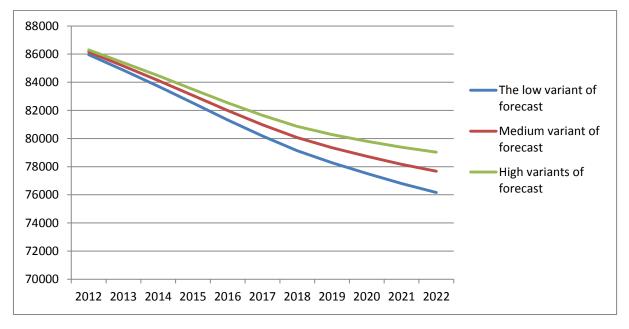
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## Productivity and shortage of labor: the case of Russia.

## Extended abstract.

The impact of falling birth rate in 90 years in Russia are beginning to have a significant impact on the labor market. In the period up to 2022, the population of Russia will lose (in line with the average forecast FSGS<sup>1</sup>), about 8.5 million people of working age. Moreover, the average annual decline during this period will be about one million people in accordance with a low variant projection (figure 1). Reducing the rate reduction is expected only after 2017. In addition, Russia's population will grow old rapidly, especially after 2015. The share of working-age population the period under review will be reduced from 61% to 55%, and the proportion of the population over working age population will increase by 4.4%.



Source: FSGS

Figure 1. Changes in the population of working age in the period of 2012 - 2022 years. in the Russian Federation.

<sup>&</sup>lt;sup>1</sup> Federal State Statistics Service of Russian Federation.

The stimulation of migration is the one way of improvement of the negative demographic situation of Russia. But at the same time, there are significant internal resources in Russia. In the first place it is necessary to say about a growth of labor productivity and reducing labor-intensive. Russian labor productivity is 26.8% of this indicator of the United States of America, 40% of the indicator of Japan and Germany, 33.3% of the indicator of France, 36% of the indicator of Sweden.

Of particular concern is the fact that Russia is lagging behind from countries such as Argentina, Hungary, Mexico, Poland, Slovakia, Slovenia, Turkey, etc. Moreover, a number of former Soviet republics ahead of Russia: Armenia, Belarus, Estonia, Latvia, Lithuania, Kazakhstan. It is impossible not to note the gap in the growth rates of labor productivity in Russian from the partner countries of BRIC. According to the Federal State Statistics Service in 2010 Russian labor productivity rose by 3% for total economy, while in China 8.5%, India 5.5%, Brazil 4%.

The main reasons of low labor productivity in Russia are:

- depreciation and obsolescence of domestic production facilities
- low share of innovative sectors of the economy and the level of innovation activity of economic entities
- low investment attractiveness of the domestic economy
- excessive government regulation of business and production processes
- the low cost of labor, which is typical for the local labor force, as for foreign labor immigration
- labor law, which is based largely on Soviet practices and administrative pressure on businesses
- low proportion of the population living in large cities (more than 1 million people), in comparison with developed countries

The world practice shows, that such low productivity is typical for countries, which export labor force . It's safe to say that the current intensity of the Russian migration, both internal and external, does not correspond to the realities of economic development. Active accelerated modernization of the economy, together with the growth of labor productivity can lead to release of workers, increase the volume of internal migration, and as a result, reduce of labor shortages.

We have calculated three predicted variants of reducing the demand for labor when labor productivity growth in a 3%, 4% and 6%, and the growth of the national GDP in 3.5-3.7%. The results suggest that the demand for labor will be reduced and will vary from approximately 12 million people (labor productivity growth of 3% per year) to 4 million people (labor productivity growth of 4% per year). At the same time, with an annual 6 percent increase in productivity by the 2018 labor shortages will disappear and there will be a surplus of supply over demand of manpower in the future (figure 2).

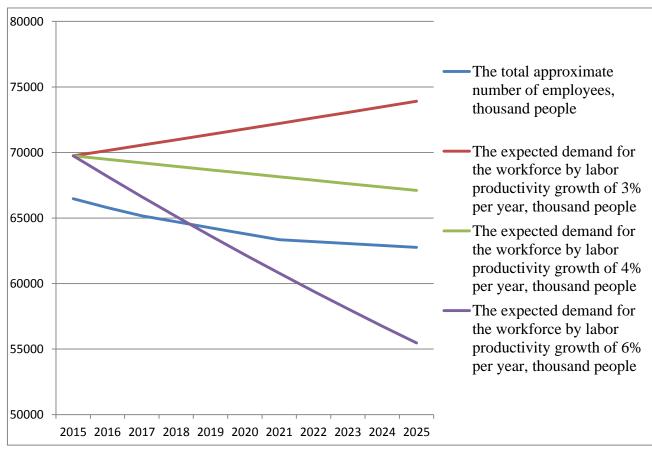


Figure 2. Forecast of demand for labor in the period 2015-2025 with 3.6% GDP growth rate per year.

The results of this study suggest that with the right government policies to promote the growth of labor productivity is possible to substitute the projected shortfall by domestic labor workforce, with a gradual reduction in the use of low-skilled foreign workers. Also, this study allows the prediction of the two waves of internal migration, which should be expected over the next 10 years. The first wave - "village - city", the second wave - "small city - the largest metropolitan area." The state needs to use those trends to create a new "growth points" in Siberia and the Far East, for the implementation of major infrastructure projects in the eastern part of the country, on the basis of management's internal migration flows.