

LABOR PRODUCTIVITY IN RUSSIA: REALITY AND ALERT

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Abstract

Labor productivity is an important estimate. The growth of labor productivity allows to increase the volume of production of goods and services, reduce the cost of production, create conditions for the further development of the country's economy, improve the welfare of the population. The Russian economy is characterized by a much lower level of labor productivity than in developed countries, and this cannot but cause concern. The main reason for low labor productivity in the Russian economy is the imperfection of Russian enterprises in the technical and technological and information equipment of production, and the motivation of workers' labor is low. This article describes the state of labor productivity in the Russian economy, as well as the direction of its increase.

Keywords: Labor productivity, Economic growth, Technological stay, High-productivity jobs, Labor reallocation

1. INTRODUCTION

Labor productivity is an important economic indicator that is closely linked to economic growth, ensuring competitiveness and a high standard of living in the economy. The increase in labor productivity is Russia's strategic goal. Decree of the President of Russia V.V. Putin is tasked to ensure an increase in labor productivity by 1.5 times by 2018.

2. LABOR PRODUCTIVITY IN THE RUSSIAN ECONOMY: CONCEPT, SURVEY OF THE SITUATION AND OPTIONS FOR IMPROVEMENT

2.1. What is labor productivity?

There are several methods for determining labor productivity.

In accordance with the Organization for Economic Cooperation and Development' (OECD) methodology, labor productivity is defined as the total volume of output (measured in terms of Gross Domestic Product, GDP) produced per unit of labor (measured in terms of the number of employed persons) during a given time reference period (Labor productivity). Labor productivity is GDP per hour worked. To compare the levels of labor productivity between countries, GDP in national currency and current prices is converted into a single currency - US dollars at purchasing power parity (PPPs).

Labor productivity, according to the International Labor Organization' (ILO) methodology, is the amount of output produced for a certain period per employee. Calculated as GDP in constant prices for the total number of employees.

The Federal State Statistics Service of Russia, on the basis of the developed methodology for assessing labor productivity, calculates labor productivity in the economy as a whole and the main types of economic activity that produce market goods and services. This methodology is based on the concept of the OECD "Guidelines for Measuring Productivity Growth at Industry Level and at Aggregate Level" (2001), written by the Statistical Directorate for Science, Technology and Industry of OECD. The labor productivity index for the economy as a whole is calculated as a quotient from the division of the indices of the physical volume of GDP and changes in the total labor input; by types of economic activity - as a quotient from dividing the indices of the physical volume of output by homogeneous activities and changing the total labor costs.

The reciprocal of labor productivity is labor intensity. It is measured by the amount of time it takes to produce a unit of output.

The analysis of the official statistics of the Federal State Statistics Service, OECD and ILO, available in open access, showed that in 2005-2015 the level of labor productivity in the Russian economy was lower (more than twice) compared with groups of countries of the European Union (EU), G7, OECD. By the end of 2014, Russia ranked 40th among the world's countries (Table 1). According to the OECD in 2015, the level of labor productivity in Russia amounted to 23.18 US dollars, in the countries of the European Union - 47.4 US dollars, OECD - 46.53 US dollars, G7 - 54.85 US dollars (Labor productivity in the Russian Federation. Social Bulletin, 2017).

At the beginning of the list are Luxembourg, Ireland, Norway. The gap between Russia and the leading countries is very large. So, if in Luxembourg an hour is generated almost 100 dollars of gross domestic product, in Russia - about a quarter of this value.

Table 1. Dynamics of changes in labor productivity in countries (GDP per hour worked, constant prices, 2010 PPPs, US dollars)

Country	1995	2000	2005	2010	2011	2012	2013	2014	2015	2016
Luxembourg	72,6	78,8	80,8	79,8	79,5	77,7	79,7	81,7	82,5	83,6
Ireland	34,7	44,4	51,7	58,3	63,9	64,1	63,1	66,7	81,3	83,2
Norway	64,5	71,9	80,6	76,7	76,1	76,7	77,2	77,6	78,7	79,1
Denmark	51,5	54,8	58,6	60,3	60,5	61,6	62,1	63,1	63,4	63,5
United States	44,8	50,4	57,1	61,9	62,1	62,2	62,3	62,5	62,9	out data
Netherlands	48,9	54,2	58,2	59,4	59,8	59,7	60,1	60,5	61,5	61,7
France	47,7	52,2	56,0	57,0	57,5	57,6	58,4	58,9	59,4	60,0
Germany	46,0	50,6	54,4	56,3	57,5	57,8	58,3	58,5	59,0	59,5
Austria	39,3	44,9	51,8	53,1	53,5	53,4	53,9	54,5	55,8	56,3
Italy	44,9	47,3	47,1	47,2	47,5	47,3	47,8	47,8	47,7	47,4
United Kingdom	36,8	41,0	45,6	41,1	47,2	46,9	46,9	47,1	47,8	47,5
New Zealand	30,2	32,1	33,8	35,9	36,6	37,9	37,2	36,3	37,5	37,8
Turkey	20,4	23,1	28,4	30,7	32,4	33,1	35,3	35,4	36,4	out data
Russia	15,0	15,3	19,5	22,9	23,5	24,2	24,7	24,7	23,9	23,8

Source: http://stats.oecd.org/index.aspx?DatasetCode=PDB_LV

Factors that affect labor productivity are defined in economic theory:

- 1) material and technical factors - include factors that allow to increase the technical level of production and ensure the economy of materialized labor;
- 2) organizational and economic factors - characterize the organization of labor, production and management; factors of this group affect mainly the increase in the effectiveness of "living" labor and supplement the material and technical factors;
- 3) socio-psychological factors - refer to the human component of production: the quality of workers, the level of their motivation and satisfaction with work. This group of factors creates the prerequisites for using the first and second groups of factors.

The key reason for low labor productivity in Russia, according to experts, is the poor quality of fixed assets. Analysis of the state of fixed assets in Russia shows a high degree of their wear and tear (Fig. 1).

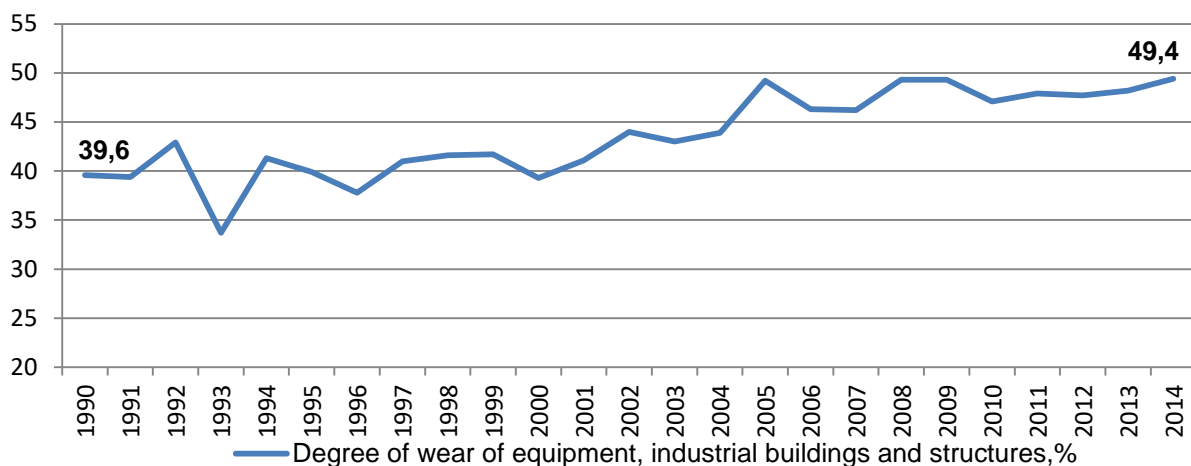


Fig. 1. Dynamics of the degree of deterioration of equipment, industrial buildings and structures in Russia, %

Source: <http://council.gov.ru/media/files/CQNOp1HscHaTulPa5BYZesqLNqUSQeHw.pdf>

The high level of depreciation of fixed assets in Russia is due to the fact that over the past 25 years, both the commissioning of new fixed assets and the disposition of especially obsolete, worn-out funds has occurred at a completely inadequate pace. Moreover, the retirement of fixed assets decreases. All this period is characterized by a low level of investment in the renewal of fixed capital, which stems from the general low level of gross accumulation in the economy. The Russian economy is characterized by a poor age structure of equipment. In this structure, machinery with a service life of more than 20 years is absolutely dominant. While maintaining such a level of depreciation of fixed capital and such an average age of equipment, the Russian economy will not be able to approach the world standards of labor productivity.

This state of affairs has associated negative consequences. Poor technological equipment of jobs does not imply demand for high-skilled workers. But without a high qualification for a worker or a specialist can not achieve a rise in labor productivity, because these people who must work productively.

Qualification of workers and specialists greatly affects the performance indicator. Russia is experiencing a serious shortage of qualified personnel in the specialties associated with the working professions.

The low pay of employed in the economy has a negative impact on labor productivity. In dynamics in 2005-2015, the trajectories of changes in the indices of real GDP, real accrued wages, labor productivity in constant prices (in% of the previous year), almost completely coincided (Fig. 2). But since 2012, the growth rate of real wages has steadily declined and already in 2015 was lower than the index of labor productivity growth in constant prices. This marked trend is negative.

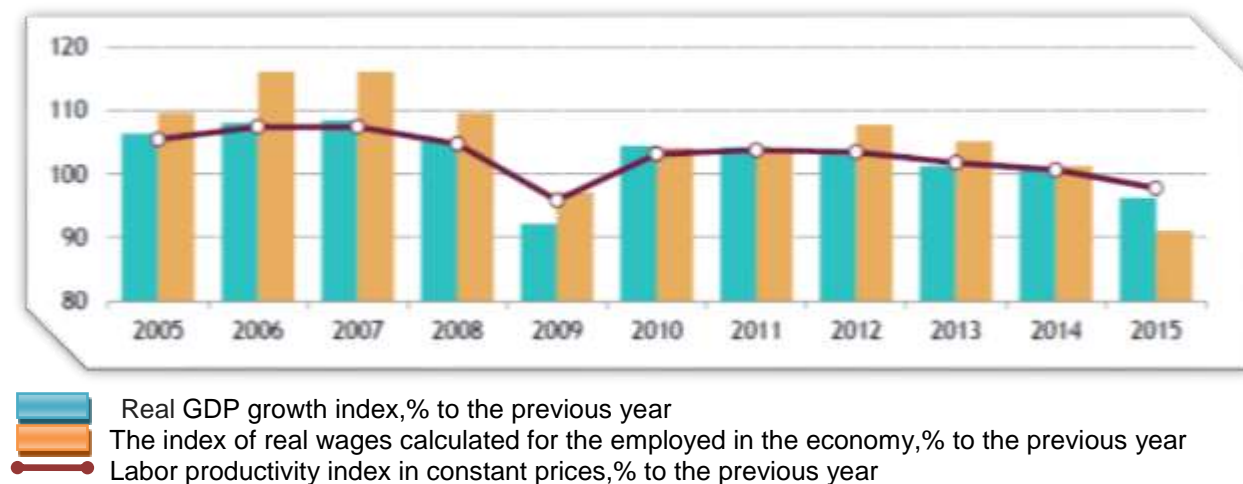


Fig. 2. Changes in indices of real GDP, real gross wages, labor productivity in constant prices in the economy of Russia in 2005-2015, %

Source: Labor productivity in the Russian Federation. Social Bulletin, 2017

Saving on labor costs not only does not stimulate the growth of labor productivity, but also limits personal consumption of households and, accordingly, the demand of the population for manufactured goods and services. Reducing demand restrains the interest of producers not only in building up, but also in maintaining the achieved production volumes. Thus, the wage policy, other things being equal, affects the dynamics of labor productivity in the economy. In these conditions, there is a need to develop new approaches to the forms and methods of organizing labor remuneration in both the real and budget sectors of the economy in order to strengthen the stimulating effect on productivity growth

We are worried that labor productivity in Russia is much lower than in the developed countries of the world, and in recent years this gap is almost not reduced.

2.2. What should be done to improve productivity?

President of Russia V.V. Putin said that Russia needs to increase labor productivity by at least 5-6% per year. Such growth rates will ensure the growth of the efficiency of the economy and enterprises, the creation of jobs and decent wages of those employed in the economy, which will increase the welfare of Russian citizens.

The solution of the labor productivity problem in Russia needs to be implemented through the activation of the technological factor, that is, the renewal of fixed assets, the commissioning of high-performance equipment, the introduction of advanced technologies, and the creation of high-performance jobs.

The world development tendencies contribute to the activation of the technological factor. The modern world is entering a new fourth industrial revolution. Therefore, modern Russian production in any field, be it industry, agriculture, transport, should switch to modern resource-saving technologies. The modernization of production facilities should be allocated own funds of firms, as well as funds from budgets of various levels.

A high-productivity job is considered based on the added value produced by each employee, with depreciation, insurance premiums, and wages also taken into account here. A high-productivity job is a boon to the economy of any country. First and foremost, this is a higher pay for the employed in the economy, and secondly, it is an increase in budget revenues from taxes on wages and incomes. Fig. 3 presents information on the number of high-productivity jobs in the economy of the country according to the Federal Service of State Statistics of Russia.

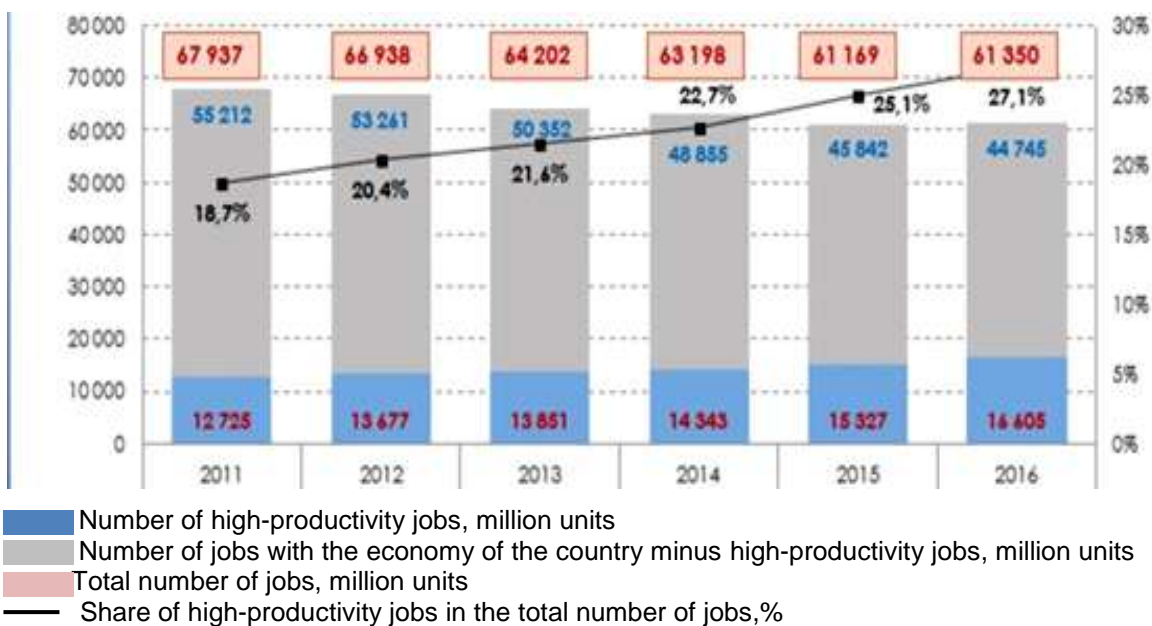


Fig. 3. The number and dynamics of jobs in the Russian economy in 2011-2016

Source: <http://www.vestifinance.ru/articles/87280>

Although in recent years there has been an increase in high-productivity jobs, their number is not normal, given that they are only a quarter of the total number of jobs.

The creation of high-productivity jobs requires the availability of the necessary skills of workers. But Russian employers are slow to invest their workers in the development of human capital, especially in training and retraining of workers. Forecast by 2030, the number of employed people under the age of 40 will be less than now about a quarter. Opportunities for additional education of residents of Russia older than 40 years are approximately two times lower than in Europe. Therefore, to increase labor productivity, it is necessary to increase spending on the education system, including vocational education and retraining of specialists from 40 years and older, on the health care system and the development of human capital.

The increase in the productivity of the economy as a whole, the so-called aggregate productivity, can also be achieved through the redistribution of labor between enterprises or industries with different levels of productivity, that is, labor reallocation (Voskoboynikov and Gimpelson, 2015). Aggregated productivity will increase if the redistributed workers at the new workplace will work more productively than the old one. However, if they find themselves less productive work, then the aggregate productivity may not grow as much as in a separate modernized plant or in the industry, and may even decrease. McMillan and Rodrik (2011) show that in East Asia, relocation stimulated productivity growth (and thus economic growth), whereas in Latin America and Africa, its effect was negative. They emphasize that labor flows from low-productivity to high-performance activities are key factors in development (McMillan and Rodrik, 2011) Labor reallocation is beneficial when labor market institutions actively promote the generation of more productive jobs compared to those that drop out when new ones are created technologically modernized enterprises, and inefficient obsolete firms leave the market.

And one more important aspect is to increase the workers' interest in labor productivity. This can be facilitated not only by an increase in labor remuneration, but also by the creation of a "healthy" climate in the work collective and an increase in the social stability of the employee. Employment precariousness and the growth in the number of informal labor relations are negative factors for increasing labor productivity.

REFERENCE LIST

Labor productivity. Available at SSRN: http://www.ilo.org/ilostat-files/Documents/description_PRODY_EN.pdf

- Labor productivity in the Russian Federation. *Social Bulletin* (2017). Moscow: Analytical Center under the Government of the Russian Federation. Available at SSRN:
<http://ac.gov.ru/files/publication/a/13612.pdf>
- McMillan, M., and Rodrik D. (2011). Globalization, Structural Change, and Productivity Growth. In: *Making Globalization Socially Sustainable*, edited by Mark Bachetta and Marion Jansen, International Labor Organization, Geneva Switzerland, pp. 49–84. DOI: 10.3386/w17143
- Voskoboynikov, I., and Gimpelson, V. (2015). Productivity Growth, Structural Change and Informality: the Case of Russia [Electronic resource]: Working paper WP3/2015/04. Moscow: Higher School of Economics Publ. House. Available at SSRN:
https://www.hse.ru/data/2015/07/17/1085497876/WP3_2015_04_FFF.pdf