

AGRARIAN TRANSFORMATIONS OF RUSSIA: FROM GREAT REFORMS  
TO “VOLUNTARY” COLLECTIVIZATION

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**Abstract.** Agrarian transformations of Russia both in XIX-th and the XX-th centuries, trends of their action and efficiency, and also the necessity of both agrarian and industrial complex adaptation to modern vectors of globalization and industrialization of world agriculture are considered. Mechanism features of carrying out reforms and also their relations with both social crises and economic development are discussed in the article.

**Key words:** agrarian transformations, great reforms, industrialization, globalization, theory of systems, economic development.

Agrarian reforms and class system

Conditionally, there were about 12 stages during all period of agriculture development in Russia: 5 stages before Soviet rule, 6 stages within soviet period and one post — soviet reform. Each was characterized by reforms implemented by state structures. As a rule, the reforms were accompanied by pauperization of peasants, weakening of the country, social tension rise, peasant revolts and peasant revolutions. As a result, at least, of five reforms, mass peasant uprisings became a norm, which led to organized state acts of war against peasants in Russia. Peasants' protest actions led by I.I. Bolotnikov (1606-1607), S.T. Razin (1670-1671), E.I. Pugachyov (1773-1775), A.S. Antonov (1920-1921), and peasant revolt at the time of collectivization are well known. Social tension was due to the fact that most agrarian reforms were preceded by toughening of administrative repression methods in order to control peasantry, and also tightening up restrictions sorting out peasants in a separate stratum.

Four main types of stratification are known in sociology: slavery, castes, estates and classes. First three characterize close societies, whereas, the latter characterizes open ones, in which, versus closed, resettlement from one country to another was not restricted officially. Estates preceded classes and were typical of feudal societies in Europe from IV till XIV centuries. For estate system, comprising several strata, hierarchy was expressed by inequality of both position and privileges. In X - XIII centuries there were three principal estates: clergy, nobility and peasantry.

Since the second half of XVIII century, class division into nobility, priesthood, the merchants, peasantry and petty bourgeoisie (middle urban strata) had been established.

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Estates were based on land property, and rights and obligations of each were determined by law and sanctified by religious doctrine, membership in an estate being determined by legacy. Social mobility existed not only between but within estates. The higher in social hierarchy an estate was, the better its status was.

Three main stratification systems' models are distinguished: western, eastern and mixed. Schematic western model is a geometric figure, in which ruling class is approximately equal to the lowest one in size, middle class being the largest. The model of eastern stratification system belongs mainly to societies in which Asian type of production predominates, such model is a pyramid, its groups varying in power rate, wealth, prestige, and the lowest class is the largest *Per se* this is the most ancient stratification system. About five thousand years ago it was established in India and has remained up till now. Its characteristic feature is both a sharp boundary between strata and, practically, impossibility of transition from one caste to another. One of domestic variants is serfdom. Alongside with communal land tenure it caused not only Russian crop farming retardation, but also lagging in industry. Serfs did not make qualified specialists. Consumers' demand was quite natural. Wage labour market did not exist in the country. Poor population didn't buy manufactured products consequently, it didn't induce output expansion.

Backwardness in industry caused retardation of social evolution development, including the army, its arms and ammunition. The Crimean war, ended in Russia's defeat, proved that. Serfdom effect resulted in bureaucracy rise in society, low quality of administration, judicial procedure, education etc. The Crimean war revealed the drawbacks of the system. It was clear what was forming in Russia — anarchy and peasants' rebellions.

But both agrarian reform and liquidation of serfdom relationships are, first of all, global structural changes in economy, shift from agrarian society to an industrial one, and even, subsequently, to post-industrial. All experience of European reforms especially in France, Germany, Austria — Hungary, was shaped not only by domestic problems, but also by international, political, competitive and cultural influence that had existed in Europe since XVII century and propagated from England, Holland and northern France. Ultimately, the effectiveness of food supply defined the national security. Nevertheless, despite the fact that in 1768 Catherine II created the first commission for peasantry setting free and the necessity for serfdom abolition was convinced by the majority of population in the country, it needed more than a hundred years to realize this common desire. It took Russia rather long time to move from a closed society to the first attempts of creating an open one.

On February, 18 1762 the first social reform occurred in Russia, during the short-term reign of Peter III, when nobles were exempted from compulsory military service for imperial court. Nobles (Tsar's servants) were exempted from serfdom. In 1766, during the reign of Catherine II, the decree that "Russian Empire is managed on a rigid foundation of positive laws, institutions and statutes of the sovereign power of outgoing" was issued and it remained unchanged in law till 1917.

It was then that the principle of issued legal norm continuity was approved in the state political practices.

The question of abolishing serfdom, which had been alongside with autocracy the principle backbone of social structure in Russia, its administrative system, required replacement of both given institutions and administration mechanisms by newer and more efficient ones. Changes had to be universal; the transformation required not only peasants' but also other spheres of social life. Unsettled problems of Alexander I went to the next emperor — Nicholas I.

On February 19, 1855 Alexander II mounted the throne. It was he who abolished serfdom in Russia. His reign (1855-1881) became a period of radical reforms of all Rus-

sian society united by the notion — Great reform. Although from mounting the throne till the beginning of reforms about four years passed. Those were difficult years for Russia. The Crimean war (1853-1856), which was lost in favour of both Turkey and its allies England and France, became both an obvious case of Nicholas I reign epoch and unsuccessful beginning of his son's Alexander II reign. In that situation Alexander II made an amazing step to find those who were guilty: he condemned neither ministers nor officials, neither institutions nor his father's errors in both domestic and foreign policy, but serfdom was proclaimed to be the main social evil of the society. Alexander II made his historic choice and disregarded those who were against abolishing serfdom among both landowners and bureaucracy in the higher echelons of society. He was able to unite progressive people around him who really believed that the reform abolishing serfdom should be carried out at the top of society, rather than at the bottom of it, which might cause social revolution from the bottom.

On February 19, 1861 Alexander II signed a manifesto in which general principles of serfdom abolishment, compulsory for all Russian empire, were announced.

The general officer L. V. Dubelt, after the manifesto's announcement, wrote in his diary: "...Soon there will be proletariat in the country and revolutions will start as in France."

Serfdom abolishment was a great deed of Alexander II, but he carried out many other reforms that brought autocratic, feudal Russia nearer to educated, constitutional monarchy. Among his other reforms, the most important were reforms in view of Zemstvo, education, governmental system and army. Reformative, progressive activity of Alexander II affected all considerable spheres in the country.

Peasant reform of 1861 raised the issue of a new, different farming including scientific basis. After abolishing serfdom in 1861 and subsequent carrying out local control reforms, court procedure and many other reforms, much had changed in Russia. Though, estate — hierarchical ranking remained intact. People were not equal *de jure*. Their status was legally determined by their membership of a particular, concrete social group — estate. The special volume of the code of laws (IX) comprised "Laws of conditions (fortunes)" regulating status, rights and duties of each estate in the county. The Law read that "in composition of both urban and rural population, according to difference in estate rights, four main estates were differentiated: nobility, priesthood, city dwellers and rural dwellers." It is quite obvious that nobility had the highest status. It had always, traditionally been the main support of both throne and state. One of the articles from the code of laws read: "Nobles, the first support of the throne, belong to the highest and, for the most part, most educated class of people devoting their life to government service, are one of the most reliable tools of the government." By the end of the XIX century there had been approximately two million nobles (about 1.5% of all population).

After serfdom abolishment in country estates there were three systems: labour rent, capitalistic and mixed. Contract labour, farm machinery use, improved cultural practices enlivened developing production and yielded good results. Landowners — entrepreneurs and a part of wealthy peasants took advantage of the situation in some regions of the country and actively developed commodity production. Corn crop over the second half of XIX century had doubled and com export had grown 5.5 times. By late 1890s 50 per cent of reaped harvest had come in the market. Land ownership was gradually but steadily losing its exceptionally class character as, alongside with habitual landowners' land tenure, areas under crop, belonging to businesslike peasants, increased greatly.

By the beginning of XX century Russia still had been too far from universal, constitutional state, but there was a tendency of humanization, legal ensuring of both so-

cial life and public administration had showed themselves over a period of the whole XIX century.

At the beginning of XX century Russia was still far from a universal rule of law, but the trend of humanization, the rule of social living and government arrangement was manifested during XIX century. By that time, social class order had disappeared in most Western countries. Nobility was the only social class remained but no special rights were assigned by the law. Bourgeoisie approved a new social hierarchy based on income.

But before the disruption of the tsar empire the upper class was the leader in government offices in Russia. The state purposefully supported the nobility to get quality education. A special system of privileged schools was totally designed for noble children. It included Alexander (Tsarskoe Selo) Lyceum, College of Law, the Page Corps, Institute (Smolny) of Noble Ladies and others. There existed one more rather important privilege of the nobility that was their position in the bureaucratic-service relationship hierarchy, they having benefits in state military and civil service.

Peasant reforms, the reduction of public pressure on strata borders had a significant effect on the entire structure of the Russian society. In the 60's and 70's of XIX century so called "liberal" social environment was established. It included representatives from different castes and social groups, but its mood was determined by those who were identified as "intelligentsia". That definition was not an equivalent to the word "intellectuals". The former pointed out socio-political, ideological commitment, mainly directed against governmental violence and as a result the desire to reorganize the world into a new one on a rational social basis. All liberal community in Russia was originally characterized by critical attitude towards existent political and social systems. The nature of such ideas and values was called "the ideology of the state otschepentstva" by F.M. Dostoevsky. Up to 1917 such views were shared by diverse social groups in the country, and, what is more, a considerable number of people fetished a revolution as something leading to social transformation of the country. It was explained clearly by S.L. Frank in exile: "That moment in time the vast majority of Russian people from so-called intellectuals lived with faith in revolution. It was the only essence of their life. Russian people — as we thought — had been suffering and dying under the burden of an outdated, degenerate, evil, selfish, arbitrai power"... Prominently, the main point of expectations lay neither in future nor work, but it was coded in denial of the past and present. That is why such faith could not be defined either as belief in political freedom, or even as faith in socialism, furthermore according to its inner content it could be determined only as a belief in revolution to overthrow the existing regime. And by no means the difference between parties did not state qualitative difference in world outlook, but, mainly, the difference in the intensity of hatred to the existing conditions and repulsion from them — that is a quantitative difference in the degree of revolutionary radicalism". [2].

Epiphany came only after the revolution and the Bolsheviks coming to power. P.B. Struve wrote that the intellectuals "set the lower classes against the government and the historical monarchy, which despite all their faults, vices and crimes still expressing and maintaining the unity and strength of the state" [3]. SL Frank noted that: "Up to nowadays, our liberalism has been filled with totally negative objects, and rejected any positive government activities, and moreover its dominant mood has been budinage in the name of abstract moral principles against the prevailing state order and control without realizing tragic difficulties and responsibilities of any government" [2]. It is known a famous judgment by F.M. Dostoevsky: "all our Liberal Party has passed the business without participating in it, just denying and giggling." Disregard and ignorance of specific ethno-historical conditions

made Russian liberalism and Russian liberals absolutely helpless in periods of social situation sharpening.

In contrast to the leading Western countries, Russia was still a country of traditional rural civilization to be exact a country of peasant communities. About 85% of the empire population lived in villages. Peasants were also prevalent class in towns. Russian village community was built on the principles of mutual aid, distribution and one-size-fits-all approach. But early capitalism way of life was characterized by individualism, pragmatism, social egoism. For this reason a Russian peasant was considered to be a possessor of particular national mentality, a "natural socialist," a "walking around intellectual", etc. Intellectuals' narodofilstvo was not only ideological exaggeration, but also politically dangerous myth, which was discovered lately in the revolution process. Actually community psychology included a respectful attitude neither to personal material well-being of individual members of the community nor to any individual selection, "rising" above the rest of the "rural world." "Peasant mentality" identified Russian history of the XX century and, apparently, its influence is still strong in the XXI century. It was a major factor of strengthening Bolsheviks power after 1917.

At the beginning of the XX century class leveling trends were already obvious in Russian life. Though some social class subordination gradually disappeared and some obsolete norms were repealed by the government, the whole estate system saved its basic features. Another important element of the Russian Empire identity was a vertical power structure which was not affected by the reforms of the XIX century.

Having occurred in Russia since the end of the XIX century rapid industrialization led to social damages in fact changing nothing in the country. Peasants were not able to become up to date qualified farmers during the life of one generation. Raskrestyanivanie only contributed to the marginal social environment, the most susceptible to radical propaganda and irresponsibility. For example, in December 1910 about 2 million people lived in the imperial capital, more than 1 300 thousand being peasants. The majority of this group was workers, servants, clerks. Their readiness to any irresponsible social action was clearly seen in February — March 1917, hidden potential danger of population marginalization due to a sharp change in social structure having been foreseen beforehand. F.M. Dostoevsky wrote about it long before the Revolution of 1917: "Godless anarchism will come soon, our children are sure to see it. International wants a European revolution to start in Russia, and it will, because we have neither reliable government nor social resistance. A revolt will begin from atheism and wealth plunders; religion will be neglected, temples will be destroyed and converted into barracks and stables; the world will be flooded with blood and it will be frightened." Bolsheviks hated F.M. Dostoyevsky for his brilliant views even long after the revolution and tried to erase his great works away from national literature, particularly, his novel "The demons".

#### The directions of Russian agrarian reforms in XX century

At the beginning of the XX century there existed a noticeable imbalance between accessible agrarian subculture and rapidly progressive structures of industrial society in the country, which had direct political and economic consequences. In the first third of the XX century several politico-economic models were developed to solve this problem, but in fact they were not only economic concepts, in other words, models of optimal economic reconstruction and concentration of material-technical resources. All these concepts inevitably became political, that is self-fulfilling or self-braking forecast programmes.

The most significant ones were: 1) "Stolypin's reforms directed to change evolutionally horizontal (inner system) relations based on the sharp increase of competition among economic units; 2)" Stalin's plan of total collectivization or homogenization, in essence, directed to eliminate a horizontal structure and to replace it with a vertical power organization 3) Chayanov's concept directed to restructure relationships among separate farmers through cooperative development.

### *P.A. Stolypin*

New reform preconditions developed as early as 1861, when personal emancipation of Russian peasants from serfdom marked the beginning of the transition to the individualization of land tenure and land use. Unfortunately, the abolition of serfdom did not lead to the progress of private property. In the 80-90s of the XIX century, the government supported rural community structures, contrary to the idea of free peasant property in future. The reforms initiated by PA Stolypin might overcome these difficulties. His name was related to agrarian reform in Russia, which, on the one hand maintained the landed estates, but on the other hand contributed greatly to the development of agriculture along the capitalist path and, ultimately, to the development of industry and statehood. Stolypin's agrarian policy provided immense opportunities to wealthy peasants, e.g. government loans and attempts to eliminate the communal land tenure system. It helped Russia to join the group of the five top developed countries in the world that time.

Up to 1905 the government supported development of peasant communities in Russian villages, though it was seen their gradual disappearance on the way of perspective transition from collective farms to private ones, and creation of independent peasant farms along the conservation of large landowners. In 1906 P. A. Stolypin, the Prime Minister and Minister of State for Home Affairs, was the top executive, organizer and performer of all these transformations in the field of agriculture and land use. Some of his expressions are well known and widely quoted, such as: "Give Russia 20 years of internal and external peaceful life, and you won't be able to recognize the country" and "You need great cataclysm, we need great Russia."

The reform was carefully prepared. Since 1894 the Ministry of Home Affairs had begun to revise peasant laws. In 1902 a specially created drafting committee was in charge of this work. Then a special council dealing with problems of agriculture was formed under Sergey Witte's chairmanship. It included 618 local committees, with almost 12,000 members. In 1905 it was replaced by a special council concerned with procedures on peasant land tenure strengthening. The Committee of Land Affairs to guide land management and migrants' business was established as well. Being formed in 1882 the Peasant Land Bank provided loans to wealthy peasants for land purchase under the most favorable conditions. During the reform years about 1 billion rubles were spent on purchase of 9.1 million acres.

Trying to modernize the country the tsarist government was scared the process of class transformation (the movement of rural population into working class (proletariat)). It prevented the formation of rural bourgeoisie, despite enormous Stolypin's efforts. Stolypin was strongly criticized by the right wing of monarchical supporters for all reform difficulties and setbacks. Being in power only for five years (1906-1911) P.A. Stolypin was killed in Kiev in September 1911 during the celebration of the 50th anniversary of the Great Reforms.

Aiming to make the inhabitants of the village prosperous Stolypin's reforms tried to prevent peasant riots in Russia. Stolypin chose the best possible ways: to give farmers the known inspected lands belonging to the treasury, and to allow landowners to redeem the

land. Giving peasants the landowner rights set the stage for formation of the largest class of owners in Russia (up to 80% of the total population at the beginning of XX century). Stolipin's policy gave wide opportunities to the prosperous peasants: he suggested granting rich peasants state loans and was eager to abolish the community landownership system. As a result, according to its development Russia was among the other five top countries in the World.

It was the way the National land fund to be organized allowing to carry out a wide programme of resettling farmers from the areas of high population density to more vacant ones (mainly from the Central Part of European Russia to the East). The peasants' resettlement right was given to everyone wishing without any limitations according to the decree of March 10, 1906. 3.3 million of people had moved only to Siberia for 1906-1914 (compared with 1.6 million people in 1883-1905). The number of peasants, not having managed to adapt to the new conditions and having to return, constituted 12% of the total migrants' number. The great advance had been made in the economic and social development of Siberia; this area population had increased by 153% during this period. If the arable lands decreased before resettling to Siberia, they had been enlarged by 6.2% in European part of Russia. Siberia also outran European part of Russia in animal farming development rate.

The decree, having equalized peasantry in its attitude to: the state and military service, entering educational institutions was adopted in October 1906. The decree of November 9, 1906 allowed peasants to leave the community without its permission and high redemption payments. The measures on stabilizing and strengthening labour peasants' farms were taken. For example, in order to avoid land speculation and property concentration, the law limited the maximum personal land-ownership size and allowed selling land to peasants.

The law of June 5, 1912 allowed to pay out the loans on the security of any allotment, bought by peasants. The development of different credit forms — mortgage, melioration, agricultural, land-usage organization promoted the intensification of market relations in the village.

The tsar lands of the Altai and Siberia were used for resettlement. Nicholas II gave out about 100 million acres of Siberia, being his private Emperor's property, to the peasants' fund. The roads, schools, churches and hospitals were built on the tsar's own money in the areas, ceded by him. Peasant resettlement was necessary not only for economic, but also political reasons: such as securing vacant lands of the Empire. Stolipin understood that, for example, immediate landowners' allotment, as the extremists demanded, would have ruined effective landowners' farms. Only small and average farms, provided with land to little extent would have remained in the Central Russia. As they could hardly survive, it would have resulted in reducing agriculture marketability, and consequently blocking agriculture mechanization, application of new land-using technologies, that were carried out on the account of selling commodity grain to big farms. Besides, profitable land ownership abolishment damaged the food provision of cities, as big land-owners' farms gave the main commodity grain part. All these happened after the October revolution in 1917.

#### *A. V. Chayanov*

At the beginning of XX century A.V. Chayanov was the first to find and describe the mechanisms of agrarian sub-culture (civilization) and demonstrated how closely agrarian sub-culture development connected with the system of ethnic, cultural, personal peasants' traits, and the specificity of ecological-geographic conditions, which it developed under. A.V. Chayanov emphasized that a peasants' farm based on the family's labour, had remained a permanent constituent of aV\ economic systems. \4,5,6\). That is a peasants' farm

was relatively stable and independent. Most of them didn't disappear and remained as the main production force. It resulted in A.V. Chayanov's conclusion about the necessity of general state food activity organization — from the purchases at farm producers to allocation among consumers. A.V. Chayanov marked out two cooperation sides: the first one was organizational-administrative-cooperation and the second one was social, in the latter cooperation being considered as public activity. Speaking about cooperation, A.V. Chayanov emphasized that it had not been authorized enterprise, but the one, serving its masters and their interests. It will be called corporation interest-ethics. Chayanov's ideology of solving problem looks to some extent analogical to Stolipin's methodology, directed to sequential evolution reforms, however it was radically different in contents.

At the beginning of XX century Russia took the first place in the World in the number of cooperation enterprises and their members, by 1917 the amount of cooperatives of all types having been nearly 50000 (about 25000 consumer societies, 16500 crediting cooperatives, 6000 farm societies, 2400 farm communities, 3000 butter-producing farms, 1500-2000 producing and handicraft farms). They registered about 14 million members. Huge cooperative organizations appeared in the country. The Union of Siberian butter-producing farms appeared in 1907. By 1917 it had united nearly 1400 farms, controlling 80% Siberian butter production and sales and so on. A wide institution chain of small peasant loan, mortgage banks and loan communities, serving the money circulation of peasants' farms. A number of such institutions had exceeded 13 thousand by January the 1<sup>st</sup>, 1914.

The agrarian reform called Stolipin's reform was of great importance for Russia. P.B. Struve characterized Stolipin in the following way: "No matter how one would treat Stolipin's agrarian policy — it is possible to accept it as the greatest evil or bless it as a beneficial surgery operation; — he has created a great advance by this policy in Russian life. And this advance is both essentially and formally revolutionary. The reason is there is no doubt that, according to the meaning for economic development of Russia; only peasant liberation and railway construction can be put in one line with the agrarian reform."

Peasant cooperation got an intense impulse. The money supply appeared made the solvent demand. The people required the building materials, farm machinery, expensive items to the house — all these stimulated industry development. As a result, Stolipin's reform favoured the country economy as a whole. The peasants got global agro-economic assistance. The progressive farm production forms were applied. A lot of attention was paid to out-school agricultural education. If a number of agricultural-course listeners constituted two thousand in 1905, it was 58 thousand in 1912. And there were 31.6 thousand in 1905 and 1046 thousand in 1912 respectively at the agricultural readings. 9000 employees of the agricultural information-consultation service worked in 1913 in Russia, while the number concerned was less two times in the Netherlands in the same years.

A village absolutely changed during these five Stolipin's years: progressive agrarian methods started being applied. Fertilizer consumption increased 2.5 times, farm machinery import raised 3 times. The building boom began. The arable lands enlarged. The farm production volume increased from 6 to 9 billion roubles for 1908-1913. Bread import increased twice for ten years. The yield growth constituted 14% in 1906-1915.

The organization general-national experiment system began. According to the imperial decree, signed by Nicholas II in summer 1912, "About Spreading Experimental Farms", the chain of state selection institutions was arranged in the country. According to this decree, 12 specialized selection stations were founded in Russia in 1914. Besides, 30 experiment stations and fields had selection departments or specialized in selection. 264 experimental farms had been registered in the total area of Russia by 1913. At the same time one of the famous Russian agronomists A.G. Doyarenko wrote: "Experiments



in Russia are of great historic importance, characterized by sharp raising interest to it from different sides and belief of the future agronomic progress, expressed to not less extent... Plenty of work has been done with the participation of the Government, public organizations and specialists, but more work on inner organization of all appearing and transformed stations will be done". [7]. By 1917 400 experiment stations had functioned in Russia, only  $\frac{1}{3}$  of them were state ones. Agricultural experiment systems were organized according to the "natural-historic" principle. The natural-historic principle meant to demand "to build the experiment regions according to natural, and the work programmes — on the base of natural features according to economic characteristics" in the latest A.V. Chayanov's formulation, changed a little. One should note that A.V. Chayanov's ideas of agronomic, economic consultation service have still been up-to-date by nowadays. Zemstvo agronomic plots became the centers of interaction between theoretic agronomy and practical agriculture in Russia. As a rule, wide-type agronomists, leading a small auxiliary personnel group, worked at agro-plots. A group of specialists worked more seldom there. It was zemstvo agronomy system that promoted the creation of the experiment fields, nurseries, and hire farm-machinery stations and so on. According to N.P. Makarov's data, a relative number of districts, having district agronomists, had increased from 0.5 to 93.87% for only some years (1906-1913). [8].

The result of these changes was that Russian production of the most important grain crop varieties was 28% more than it was produced together in Argentina, Canada and America. The Russian wheat export constituted 36.4% of the total world one in 1910. The Russian grain export reached 15 tones a year in 1912. Bread surplus constituted 16.38 billion kilos a year in 1916. The gross revenue of all agriculture constituted 52.6% of the general one of Russia in 1913. Due to increasing costs, created in agriculture, the whole economy revenue increased by 33.8% in the prices compared from 1900 to 1913. The farm produce circulation increased by 46% during the reform period. Farm production export raised by 61% in the pre-war years, compared with 1901-1905. Russia became the greatest producer and exporter of bread, flax, and a number of animal farming products. The butter exported to England was twice the value of the entire annual production of gold in Siberia. The volume of annual farm machinery purchases increased by two-three times from 1905 to 1913.

According to the census of 1916, 3 of 4acres belonged to peasants. 93 from 100 horses used on farms belonged to peasants as well. 2.37 million acres of land were arable in peasants' farms, and only 0.28 million acres — in land — owners' ones.

Economic development was accompanied by flourishing education, science and culture. There were over 100 higher education institutions with 150000 students in Russia. There were about 40000 students in France at the same time. A lot of higher-education institutions were organized by corresponding ministries or departments (military, industrial-commercial, religious and so on). Education was not expensive being free for poor students who got scholarship.

The scientific advances testified the quality of Russian scientific-technical education. It is enough to name such world-wide Nobel-prize winners' name as E. Pavlov, E. Mechnikov (the first Nobel prize was received in the USA only in 1933). Besides Nobel prize winners, Mendeleev, Sechenov, Timiryazev, Pirogov, Popov and many others are known all other the world. Having subsequently found themselves in emigration (over 2 million) the Russian scientists and engineers were highly appreciated in all the countries and were famous for plenty of world-wide achievements, for example, in the areas of television (Zvorikin), helicopter-making (Sikorsky), chemistry (Ipatiev), sociology (Sorokin) and many others.

The classics of Russian prose (Dostoevsky, Chekhov, Bunin), poetry (Blok and symbolists), Russian music (Chaikovsky, Musorgsky, Rimsky-Korsakov, Rachmaninov, Grechaninov, Stravinsky) and stage art kinds, connected with it (Shaliapin, Sobinov, Pavlova, Kshesinskaya, troupe of Dyagilev); Russian artists (Nesterov, Vasnetsov, Kustodiev) and so on. By 1914 12,627 public libraries had been established in the Zemstvos.

October 1917, known as one of the crucial events in the XX century, was the turning point not only in the Russian history, but also had a strong impact on the whole world history and led to a new series of agrarian reforms. After abolishing serfdom the acquired experience in reforming the agriculture had already begun to produce results, however, it was disrupted World War I and eventually lost. The power was taken by the most radical party such as the Bolshevik Party. The peasantry of the country as well as part of the Russia's elite believed the Bolsheviks and followed them and their slogans borrowed from other parties \_\_\_\_\_. The deputies of the Second All-Russian Congress of Workers, Soldiers and Peasants Soviets adopted the Land Decree together with the "peasant mandate". On January 27, 1918 the Central Executive Committee of Workers, Soldiers and Peasants Soviets adopted the Decree on the land socialization. However, on May 9, 1918 the Decree on the surplus-appropriation system was approved, which resulted in the peasantry stratification into two hostile groups. On the one hand, the peasant harboring bread or decreasing its amount was declared to be "the public enemy" with the following consequences. On the other hand, the informer peasant who acquired automatically the right to receive a part of the requisitioned grain for free. The mass repressions started. The peasant war broke out.

A.V. Chayanov, as many others, accepted the Soviet government and participated actively in the economic activities of the Soviet state. He assumed the newborn system to provide enormous opportunities. The scientist believed his groundworks on cooperation as well as the ones developed by other scientists to be of great use for the state in order to increase the economic efficiency in agriculture using differentiation and specialization of cooperatives within the entire integrated system.

A.V. Chayanov joined the leadership of a number of cooperative and state institutions in the Soviet Russia. The main aim of his work in that time was to develop the state plan for the complex cooperative farming. Being both the scientist and the organizer, he considered the plan to be developed according to the history specificity, social interests, and natural resources in the state [4-6].

Besides the theory and organization of peasantry households the problem of farm cooperation was one of the main directions in A.V. Chayanov's studies. He distinguished two aspects of the problem: the first one related to organization and economic activities in case a cooperative was an enterprise; the second aspect dealt with social issues when cooperation was a public movement. Considering a cooperative enterprise, A.V. Chayanov emphasized that it was not self-sufficient, but served their masters' interests. It was something which was later referred to as a corporate interest, that is, ethics. Chayanov emphasized that cooperation was a process of resources concentration both in horizontal and vertical directions. The horizontal concentration was more efficient in industry, but the vertical one was typical of agriculture. The vertical cooperation includes manufacturing the means of production, procurement, production services, marketing and processing of farm produce, its transportation and storage, supply of seeding and pedigree materials, building roads and production buildings, crediting system etc. It required time.

In 1919 Chayanov organized the Major seminary in agricultural economics and politics, which was reorganized into the Institute of agricultural economics and politics in 1922. Aleksandr Vasilyevich was its unchallenged leader. In short time the Institute became a world prominent center in agricultural science.

However the country's Bolshevik leadership used to aim at collective management forms in agriculture. According to the Programme of the ARCP (b) adopted by the S\* Congress in March 1919: "On accomplishing the total abolition of private land ownership the Soviet power has already started implementing in practice a series of measures aimed at organizing a large-scale socialist farming system. The most important of these measures are the following: establishing state farms, that is, a large-scale socialist economy..."

Such events as the Peasants' War, the Kronshtadt Rebellion, the Antonov rebellion in the Tambov province, "Makhnovshchina" seemed to show the deadlock of the War Communism policies relying on violence, terrorism, requisition. The country was on the verge of collapse. The war was against the country's own people. Under such conditions no state was able to survive. It was necessary for the state to alter its economic policy in order to survive. Even the party leader realized it. The gap between the state structures in Russia and the actual producers, that is, primarily peasants who were the majority of the population, was increasing. It was essential to switch over to other non-violent methods of farming.

The essence of the new economic policy was to restore the traditional commodity-money relations, cost accounting, material incentives, encouraging personal initiative. However, firstly, it was necessary to cancel the surplus-appropriation system, which was done by issuing the Decree of the Central Executive Committee on March 21, 1921 which was called "The replacement of the surplus-appropriation system by natural taxation."

The following Decree of the Council of People's Commissars on May 17, 1921 was adopted, which allowed developing "artisanal and small-scale industry" both in a form of private enterprises and in a cooperative form, as well as supporting the full development of farm cooperation on the principles of establishing at sight..., a voluntary entry..., a free ... . It launched the revival of small plants and factories and other enterprises, and eventually the entrepreneurship in general.

A week later, May 24, 1921, the Decree of People's Commissars, permitted the population "to exchange, buy and sell freely farm produce which remained after natural taxation." Handicraft items and articles as well as products of small industry were also allowed to be exchanged, bought and marketed... "Exchange, purchasing and selling were permitted for individuals and cooperative associations as well as consumer, farm and handicraft organizations. Such types of activities could be carried out in markets and bazaars, and in other places, on stalls and in stands, and inside trade buildings."

Then private and cooperative trade was allowed. Since the autumn of 1921 revived the fairs, stock exchanges were restored. In July 1921 the Central Executive Committee and People's Commissars of the RSFSR permitted to organize private enterprises with the number of workers as many as 20 people, and more workers were allowed later. Thus, personal initiative was encouraged both in the city and in the village. In October 1921 the State Bank was set up, in February 1924 the Central Bank of Agriculture was established. The monetary reform was implemented, a reliable currency ensured by gold (gold coins) were minted. After a disastrous hyperinflation the financial system began to recover.

In general, the style and methods of government, economic and party officials changed. It was recorded in the resolution of the 11<sup>th</sup> Congress of the CPSU (b): "About farm work." It states: "... 7. Party's activities in the village are mainly to be aimed at economic, organizational and cultural-educational aspects, instead of the previously proposed administrative-despotic and political-propagandistic approach." Among the major measures composing the whole range of the new economic policy, the restoring of cooperation should be mentioned. Unfortunately, the same problems are of great importance at present.

The New Economic Policy (NEP) had a beneficial effect on the production development. There has been the total increase in the wealth was observed. Due to replacing the surplus-appropriation system by a reasonable surplus-taxation the ruined country, which had lost one-sixth of its population, managed to achieve the pre-war level for a few years. There was a dramatic increase in the farm output. Derelict lands were cultivated. The grain production increased from 36.2 to 73.3 million tons in 1921-1928, and the gross farm output rose from 32.9 to 71.9 billion rubles. The livestock population was being restored quickly. In 1916 cattle accounted for 49.8 million animals, by 1922 only 35 million heads remained, but in 1924 there were already 46.2 million, etc.

By that time the Soviet government was strong enough and a powerful punitive organ was established as a result of the Civil War and there was no external threat. The 15<sup>th</sup> Congress of the CPSU (b) (1927) outlined the landmarks in the policy towards collectivization without particular dates and rates. The 16<sup>th</sup> Party Conference determined the tasks for the coming years. The rapid rates of collectivization were not expected. Stalin gave a different twist in the farm policy as he believed industrialization to be of great importance for the country. Free peasant labor was the sole source of financing industrialization. But collectivization was a hard process, so by the middle of 1929 only over three percent of peasant households had been socialized.

### Collectivization

The fierce political struggle on the problems of the NEP started. The focus on developing industry demanded the money. The well-known methods were developed by I.V. Stalin during his trip to Siberia in January 1928. The tension of violence was increasing. February 13, 1928 Stalin sent a letter to all the Bolshevik Party Organizations demanding to set up pressure on peasantry in view of the corn-storing as a matter of urgency.

The Bolshevik leadership was oriented towards the total socialization of means of production, collectivization and new methods of farming. Forced mass cooperation of the peasantry proved to be one of the major and tragic measures. The slogan holding the support of an individual peasant and his voluntary cooperation was rejected... Compulsory measures didn't yield desirable results. Collectivization was a slow process. A new economic reform policy wasn't popular with peasantry.

Oriented to a progress under NEP in the mid- 1920s, Western mass media announced Russia built up capitalism. But actually the situation was different. In the late 1920s the recession in the private sector of the economy deepened and only cooperation held its position. Tough fiscal policy put a stop to differentiation between peasantry. Correlation of prices on industrial and agricultural products favoured the former. A repressive machine was increasing the speed of rotation. Agrarian reforms carried out in accordance with a scheme worked out by Stalin brought a number of serf features back to agriculture. Stalin's theoretical formula developed during his trip to Siberia regarding corn-storing was stated perfectly clear on the Agrarian — Marxist conference in December 1929, and then successfully carried out ahead of schedule. Collective farms were forcefully organized, regardless of major peasants' unwillingness and resistance. The kulaks were liquidated, and together with them middle and poor peasants were driven from their homes to virgin lands. They had to develop taiga and cultivate arid salty steppe. With all its obvious disadvantages the Soviet statistics didn't conceal the destruction of productive forces in the course of collectivization. The amount of agricultural production was greatly reduced and livestock population decreased.

In the Agrarian-Marxist conference (December 27, 1929) Stalin made a report "On some problems of the agrarian policy in the USSR". In fact the report marked the beginning of a new stage in the proletarian science and made scientists into mere interpreters of the Central Committee decisions. A period of free view exchange and scientific discussions came to an end. Diversity was replaced by monotony.

Stalin's report in the conference indicated his keen interest in social status of the agrarian policy — that is, eliminating capitalist relations in agriculture and introducing a productive system similar to that one in the socialist industry (state-capitalist in fact). After highlight declarations in the year of "Radical Turning Point" (1929) a protracted agrarian crisis started in the country.

In the course of "complete collectivization" the total acreage of the cultivated lands was greatly reduced and crop yields didn't reach the pre-war level in 1913 — 8,2 dt/ha, in 1928 under NEP — 7,7 dt/ha, and in 1932 under complete collectivization — only 7 dt/ha, that translated the country to the reduction of the gross grain yield and starvation.

The year 1930 was the continuation of "the great turning-point", the landmark of which was the Party CK decree called "About the Collectivization Rate and the Measures of Government Aid to Collective Farm Construction" (January 5, 1930). According to the decree, it was planned to carry out a "voluntary" collectivization in three stages depending on the regions. However, in practice the collective farms were formed by force, when the peasants against their own will were ordered to enter the collective farms. The years 1930-31 were the beginning of the second stage of forced collectivization. It was the period of "kulak" extermination as a class. Preferred stock weight of collective farms in the total volume of gross farm production accounted for as little as 2% in 1927-28 and marketable one — less than 7%. In spite of extensive propaganda and financial support increase in the number of collective farms was very slow. In 1929 the number of farm households joined collective farms amounted to 3.9%. Their portion in gross farm output was not more than 2.6%. In the areas of complete collectivization the government actions towards "kulaks" were: some of them (the best farm households) were sent to concentration camps. The others with their families were exiled to remote parts of the country. The rest of them were forced to leave their villages. They were forbidden to move houses and sell their properties without permission. Not only "kulaks" were persecuted as a social class but considerable number of middle well-off farmers so called "seredniaks" were victimized as well. As a result, according to different sources of assessment from 1 ml to 3 ml households, including 5 ml to 15 ml people, were subject to liquidation. The communes (nearly 45% of collective farms) were organized from amalgamated households. In those communes even the poultry were communal.

The leader's speech at the first All-Union Conference of agriculturists-marxists was accepted by practical workers as an instruction for action. If at the moment of leader's speech there had been 20% farm households in the collective farms, by March 1930 there had been more than 50%. (On March 1, the Confirmation of rough Code of Rules for farm cooperative (artel) was adopted according to which the land, the cattle and the farm implements were communal. In his own possession the farmer had: the house, the plot of land, the cow and a particular amount of farm livestock.) All draft cattle and all the cows, up to 80% hogs, 60% sheep etc. were communal.

Within the first three months of 1930 in the country there were recorded about 4000 peasants' rebellions, about 2 ml people took part in them. The army and the units of USPD (Unified State Political Department) were sent against people. The government allowed taking both legal and illegal repressive actions against rebels. There started the mass cattle slaughter. The fear that spring sowing campaign would fail, forced both Sta-

lin and Lenin to make some concessions (NEP) in 1921. To his loyal supporters' surprise he published the article "Intoxication with Success" (it was published in "Pravda" on March 2. In the article he blamed local authorities for catastrophic consequences of collectivization and held up compulsory enrollment to the collective farms), in which he accused them of blockheadedness and called for returning to reasonable cooperation on a voluntary basis. On March 14, the new Decree of AUCP(b) CC "About Struggle against Distortion of Party's Line of Policy in Collective Farm Movement" was adopted. The number of collectivized farm households fell from 55% in March to 24% in July, however further on it would steadily increase.

In spring 1930 about 9 ml farm households left the collective farms. But it was not the change of the policy that General Secretary had proclaimed; it was just a minute break for sowing season. In September Stalin sent round the letter of instructions called "About Collectivization". It ordered to complete entire collectivization till spring 1932. That time the campaign was prepared more carefully. The example of repressed "kulaks" demonstrated what measures could be taken against those who were not willing to join collective farms. And there were results. In spring 1931 the losses were compensated. 55.8% farm households were collectivized. In 1932 there were 61.5% households in collective farms. And by 1934 up to % households were counted in collective farms. The entire collectivization was completed.

Stalin made the final choice: he began "all without exception" collectivization and got down to establishing gigantic Gulag armies, mainly at the expense of repressed wealthy farmers and a little later-dissatisfied by everything at all times intelligentsia and including the others. Stalin and his loyal supporters tried to explain their failure in socialist construction by intelligentsia's opposition. The famous biologists were arrested and exiled.

At the XVI congress of AUCP (June 27 — July 2 1930) the leader extended directives, "Deliberate damage to all industries caused by upper bourgeois intelligentsia, he said, kulaks' brutal fight against collective farms in villages, sabotage against Soviet government actions by state bureaucratic elements who represented the agents of class enemies...". There were not only the arrests. The decision was made to dramatize several model law trials.

On September 27, 1930 CC sent a circular letter to all "districts". The letter attacked those who tried to replace collective farms by cooperatives, and demanded to turn cooperatives where they were formed into collective farms again. It was the end of cooperative movement.

Professor Chajanov and his colleagues were repressed in 1930 on the case of mythical Labour farm party. Not only he had to deny his scientific beliefs but to accept false accusations. In 1937 during the second "cleaning", having been arrested at the law investigation Chajanov "admitted" that he had been engaged in espionage — "the most severe crime committed against the Soviet Power", the crime was distribution of scientific literature of the institute. On October 3, 1937 Chajanov A.V. was executed by shooting. But the year 1939 was stated as the date of his death. Such kind of government actions were common practice.

The tragedy of agrarian country was that its new ways of development the methods of management were left without scientific ground, without scientific support.

Chajanov A.V. realized that determination and confirmation of social agronomy methods were of great importance for agricultural development in Russia. He described in details how to organize consultation centers in villages, the programme of their work, how to organize management in agronomy. According to Chajanov's theory the role of social agronomic consultation was to become a key point in agricultural development. Its work on

introduction of cooperative achievements and new technology into production, creation of agricultural commodities markets had to be the foundation for development and prosperity of agriculture in Russia. It was A.V. Chayanov's untimely death, neglect to his scientific work that might have resulted in low effectiveness of agrarian reforms in Russia.

It was not necessary for the state leaders to rely on science, recommendations of which contradicted their own ones, and which appealed to the builders of Soviet barrack-like socialism to be careful in dealing with "tremendous experiments". Moreover, "the science was an obstacle for them. For example, the science objected to setting up the state-farms — giants. Scientists expressed their deep concern about entire plowing of the steppes. They expressed their apprehension about the possible ecological disbalance, destruction of animal migration routes, plowing up the areas where birds made their nests, rude invasion into formed for thousands years relations between species and immediate danger of all those ill-considered actions for the man.

The events that happened to the country in the 30-s and in the years after were the consequences of collectivization. It can be referred to as the second enslavement of peasants (coming back to serfdom till 1861, till Great Reforms). And it can also be named as counter-revolutionary overthrow of previous regime or the fifth revolution of Russian Marx followers that ruined the state system of soil management in Russia and the soil itself.

The most evident consequences of collectivization were complete deforestation to export timber (in exchange for gold), that opened that opened the way for the north winds, which resulted in flooding fertile soils along the rivers and made it impossible to cultivate them in a number of areas in Russia, having salinized and rotted the soils.

As a result there came the famine. The introduction of food stamps and supply rationing at the factories inflicted the heave blow first of all on those population who were not socially protected. (They had food stamps neither at the factories nor at the institutions.) In connection with that, market prices had increased 30 times by the end of the first "Five year plan". But in spite of those tragic facts, the industrialization had taken place, 40% of money, made from the bread export, were directed into industrialization. Due to our grain export the world prices for grain fell considerably. The peasants who fed the whole country had to make the hard choice whether to submit, to become economically and socially dependent, or starve to death. That meant that the Civil War continued in Russia. Actually, it was the second Civil War. And the result was a great deal of people's death (it is not known exactly how many people died) in the severe years of collectivization and famine that completed the reform of the village. Stayed alive, weakened and humiliated rural population had to obey and without objection to perform orders.

From that moment the Russian village actually came to an end. Traditions, established for many generations, were broken. But command-administrative system fulfilled Stalin's wishes. Nevertheless, in the fierce war against peasants there turned out to be no winners. In the end, it was "pirrova" victory. The volume of farm output remained at the same low level; animal farming was ruined and never recovered. The land and peasants took their revenge on the winners: the farm land failed to yield, and peasants became indifferent to agricultural work. As a result a lot of problems with food appeared making a significant contribution to the collapse of the Soviet Union. It was dreadful but just vengeance.

### The Modern Difficulties of Agrarian Reforms

Outstanding Russian scientists N.D. Kondratjev, A.V. Chayanov and many others anticipated the harmful effects of excessive amalgamation of farms, which was sure to lead to difficulties and weakening of management, but Stalin, not being a specialist in agriculture, had different point of view. He said: "There crashed down and dispelled into ashes the

objection of “science” to possibility and expedience of organization of large grain factories in 40-50.000 hectares”. The setback in production at the initial stage of collective farm construction didn’t make him worry either. He considered it to be the difficulties of growth (not more than that) that would have to end after collectivization was completed and machinery supply to collective farms increased.

But some of those “temporary difficulties, especially in animal farming, were catastrophic. Because of amateurishness in dealing with storing up feeds, because of the famine, peasants’ unwillingness to head over their cattle to collective farms, the livestock number decreased 2 times.

Stalin’s destruction of peasants as a class finally led to people’s disincentive to work on the collective or state farms. Besides, under those circumstances home applied economics started considerably falling behind foreign economics that had already successfully applied math’s methods, programming, modeling, sociology, biotechnology, social psychology and others. And that was one of the gravest reasons explaining the fact that home economics, including agronomy, actually became helpless, completely unable to develop scientific recommendations at the time of replacement of communist formation by quite new one in Russia of the 1990-s, giving way to the new generation of politicians.

For the long period of time A.V. Chayanov’s scientific research was practically unavailable for the Russian scientific investigators. Even now, unfortunately, his scientific heritage hasn’t found its proper use in the theory and practice of the agrarian reforms conducted. At the same time it is especially important for modern Russia profoundly comprehend and study Chayanov’s ideas and theories that could be able to help in searching new ways of copying with difficulties in developing different forms of agriculture production. It is an irreplaceable loss for the native science and the whole country; for Chayanov’s scientific investigations were immediately directed to agriculture in Russia, where according to his words: “Russian statistics working in completely different surroundings with quite different sphere of budget aspects for the short period of time used up Western-European experience and had to get down to setting its own tasks for financial work and develop in detail methods of its own”. [4-6]. In more than half a century history of Soviet agriculture, in its organization there can be seen the realization of a number of elements predicted by Chayanov, such as centralized guidance, powerful mechanization, successive farms amalgamation, the foundation of extensive agro industrial complex differentiated according to the peculiarities of farm districts. But Chayanov’s ideas were realized not in 10-15 years as he hoped but in 50 and this period came into history as the time of great losses, destruction of the Russian peasantry, disaster and suffering. As a result the system proved to be inefficient. The government command administration of the complex agrarian sector breaking traditional relations between its branches, drove the home farming to collapse. Naturally A.V. Chayanov could not foresee it creating his collective farming project.

A.V. Chayanov’s theory suggests complex approach to the economic evaluation of farm management, including district specialization, transport support, industrial farm potentialities and realities. The final stage of A.V. Chayanov’s project was the foundation of universe theory of farming and collective farm management. The development of farming in Europe, the USA and the third world countries proved the scientist’s ideas to be right. And only in our country they were neglected. The agriculture development took the wrong way, not very efficient and it resulted in its self-destruction and finally disintegration of the country.

The experience of developed and developing countries confirms that the government non-interference into the market is not a viable approach. The lack of effective policy results in numerous ulterior costs-environment deformation, no poor farms support, veteri-



narian problems and also threats to the health of people and animals initiated by inefficient government management.

Politicians usually use three main methods to influence changes in the agrarian sector: price regulation, administration control and technology development support. For example, environmental units can be preserved through numerous means, in particular, levying such taxes that make the final product price a real cost reflection and cover expenses on the ecology damage due to industrial production. The absence of political and public control makes the use of natural resources underestimated. At the same time the policy in ecology, affecting farm management, increases comparative competitiveness of products in those countries where ecological regulation is not so hard.

The market necessity to enlarge production for reducing cost price and final product prices inevitably leads to the connection of the blocks of chains in industry, in particular, in livestock production with the growth of farm animal concentration within the limits of one and the same area. The animal keeping density provokes favourable environment for easy spread of infectious diseases unless special disease control measures are taken. Thus industrial farm units have a tendency to a wide use of various veterinarian medicines. Improper usage of the latter may result in getting them into the food chain with a bad effect on man's health. In the same way on large livestock farms high rates of chemical clearing agents are used to meet sanitary requirements, for example, fungicide, careless appliance of which may become the potential source of further environment pollution.

By now the share of small farms in food production has not been estimated yet (economically). It is considered to be nearly equal to that of the industrial ones. The survey of some African, Asian and Latin American towns revealed unexpectedly great number urban livestock breeders including even well-to-do ones. [10]. Headlong policy often aggravates ecology problems as in the case of too large schemes of constructing in forest areas; or false tax policy and by subsidies aimed at increasing best production and beef products export; or by migration projects and replacing poor populations to the less inhabited regions.

The urgency to analyze the Russian farming peculiarities is essentially growing due to unique in the mankind history challenges, caused by globalization processes and qualitative changes in intergovernmental relations. It requires the working out of new control and social structures management concepts especially for those structures that are engaged in the agrarian sector organization as nowadays it is becoming more obvious than ever that it is the efficient agriculture ensures food security and stable country development.

The attitude to globalization is known to vary from unqualified approval to blaming those who consider it to be a new form of colonialism. Hyperglobalism or revolutionary globalism has its followers who assume market and competition will put everything to its place being able to provide effective global economic integration with the maximum introduction of scientific and technology achievements and free market mechanisms through complete ignorance of national established formations, many social, culturally civilized and nature and ecology imperatives. Under global conditions the international system of labour division results in the domination of North America, EC and East Asia. Only ten developing countries could enter the common global market. The rest countries including Russia stay outside this market. As a result the necessity to find out the possible ways of agriculture efficiency increasing in the conditions of globalization has become especially vital. It is obvious that it requires the development of ideas about society intra-structure features and opportunities for the selection of such peculiarities which being controlled and intervened may affect the country's economic development. Recently the concepts and methods of the system theory have actively been used for solving difficult tasks.

The fundamentals of the systems theory began to shape in the middle of XIX century [12], most successfully being developed in the works of such economists as N.D. Kondratyev [13], A.V. Chayanov [4].

The former anticipated the formation of some concepts of the future general systems theory such as a system, links, elements, hard and discrete systems, material and information connections, a subsystem, a system goal, system circularity, the emergence. The scientist also introduced the concept of system statics and system dynamics which were later defined as concepts of homeostasis and its disorders.

N.D. Kondratyev subdivided system dynamics into qualitative and quantitative changes. Quantitative changes are the changes of the system elements number and their volume parameters, qualitative changes cannot be narrowed down quantitative changes and present the formation of new subsystems from pre-existing elements. Along with this classification N.D. Kondratyev also divided dynamic processes into evolutionary (irreversible) processes and wave-like (repeatable or reversible) processes. It is reversible changes in the elements of the economic process, their susceptibility to fluctuations that he defined as the cyclic dynamics regularity essence. Not only economic phenomena but also social and political events are influenced by cyclic fluctuations. Being affected by countervailing factors (similar in influence intensity) the wave dynamics of any open system has been described nowadays for many systems.

In the last decade, interest in the systems organization has grown considerably and begins to acquire an independent significance in various research fields. Development of systems theory has allowed coming to the conclusion that the majority of real network structure systems, regardless of age, function and scale, has a similar, reasonably universal architectonics, which allows researchers in various scientific fields to use it as a common paradigm. The discovery of universality in the network organization, apart from the size, resulted in forming a new scientific discipline — the science of networks, with its arsenal of objectives and methods. Being based on the theory of constructing graphs the rules of empirical data formalization as a network have been developed, the critical factor for such formalization being the initial assumptions about the interactions between different network nodes, their nature, time scales. The choice of these assumptions determines the adequacy of the final results to the real processes.

The development of systems theory has allowed obtaining a number of new qualitative data to clarify the regularities in the variability of social — ecological relationships. It is especially important because until now only the government structures were considered to be able to control the use of natural resources. However it turned out that an analysis of 10 variables in the relations between society and ecology can contribute to the development of a social self-organization model, where their stable interaction may self-maintain [14]. The current development of economic crisis has clearly shown the certain global links between transnational key economic institutions, described the relationship between the development of social technological components (airlines, roads) and the spread of pandemics among people [15].

There have already been examples of direct use of systems theory methods to identify economic development factors and assess their value [16].

Initially agrarian reforms in Russia have always been determined by authorities guided by their own ideas and opinions on economic efficiency of such reforms so it was impossible to forecast the correlation between reform results and social conflicts. Under globalization conditions the neglect of scientific research, education and due professional preparation of such reforms is particularly dangerous as it inevitably reduces the country's competitive economic potential in world markets.

So far there has been developed a conceptual and methodological mechanism of the systems theory allowing searching and identifying the critical components of social organization that are essential for the economic development of any society, including multiplicity and complexity of social communicative networks which are inconsistent with the strict social strata boundaries typical for Russia. New economic, environmental, food supply risks require large-scale modernization of all agricultural sectors based on up to date technology in order to start at least developing methods ensuring the sustainable development of domestic agricultural complex. Permanent comprehensive monitoring of all economic characteristics can be the integral indicator of programme success but, its principles are also in need of development and scientific confirmation. Relationships between agricultural science, education, farm production and agribusiness are crucial for the whole agricultural sector and it is their assurance that may facilitate agricultural sector development. Imperfection in any part of such relationships inevitably affects the whole production cycle and use of new knowledge and, hence, opportunities for innovative development.

Thus, in Russia for more than two centuries the driving development factor has been the governmental system that relies mainly on capital.

But finally the authorities had negative attitude to the results of such modernization. Power was considered as a guarantee of any reforms realized to be a success. Throughout the whole Russian history the ruling elite, the top of the social pyramid, has been based mainly on their own understanding and interpretation of public benefit. It is obvious that until education and training are major factors in decision-making for the authorities in implementation of any reforms, the effectiveness of the latter will be unpredictable. This is especially dangerous in today's globalized environment, economic risks, increasing interdependence of the different states.

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Аннотация. Рассматриваются аграрные преобразования России XIX и XX веков, направления их действия и эффективность, а также необходимость адаптации АПК России к современным тенденциям глобализации и индустриализации мирового сельского хозяйства. Обсуждаются особенности механизмов проведения реформ, а также их связь с социальными кризисами и экономическим развитием.

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