

Comparative analysis of the influence of distribution relations on the most important indicators of socio-economic development in planned and post-reform period of development of Russia

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ABSTRACT

This article attempts to interpret the results of reforms carried out in the Russian Federation at the end of the XX century from the standpoint of transforming the system of distribution of goods produced. The study is based on comparing the impact of the main macroeconomic and social parameters of economic development on the gross domestic product and economic growth indicators before and after economic reforms. The main task is to try not only to comprehend, but also to quantify how distribution relations affect the indicators of growth, consumption and development sustainability in various socio-economic systems. The research materials are based on official materials of the official statistics of the Soviet Union and the Russian Federation.

Keywords: Socialism, Capitalism, Gross domestic product, Wages of hired workers, Incomes of the population, Expenses of the population.

INTRODUCTION

One of the main tasks of our time is the search for new ways and mechanisms to ensure harmonious and sustainable socio-economic development. The solution to this problem can be successfully considered in a complex (Lenin 1899; Denmark 2001; Samuelson 2007; Stiglitz 2015), or in the context of reforming public administration (Stiglitz 1983; Samuelson 2007). or the formation of new fields and restrictions, allowing diversifying the economic structure (Sabia 2015; Safiullin & Elshin 2017; Safiullin et al. 2017). In the previous study (Safiullin & Yelshin 2018), the authors exhibited that history, culture, and organizational features of society influence on the formation of sustainable economic development mechanisms. Therefore, consideration of the experience of the Soviet Union is quite natural in our research. For less than a century, approaches to the regulation of economic systems have repeatedly changed dramatically. Each time a change in political course is accompanied by serious resource losses and a decrease in labor potential, which negatively affected the social well-being of the population. The reform results carried out in Russia at the end of the 20th century have not only positive aspects, but also brought a number of negative consequences. The development of private initiative, the openness of markets made it possible to fully integrate into the world system and take advantage of the benefits of world production. At the same time, the reduction in the production of own goods, the closure of industries that could not withstand competition with world manufacturers, contributed to a decrease in the standard of living and the emergence of unemployment. The efforts made by the state leadership to reduce the negative effect of the economy transformations have led to a change in the foundations of the distribution system in the country. This study is devoted to the analysis of the essence of such changes. Taking into account the fact that the Russian Federation is the legal successor of the Soviet Union, at the same time it differs significantly in its territory and population, the

use of known methods (Piketty 2015; Bustos-Guajardo & Moukarzel 2016; Safiullin & Yelshin 2018; Rylov 2020) is hard. Therefore we have developed a model of analysis based on relative indicators.

MATERIALS AND METHODS

The transition of the Russian economy from a planned to a market economy took a long time. To simplify the task of comparing statistical data, let us determine the period of the end of the planned economy by the moment of signing the Agreement on the Creation of the Commonwealth of Independent States (1991). When analyzing socialist economy, whenever possible, we will rely on data up to 1990 - the last full reporting year before the start of reforms. At the beginning of the analysis carried out within the framework of this study, in our opinion, it is necessary to pay attention to the most general changes that have taken place since the beginning of capitalist transformations in the economy. We analyzed data for the last ten years of the existence of the Soviet Union (1980-1990) and the last eight years of the development of the Russian Federation (2010-2018). In the table below, the sample years are presented in order to be as representative as possible. Data for 2019-2020 was excluded due to the coronavirus pandemic. The research will be based on the analysis of gross domestic product, profit of enterprises as a result of economic growth, wages of employees as a system of economic motivation. (Table 1).

Table1. Comparison of the main parameters of the economic development of the Soviet Union and the Russian Federation before the start of market reforms and the last period of development (billion roubles).

	GDP (before 1990 GNP)	Income* of enterprises % of		% of		% of	
		GDP	Consolidated budget	GDP	Payment for hired labor	GDP	GDP
Period of the Soviet Union							
1980	619	121.6	19	-	-	-	-
1985	777	175.9	22	372.6	47.9	312.8	40.2
1989	943	268.2	28	401.9	42.6	406.8	43.1
1990	1000	282.4	28.2	471.8	47.1	464.3	46.4
Period of the Russian Federation							
2010	46308.5	8873.0	19.2	16031.9	34.6	22737	49
2015	83387.2	11876.5	14.2	26922	32.2	38390	46
2016	86148.6	12995	15	28181.5	32.7	40798	47.8
2017	92037.2	13851.5	15	31046.7	33.7	41245	47.6
2018	103875.8	20501	19.7	37320.3	35.9	43884	46.4

*Indicators have been calculated on the basis of data on the income tax payment since 2010.

The data was prepared by the author based on sources: The National Economy of the USSR in 1990;

Statistical Yearbook / Goskomstat of the USSR. -M.: Finance and Statistics, 1991. (p. - 5, 15, 36), as well as the Official Statistics Website <http://www.gks.ru>, access date 25.03.2020.

In order to further use the data obtained, their comparability, we have implanted the data of the income of enterprises, wages, consolidated budget not only in absolute values, but also as the ratio of these indicators to the gross domestic product.

RESULTS AND DISCUSSION

With this approach, it becomes possible to analyze the distribution of goods produced in the socialist period and in the post-reform period. From the data presented above, the following changes can be seen: socialist economy

of the Soviet Union, with the indicated volume of the gross product as a whole, generated an income greater (on average by 5%) than the economy of the Russian Federation operating in the capitalist economic conditions (in the USSR, the income of enterprises was comparable to 19-28% of the gross product, in the Russian Federation the income of enterprises does not exceed 15-19% of the gross domestic product). At the same time, based on the gross product volume, the budget of the modern Russian Federation does not receive about 10% in comparison with the budget of the pre-reform country (in the USSR, the budget represented 42-47% of the gross product, and in the Russian Federation the consolidated budget of the country does not exceed 32-35% of the gross domestic product). Wages for hired labor both before and after the reforms averaged 40 to 50% of the gross domestic product. At the same time, it should be noted a slight increase in the share of the gross product allocated to wages. That is, it can be stated that the past reforms contributed to a change in the proportions of the distribution of benefits. At the same time, the changes described above do not have a positive effect on the quality of labor. Labor productivity in the studied period of time, i.e. from 1980 to 2018, does not have a pronounced growth trajectory and did not reach the indicators established in 1985 at the end of the study. (Table 2).

Table 2. The ratio of total wages to gross product (billion roubles).

GDP (before 1990 GNP)	Payment for hired labor	Labor productivity
Period of the Soviet Union		
1980 619	-	-
1985 777	312.8	2.49
1989 943	406.8	2.31
1990 1000	464.3	2.15
Period of the Russian Federation		
2010 46308.5	22737	2.03
2015 83387.2	38390	2.17
2016 86148.6	40798	2.11
2017 92037.2	41245	2.23
2018 103875.8	43884	2.36

The data was prepared by the author based on sources: The National Economy of the USSR in 1990; Statistical Yearbook / Goskomstat of the USSR. -M.: Finance and Statistics, 1991. (p. - 5, 15, 36), as well as the Official Statistics Website <http://www.gks.ru>, access date 25.03.2020.

In the modern Russian Federation, labor began to be valued more highly, its share in the country's gross product during the post-reform period increased by an average of 4% compared to the pre-reform country, which most likely should have had a positive effect on the standard of living in the country. However, the new owners of the production means previously owned by the state did not fully assume the social obligations that existed in the planned economy. Therefore the transition of the socialist economy to development in a market economy led to an increase in the social costs of the population. For example, earlier the state built and transferred housing to workers in the amount of about 5% of the total income of the population; after the reforms, the issues of providing housing were largely transferred to the category of problems solved through earnings (Table 3). During the period of socialist development of the country, a large amount of housing stock was built at the state's expense. At the same time, the construction of individual houses was also widespread, mainly in rural areas. The information presented in this table indicates that under the socialist system, the Soviet state, by building housing and transferring it to citizens, indirectly added to the income of the population within 5-5.5% of the total income of the population. The owners of production assets formed after the reforms did not provide the previously achieved level of social investment. Therefore, after transition to the capitalist path of development, the population is forced to provide themselves with the necessary housing at their own expense and 3 to 4.6% are deducted for the necessary housing already from the incomes of the population (the above cannot indicate what part of the funds from their income is spent by specific households on the purchase of housing, it is only a partial confirmation of the most general vector of the modern economy of the Russian Federation for transfer of state's social costs to citizens). In other words, the reforms carried out affected the population by increasing the financial burden only on meeting housing needs by an average of 8-9% of the income received from the economy.

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Table 3. Share of state and population funds allocated to improving housing conditions in the period before and after reforms.

	1986	1987	1988	1989	1990
Cash income of the population, billion roubles	435.3	452.1	493.5	558.0	652.5
	23.6	25.9	27.2	29.2	29.7
Invested by the state enterprises in the construction of residential buildings, billion roubles					
Ratio of investments to income of the population (%)	5.4	5.7	5.5	5.2	4.5
	2011	2012	2013	2014	2015
Total cash income	35648.6	39903.7	44650.4	47920.6	53525.9
of the population, billion roubles	1533.9	1793.6	1855.8	2245	1656.2
Expenses of the population for the purchase of housing, billion roubles	4.3	4.4	4.1	4.6	3.0

Ratio of expenses of the population for the purchase of housing to income (%)

The data was prepared by the author based on sources: The National Economy of the USSR in 1990;

Statistical Yearbook / Goskomstat of the USSR. -M.: Finance and Statistics, 1991. (p. - 5, 187), as well as the Official Statistics Website <http://www.gks.ru>, access date 25.03.2019.

Here it is necessary to emphasize that a significant share of the public services consumed by the population during the socialist period was compensated by the state. The cost of housing maintenance and utility bills in the 80s of the last century in the Soviet Union did not exceed 3% of the total family income. Utility expenses of the population in the post-reform period have increased significantly and vary within 7-8% per one household member (see table.4).

Table 4. Costs for housing and utility services per 1 household member, per month (in roubles).

	2010	2016	2017	2018	2019
Median value of the average per capita income of the population, per month	1142.2	1816.1	1834.7	1948.2	2067.2
Expenses for housing and utility services per one household member, per month					
Ratio of utility costs to average income, %					

The data was prepared by the author based on the source: Statistical Collection "Russia in Figs. 2020", p. 129,132, posted on the official website of state statistics: <http://www.gks.ru>, access date 02.10.2020. If we assume that the

average household consisted of three people in the socialist period of the country's development, then the burden on the population to pay the necessary utility bills increased by 7-8 times.

In a post-reform country, the state took the path of transferring the costs for providing society with such important services as education and health care to the population. If earlier, during the socialist period of the country's development, medical services were provided to the population mainly on a gratuitous basis (the only exception was high-tech orthopedics and cosmetology), then the payment for medical services increased significantly after the country's transition to development in a market environment, which affected expenses of the population (Table 5).

Table 5. Household expenses on average per one household member, per month, roubles.

	2001	2005	2010	2019
Expenses, total	1659.9	4239.2	10121.5	19159.3
Health care costs	34.4	104.8	327.3	734.6
	2	2.5	3.2	3.8

Share of healthcare costs in total expenses, %

The data was prepared by the author based on the source: Statistical Collection "Russia in Figures. 2020", p. 132, posted on the official website of state statistics: <http://www.gks.ru>, access date 02.10.2020.

This information indicates an increasing share of expenses for medical services in the post-reform country. The education costs are also becoming a significant item of expenses of the population. Thus, there were already 1.46 million students studying with full reimbursement of training costs in the Russian Federation in 2000. There were already 2.3 million such students, or 44.2% of the total number of students at that time in 2003. (Source: Statistical Collection "Education in Russia 2003", p. 372, posted on the official website of state statistics: <http://www.gks.ru>). It was established From the above that the share of income in the country's gross product and the share of the consolidated budget decreased, the social burden on the population increased, that is, the reforms carried out did not contribute to an increase in production efficiency, the development of state institutions, as well as an increase in the standard of living of the population. In a pre-reform country, most of the fixed assets belonged to the state. The reforms carried out led to the domination of the non-state form of ownership of the production means (Table 6).

Table 6. Fixed assets by type of ownership (billion roubles).

	1990	2017
Fixed assets, total:	2958 100%	194,649.464 100%
including:		
State property	262488.8% 22%	42,822.882 22%
Non-state property	334 11.2%	151,826.582 78%

The data is presented by the author based on sources: The National Economy of the USSR in 1990; Statistical Yearbook / Goskomstat of the USSR. M.: Finance and Statistics, 1991 (p. 291), Official Statistics Website of Russia: <http://gks.ru>, access date 21.03.2019 (fixed assets tab).

As mentioned above, the transformation of the distribution system of produced goods, which took place in the course of reforms, did not contribute to the satisfaction of the state and public interests, while reducing the share of generated profit in the gross product did not improve the position of producers of goods. Accordingly, it can be assumed that the need for the reforms is not obvious from the standpoint of the country's economic development. It is assumed in an economy based on the principles of a free market that the main purpose of the activities of economic entities is to make a profit. Accordingly, the higher the profit is, the more efficient the enterprise is. At the same time, as shown above, only 22% of all fixed assets belong to the state in a post-reform country, most -

78% - belong to the non-state form of ownership. The ownership of the production means formed in such proportions under the conditions of the development of market relations began to be used to make a profit. Macroeconomic indicators of the country's development indicate that efficiency was achieved not by increasing the production volume, but by increasing the price of goods and services produced in a post-reform country (Table 7).

Table 7. GDP dynamics in the Russian Federation after reforms.

Year	Total country's GDP in billion roubles (from 1992 to 1997, in trillion roubles)	Consumer price indices for goods and services (December to December of the previous year, in percent)	Dynamics of the country's GDP, in billion roubles, taking into account the consumer price index (relative to 1992)	Dynamics of the country's GDP, in billion roubles, taking into account the consumer price index (relative to 1995)	Industrial production index, % of the previous year
1992	19				84
2000	7305.6	120.2	26	1786	108.7
2005	21609.8	110.9	40.7	2789.5	105.1
2010	46308.5	108.8	53.3	3654.1	107.3
2015	83387.2	112.9	63.4	4344.2	99.2
2017	92037.2	102.5	64.7	4438.6	102.1
2017 Industrial production index in relation to 1992					94.6

The data was prepared by the author based on a source: Official Statistics Website <http://www.gks.ru>, access date 25.05.2019.

This table provides information on the country's gross domestic product - the basic indicator characterizing the final result of the production activity of resident economic units, consumer price indices are also presented and the industrial production index is given. The data in the 4th and 5th columns of the table indicate the GDP that would have been as of the given date in the prices of 1992, if we take into account the consumer price index for goods and services.

This indicator is calculated by sequentially dividing the GDP specified for a specific year by the consumer price growth rate. The industrial production index for the whole period is defined as the product of the indicated growth rates from 1992 to 2017.

In absolute terms, excluding the hyperinflation of the early 90s, the country's GDP increased by more than 4800 times over 25 years (from the beginning of 1992 to the end of 2017). Understanding the need to adjust the data obtained, we took into account the consumer price index (CPI), which adjusted this indicator. Thus, taking into account the CPI, the Russian economy grew 3.4 times over the period from 1992 to 2017, or the average GDP growth was 13% per year. 1992 - the first year after execution of the CIS creation agreement, the year of formation of the Russian government. Therefore, it is possible to assume that the information on this period is unrepresentative, since Russia began to develop independently, and most of the production chains were canceled at once. In this regard, the information is provided on the GDP growth taking into account the CPI in relation to 1995. When the CPI is taken into account in relation to 1995, Russia's GDP for the period from 1995 to 2017 increased by 3.1 times, that is, the GDP grew progressively and the effect of the "low base" of 1992 cannot serve as an argument in favor of conducting an incorrect analysis.

Notably, for the same period of the country's development, the industrial production index amounted to 94.6%, or, in other words, production in Russia in total volume did not reach the level of 1992, that is, the profits in post-reform Russia were generated to a greater extent by the owners of production means by increasing the price of goods.

In the socialist period of Russia's development, the enterprises formed a significant part of the country's budget from their profits, such deductions ranged from 59% in 1980 to 35% in 1990, that is, significantly more than a third of the country's consolidated budget.

After the reforms, the Russian economy was tuned in such a way that the profit generated by enterprises replenished the budget by only 20%.

The transformation process of the Russian economy at the end of the 20th century led to an almost twofold decrease in the share of payments from the profits of economic entities to the country's budget, although it should be noted

that the volume of such payments tended to decrease at the end of the socialist period of development. It is clear that an increase in prices with a simultaneous decrease in the production level, as well as a decrease in the participation of enterprises in the formation of the country's budget and a decrease in participation in social projects does not contribute to an increase in the welfare of the population. It is possible to assume that the resources of enterprises concentrated in this way were directed to the development of production and the owners of fixed assets became the holders of the largest volume of modern assets. In order to confirm the stated assumption, let us consider the fixed assets recorded in the country. In connection with the past, during the transition of the Russian economy to the capitalist management mode, changes in the assessment of the total volume of fixed assets in rouble terms will be fraught with significant errors. It is more correct, in our opinion, to express the value of fixed assets taking into account the consumer price index (CPI) (Table 8).

As can be seen from the presented table, the fixed assets in the country have increased significantly over the post-reform years. Subject to the determination of the volume of fixed assets taking into account the CPI for 27 years from 1990 to 2017, the fixed assets increased by 45.7% or 1.69% per year. Nevertheless, the quality of fixed assets has significantly deteriorated over the past period (completely worn-out funds accounted for 17.9% of the total volume), which indicates insufficient funding for their update. (Data source: Official Statistics Website <http://www.gks.ru>, "supplement to the yearbook" tab). It should be noted that most of the enterprises were state-owned and the rest of the profits were invested either in the renovation of production facilities or in social infrastructure in the pre-reform country. After the reforms, most of the economic entities ceased to belong to the public sector of the economy and were able to use the profit remaining after taxes at their own discretion (Table 9).

Table 8. Fixed assets at full book value.

	1990	2010	2015	2017
Fixed assets, total in billion roubles	1,229.93	1,856.12	1,607.25	1,946.49
Consumer Price Index (CPI), production of annual indices	1,229	1,580	1,799	2,017
*Fixed assets, total in billion roubles, including CPI in relation to 1990				
Growth, in % to the previous period		22.7	12.2	10.8

*taking into account the denomination in 1998.

The data was prepared by the author based on sources: National Economy of the USSR in 1990; Statistical Yearbook / Goskomstat of the USSR. - M.: Finance and Statistics, 1991. (P. - 290), Official Statistics Website <http://www.gks.ru>, "supplement to the collection" tab, access date 25.03.2019.

Table 9. Shares of profit invested by business entities in the development and left at their own disposal.

	2010	2014	2015	2016
Total profit*, billion roubles	8,873.0	11,876.5	12,995	13,851.5
Introduced to the budget from profit, billion roubles	1,774.6	2,375.3	2,599.0	2,770.3
Total private investments from own funds, billion roubles	2,715	4,742.3	5,271.1	5,738
Profit not participating in the production development, billion roubles	4,383.4	4,758.9	5,124.9	5,343.2

*calculated on the basis of income tax payment data

Prepared by the author using the source: Russian Statistical Yearbook. 2017, p. 298, 495, the electronic version is posted on the official website of the Federal State Statistics Service <http://www.gks.ru>

As shown in Table 9, the enterprises, which gained independence in the course of the reforms, made decisions not to invest most of their profits. Thus, for example, according to the results of 2010, only 2.7 trillion roubles were invested out of 8.8 trillion roubles of profit received by enterprises. According to the results of 2016, 5.3 trillion roubles from the profit of enterprises was not directly spent on development. In other words, about half of all profits left over after tax payment do not directly participate in the production development. At the same time, as mentioned above, almost 18% of all fixed assets of the country are completely worn out and need to be replaced.

CONCLUSION

Summing up a brief summary of the material presented in the study, the following should be noted:

- The reforms carried out for the transition of the socialist economy to development in a market environment have led to the emergence of a new party that receives the production benefits. Such a party is non-state owners of the production means;
- The reforms carried out for the transition of the socialist economy to development under market conditions contributed to a change in the proportions of the distribution of goods produced between the state and hired workers in favor of non-state owners of the production means;
- The new system of distribution of the goods produced, formed in the course of the transformation, does not improve the situation of the population, does not contribute to the production development;

The reforms carried out did not help to improve development indicators, did not increase the arbitrariness of labor.

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تحلیل مقایسه ای تأثیر روابط توزیع بر مهمترین شاخص‌های توسعه اقتصادی - اجتماعی در دوره برنامه‌ریزی شده و پس از اصلاحات توسعه روسیه

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چکیده

این مقاله تلاش می‌کند نتایج اصلاحات انجام شده در فدراسیون روسیه در پایان قرن ۲۰ از نقطه نظر تحول در سیستم توزیع کالاهای تولید شده را تفسیر کند. این مطالعه بر اساس مقایسه تأثیر اصلی پارامترهای اقتصادی کلان و اجتماعی توسعه اقتصادی بر تولید ناخالص داخلی و شاخص‌های رشد اقتصادی قبل و بعد از اصلاحات اقتصادی است. وظیفه اصلی این است که نه تنها درک، بلکه همچنین کمی ارزیابی شود که چگونه روابط توزیع بر شاخص‌های رشد، مصرف و توسعه در سیستم‌های مختلف اقتصادی - اجتماعی تأثیر می‌گذارد. مطالب تحقیقاتی براساس مطالب رسمی آماری رسمی اتحاد جماهیر شوروی و فدراسیون روسیه است.

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