCTIVE EFFICIENCY

Together with the unsustainable growth rates, one can witness a sustainable high rate of decreasing the resource potential of agricultural enterprises. The number of employees decreased almost twofold from 1998 to 2004 and continues shrinking at the rate of over 10 per cent a year; the agricultural land reduced by 13 per cent, i.e. by 30 million hectares; cultivated areas of agricultural enterprises decreased by 28 per cent, i.e. by 22.3 million hectares, over these six years. The circulating assets of the enterprises included in the statistics of the Ministry for Agriculture, in comparable prices, decreased, according to our estimates, by 37.9 per cent. Despite a certain investment growth, the fixed assets of agricultural enterprises, in the prices of 1998, reduced by 23.1 per cent by 2004. Since 2001 the number of agricultural enterprises has also been decreasing very fast (by up to 10 per cent a year), while their resources are not being transferred to other enterprises, as such an overall reduction of resources would not take place otherwise.

Let us turn to the situation with the productive efficiency, i.e. with the dynamics of costs per unit of gross output, in comparable prices. It can be expected that, under a very tough pressure of the disparity of prices, the surviving agricultural enterprises were able to adapt to this situation after 1998 and achieve a decrease in the costs per unit of output. Our estimates support this hypothesis (see Table 2).

Table 2: Dynamics of self-cost of a unit of gross agricultural output in comparable prices of the earlier period in 1990-2004 in Russia, per cent

	1995 in % of 1990	1998 in % of 1995	1999 in % of 1998	2004 in % of 1999
Self-cost of a unit of gross agricultural output in comparable prices, in %	142.7	103	91	72.1

Source: Own estimates

Obviously, in 1999 agricultural enterprises were able to overcome the tendency of increasing use of resources per unit and then started to increase productive efficiency at a fairly high pace (over 5 per cent a year). This efficiency growth is partially caused not only by a growth of efficiency in active enterprises, but also by withdrawal of the least effective enterprises and their resources. We carried out an approximate estimation of efficiency growth and in particular due to withdrawal of weak enterprises on the basis of data from the Leningrad Region (Oblast).

8. DYNAMICS OF GROWTH OF PRODUCTIVE EFFICIENCY IN THE LENINGRAD OBLAST

The Leningrad Oblast is among the most successful in the country in terms of the pace of productivity growth in cattle breeding at agricultural enterprises⁹. The agrarian policy in the Leningrad Region can certainly be also characterized as a policy of forced minimum support, as the government of the Leningrad Oblast does not go beyond minor subsidies, up to an average of 6 per cent of the revenue of an enterprise. Most subsidies go to relatively strong enterprises. Weaker enterprises also receive some support. For instance, there is a program of supporting enterprises in disadvantageous areas. The Leningrad Region participated in the financial recovery program. The Region does not apply any measures that would limit market development.

The agriculture of the region is significantly influenced by the constantly growing demand of the population of St.Petersburg for foodstuffs (due to growing incomes), as well as a competition in the labor market of the city's industrial enterprises with relatively high wages. Influence and competition on the part of the neighboring regions (Vologda and Novgorod Regions, Central Russia) that also produce milk, poultry, vegetables, as well as competition on the part of imported dairy, meat and vegetable products can also be found.

The said stable situation, with weak support from the state and high level of competition on the part of the imports, influenced the resource potential and efficiency of enterprises in the following way. According to the general report of the Committee for Agroindustrial Complex for the said **period of three years**, the number of workers employed by agricultural enterprises decreased by 30.5 per cent. The area of agricultural land reduced by 20.9 per cent, the area of cultivated land – by 23 per cent, irrigated areas decreased by 30 per cent, while drained areas reduced by 15.4 per cent. The number of tractors fell by 30 per cent, with the quantity of trucks decreased by 13.7 per cent. A fairly fast decrease in the resource potential of agricultural enterprises is also obvious¹⁰.

A comparison of resources used and the output using the general reports of 2001 and 2004 in the comparable prices of 2001 gives the following results, rather interesting in our opinion: total expenditures (total self-cost in comparable prices) decreased by 9 per cent over three years; total output measured in the average regional prices of 2001 increased by 26.1 per cent, while the output per unit of resources

⁹ By the end of 2005, the milk yield in the region amounted to 6240 kilos per cow, with the country average figure being 3280 kilos.

¹⁰ In Leningrad Oblast in 2004 the corporate farms y produced over 64 per cent of gross agricultural output comparing with the country' average of 42 per cent.

increased by 38.6 per cent¹¹. The growth of sales was generally achieved due to hothouse vegetables, cattle meat and poultry. Table 3 below contains the data on the extent of decrease in the number of enterprises producing certain products and of increase in production concentration.

Table 3: Growth of production concentration in the Leningrad Region in 2001-2004

Products	Quantity of producers, enterprises		Quantity of largest producers on aggregate giving 50 per cent or more	
	2001	2004	2001	2004
Grain	106	83	14	8
Potatoes	155	116	21	16
Vegetables	66	46	5	5
Milk	166	126	35	34
Dairy products	36	23	6	4

To evaluate the growth of efficiency of the surviving enterprises we organized a panel data analysis of the aggregate of 126 enterprises functioning in 2001 and 2004. Using the least-squares method, we plotted a Cobb-Douglas production function for the output on 6 factors on the aggregate of 2001-2004 with the data reduced to the prices of 2001 and with the time factor (neutral technological progress). By its form, the production function is a usual Cobb-Douglas function with y for output, t for the independent time factor and X for the vector of inputs:

$y(X, t) = Ce^{\alpha t} X^{\beta}$ with α and β being the required function parameters. The equation demonstrated a serious increase in technical efficiency in 2004 compared to 2001, at the rate of over 6 per cent annually (see below).

Table 4. Coefficients and statistical evaluation of production function for the Leningrad Region in 2001-2004

Variables	Regression coefficient	Standard error	T - criterion	Significance
Constant	0,2699	0,257	1,051	0,2944
Ln (labor, average number of the workers, persons)	0,106	0,053	2,002	0,046
Ln (material cost minus cost of fodder, thou. Ruble)	0,442	0,056	7,920	0,000
Ln (cost of machines, equipment, transport means, thou. Ruble)	0,002	0,023	0,073	0,942
Ln (agricultural area, ha)	0,080	0,017	4,563	0,000
Ln (concentrates, thou. fodder units)	0,274	0,028	9,711	0,000
Ln (other fodder, thou. fodder units)	0,171	0,046	3,737	0,000
T (time, year)	0,063	0,012	5,349	0,000
n	252			
df (degrees of freedom)	7			
R ²	0,969			
F - criterion	895,1			
Durbin-Watson-criterion	1,964			

¹¹ Production output was estimated as a sum of all products sold in the comparable prices of 2001, the same for all enterprises.

With the average annual rate of neutral efficiency growth of 6.3 per cent a year, its growth over three years amounts to 20.1 per cent. This means that over half of the 38.6 per cent growth of productive efficiency was achieved as a result of growth of efficiency of active enterprises, with the almost other half being the result of withdrawal of less effective enterprises.

Obviously, the efficiency growth in the Leningrad Region was noticeably ahead the average efficiency growth in Russia. We can also see a significant economy of scale: with the increase in production volume by 1 per cent, the output is growing by 1.075 per cent¹², even without considering technological progress. Thus the outcome of 'moderate market fundamentalism' in the region of such a big city of St.Petersburg was also ambivalent, as in Russia in general. On the one hand, there was a significant increase in the efficiency of using resources. On the other hand, due to weak support there was a serious decrease in the number of agricultural enterprises, as well as in the labor and land resources used by them.

9. WHAT'S NEXT? ABOUT A VISION OF AGRARIAN POLICY WITHOUT MARKET FUNDAMENTALISM

In order to correspond to the objectives of the country in the situation of globalization and to achieve efficiency growth in combination with an increase in both production and consumption, market fundamentalism in agrarian policy should be abandoned. In our opinion: 1) the total expenditures for support shall be determined on the basis of the objective of providing conditions for extended reproduction of foodstuffs and increasing the competitiveness of the products, including that in the world market¹³; 2) forms of support shall ensure the profitability necessary for extended reproduction in the sphere of commodity production, as well as narrowing the gap between wages in agriculture and wages in industry, at the same time distorting the market prices of the production to the lowest degree possible; 3) the level of protection of the domestic market from the imports shall be determined by the internal objectives of agrarian policy.

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¹² The sum of the factor coefficients is 1.075.

¹³ According to our estimates, it should increase by 4-5 times.