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Conditions of Soviet Economy Development in the Middle of XX Century and Factors of its Crisis

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Abstract: Presented research is dedicated to the issues of Soviet economy development in the middle of XX century. Selection of the topic is not accidental. This is the time, when economic growth rates were very high and at the same time, first contradictions which led to a crisis of the system and its breakdown appeared. In this context, we have defined the thesis that causes of Soviet economy crisis can be found during the period of its highest development in the middle of XX century. As a main task, we decided not only to consider the reasons of the Soviet economy growth during the specified period but also to analyze the sources of its future challenges. Specificity of the problem determines using of different methods of historical and natural scientific research: historical and retrospective, system-structured, analysis and synthesis. Conditions of Soviet economy development, its achievements and mistakes are highlighted in details in the study. At the same time, researcher does not try to cover all complex of economic problems of the state but a special place in the research is given to contradictions in the industrial sector. Researcher makes a conclusion that in addition to general problems (recovery of war-ravaged economy, difficult demographic situation, reduction of investment share in the national economy during the Great Patriotic War and other) serious mistakes were made by the leadership of the country in the middle of XX century. These include: imbalances in the sectoral character of the economy, focusing the bulk of enterprises in the individual republics and so on that resulted in serious economic problems in the following period. Now a days, it is very useful to study positive and negative aspects of the Soviet management system in order to apply these concepts in practice of modern management.

Key words: Russia, Soviet Union, economy, economic growth, crisis, scientific and technical revolution

INTRODUCTION

Modern model of the Russian economy cannot be a guarantee of stability and sustained development in the future anymore. Economy growth rates are slowing down more and more in recent years, there is its sluggish development. Western sanctions actions supplement this negative situation. All together causes a search of impact mechanisms on existing system that will allow giving it a dispersing effect. In this context, we consider it necessary to analyze some stages of economy development of Russia in order to understand the reasons of contemporary crisis.

As a basic thesis, we determined that the reasons of the Soviet economy crisis can be found in the period of its highest development in the middle of XX century. In this context the main task is not only to consider the reasons of the Soviet economy growth in the specified period but to analyze the sources of its future problems.

MATERIALS AND METHODS

Specificity of the problem determines using of different methods of historical and natural scientific research: historical and retrospective, system-structured, analysis and synthesis. Generally, the methodological framework is represented by a comprehensive approach to the study of historical processes which includes such principles as objectivity and historicism. For implementation of the above-mentioned principles traditional methods of scientific knowledge are used, namely: contrastive-comparative, historical and logical and problem and chronological.

Basic part: The functioning of the Soviet economy in middle of XX century was characterized by a predominantly extensive economy growth when increasing of production volume has been in almost linear dependence on rising costs. Such dependency was being preserved in the conditions of mostly evolutionary

capital-intensive scientific and technical progress that leads to the increase of resources amount used by productive facilities. Presence of significant human and natural resources and also undeveloped grounds did not contribute to the reorientation of industrial policy to more intensive development.

The post-war economy recovery with the orientation for old branch system (more precisely, a traditional branch product range) on the basis of obsolete and physically worn in many ways technical base was a strategic mistake. Generally, a new post-war five year plan reproduced a previous industry structure and did not take into account structural shifts in the industry of the Western countries during the period of the Second World War and also the trend towards accelerated development of the most advanced branches (electricity and chemicals) which defined itself in the pre-war period. Although, it was explained mainly by the necessity to recover the economy destroyed by the war as soon as possible and at the lowest cost (Anonymous, 1965). These incorrect measures were aggravated by a number of actions which gave point to these negative processes in the post-war period. According to Russian scientists (Glaziev *et al*., 1992) they include:

Aspiration to develop a five year plan as soon as possible (at the same time, a race for the terms of coordination and implementation of formal parameters did not leave time for understanding technical and structural shifts that have passed lately). Four and five year plans have directed the technical and economic development to a well-trodden path which led to further lag behind the advanced countries of the West that went on the different technological trajectory. Besides, directive character of the plan did not allow to carry out unforeseen technical measures (the need for the implementation of which was realized subsequently). Additionally explored resources were directed to financing of the technological shifts which supported plan implementation. Naturally, this technological progress could not lead to the large technological breakthroughs.

Attempt to engage all frozen and unused equipment in the production process. For that purpose State Planning Committee of the USSR in the late 1940s early 1950s sent commissions to the fields to detect capacities hidden by the enterprises of machinery, metallurgy and coal industry and conducted a number of equipment censuses. Plans were enhanced to enterprises which capacities were detected even if those were obsolete and moreover often physically worn. This led to involving of the additional amount of resources in the turnover though they could be aimed to the development of new productions.

Orientation for industrial recovery in the destroyed areas of the country without a preliminary scientific analysis. Moreover, quite often there was a situation when a huge amount of labor and money for the restoration of some mining enterprises and associated processing plants and factories had been spent, business structures assured themselves in a few years that capacities of mines, ore mines and others that were put into operation could not provide territorial formations which they relate to with the necessary amount of raw materials. Depletion of deposits which traditionally served as raw materials sources stultified earmarking for their development. Significant investments had to be directed to the mastering of new mining areas that required additional indirect costs for transport and social infrastructure and so on.

Disparagement for foreign achievements if the sphere of science and technology initiated by the political leadership in the late 1940s. As a result, interesting discoveries and findings of the Western scientists and engineers were ignored by the official Soviet science even if the priorities in the world science were reviewed under their influence. “Persistent campaign” against Soviet scientists involved in the non-traditional areas of Research and Development were continued and as a result their achievements were announced to be a bourgeois pseudo-science and scientists themselves were persecuted. This destruction of the national scientific and technological potential did not pass completely. The prerequisites of the future technological lag in new areas of scientific and technical and production activities were laid down by it.

Due to the prevailing of old technocratic approach the opportunity for economic leap was lost. There was a complicated situation in the Soviet Union by the middle of 1950s. Around 18% of produced machine tools require replacement and modernization, about 50% of produced woodworking machines by the machine tool industry became outdated. And it was being occurred in mechanical engineering that is the “heart” of industry. The situation was much worse in other branches. According to materials of the All-Soviet Union Industry Employees Council >300 thousand machine tools had been operated for over 20 years, 63 thousand had been operated from 20-10 years (Anonymous, 1955). By 1960s, the situation had become more difficult regarding the issue. Introduced from January 1, 1963 depreciation rates were based on the period of equipment renovation at an average for 17 years, according to Heinman data, replacement time was actually 25 years (and more precisely about 40 years). For 1965 year, the retirement of fixed assets of industry, including industrial buildings and

constructions of dilapidation and wear had made to 2.1% from their cost for the beginning of the year and in mechanical engineering, metalworking and chemical industry 1.4%, i.e., it would have taken 70-80 years to fully update the equipment in these branches while maintaining this rate. The practice of overhauls have gone mainstream when the recovery of old machinery was substituted by the introduction of the new one. Malpractice of multiple overhauls whereas in fact complete absence of centralized production of spare parts presented in branches came into widespread acceptance. As a result a large-scaled but poorly developed repair facility spontaneously emerged in industry. It had low production rates, human resources at 2.5 million of skilled workers and machine park of 1 million pieces of equipment and machines used for repair works had usually been of later generations than in the main production, i.e. in fact the repair facility was repeatedly reproducing the outdated equipment (Stepanov, 2004; Heinman, 1967).

In parallel, with this a share of manual labour continued to be high. Industrial census in 1954 showed that a share of manual labour in iron and steel industry made up to 34.6% in coal industry 44.1%, in mechanical engineering 48%, in timber harvesting 67.8% (it is possible that these official figures were understated). As a result, at the XX Party Congress, all-round development of automation of the social production has been allocated as the "key link". In the report of I. Bulganin "On the directives of the sixth five-year plan" it was emphasized that "implementation of a broad program of technical progress will largely depend on the scope which the development of specialization and cooperation in industry will reach".

In addition, there were legitimate factors, which reduced the economic growth rate in the late 1940s early 1950s such as:

- Restoration works had been being continued in the USSR
    - In the industry: return and launch of the evacuated during the war enterprises, the reorientation of the military industry to production of civilian goods, etc.
    - In the agriculture: desolation and destruction of large areas during the war, thus it was necessary to transfer a lot of money from the industry on the recovery of agriculture, etc.
- Unfavorable demographic conditions had showed up themselves: a sharp decline in the birth rate had taken place as a result of the last war
- Decrease of investment share in the country economy during the Great Patriotic War

A competition with the capitalist countries on the increasing of gross output, productivity rates, build-up of the military-industrial complex and others had become the basic paradigm of the Soviet economy in 1953-1965s.

The development of industry in majority of the Western countries had been accelerated in that period. If in 1930-1938s industrial production of that countries had been increasing by 0.5% only on average per year, then in 1953-1962s it had been increasing by 4.8%. Average annual growth rates of industrial production had made up of 3.2% in the period of 1925-1937s in the period of 1949-1962s they had already made up 6.8%. The fastest growing of industrialization had been presented in: Federal Republic of Germany (average annual growth rate in 1953-1962s was 8.2%), France (5.8%), Italy (9.3%) and Japan (>15%). Lower industrial growth rates were observed in England (3.2%), Sweden (3.6%) (Anonymous, 1965). According to Soviet economists calculations, economic growth rates were 10-12% in average during 1950-1963s in the USSR, according to American researches they were 6% that significantly outrun the growth rates of many Western European countries. This data had an international resonance: as P. Samuelson wrote at that time, the supporters of economic growth acceleration in the United States used rapid development in the USSR as a counterargument to their more moderate opponents (Faltsman, 1991).

Despite higher rates of the Soviet economy in the middle of XX century, there was a significant gap between the USSR and the USA. In 1960, the fixed assets of the Soviet Union industry had been around a half of the capital stock of the US and capital/labour ratio and electric power consumption/labour ratio fluctuated between 40-45% comparing with American (Kvasha, 1963). According to official data the industrial output of the country made up to 65% of the industrial level of the USA (though comparing with the Western European countries, it was much higher: 315% of the output in the Federal Republic of Germany in 1962, 323% of England, 578% of Japan) (Anonymous, 1965).

Scientific and technical revolution in the USSR has been conducted in three main areas:

- Search of new energy sources
- Qualitative changes in the sphere of labour instruments in connection with the introduction of automation and electronics in production
- Revolution in the sphere of labour instruments connected with a rapid development of chemical industry (Semkin and Leontiev, 1966)

This policy resulted in the following: atomic test in 1949 by the USSR, creation of a thermo-nuclear bomb in 1954, development and implementation of a nuclear power plant project (the very first nuclear power plant in the world was put into operation in 1954 in Obninsk), emergence of the first electronic computers in the country, etc.

The basic directions for a public policy in the area of industry were: firstly, organization of systematic specialization of economic regions of the country; secondly, in-depth development of branches of the machine production; thirdly, increasing the values of such industry branches as electrical engineering, radio electronics, radio engineering etc. The special place was devoted to the regional component in the development of economy.

Maintaining a stable environment for economic growth had been seen in the planned specialization of districts and republics. It mainly depends in turn on their natural and economic features. Complex development of the national economy in districts should have formed the integral part of all national economy of the country. A combination of the comprehensive development of basic branches of economy which served for public needs within an economic district or republics and vicinal branches designed to meet local needs became the characteristic features. The proportions of the production had its specific content and objectives. Firstly such a level of development in the leading branches of economy in each district which corresponds to country needs should have been enshrined there and simultaneously, the proportions of a material production should have been directed to the development of vicinal branches in each district and republic for maximum satisfaction of internal needs at the expense of own resources.

The country was seriously lagging behind the countries of the Western world on this component. Discrepancies in the development of production branches were allowed, the complexity of the economy was violated in separate districts thereby the further growth of the national economy was retarding. Up to the second half of 1950s virtually, all production were spread out in the European part of the country whereas natural resources that were necessary for the Soviet Union, located in the Eastern part of the country remained practically untouched. In this context a creation of environment for more planned development of depressive, underdeveloped districts of the country had been staying the top-priority task for the leadership in 1950-1960s.

Exploration works, conducted in the Soviet Union, were focused on the identification of mineral deposits. New branches of the industrial production have been developed as a result of these actions: oil, gas, nuclear; and accompanying productions: chemical industry, mechanical engineering, electric power and others. In the machine-building and tool industries, the production of artificial diamonds, abrasive materials and tools made of them were allocated; such branches and sub-branches as the production of synthetic resins, plastics, dyes, alcohols and detergents, plastic products industry and others have been developed as a part of the chemical and petrochemical industry groups. Generally, comparing with the classification of the national economy branches of 1962, the classification of 1967 determined the emergence of new three industry groups, 16 branches, 46 sub-branches and 30 new productions. According to classification of 1967 the Soviet Union industry consisted of 16 complex branches, 139 branches and 305 sub-branches. Mostly new productions have been concentrated in the branches of heavy industry. Nuclear plants, nickel-cobalt, titanium-magnesium, tungsten-molybdenum industries were allocated to separate industries and polymer engineering have become a sub-branch of mechanical engineering (Anonymous, 1974). At the same period, there were 27 complex branches, 171 branches and 483 sub-branches in the industry of the USA (Revenko, 1971).

Merger of the production processes and science were a features of the initial period of scientific and technical revolution. The annual addition to capital invested in science only had made up to 12.85% during 1950-1965s (in further four years it was equal to 5.45% only) (Kamayev, 1972). The result of these changes was the fact that if in 1951-1955s a number of scientific discoveries was 32 in 1956-1960s it was 74 in 1961-1965s, 90 (in 1966-1970s, 89, 1971-1975s, 47) (Anonymous, 1996; Kudrov, 1997). Western researches also confirm this data. Thus, the American researcher W. Hearst said in 1957: “If a few years ago we were told that Russia would overtake the US in science, we have a good laugh over it. However, the Soviet Union did”. And the US President D. Eisenhower was forced to put the American scientists to the task to excel the Soviet Union in a number of major branches of science and technology (Anonymous, 1957).

From the middle of 1950s the attention to the idea of regional and complex organization of production capacities as a methodological basis for the development of the scientific and technical policy for formation and development of the territorial and production complexes intensified (Lebedev, 1991). It was becoming obvious that the objective processes of increasing the role of science and education, the convergence of research with business practice should be taken into account not only in the scale of the country but also individual regions.

Meanwhile the main part of the scientific potential was concentrated in the central regions, mainly in Moscow and Leningrad (Osipov, 1988). In the second half of 1950s the process of science regionalization chronologically coincided with the reform of the Academy of Sciences of the USSR and the establishment of its offices in the Urals, Siberia and the Russian Far East had started. A fundamental restructuring of economic management have been the great value for the emergence and development of science institutions in regions. Numerous specialized research institutes, design offices emerged in many regions and republics and received considerable initial support of local authorities on the basis of leading industry branches in the context of councils of national economy (Anonymous, 1974).

Serious shortcomings in the development of the matters of scientific and technical revolution achievements with the socialist economy merging, presence of planning methods of control, the accumulated contradictions between the complicated structure of the productive forces, established under the influence of scientific and technological revolution and backward management system remained in the scientific area. Instead of the expansion of individual and collective freedoms that were the essence of all organic updates in the world, the selective borrowing of technical and organizational achievements of the more developed Western countries was the task of the Soviet modernization in 1950-1960s. Science and technology development was conducted extremely uneven due to the factor of chance in the field of inventions and discoveries. Besides in parallel with the introduction of new technical solutions, the existing types of equipment and technological processes which had not exceeded its potential, had been continuing to improve.

RESULTS AND DISCUSSION

Summarizing the processes that had been being occurred in the second half of the XX century, it should be noted that in the postwar decade the fundamental content of the social and economic development began to change. The world community faced the principally new production, social and cultural tasks, social production came to the threshold of a new stage where the extraordinary strategy of accelerated industrialization was losing any sense. At the forefront the processes of the next stage of technical and technological, social and cultural progress became advancing gradually (deployment of modern scientific and technological revolution, scientific and industrial, scientific and technological mode of production). They required rapid theoretical understanding of organizational and technological restructuring of the economy. Nevertheless, with the basic conditions for the emergence of scientific and technological revolution (presence of natural and human resources, undeveloped grounds, well-developed industry and scientific sphere etc), the USSR managed to implement all achievements of the scientific and technological revolution in all branches of the national economy. Preferential financing received the areas of scientific knowledge only which went to the modernization of engineering, chemical, fuel, electric power complex branches, almost without affecting light and food industries.

CONCLUSION

In the post-war period the mistakes in the strategy of further development were made by the leadership of the country. They were taken the form of the aspiration to develop a five year plan as soon as possible (not taking into account structural shifts in the post-war period), attempt to engage all frozen and unused equipment, orientation for industrial recovery in the destroyed areas of the country (without a preliminary scientific analysis) etc. Along with the intended impact of the postwar period (economic collapse, demographic crisis, etc.), these factors hindered the development of scientific and technological revolution in the country. Industrial production continued to develop at the expense of growth in gross figures to the same social and economic institutions in the early 1950s failed to adjust to the peaceful development. The time period to overcome the inertia of thinking had to go through. But, there was no more of it as the subsequent history showed the country which was disrupted economically and shattered politically ceased to exist in early 1990s.

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REFERENCES

Anonymous, 1955. Materials of All-Soviet Union Industry Employees Council convened by the Central Committee of the CPSU and the USSR Council of Ministers, May16-18, 1955: Verbatim records. Off-the-Record. M., pp: 94, 95.

Anonymous, 1957. On the economic competition between the Soviet Union and the United States of America (Regarding the publication of the 'Economic growth of the Soviet Union comparing with the United States' report prepared by the group of bourgeois economists in 1957). Communist, No. 9, pp: 35.

Anonymous, 1965. Development of social economy of the USSR in the post-war period. Gladkov, I.A., A.I. Kosoy (Eds.). M., pp: 121.

Anonymous, 1974. Guidelines for the development of national plans of economic development of the USSR. M., pp: 706-745.

Anonymous, 1996. Bulletin of the Russian Academy of Sciences, pp: 419.

Faltsman, V.K., 1991. Macroeconomics of planning and business systems. M., pp: 151.

Glaziev, S.Yu., D.S. Lvov and G.G. Fetisov, 1992. Evolution of technical and economic systems: opportunities and borders of centralized regulation. M., pp: 142-143.

Heinman, S., 1967. On the unique public policy in the area of technical progress. Communist, No. 2, pp: 49.

Kamayev, V.D., 1972. Modern and scientific and technical revolution. M., pp: 63.

Kudrov, V.I., 1997. Soviet economy in retrospective: Experience of rethinking. M., pp: 204.

Kvasha, Ya.B., 1963. Capital investments and fixed assets of the USSR and the USA. M., pp: 220.

Lebedev, V.E., 1991. Scientific and technical policy of the region: Experience of formation and implementation (1956-1985s). Sverdlovsk, pp: 30.

Osipov, A.G., 1988. Party management of the development of science in Siberia. History Issues of CPSU, No. 11, pp: 69.

Revenko, A.F., 1971. Industrial Statistics of the USA. M., pp: 68.

Semkin, P.D. and G.A. Leontiev, 1966. CPSU Struggle for the creation of material and technical base of communism. Kazan, pp: 8.

Stepanov, V.R., 2004. Scientific and technological revolution: public policy and region (on the basis of materials of the industrial development of the republics of the Volga-Vyatka economic region in 1950-80s). Kazan, pp: 125.