

Correlation of Wages and Labor Productivity in Russia and Abroad

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ABSTRACT

Current article represents research in the field of labor productivity and wages, as well as their correlation. The authors highlight the main tasks and set the goal of analyzing the correlation between wages and labor productivity in the Russian Federation in comparison with the EU countries and the United States. The study revealed an excessively overestimated level of correlation between labor productivity and wages in Russia and in a number of foreign countries, with the exception of the G7 countries. The novelty of the article is the demonstration of the real situation and the high level of correlation between labor productivity and wages in Russia.

Keywords: *Wages, Labor productivity, Correlation, Costs, Real incomes, Country, Calculation methods, Devaluation, Corruption.*

1. INTRODUCTION

Throughout the entire reform period, starting from 1991, there is an acute issue in the field of the correlation between wages and labor productivity. Despite various legislative innovations, this issue in the field of wages practically does not change in a positive direction. Moreover, it is only getting worse every year, while the causes are dismissed either on "low" labor productivity, or on international financial crises.

At the same time, financial crises also occur in other countries, including the most highly developed ones, but things there in this regard are much better than in Russia. This study provides calculations, empirical data confirming the over-exploitation of the Russian population and low wages that lag behind labor productivity indicators.

Labor remuneration and the ongoing indexation of wages do not meet the requirements of the country's economy and high rates of real inflation, which does not correlate with that calculated by Rosstat and the Central

Bank of the Russian Federation. Labor remuneration that lags behind labor productivity does not allow the qualitative development of human capital, demotivates workers and, accordingly, leads to crisis phenomena in the country's economy.

2. METHODOLOGY

The aim of the study is to perform an analysis of wages and labor productivity and their correlation in the Russian Federation in comparison with the EU countries and the USA. The tasks set by the author are:

- to explore theoretical aspects in the field of the correlation between wages and labor productivity;
- to analyze empirical data on the topic under study;
- to evaluate and substantiate the real level of wages and labor productivity in the Russian Federation;
- to objectively assess the current situation in the field of wages and labor productivity in Russia and abroad.

A large number of studies, calculations, statistics, etc. are devoted to the topic of wages and labor productivity. V.V. Aranzhin in his studies investigates the correlation between wages and labor productivity in the context of the digitalization of the economy [1], A.M. Chernopyatov investigates the workload, wages and labor productivity in the educational sphere in the publication *Marketing in Education* [2], and D.Ya. Belavin investigates the relationship between wages and labor productivity in an innovative economy in his dissertation study [3]. Researchers from various institutions investigate wages and labor productivity [4,5,6].

The legal concept of wages and the term itself is defined in Art. 1 of the ILO Convention No. 95 "On the Protection of Wages" (1949) [7], as well as the concept of wages (remuneration) is enshrined in Art. 129 of the Labor Code of the Russian Federation [8]. Foreign authors in their studies pay great attention to wages and labor productivity. This is clearly seen in the studies of K. Marx [9]. According to the labor theory of value developed by W. Petty, A. Smith, D. Ricardo and other [10,11,12] theorists, "wages are a form of income that an employee receives as a result of the realization of the right of ownership of the labor resource belonging to him, which is a commodity in a market economy".

The theoretical realities of the correlation between wages and labor productivity in work are considered at the present stage [13]. The topic of wages and labor productivity has received a lot of attention at the government and statistical levels, but there is no general solution to such a complex issue.

3. RESULTS

Over the years, in various scientific and statistical sources, especially Western ones, we have seen

calculations of labor productivity and wages in Russia, which do not always go along with real factors. Thus, various sources indicate low labor productivity in Russia, which lags behind the western countries by more than three times, and by four to five times from the United States. Also, in this proportion, wages in Russia are 3-5 times lower; a number of sources give worse results.

With low wages, employees, and especially highly professional specialists, are looking for a part-time job in other organizations or work additionally as freelancers. In the first place, this approach harms the organizations where they work full-time. The advantage is that these employees advertise their company and gain additional experience in other areas and organizations. The extreme point in such situations may be the outflow of the population abroad in search of more decent wages for work.

According to the recommendation of the International Labor Organization (ILO) [14], it is necessary to pay a minimum wage of \$3 per hour (about 220 rubles). In the Russian Federation the minimum wage is only 12.392 rubles, while the EU and the USA follow these recommendations. This shows how the Russian Federation dismisses the recommendations of ILO. This approach does not allow maintaining a highly professional labor potential; moreover, it simply begins to disintegrate. Let us present a sample of a comparative assessment of wages and labor productivity in terms of GDP (table 1) in 2003 and then compare it with the data of subsequent years, which we will present later.

We see that labor productivity in Russia, according to the data presented, is at the same level as in a number of countries, but in various studies, including those used in this article, authors indicated and cited calculations that this is not true and labor productivity in Russia is much higher. Even if we take the OECD calculations on labor

Table 1. Comparative assessment of productivity and wages by GDP at PPP, 2003 [15]

Country	Hourly Productivity (by GDP in USD)	Hourly wage, in USD	GDP per 1 USD of wage
USA	27.0	16.4	1.7
The UK	22.0	13.8	1.6
Germany	27.7	22.7	1.2
France	28.8	14.4	2.0
Japan	21.6	12.3	1.8
Canada	23.4	17.1	1.4
Italy	30.6	16.4	1.9
Turkey	10.3	2.6	4.0
Chile	9.7	4.3	2.3
Korea	9.6	7.2	1.3
Hungary	8.8	2.7	3.3
Czech Republic	8.5	2.5	3.4
Poland	6.2	4.3	1.1
Russia	7.6	1.7	4.4

productivity, Russia is lagging behind Poland, but according to the data we represent, labor productivity in Russia is higher. This once again says that the used methods and calculations are either built on an ideological and political basis, or contain distorted data in the calculations. At the same time, GDP per 1 USD of wages in Russia is the highest and exceeds hourly wages by 1.6 times, which means high exploitation of the population with low wages compared to other countries. The same situation is repeated in Turkey and other countries, except for the G7. The expression of K. Marx remains relevant: “What a commodity costs to the capitalists is measured by the cost of capital, what the commodity is really worth is measured by the cost of labor” [9]. In the Russian Federation, wages are more than three times lower than the threshold value, and the prices for products and services have already reached the world level. The academician of the RAS D.S. Lvov noted that “No civilized country knows such a monstrous exploitation” [16]. Table 2 presents data for the period of 2000-2014 (table 2).

If we evaluate the level of wages in the countries under consideration in USD terms, we will see a huge gap in the absolute values of wages in Russia compared to the United States and others. Even if we take labor productivity in the USA and Russia for 2013, the lag will be 2.13 times. In terms of wages, Russia will lag 5.05 times. In fact, there is discrimination and destruction of the country's population due to the highest exploitation, and most importantly, this situation is getting worse in 2020.

It is also necessary to take into account that the calculation in USD does not correspond to reality, due to its devaluation, decrease in purchasing power, the same position of currencies in other countries, especially in Russia, etc. The prices of produced goods (services) can be increased only through inflation and thus labor productivity is increased. The downside is the devaluation of the country's monetary unit. For example, in Russia, the ruble was devalued by more than 2.5 times only for the period from 2014 to 2020.

Further studying the ratio of wages and labor productivity considers the data for Russia. For the performed analysis of the shown phenomenon we

calculated the indicators of the share of wages in the value of the products produced by the 1st employee. Output and labor productivity is determined by dividing the level of wages by the value of labor productivity in USD (tab. 3).

As we mentioned earlier, according to the ILO recommendations, the minimum wage for labor should be \$3 per hour of work for low-paid workers. Based on this approach, the wages of the lowest paid segment of the population in the country should be about \$ 500 a month, not \$ 165. We can calculate this amount using the formula:

$$W = (ANW \times MWL) \times C (I),$$

where W is wages;

ANW₂₀₂₀ is the average number of working hours per month with a 40-hour and 36-hour work week, equal to 149 = 1788/12 and 134 = 1608.8/12 accordingly;

MWL is the minimum wage for labor equal to \$ 3 for 1 hour of work; C is currency exchange rate 75 rubles for 1 USD.

$$W_{2020 (40\text{-hour})} = 149 \times 3 = \$447 \times 75 = 33,525 \text{ rubles}$$

$$W_{2020 (36\text{-hour})} = 134 \times 3 = \$402 \times 75 = 30,150 \text{ rubles}$$

Thus, the increased minimum wage up to 12 392 rubles in 2020 should be equal to such an amount of income and, accordingly, this income should become the minimum wage (subsistence minimum).

In the long run, in value terms of the means of production, physical capital and wages, which reflect the level of consumption, should grow at the same rate. In this case, any economy will have the maximum possible rate of development.

We found that in Russia there is a very low assessment of labor for the work performed in comparison with Western countries. This approach is expressed in the lowed share of the wages of the main amount of employees of organizations, institutions and enterprises in the value of the output. Moreover, the leading role is occupied by government organizations, institutions and enterprises. Their share is in the range of 15%-25%, which is 20% average.

Table 2. Labor productivity and average annual wages [17]

Years	Annual productivity, USD per employee				Average annual salary, USD			
	USA	The UK	PRC	Russia	USA	The UK	PRC	Russia
2000	74352	59488	1674	15360	50993	50444	1134	no data
2005	91487	72778	3012	24828	53511	55563	2211	3636
2010	106509	77364	7860	41869	56100	55851	5413	8184
2013	115393	83989	12027	45274	56811	54134	8371	11232
2014	no data	84898	no data	46947	57139	54350	9132	10272

Table 3. The share of wages in the output of the 1st employee [17]

Years	Share of wages in the output of 1 employee, %.			
	USA	The UK	PRC	Russia
2000	70	85	68	no data
2005	58	76	73	15
2010	52.6	72	69	19
2013	49.3	64	70	25
2014	no data	64	no data	22

The main share of the value of the national product in the form of interest, profit and dividends is taken by the owners of capital themselves, foreign investors, top management of various private and state enterprises, corporations. Civil servants, deputies, senators, who make up just over 2 million people in total, do not stand aside. They take a large share of the national income. Another negative aspect is the high share of deductions from the wage fund - 13% of personal income tax, 30% to off-budget funds. We need a radical reform and scientific understanding of the current situation.

4. DISCUSSION

In the course of the research carried out in the field of wages and labor productivity, as well as its measurement at the international level, we revealed a discrepancy between wages and high exploitation of the population with low wages compared to other countries. The high level of correlation between labor productivity and wages in Russia has been confirmed.

In our opinion, this happens due to the imperfection of the used methods, the ideological component, different approaches, etc. This approach does not always allow retrieving more objective data. Every third citizen is dissatisfied with the level of wages in Russia (39%).

According to the Public Opinion Foundation (POF), "its median values in August 2019 in Russia amounted to 21 thousand rubles" [18]. The salary does not correspond to the volume and the level of complexity of the work. Most Russians consider the level of wages to be more fair - in the range of 25.000-45.000 rubles, which we calculated earlier in this study. The majority of people blame the current situation on the Government of the Russian Federation and the President of the Russian Federation, who do not fulfill their direct duties to restore order in this area. Organizations, institutions, enterprises with the participation of the state violate labor laws and set wages below the criterion level.

It is necessary to pay wages to all workers in Russia that match their counterparts in the EU or the US. All top managers and other officers work in this scenario. At their request, they are paid the same wages as their colleagues abroad. If we refer to low labor productivity,

then it is necessary to remove the increased salaries of top managers and other leaders, as they cannot achieve high labor productivity, which they directly declare. We can state that at the end of 2018 Russia took only 67th place in the world wage ranking compiled by the ILO.

A special place in the field of labor productivity and wages is occupied by highly professional management and personnel of the organization. In those organizations that follow the rules for the selection and recruitment of such employees, labor productivity and wages meet domestic and international criteria. In other organizations, mainly with state participation, where selection and recruitment is carried out on grounds of corruption (buying a job) and "nepotism", labor productivity is at a low level and, as a rule, with high salaries of the administrative and managerial apparatus.

These features in the Russian economy are known to most Russian and foreign citizens, but at the same time such organizations as the Ministry of Labor of the Russian Federation, the General Prosecutor's Office and other organizations have moved away from solving such an issue or act like they resolve it.

We should also note the flourishing ageism in the Russian economy. Representatives of mature age are either get fired or not hired at all. According to the results of many studies, mature employees show the highest labor productivity with the least losses. The reason for this situation is seen in the leadership of organizations that do not want to have experienced workers with them, who know the entire production cycle and criticize managers.

5. CONCLUSIONS

To eliminate the identified shortcomings in the field of wages and labor productivity, it is necessary to:

- establish the lower criterion for the wages of variable personnel in the proportion of the company's income at the legislative level;
- bring the share of wages in the output of 1 employee to the statutory criterion;

- optimize the administrative and managerial staff and, accordingly, to set within 30% to 70% of variable personnel;

- redistribute cash flows in the wage fund from the higher hierarchical structure to the lower one (production and industrial apparatus);

- legally establish the decile coefficient;

- establish the lower and upper criteria for the payment of dividends, or raise the personal income tax rate to 22-30%;

- toughen up the fight against corruption, "nepotism" and ageism;

- pay attention of state structures of all levels to low-performing organizations and carry out tough measures with the managers.

Such measures will undoubtedly make it possible to correct the current situation that has developed over the past 30 years in Russia. The lower production echelons will be motivated to work and improve production quality and discipline.

Summarizing the above, we can say that the policy of incomes of the population and wages in Russia cannot ensure effective and progressive economic growth in a digital and innovative economy. This policy does not allow increasing the well-being of the country's population, and is also a negative source of unacceptable high income differentiation and flagrant social injustice. The current policy must be radically eradicated, otherwise there will be a social explosion in society.

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