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The Soviet Union as the Pilot Economic Laboratory of the World

Yu.P. Voronov
Institute of Economics and Organization of Industrial Production SB RAS, Novosibirsk, Russia

ABSTRACT

In the economic practice of the Soviet Union, many decisions were developed that were perceived in many countries. The main experiment, the author considers the work with hundreds of thousands of top managers who do not have the property rights to their business. This article discusses methods of ensuring currency stability in the Soviet Union — sole proprietorship and personal responsibility, the formation of a personnel reserve and the so-called "nomenclature". Such Soviet developments as Dynamo and Lipetsk methods, brigade contract and Saratov system, and today are used by different countries. On this basis, it is proposed to consider the Soviet Union as an objective pilot economic laboratory of the world.

Keywords: Soviet Union; stable currency; manager stimulation; scientific organization of labor; Vologda index; nomenclature; personnel reserve; standardization of labor; Dynamo method; brigade contract; Saratov system; Lipetsk method

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INTRODUCTION

Even during the existence of the Soviet Union, some of the achievements of Soviet economic practice were more known abroad than within the country. In the new economic conditions, this unique heritage in the Homeland was almost completely forgotten, and economists who considered the Soviet system of economic management as one of the instructive, were not used.

Foreign research of the Soviet experience can be divided into three categories. The first of them is based on the Soviet Union's interpretation of exclusively as an opponent's, the second stands on socialist positions and considers the experience of building a new type of economy [1], and the third, free from ideological bias, studies Soviet methods and techniques of economic management without dividing the world into two systems or two camps [2]. The emergence of this category required a gradual transition from the integral perception of the Soviet economic system as a single phenomenon to the analysis of its individual elements. This approach is followed in the present work when interpreting the USSR as pilot economic laboratory of the world.

MOST STABLE CURRENCY

Many studies around the world focused on the mechanism of ensuring low inflation and price stability in the Soviet Union. For many, it was a paradox, a mystery: how to maintain price stability over the years?

One part of this common puzzle is: how did such a huge country manage to implement monetary reform before anyone else in the post-war world — already in 1947?

It is well known that in the majority number of States, the stability of the monetary system is ensured by a reserve currency (guaranteed yield securities, which are not means of payment). If there is little money in circulation, the reserve currency is bought by authorized state bodies, if many — sold to residents, and thus reduces the amount of money in circulation. Classic example of reserve currency — US Treasuries.

Neither in the Russian Empire, nor in the Soviet Union, and subsequently — in market Russia, it was possible to create a normal reserve currency. The reason has always been one — distrust of the state obligations. Placement of State loan bonds in the Soviet Union always went through administrative measures with party-ideological shade. Russian government securities caused the country to default in 1998.

However, during the formation of the administrative system of money circulation regulation in the Soviet Union, many techniques were invented, which in other countries are used when mistrust of the State grows.

However, the first of these — is an obvious borrowing from the practices of the USA, where the Federal Reserve System (FRS) was created in late 1913, acting as the Central Bank — consolidation of 12 Federal Reserve banks, formally private, located in the largest cities and distributed throughout the country. And at the end of 1921 the State Bank of the Russian Soviet Federative Socialist Republic (RSFSR) was created, less than two years later transformed into the Gosbank of the Soviet Union. He adopted from FRS the idea of spatial distribution of the activities of emission banks.

Just in Soviet Union issued 70 domestic bond issues, of which 65 — to 1957, i.e. about two loans per year on average. In the literature, the function of these loans is most often interpreted as attraction of funds of the population for solution of specific economic problems, and in time of war — for needs of front. But there is no doubt that this original reserve currency was regulated of money circulation. The main difference from foreign practice — actually forced placement of securities. Coercion was carried out through ideology, propaganda and directly — as obligatory purchase of bonds for some categories of citizens.

Another element of the Soviet system of currency stabilization was the separation of cash and non-cash circulation. Non-cash circulation was allowed to use only legal entities. Citizens — cash only. The recurrence of this separate payment system is still remained. In some (lightweight) form, this division is present in all countries of the world.

In addition, there was a division of credit money into "long" and "short". This required separating long-term credit banks from (LCB) commercial credit banks. They provided loans for long periods and at significantly lower interest rates. But to those who wanted to enrich themselves did not make "short" money from "long", it was necessary to have a well-functioning system of unavoidable severe penalties, and therefore, hard power in general. In the area of credit, this division improved during the reforms of 1928 and 1931.

The unique invention of the Soviet currency stabilization system was the regular compilation of the all-Union and regional balance sheets of monetary incomes and expenditures of the population. Such balance sheets allowed estimating the amount of cash in circulation and deciding whether to increase or reduce it. The balance sheet function was also to prevent the population from accumulating cash, which contributed to long-term currency stability.

Along with all the above, another element of stabilization of the ruble was the use of numerous "rationalization" techniques, which came from both the center and the places.

Here is an example. At some point, the old standard for cash registers is cancelled and replaced by a new one that is known to be more stringent. Suppose, wall fittings should not be 14 mm thick as before, but 18 mm. The Order may even be regional, but more often — common to the country. On this basis, all cash intended for the remuneration from the fund of the enterprise is withdrawn to the bank — until the fund will meet the new requirements. This reduced the amount of money in circulation. It was not possible to find information about borrowing of one kind or other methods of ensuring stability of the Soviet currency in any countries, but, undoubtedly, the whole system can be considered as a large experiment.

From 1937 to 1950, the Soviet ruble was pegged to the dollar. In February 1950, the Central Statistical Board of the USSR received an urgent assignment from I.V. Stalin to calculate the purchasing power of the ruble. Statisticians got 14 rubles per dollar (at the rate before the 1947 reform — 53 rubles). Stalin was not satisfied with this, and he ordered the ruble to be transferred to a permanent gold base, which was made by the Decree of the Council of Ministers of the USSR of 28.02.1950, the gold content of the ruble was set at 0.222168 grams of solid gold, and the sales price of a gram of gold — in 4.45 rubles. This unsuccessful experiment, which eventually ended with the death of the leader, only confirms once again that the USSR was an experimental economic base for peace. If one pays attention to the Soviet experiments they could not be repeated.

MEASURE OF TOP-MANAGERS CONTROLS

A country without private ownership of the means of production has given the world a huge number of managers who have no right to what they manage. This experience has proved invaluable for large companies [3]. However, in the early 1940s, there was a tradition to consider this problem in a purely theoretical context, as the one for the whole world [4], and since then this approach has been the predominant.

But it is possible and a completely different interpretation of this phenomenon — as a kind of experimental situation that precedes the mass distribution of hired managers around the world, the transition from the dominance of family business to the "revolution of managers".

At different times in the Soviet Union there were different systems of incentives for managers. First there was a “reward for the execution of the plan”. There was something romantic about it — the plan seemed to be comprehensive, taking into account all the circumstances of the enterprise. Subsequently, extensive literature emerged on the major defect of this method — the pursuit of unfettered plans.

The next stage was promotion “from the achieved”. Director of the State enterprise were assessed on the basis of how different their performance during the period of operation was from the previous period. This approach is most often applied in foreign practice of stimulating top managers, despite the known disadvantages. The development of this method in the information age is the maintenance of a dossier for each top manager, which highlights not only his latest achievements, but also all previous. The focus on a one promotion “from the achievements” is replaced by the fixation of the constant success of the manager, but also “from the achievements”.

NOMENCLATURE, STAFF RESERVE

All the largest companies in the world today hold competitions and tests for applicants. Quite often, the aim of such procedures is not to find staff for specific jobs, but to create a personnel reserve for the short and long term.

This approach originated in the Soviet Union, where there was the concept of “nomenclature”. The main function of the nomenclature — is the formation of a personnel reserve for key positions in the Soviet system of management and economy, as well as — contingent of managers who can be entrusted with the management of production, editorial staff of a major newspaper or a serious position in the bodies of the party, State authorities.

Ordinary Soviet citizens treated the nomenclature ironically and often negatively. In publications and TV programs during the Soviet Union this idea was often ridiculed on the examples of how the directors of the sauna translated to the management of the philharmonic, etc. Yet now, decades later, we see that this was a compelled and inherently effective necessity not only in the critical conditions of post-revolutionary Soviet Russia. Time has shown that the idea of personnel reserve is a lot of useful.

Today, the system of training reserve of civil servants operates in the US and many countries in Europe. In the business the company “British Petroleum” is an indisputable model of formation of personnel reserve (internal nomenclature). Each division of the company has its own nomenclature, for each of its members is developed an individual development program, implemented under the control and with the help of direct managers, etc.

The first, not burdened with the initial theoretical background research nomenclature appeared in the late 1970s, and serious works — only in the 1990s [5]. Today, both empirical and theoretical research on this subject is conducted mainly abroad. The work of G.L. Tul’chinskii is interesting from the Russian publications of recent years, which showed on the example of the post-Soviet nomenclature that belonging to it can become a de-motivating factor that does not require constant maintenance of a high level of professionalism [6].

UNITY OF COMMAND

In a number of foreign researches, it was noted that the rights of the director of a Soviet enterprise were much broader than those of the top manager of a European or American firm [7]. The owner State had less control over its activities than the shareholders of a private foreign company. “Despite formal centralization, the director of the enterprise in Russia (Soviet Union) seems to have been more successful in building his own empire than his counterpart in a giant American corporation” [8]. In foreign practice, the top manager may not have ownership rights (or he was a minority), but in this case, the control over him was only strengthened.

Another thing — “red” director. The less financially connected he was with the company, the more trust he used. The principle of the Soviet system of administration was personal responsibility, and it could not be property, since none of the managers possessed such property as could compensate his possible managerial error.

In general, according to foreign researchers, personal relations are 90% determined success for the Soviet (and then Russian) manager [9]. They were often even formalized within the management structure.

Thus, at each Soviet enterprise at the top level of management two “triples” were formed — a kind of analogue of the board of directors, common for foreign practice [10]. The members of the first “triples” focused on production and economic activities,— the director, chief engineer and chief accountant — had to have personal trust in each other, since none of them had property interests in the business. Even more cohesive was the second “triples” focused on work with personnel: director, secretary of the party committee and chairman of the committee of the trade union (sometimes the secretary of the committee of the Communist Youth League).

With the destruction of the Soviet control system, the departure of one character from the second “triples” and a sharp increase in the burden on the chief accountant disturbed the balance of two “triples” and seemed a natural division of their functions.

VOLOGDA INDEX

This inflation rate, introduced in Soviet Russia in 1922, was better known abroad. Even today, only a few (mostly foreign) professionals are familiar with it.

As you know, the goal of building communism — is to create a society where the principle is respected: “From each according to abilities, each according to needs”. In part, this principle is still being observed, considering needs as the basis for determining the minimum wage.

For example, in Moscow, a contract between the workers and the owner of the Trekhgornaya manufactory in September 1917 established such standards for the calculation of their wages: for a month was the bread of brown and white — 34 kg, sugar — 1.6 kg, tea — 140 g, cabbage — 7.2 kg, potatoes — 16.5 kg, pasta and cereal — 3.6 kg each, lean oil — 900 g, cows — 450 g, 680 g cheese and 1.8 kg of salt, and 15 eggs and 66 cucumbers. The Working Committee requested that 270 g of meat per day be included in the norm, but the question remained open, i.e. was not approved by vote [11]. In addition to clothing and underwear (for the year: blouse, trousers, two shirts, 2.25 towels, 1 bedsheet, 2.5 pillowcases, two pairs of socks, foot wraps and lingerie; for two years: 2 pairs of boots, 6 pairs of strapsof, cap and mittens; three years: warm jacket and trousers; four years: coat and hat, etc.), provision was made for baths, washing, haircutting and shaving, shoe cleaning and other cultural and educational purposes. Even costs of “updating the dishes” and “updating the home situation” and unexpected expenses were included in the calculation.

Labor productivity did not match wages. The October Revolution did not change the situation. In the decade following it, the gap between productivity and wages widened. In 1922–1923 wages in the metal, printing and paper industries doubled, 2.4 times in leather, 2.2 times in textiles, 1.8 times in food, 1.6 times in chemicals [12]. According to some researches, this was due exclusively to inflation [13].

In these circumstances, at the request of the Vologda trade union of dairy industry, an index was introduced in 1923, by which wages should be increased (indexed) based on the inflation rate. In the world science and practice he got as “Vologda Index”, at the place of his origin.

The basket for the calculation of the minimum wage included only foodstuffs whose composition varied from one part of the country. It is important that for each item the price was considered as if the employee had bought half of the product in the state store at fixed (controlled) prices, and half — in the market, at commercial prices that could be 4–5 times higher [14].

Vologda Index is the beginning of a wide range of indicators by which wages are indexed in the world economic practice. The relevance of such an updated indicator is felt in Russia and at present. And globally, it would be wise to use the idea of this index for average purchases in different retail chains that currently have different price ranges.

It should be noted that in the idea of paying not for the work done, but to ensure acceptable living conditions, there is something fundamentally Soviet. It is this principle that has been introduced in all economies of the world.

REGULATION AND SCIENTIFIC ORGANIZATION OF LABOUR

In the Soviet time until the late 1980s the abbreviation SOL — scientific organization of labor — was popular. It was a set of interrelated activities that improved the production process. According to some sources, the term SOL appeared in 1960 [15]. But some elements and approaches existed even during the period of military communism, many Soviet figures, including V.I. Lenin and L.D. Trotsky, were impressed by Taylorism. The latter, in particular, attempted to introduce SOL into the work of labour armies, citing Kelly, a visiting engineer from the United States, as a consultant [16].

The key to SOL was regulation of labor, more theoretically and practically worked in the USSR than anywhere else. Two methods of normalization were used: experimental-statistical and analytical (and in practice constantly tried to replace the first by the second). There was no element-by-element analysis of transactions in the statistical pilot method, it was based on actual past time and labour for similar work.

In the analytical method, each production operation is decomposed on the elements, the duration of each of them is established depending on external factors, it is determined which factors need to be changed in order to reduce their time. Finally, the optimal composition of the elements of each operation and the totality is designed. The standards obtained for each operation were considered scientifically.

There was a cost-limiting variant of the analytical method of normalization, the so-called chronometer method, when next to the employee stood the controlling manager and fixed the duration of each operation. It is not common in practice because of its high cost and extensive use of hardware production, where the duration of operations is determined by equipment and process standards. More often than not, SOL applied an analytical calculation method — without chronometer, based on approved intersectoral, sectoral or local regulations. Labor standards were to be updated with regular planned reduction of labor intensity.

Abroad this direction was considered “ultra-Taylorism” and was associated with the name A.K. Gastev, who headed the Central Institute of Labor (CIL) in 1920–1930, which, in my opinion, is not true. Much closer to the works of A.K. Gastev [17] the concept of E. Mayo’s social leadership with his so-called Hawthorne experiments and the approaches of Henry Ford, with which A.K. Gastev was in correspondence.

For CIL, the country’s economy was a single production structure. It was created a training center “Installation”, which had the status of a joint-stock company, which trained instructors on scientific organization of labor, surveyors, accountants and specialists of the Department of technical control, as well as highly qualified workers, with SOL skills. During its existence more than half a million people were trained in 200 professions, including 20 thous. SOL instructors. Training programmes were conducted over several months. Such training institutes now exist in many leading companies in the world.

Another classic of SOL — P.M. Kerzhentsev — took a different view on many issues than A.K. Gastev. For example, he explicitly emphasized that, in addition to increasing productivity, it is necessary to increase labour intensity, considering (based on research) that the intensification of labour is not necessarily related to the deterioration of the worker's physical condition.

Thanks to P.M. Kerzhentsev, the world's science and practice have received three directions in the organization of work, which are successfully developing and in our time. The first of them is now called "ergonomics" — the science of the rational movements of the human body during work. Unfortunately, P. M. Kerzhentsev's contribution to this science, which largely determined its future development, is hardly mentioned in modern textbooks.

The second was to save working time and to plan each employee's routine — from manager to worker [18]. After decades it became called time-management and returned to our country as a foreign experience.

The third direction was the mass involvement of workers at all levels to the scientific organization of labor. Kerzhentsev organized the mass public organization "Time League", actually the first public movement aimed at improving the organization of work [19]. Activities of League members were voluntary and unpaid. All this happened long before the appearance of Japanese "quality circles".

Other prominent SOL theorists and researchers include O. A. Yermansky, E.F. Rozmirovich, N.A. Vitke and others whose works have been carefully studied by their contemporaries in many countries of the world.

DYNAMO METHOD

Productivity growth in the Soviet Union was interpreted solely as a reduction in labour intensity of production, so there was a process of constant increase in output standards and regular reassessment of jobs. It is noteworthy that, contrary to declarations, the plans to raise production standards were poorly linked to new machinery, technology, production or labour organization. The schedule for the replacement and revision of standards was agreed with the trade union, approved by the director of the enterprise and included in the collective agreement until the beginning of the following year.

In addition to the established practice, public regulatory bureaus, which included the most experienced workers, were established in enterprises in the late 1970s. The stormy discussions in the bureau identified those standards that workers felt could be shortened. This increase in productivity was mainly due to increased labour pressure on existing equipment.

The so-called "Dynamo method" became a natural continuation of this practice. In summary, the idea was that the individual worker has committed itself to increasing the productivity of their work. In response, he was given a salary increase immediately after this official promise.

The fate of the method in the world was bizarre. In 2007 the method DYNAMO++ was developed by Swedish engineers. In its framework, the stimulation of workers on the assembly line was carried out by the optimal redistribution of functions between man and automatics [20], but it was the idea of the Dynamo method. The worker must accept a new division of functions between him and the conveyor and, in fact — a future increase in productivity [21].

BRIGADE CONTRACT (SHCHEKINO METHOD)

In the 1970s in the Soviet Union, as a pioneer of the new method of stimulation, the Hero of Socialist Labor Nikolay Zlobin, the foreman of management "Zelenogradstroy" became famous. The method was subsequently named Shchekino — after the city of Shchekino, where it originally appeared, but is also known as

Zlobinsky, by name of the initiator, or as a "brigade contract". According to this method, instead of the usual orders, the brigade received a task plan for the whole year, which specified all types of work, deadlines for their implementation, the salary fund and the total amount of rewards.

The team committed to high-quality and on-time work, and the administration guaranteed the delivery of materials and equipment on schedule. Current salary payments were treated as an advance payment and full payment was made on the basis of final results. Under this approach, workers performed tasks with higher productivity and lower cost. The method was not effective because the administration often failed to meet its commitments [22].

Shchekino method was studied in detail abroad by Sovietologists [23] and management specialists [24]. But the practical implementation of the method had been considerably in Asia than in Europe or North America. The reasons for this may in common elements of community mentality.

SARATOV SYSTEM

Little known to us now Saratov system was popular in the country and the world more than half a century ago and is introduced abroad so far. It appeared at the Saratov Aviation Plant in 1955 and was fully called "the system of defect-free manufacture and its delivery to the Technical Control Department and the customer from the first presentation". Often it was replaced by the abbreviation defect-free product manufacturing (DPM), which was then understood by most manufacturers.

There was a new director at the factory, and in his first order for the aircraft factory there were only two items:

1) technical control department will stop the acceptance of the quantities of products after the first defect is found and return the whole quantities of products to the bearer;

2) workers who sell on first presentation pay an award of 50% of the basic salary.

This radical version subsequently did not catch on. Any employee was given the opportunity to obtain their own quality seal and sell the manufactured products in a lighter and more widely distributed version or details in Technical Control Department (TCD) or to the customer "from the first presentation". Employees with a personal stamp were paid 5 to 10% of salary or partial (annual) earnings to the regular premium.

The production organization system of defect-free manufacturing was distributed to industrial enterprises, and in 1979 industry standard OST 1 41725–78 was adopted, which is still in force in the Russian Federation (last updated 1 January 2018).[1]

Abroad Saratov system is better known under the name "zero-defect" (ZD). It began to be studied during the Soviet Union. For example, the American Society for quality control noted that the Saratov system is widely distributed for all countries the eastern bloc.[2] True, its origins go to the practice of the Czechoslovak shoe company Bata, introduced before World War II.

Saratov system had clones: L'viv, Yaroslavl, Krasnodar and Gorky. L'viv system of defect-free labor was developed and implemented at the L'viv Telegraph Equipment Plant in 1961.[3] Yaroslavl version called NORM appeared in 1964 at the Yaroslavl engine plant. Employees guaranteed that the engine produced will work as planned. The method is still used in the country of his birth [25]. Later Krasnodar version (1980) introduced in the Saratov system plans to improve the quality of products.

[1] OST 1 41725–78 Industry Quality Management System. Production quality management system at industrial serial enterprise, association. Organization of the production and delivery of products without defects by TCD and the customer from the first presentation. Basic provisions.

[2] Annual Technical Conference Transactions (1978). Vol. 32. Pp. 218–219. American Society for Quality Control.

[3] L'viv version was covered in the journal "Standards and Quality" in 1976 г. The English translation of the journal is available at the University of California (Berkeley) library, available electronically from August 2008 on the university website.

In the Gorky region in 1958 the system CANARSPI was created (quality, reliability, resource with the first products), oriented primarily for constructors and designers. It was developed by Chief Engineer of Gorky Aircraft Plant "Sokol" T.F. Seifi at the launch and serial production of aircraft MiG-19 and MiG-21. It has extended the quality management system to the design and production process to produce reliable aircraft from the first prototypes. Their developers made a commitment to eliminate or minimize the correction of defects in serial production, for which they increased their salary.

Seven years after its introduction in 1962, similar systems were introduced in the East and West Germany, Poland, the USA, Japan and other countries. In each of them they acquired their specific forms, but their origins were at the Saratov Aviation Plant.

LIPETSK METHOD

So called the method of organizing production in construction. It was that the mason should not have been distracted by the ancillary activities: prepare the mortar, applied to the wall and leveling, lifting bricks from the floor, etc. He had to stand in front of the installation site and wait for two utility parts to put bricks in each hand.

The method was not widely used in the Soviet Union, but in the United States it was introduced as the Lipetsk method. More widely known not the method itself, but Lipetsk masonry, which became effective using this method of work management. With it there are three spoon rows without bandage, and the space between the bricks of the outer and inner rows is filled with mortar and broken brick. Next comes one row of rows. Such masonry simplifies the mason's work and loads the utility parts with a bolt.

There was a Lipetsk masonry in Lipetsk in the 1960s, at the beginning of the mass construction "khrushchev" of silicate brick without plaster. It did not require the three-quarters bricks needed for the bandage. One of the reasons for its emergence was the beginning of the use in the construction of silicate brick, which is difficult to crack exactly. For the same reasons, it most likely spread outside the Soviet Union, mainly in Eastern Europe.

CONCLUSION

The above innovations were integrated into the Soviet economic system. The opposition between the two systems always had a strong ideological component, which did not allow research into their similarities.

Time had to pass to separate them as special elements of economic mechanisms in a calm atmosphere of abated ideological struggle. In my opinion, this time has come.

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ABOUT THE AUTHOR

Yuri P. Voronov — Cand. Sci. (Econ.), Leading Researcher, Laboratory for Modelling and Analysis of Economic Processes, Institute of Economics and Organization of Industrial Production SB RAS, Novosibirsk, Russia
https://orcid.org/0000-0002-7835-5827
corpus-cons@ngs.ru

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