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Assessment of the Population Welfare on the Basis of the Asset Index

In most countries of the world, a monetary approach based on income and expenditure data is used to measure well-being. At the same time, other approaches have become increasingly popular in recent years. Alternative approaches often consider welfare a multidimensional indicator. To take into account its multidimensionality a wide range of socio-economic indicators is being collected. It has become a common practice to build integral indices based on selected indicators.

The first attempt to create an integral characteristic of property status was conducted by D.E. Sahn and D. Stifel (Sahn and Stifel, 2000). An important contribution to this area was made by a team of researchers, including Frikkie Booysen, Servaas Van Der Berg, Ronelle Burger, Michael Von Maltitz and Gideon Du Rand from different universities in South Africa (Booysen et al., 2008). They applied a completely new indicator for evaluating trends in poverty in sub-Saharan countries. They named it asset index. Note that this indicator does not follow the monetary-metric approach, which is currently the main one for a number of countries, including Russia. The indicator definition is based on the property status of the household. This indicator provides a picture of household socioeconomic conditions much more properly than the monetary income. This indicator has become very popular, as confirmed by extensive citations of the original paper. Our research is the first attempt to apply the methodology to calculate the asset index in Russia.

The aim of the research is to conduct the welfare analysis of the Russian population with the help of a new indicator, asset index, and to compare the results with the official statistical data on well-being.

To calculate the asset index for the Russian Federation, we use the data of the Comprehensive Monitoring of Living Conditions of the population (CMLC) by Rosstat for 2014 and 2016. Based on the available list of variables, some original indicators are replaced by other. For example, the original study contains a question about the presence of a radio in the household. Due to the lack of such a question in the CMLC questionnaire this variable is replaced by the Internet access. The CMLC does not provide data about the material of the floor in the building where the household lives, so this variable is excluded from the calculations. Variables on housing conditions are added. These variables can provide a broader picture of the property status of the household. We also add the self-assessment of the property status of the household to the variable list.

According to the calculated values of the asset index, we divide all households in Russia by four quartiles. Then we analyze the distribution of households in each of the regions of the Russian Federation by the national quartiles. In 2016, the largest shares of households in the lowest

national quartile were observed in the Republic of Altai (84.35%), Zabaikal region (78.27%), the Republic of Tuva (76.12%). In 2014, these regions also headed the list of the poorest households, but in 2014 the shares of households in the first quartile was lower and amounted to 80.79%, 69.76% and 68.01% respectively. The largest shares of households in the highest national quartile were observed in Moscow (51.4%), Khanty-Mansiysk Autonomous Okrug (47.02%), St. Petersburg (45.45%). On average, there was an increase of 5 percentage points in these regions from 2014 to 2016. Thus, we see a polarization of regions by the property status of households.

We compare our results with poverty estimated by monetary income. On the one hand, there is a clear correlation between poverty by income and asset poverty: 49% of the income poor in 2014 and 53% of the income poor in 2016 were in the lower quartile of asset index. On the other hand, the fact that a large percentage of the income poor are in other quartiles (up to the top) indicates that the asset index provides additional information on household welfare. Among all regions, the highest correlation between the two indicators is observed in the Republic of Dagestan. It should be noted that in 2016 the share of income poor households in the 4th quartile increased by 5.24 percentage points, that indicates an improvement in the property status of households with incomes below the subsistence minimum.

The analysis of socio-demographic characteristics reveals that the lowest values of the asset index are observed in the households of pensioners and rural inhabitants. Compared to other approaches, the asset index is more differentiated by the size of settlements and less differentiated by age groups. Compared to income poverty the asset index shows a much lower level of poverty among the employed and among large households.

The regression analysis reveals a strong significant association of the asset index with the age and the education of the head of the household, the number of children and adults in the household, the availability of work and pensions of household members, territorial dummies. The factors of differences in the value of the asset index between urban and rural residents are analyzed on the basis of the Oaxaca-Blinder decomposition. It is revealed that the education of the head of the household (both absolute difference and difference in the return on education) has the greatest impact on the gap, and the higher return on the availability of work in rural areas contributes to the reduction of the gap.