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## Socio-Economic Indicators of Russia's National Development Goals: Trends and Forecast



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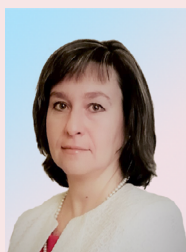
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**Abstract.** The article presents the findings of a research on the achievability of a number of socio-economic indicators that are stated in the national development goals of Russia for the period up to 2030. The aim of the work is to analyze the possibility of achieving the indicators reflected in Russia's national development goals by individual federal districts based on forecasting and creating an appropriate rating. The study includes three stages: first, to analyze available statistical data and select indicators for analysis; second, to build three forecast scenarios (pessimistic, neutral, optimistic); third, to visualize the results obtained and design a rating of federal districts according to the achievability of the declared parameters of development goals. Information base includes Rosstat data (statistical collections "Regions of Russia. Socio-economic indicators" for 2020–2023), as well as monitoring indicators of the minimum wage for the period from 2013 to 2024. We arrange federal districts in three groups: with a high level of achievability of indicators of national development goals (Central Federal District, North Caucasus Federal District), with a medium level (Northwestern Federal District, Southern Federal District, Ural Federal District, Volga Federal District) and with a low level (Siberian Federal District, Far Eastern Federal District). According to the forecast and the generalized rating, by 2030 none of the federal districts will be able to fully achieve the required level of the indicators under consideration. The uniqueness and novelty of the results we have obtained are due to the possibility of comparing the achievability of indicators in different time intervals and the declared values of Russia's national development goals. The proposed rating can be vertically and horizontally scaled by expanding the number of analyzed indicators. The technique we propose and the results we have obtained can be used by representatives of all levels of legislative and executive authorities when assessing the declared socio-economic parameters of national development goals, including the implementation of other national projects, as well as by a wide range of scientists and researchers engaged in forecasting and modeling at the macro, meso and micro levels.

**Key words:** RF national development goals, quality of life, socio-economic indicators, rating of regions, forecasting, econometric modeling.

### Introduction

The tasks of Russia's strategic development and successful socio-economic functioning of its regions are directly related to the achievement of national goals outlined in state policy documents (Ilyin, Morev, 2024). At present, scientific research in the field of identifying trends in ensuring high living standards and decent quality of life is of particular importance (Dockery, 2022), including in the context of analyzing the causes and extent (Belekhova, 2023) of inequality (Becker et al., 2005), poverty (Morris, 1982) as a threat to demographic development of territories (Ilyin, Morev, 2022). Scientists use various theoretical and methodological approaches to forecasting the achievability of national development goals.

Analytical and predictive research methods (Kroshilin et al., 2023) are in demand in the study of such important components of human well-being as provision of decent housing, increase in the minimum wage (Leng et al., 2023), including significant indicators (with dynamics in different periods) of fertility (Bird, 2021) and life expectancy.

Regional aspects of housing provision (Mamleeva et al., 2021) and satisfaction with housing conditions are studied on the example of individual territories of Russia (Yarasheva, Makar, 2022). Attention is paid to both the objective situation (Lozovskaya, 2021) – the number of square meters of available housing, and subjective estimates – the intention to improve housing conditions.

The difference in the rate of decrease/increase in fertility (including total fertility rate) in foreign countries (Thomasson, 2021) and Russian regions (Tuktamysheva et al., 2023) is considered from the point of view of the influence of all external (environment) and internal (individual attitudes) factors (Begunova, 2024). Not only fertility indicators, but also medical and demographic indicators in general (Ilyin et al., 2021), as well as population health indicators, are analyzed in a regional context (Polikarpov et al., 2023). Topical issues of reproductive behavior are studied at the level of individual territories (Arkhangelskii et al., 2023).

Russian scientists identify significant factors influencing the decrease (Shulgin et al., 2022) in life expectancy in RF constituent entities (Astaniin et al., 2022) and analyze the conditions for ensuring a “prosperous old age” (Belekhova et al., 2024). Attention is paid to the relationship between economic factors (in particular, dynamics of GDP per capita) and Russians' life expectancy (Bedanokov et al., 2022). Of particular interest is the issue of delineating the sphere of responsibility for health preservation between the state and the individual (Shabunova et al., 2021). An important component of theoretical approaches to studying life expectancy (Chekmeneva, Balina, 2019; Ongel, Yilmaz, 2020) and its increase, including through attitudes toward self-preservation behavior, is to develop effective methodological tools and possibilities of using them (Dubrovskaya, 2023).

People's financial security, including the changing minimum wage (Leng et al., 2023; Plutalova, 2023), plays a significant role in maintaining an individual's standard of living (Rumyantseva, Shutov, 2021) and improving its quality (Volgin, 2019; Dockery, 2022; Tyrell, Yates, 2017). The study of these problems is closely related to identifying trends in practice and in the development of modern concepts of social well-being in Russia (Maksimov et al., 2022). Not only

the level of wages, but also satisfaction (Sabbagha et al., 2018) with work and its conditions (Gayathiri, Ramakrishnan, 2013) have a significant impact on a person's desire to increase their “comfort” and welfare. It is the increase in people's welfare that meets the objectives of achieving the national development goals.

The article presents calculations carried out within the framework of our own research and the results of forecasting the achievability of a number of socio-economic indicators outlined in Russia's national development goals<sup>1</sup> for the period up to 2030 (hereinafter – NDGs). The main goal of our work is to identify the compliance and possibilities of achieving the declared socio-economic indicators of the NDGs by federal districts. Based on this goal, the following tasks were formulated and solved: available statistical data were analyzed and necessary indicators of the NDGs were selected; statistical methods were chosen to predict the analyzed indicators, forecast scenarios were constructed; the rating of federal districts was calculated according to the achievability of the socio-economic indicators selected. The uniqueness and novelty of the data obtained are due to the need to compare the achievability of NDGs indicators by federal districts of the Russian Federation based on the construction of our own forecast and the proposed rating methodology (by visualizing the data obtained according to the declared socio-economic indicators).

### **Research methodology**

Our approach to studying the achievability of the declared socio-economic indicators of the NDGs in the Russian Federation as a whole and in the context of federal districts was implemented by designing three forecast scenarios for selected variables. The work involved the implementation

<sup>1</sup> Decree on the national development goals of the Russian Federation for the period up to 2030 and for the future up to 2036. Available at: <http://www.kremlin.ru/events/president/news/73986> (accessed: June 1, 2024).

of successive stages. The first stage was to analyze the available statistical data and select indicators to be analyzed. The second stage consisted in constructing several forecast scenarios (pessimistic, neutral, optimistic)<sup>2</sup>. At the third stage a rating of federal districts was obtained according to the achievability of selected socio-economic indicators of the NDGs, using visualization of the data calculated. The proposed methodology (based on forecasting and visualization of NDGs indicators) can be scaled, because it provides for the inclusion of any necessary number of socio-economic parameters (indicators) required for research tasks, from the point of view of analyzing the achievability of indicators defined in the NDGs or other national projects.

The information base of the study included Rosstat data, analytical materials, statistics collections “Regions of Russia. Socio-economic indicators” (2020–2023)<sup>3</sup>, findings of a monitoring of minimum wage indicators (for the period from 2013 to 2024), including data from the following information resources: KonsultantPlus<sup>4</sup>, RBK Life<sup>5</sup>, Nalog-nalog.ru<sup>6</sup>.

To obtain the *first version of the forecast* (let us call it “*pessimistic scenario*”), econometric

approaches were used to construct a linear regression with one explanatory variable (paired regression) (formula 1)<sup>7</sup>:

$$M(Y_t | Q_t = q_t) = \beta_0 + \beta_1 \cdot q_t, \quad (1)$$

where  $M$  – conditional mathematical expectation of a random variable  $Y_t$  as a function of a non-random explanatory variable  $Q_t$  (at time  $t$ ),  $\beta_0$  and  $\beta_1$  – parameters of the linear regression model that need to be assessed.

To obtain statistical estimates ( $\hat{\beta}_0$  and  $\hat{\beta}_1$ ) and build a model of the form  $Y_t = \beta_0 + \beta_1 \cdot q_t + \varepsilon_t$  (where  $\varepsilon_t$  – random variable), the capabilities of MS Excel software were used<sup>8</sup>. Based on this model, the forecast values of the designated socio-economic indicators of the NDGs for Russia’s federal districts for 2025 and 2030 are obtained.

The *second version of the forecast* of the determined indicators of the NDGs for Russia’s federal district (let us call it “*neutral scenario*”) was based on an exponential trend. For each of the analyzed indicators, a function was calculated using the exponential smoothing method by extrapolating trends that were identified at previous points of observation (previous periods) (formula 2)<sup>9</sup>:

$$Q_t = k \cdot Y_t + (1 - k) \cdot Q_{t-1}, \quad (2)$$

where  $Q_t$  – forecast value at time  $t$  (smoothed value of the level of the series based on the exponential average);  $k$  – weighting factor (smoothing parameter), taking into account the characteristics of the current moment in time  $t$ ,  $Y_t$  – value of NDGs indicator for Russia’s federal district in the current period;  $Q_{t-1}$  – forecast value of NDGs indicator at the previous moment in time.

<sup>2</sup> We name forecast scenarios “pessimistic”, “neutral”, “optimistic”, which explains the influence of factors and their consideration in making a forecast and shows an assessment of a possible development trend.

<sup>3</sup> Regions of Russia. Socio-economic indicators. 2023: Statistics collection. Rosstat. Moscow, 2023; Regions of Russia. Socio-economic indicators. 2021: Statistics collection. Rosstat. Moscow, 2021; Regions of Russia. Socio-economic indicators. 2020: Statistics collection. Rosstat. Moscow, 2020.

<sup>4</sup> Minimum wage in constituent entities of the Russian Federation (as of July 1, 2024). Available at: [https://nalog-nalog.ru/posobiya/posobie\\_po\\_vremennoj\\_netrudosposobnosti\\_bolnichnyj/velichina-mrot-v-rossii-tablica/](https://nalog-nalog.ru/posobiya/posobie_po_vremennoj_netrudosposobnosti_bolnichnyj/velichina-mrot-v-rossii-tablica/) (accessed: July 1, 2024).

<sup>5</sup> Minimum wage will be raised in 2024. What the minimum wage will be. Available at: <https://www.rbc.ru/life/news/643d440b9a7947b22e15f7f6#15f7f6-contents-p3> (accessed: June 25, 2024).

<sup>6</sup> Grigorieva E. Minimum wage in 2013–2024 in Russia. Available at: [https://nalog-nalog.ru/posobiya/posobie\\_po\\_vremennoj\\_netrudosposobnosti\\_bolnichnyj/velichina-mrot-v-rossii-tablica/](https://nalog-nalog.ru/posobiya/posobie_po_vremennoj_netrudosposobnosti_bolnichnyj/velichina-mrot-v-rossii-tablica/) (accessed: June 20, 2024).

<sup>7</sup> Mashunin Y.K. (2021). Forecasting and planning of socio-economic systems. Moscow: Yurait.

<sup>8</sup> Models and forecasts were built, and statistics were processed with the help of add-ins “Data Analysis” and “Solution Search” in Microsoft Excel software.

<sup>9</sup> Asaul A.N., Asaul M.A., Starinsky V.N., Shcherbina G.F. (2022). Market analysis and forecasting. Moscow: Yurait.

Applying this trend method, which is based on calculations of the trend equation, taking into account the values of the coefficients characterizing the current observation (time point), taking into account previous (past time points), the exponential mean  $Q_t$  function is constructed and a forecast is made.

The *third variant of the forecast* of NDGs indicators for Russia's federal district (let us call it "optimistic scenario") was based on the method of moving averages with the "selection" of functional dependence taking into account the maximum value of parameter  $R^2$ . With this method of forecasting, the actual indicators in the dynamic series are replaced by the values calculated based on the selection of a functional dependence that is more consistent with observations (dependencies can be power-law, exponential and other) (formula 3)<sup>10</sup>:

$$Y_t = \mu + \xi_t - Q_1 \cdot \xi_{t-1} - Q_2 \cdot \xi_{t-2} - \dots - Q_t \cdot \xi_{t-q}, \quad (3)$$

where  $\mu$  – constant;  $\xi_t, \xi_{t-1}, \dots, \xi_{t-q}$  – white noise at certain points in time ( $\xi_t = Y_t - \hat{Y}$ ).

In this case, the average value of the forecast parameter is calculated in a certain time interval ( $n = 3$  years for our forecast), each subsequent calculation is formed with a shift for the selected period. This allows us to build a trend in the development of the indicator in the form of a smooth line. It is also possible to apply the ARMA and ARIMA models. In our case, a polynomial of the second, third and fourth degree was used for calculations. The function of an  $n$ -degree polynomial is given in formula 4:

$$f(Q_t) = \sum_{i=1}^n (a_i \cdot t^i), \quad (4)$$

where  $a_i$  – coefficient of parameter estimation at current time  $t$ .

<sup>10</sup> Eliseeva I.I. et al. (2012). Econometrics. Moscow: Yurait.

This made it possible to more accurately describe the upward and downward trends in the analyzed parameters and obtain the necessary forecast for Russia's federal districts for 2025 and 2030.

At the final stage of the study, a rating is built for federal districts of the Russian Federation for each of the selected socio-economic indicators of the NDGs ( $R_i, i = 1, 2, 3, \dots, n$ , where  $n$  – number of options selected for analysis). Based on the obtained values, the generalized rating at time  $t$  ( $R_{gen}(t)$ ) is calculated according to the selected indicators of the achievability of the NDGs for Russia's federal district (formula 5):

$$R_{gen}(t) = \frac{1}{n} \sum_{i=1}^n (r_i \cdot R_i(t)), \quad (5)$$

where  $R_i(t)$  – rating value according to the parameter indicator at time  $t$ ,

$r_i$  – coefficient of significance of rating  $R_i$  in the generalized rating (it is determined by experts or set declaratively, it can have a value from 0 to 1, by default it is assumed to be 1).

Based on the visualization of the obtained forecasting results and the constructed generalized rating ( $R_{gen}(t)$ ) of the selected indicators of the NDGs, we can conclude that it is possible/impossible to achieve the indicated parameters (specified at time  $t$  of the forecast).

The uniqueness and novelty of the proposed methodology are due to the possibility of comparing the achievability of socio-economic indicators of the NDGs based on forecasting and rating of federal districts by visualizing the selected indicators. This allows for the vertical scaling ("in depth" due to the use of new approaches to analysis and forecasting methods) and horizontal scaling ("in width" due to the inclusion of new parameters for analysis) of our methodology and extending this approach to other national projects of the Russian Federation.

**Forecast results**

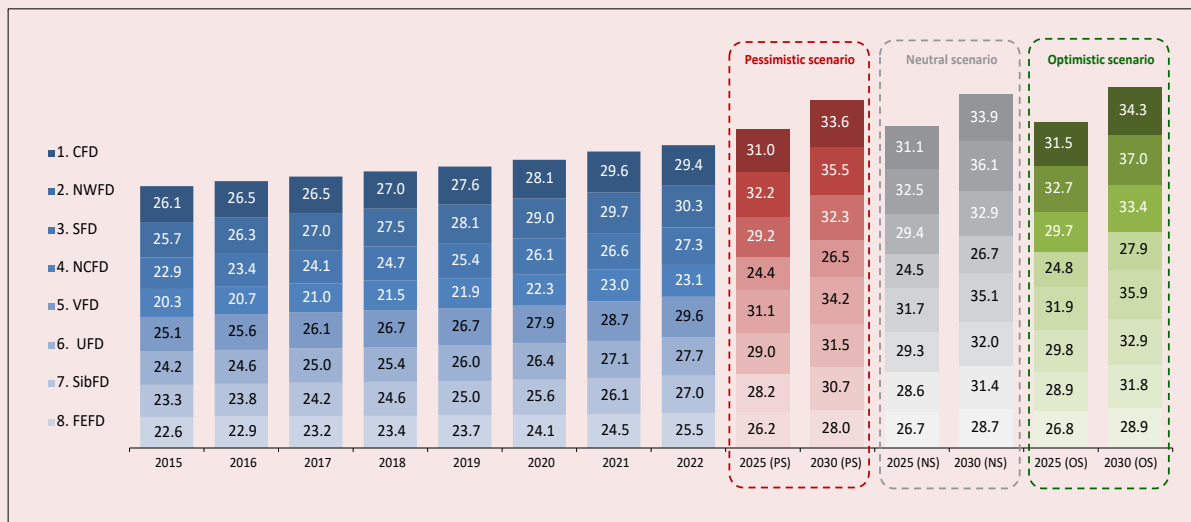
At this stage of the study, in order to test the approach we propose, it was decided to identify four main socio-economic indicators of the NDGs:

- 1) housing provision (total area of residential premises at the end of the year per inhabitant, m<sup>2</sup>);
- 2) life expectancy at birth (number of years);
- 3) total fertility rate (number of children per woman);
- 4) minimum wage in the Russian Federation (rubles).

To build a forecast based on Rosstat data, an array of values for the indicated indicators for the period from 2015 to 2022 was formed. In order to forecast the minimum wage in the Russian Federation, data for 2023 and 2024 were also included (available at the time of building the forecast). Consistent application of the forecast options described above allowed us to obtain the following results (Fig. 1–4).

According to the Presidential Decree “On the national development goals of the Russian Federation for the period up to 2030 and for the future up to 2036”<sup>11</sup>, housing provision should reach at least 33 m<sup>2</sup> per person by 2030 and at least 38 m<sup>2</sup> by 2036. It follows from the obtained forecast options that this indicator will grow steadily. In a pessimistic scenario, by 2025 the Northwestern Federal District (NWFDF) will be able to reach the level of 32.2 m<sup>2</sup> per person, by 2030 three regions will “step over” the established indicator level (Central Federal District (CFD) – 33.6; Northwestern Federal District – 35.5; Volga Federal District (VFD) – 34.2). According to the neutral forecast scenario, the options are comparable to the pessimistic one, and with an optimistic option, by 2030, the Southern Federal District (SFD) with an indicator of 33.4 m<sup>2</sup> will join the leading federal districts (Fig. 1).

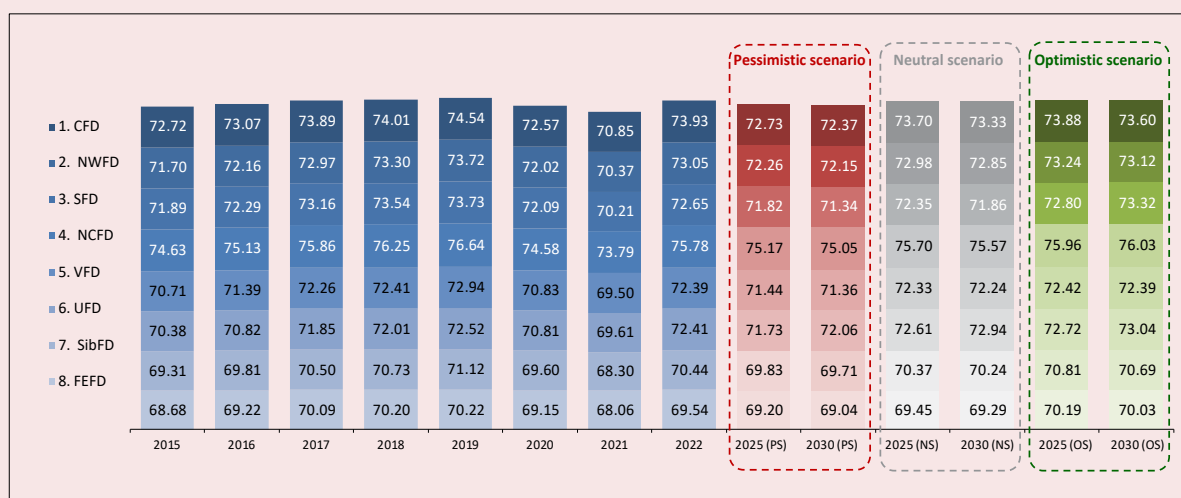
Figure 1. Forecast for the indicator “Housing provision (total area of residential premises at the end of the year per inhabitant, m<sup>2</sup>)” in the context of RF federal districts



Source: own compilation based on Rosstat data.

<sup>11</sup> Decree on the national development goals of the Russian Federation for the period up to 2030 and for the future up to 2036. Available at: <http://www.kremlin.ru/events/president/news/73986> (accessed: June 1, 2024).

Figure 2. Forecast for the indicator “Life expectancy at birth (number of years)” in the context of RF federal districts



Source: own compilation based on Rosstat data.

The socio-economic indicator “Life expectancy at birth (number of years)” according to the NDGs should be 78 years by 2030. The obtained data of the pessimistic forecast demonstrate the inability of all Russian regions to achieve the indicators declared in the Presidential Decree by the designated period. The North Caucasus Federal District (NCFD) will be closest to this value (75.6 years by 2030). Four federal districts will be able to overcome the 73-year mark (CFD – 73.60; NWFD – 73.12; SFD – 73.32 and Ural Federal District (UFD) – 73.04) – according to the optimal forecast scenario, and in NCFD the analyzed indicator will be 76.03 years (Fig. 2).

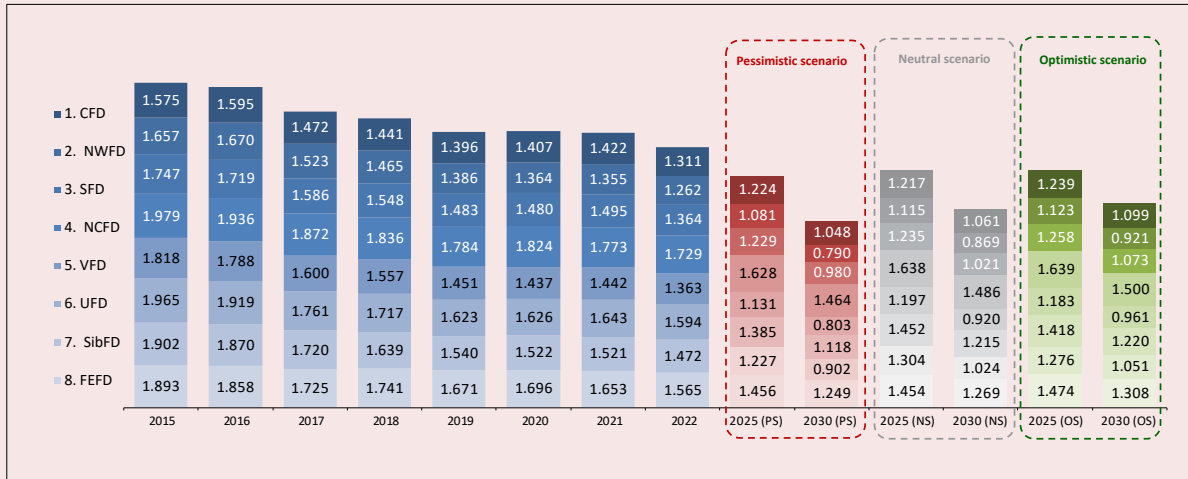
The most difficult situation concerns the indicator “Total fertility rate (number of children per woman)”. According to the NDGs, it should be at least 1.6 by 2030. Calculated statistical data indicate a systematic decrease in this indicator in all RF federal districts. Under the neutral forecast scenario, only NCFD shows a value of 1.49 in 2030, which is “closer” to the required level designated by the RF Government. Two federal districts will be able to overcome the 1.2 mark (UFD – 1.21;

Far Eastern Federal District (FEFD) – 1.27), three federal districts show a value slightly above 1 (CFD – 1.06; SFD – 1.02; Siberian Federal District (SibFD) – 1.02; Fig. 3).

According to the Presidential Decree, “... it is necessary to ensure an increase in the minimum wage at a faster pace, including its growth by 2030 by more than two times compared with the amount set for 2023, with its value reaching at least 35 thousand rubles per month”<sup>12</sup>. Over the past 10 years, according to available statistical data, there has been a steady upward trend regarding the minimum wage in Russia. However, according to the three forecast scenarios by 2030, the level of 35 thousand rubles per month indicated in the Decree cannot be achieved. Under the optimistic scenario, the minimum wage in Russia by 2025 may be equal to 21.9 thousand rubles, in 2030 – 28.8 thousand rubles per month (Fig. 4).

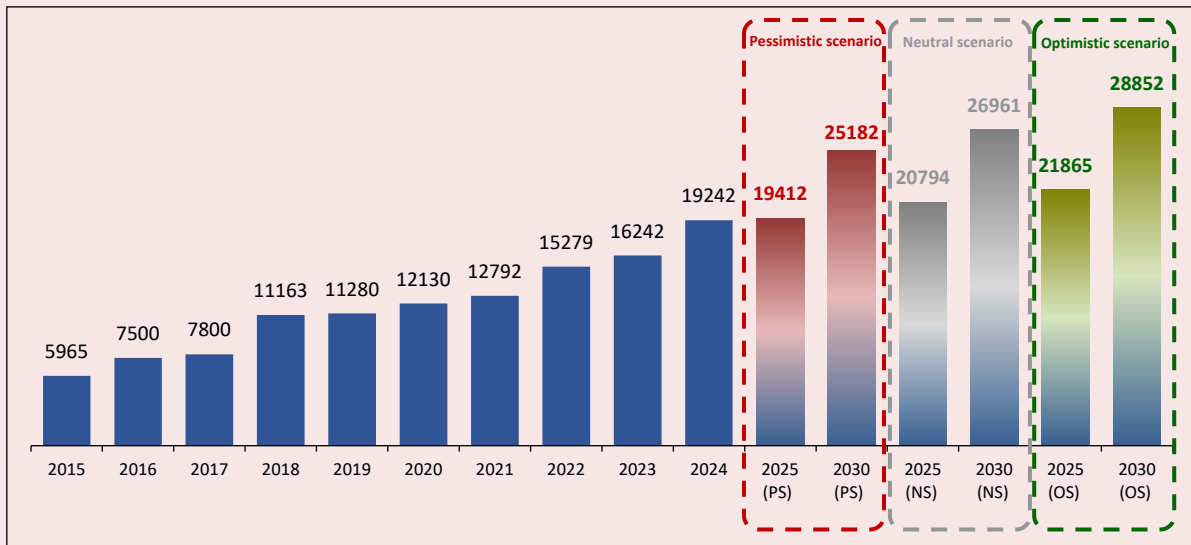
<sup>12</sup> Decree on the national development goals of the Russian Federation for the period up to 2030 and for the future up to 2036. Available at: <http://www.kremlin.ru/events/president/news/73986> (accessed: June 1, 2024).

Figure 3. Forecast for the indicator “Total fertility rate (number of children per woman)”, in the context of RF federal districts



Source: own compilation based on Rosstat data.

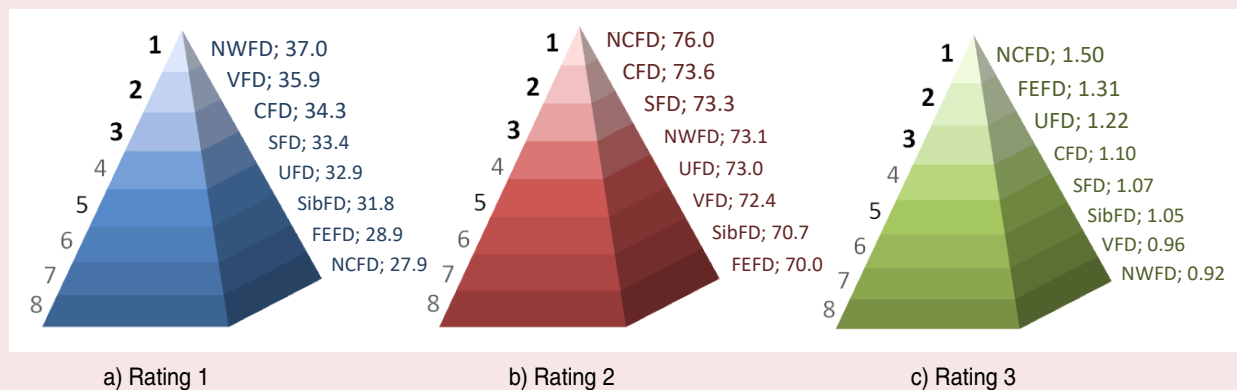
Figure 4. Forecast for the indicator “Minimum wage in the Russian Federation (rubles)”



Source: own compilation based on data from information resources KonsultantPlus, Nalog-nalog.ru RBK Life.



Figure 5. Rating of NDGs targets by federal districts  
(visualization of achievability of the indicators)



Source: own calculations.

### Analysis of the results obtained

To analyze the results of forecasting and building a rating<sup>13</sup> of achievability of NDGs indicators (“Housing provision” (at least 33 m<sup>2</sup> per person by 2030) – “Rating 1”; “Life expectancy at birth” (78 years by 2030) – “Rating 2” and “Total fertility rate” (1.6 by 2030) – “Rating 3”, data for RF federal districts were visualized on the basis of the optimistic forecast scenario (Fig. 5).

In the ranking of the achievability of the indicator “Housing provision” by 2030 (“Rating 1”; see Fig. 5a) the first place is occupied by NWFD (indicator 37.0), the second place – by VFD (35.9), the third place – by CFD (34.3). We should note that, according to the forecast we obtained, these regions have overcome the level set in the NDGs of at least 33 m<sup>2</sup> per person. In fourth and fifth place are SFD (33.4) and UFD (32.9), respectively, which will also be able to show the required value. Two regions are lagging behind in housing provision –

NCFD (27.9) and FEFD (28.9). SibFD (31.8) is closer to the required mark of 33 m<sup>2</sup>, but only under the optimistic scenario. This is not enough to achieve the NDGs.

The achievability rating of the indicator “Life expectancy at birth” by federal districts by 2030 (“Rating 2”; see Fig. 5b) reflects that none of RF federal districts will be able to reach the desired level (78 years) (under any forecast scenario). NCFD is closest to this indicator (76.0), CFD ranks second (73.6), and SFD ranks third (73.3). NWFD (73.1) and UFD (73.0) are very close in terms of values, ranking 4th and 5th in the rating, respectively. The indicators of SibFD (70.7) and FEFD (70.0), which occupy the last places in the rating, differ from the appropriate required level most of all (by almost 8 years). VFD ranks 6th with a value of 72.4 years in terms of “life expectancy at birth”.

The third rating is based on an optimistic forecast of achievability of the indicator “Total fertility rate” (“Rating 3”; see Fig. 5b). It has the lowest degree of possible achievability of the set value of 1.6. The closest to this level is the indicator of NCFD (1.5) which ranks 1st, the second place belongs to FEFD (1.31), third – to UFD (1.22). Three federal districts were able to overcome only

<sup>13</sup> Position of the federal district in the rating is determined based on the calculated level in comparison with the indicators for other federal districts (sorting is performed in descending order of the value of the analyzed parameter, where “1st place” corresponds to the highest indicator, and “8th place” to the lowest indicator among the achieved levels for all federal districts).

Generalized rating on selected indicators with visualization of achievability of the NDGs in the context of RF federal districts (according to the forecast for 2030)

RF federal district	“Rating 1”	“Rating 1” indicator (no less than 33)	“Rating 2”	“Rating 2” indicator (no less than 78)	“Rating 3”	“Rating 3” indicator (no less than 1.6)	Generalized rating
Central Federal District	3	34.3	2	73.6	4	1.10	3
Northwestern Federal District	1	37.0	4	73.1	8	0.92	4
Southern Federal District	4	33.4	3	73.3	5	1.07	4
North Caucasus Federal District	8	27.9	1	76.0	1	1.50	3
Volga Federal District	2	35.9	6	72.4	7	0.96	5
Ural Federal District	5	32.9	5	73.0	3	1.22	4
Siberian Federal District	6	31.8	7	70.7	6	1.05	6
Far Eastern Federal District	7	28.9	8	70.0	2	1.31	6

*Notes:*  
 “Rating 1” – rating of RF federal districts according to the indicator “Housing provision (total area of residential premises at the end of the year per resident, m<sup>2</sup>)” by 2030;  
 “Rating 2” – rating of RF federal districts according to the indicator “Life expectancy at birth (years)” by 2030;  
 “Rating 3” – rating of RF federal districts according to the indicator “Total fertility rate (number of children per woman)” by 2030.  
 Source: own calculations.

a value of 1: CFD (1.10), SFD (1.07), and SibFD (1.05) and occupy 4th, 5th and 6th place in the rating. According to the forecast results, VFD (0.96) ranks 7th, NWFD (0.92) ranks 8th. They will not be able to achieve total fertility rate indicators that would be equal even to 1.

At the final stage, a generalized rating of the selected indicators of the NDGs was built according to the forecast values of 2030 (at the stage of testing the methodology, the value of coefficient  $r_i = 1$ ). The obtained calculation results are shown in the *Table*.

According to the calculations, the Central and North Caucasian federal districts have the highest rank according to the generalized rating, compared to other federal districts (value 3). The Siberian and Far Eastern federal districts are on the lowest positions (value 6). As a result of the calculations, the average value compared to other federal districts was obtained by the Northwestern, Southern and Ural federal districts (value 4). The position of the Volga Federal District is slightly lower (value 5).

## Discussion

The four indicators of the NDGs selected for research and forecast characterize the level of national socio-economic welfare and are mutually conditioned, on the one hand, by an increase in the minimum wage (as well as in general incomes of the population), on the other – by housing satisfaction. They have a direct impact on childbirth intentions in families; the improving quality of life affects the overall life expectancy of an individual. Despite the fact that scientists approach the classification of quality of life indicators in different ways, have differentiated ideas about the significance of a particular indicator and about the ways (methods) of making forecasts regarding changes in these indicators, there is a common target vector – the search for possible directions to achieve national development goals. In Russia, studying the specifics and differences regarding the development of individual territories comes to the fore. It is for this purpose that methods of forecasting the achievability of the most significant socio-economic

indicators with differentiation by region or federal district can and should be used.

The analysis of the achievability of several socio-economic indicators declared in Russia's national development goals for the period up to 2030 made it possible, based on three forecast scenarios (pessimistic, neutral, optimistic), to obtain the values of indicators for 2025 and 2030. The forecast for 2025 reflects the current trend in the changes in the indicators declared for analysis. Ratings were built, based on which a generalized rating of forecast indicators of the NDGs for RF federal districts was calculated. Based on the data obtained, the results were visualized, allowing us to draw conclusions about the possibility of federal districts achieving the necessary levels specified in the NDGs. We should note that, according to our approach, no federal district of the Russian Federation will be able to fully implement the goals set by the president and achieve the required level of all indicators of the NDGs by 2030.

The leading position is occupied by the Central Federal District, which ranks 3rd in the generalized rating (high level of NDGs achievability). However, the value of the "Rating 3" indicator ("Total fertility rate" by 2030) in the Central Federal District reaches only 1.1, while the required value is 1.6. This significantly worsens the district's position in the overall rating. The "Rating 2" indicator ("Life expectancy at birth" by 2030) is also not high enough and is equal to 73.6 years at the required level of 78 years. However, this indicator allows the Central Federal District to take second place among the other federal districts. The second leader is the North Caucasus Federal District that ranks 3rd in the generalized rating. According to the "Rating 2" and "Rating 3" indicators, NCFD ranks 1st; however, according to "Rating 1" ("Housing provision" by 2030), it can only claim 4th place among the federal districts (with an indicator value of 33.4 m<sup>2</sup> – this is higher than it needs to be achieved according to the NDGs (33 m<sup>2</sup>)).

The average level of NDGs achievability in the framework of the generalized rating is observed in the Northwestern Federal District – position 4, Southern Federal District – 4, Ural Federal District – 4, Volga Federal District – 5. Moreover, NWFD has the value in "Rating 1" equal to 1, and in "Rating 3" – 8. The position of the Southern Federal District "worsens" the value in "Rating 3", equal to 5, since total fertility rate by 2030 will reach only 1.07 with the required value of 1.6, according to the NDGs. UFD ranks 3rd according to "Rating 3" with a value of 1.22, and 5th according to ratings 1 and 2. The Volga Federal District is the leader in terms of "Rating 1" (2nd place), but occupies 6th place in terms of "Life expectancy at birth" and 7th place in terms of total fertility rate.

According to the obtained version of the forecast, the Siberian and Far Eastern federal districts have a low level of NDGs achievability. They received a score of 6 in the generalized rating. Moreover, we should emphasize that the Far Eastern Federal District has a fairly high level of "Rating 3" – the value of 2, but according to "Rating 1" it ranks 7th, and according to "Rating 2" it ranks 8th and is below SibFO. SibFO has a very low total fertility rate, equal to 1.05, while the required value is 1.6.

### Conclusion

As part of the conducted research on the achievability of the declared socio-economic indicators of the NDGs in the Russian Federation by 2030, an assessment toolkit was developed and tested for selected indicators, which included a variant of forecasting and designing a generalized rating of the country's federal districts. The uniqueness and novelty of solving this task lies in the possibility of comparing the achievability of NDGs indicators (planned normative values reflected in the Presidential Decree) with the obtained forecast values and constructing visualized ratings. The technique we propose is unique and provides for vertical scaling (by applying new approaches

to analysis) and horizontal scaling (by including new parameters for analysis). At the present stage, our approach already allows visualizing the results obtained by highlighting the rating levels in color (see Table). In the table, the positions are represented by a three-level color rating: green – the rating has a value from 1 to 3, yellow – a value from 4 to 5, red – from 6 to 8, which is aimed at optimizing the analysis of trends in the indicators/positions of the region and makes it possible to see the integral rating indicator with the necessary level of detail.

The approbation of the methodology proved its viability. According to the results obtained in assessing the achievability of the selected indicators for the NDGs, the federal districts of the Russian Federation can be divided into three groups:

1) a group with a **high level** of achievement of the NDGs: Central and North Caucasus federal districts with position 3 in the generalized rating;

2) a group with an **average level** of achievement of the NDGs: Northwestern, Southern and Ural federal districts with position 4, as well as the Volga Federal District with a value of 5;

3) a group with a **low level** of achievement of the NDGs: Siberian and Far Eastern federal districts – position 6.

The generalized rating and ratings based on the forecast indicators of the NDGs for RF federal districts showed that by 2030 none of the federal districts will be able to fully meet the requirements of the president and reach the declared level of indicator values. This proves that such assessment methods should be used not only at the stage of

analyzing the implementation of the NDGs, but also during the planning of indicators.

A logical continuation of the development of our approach to analysis may be the use of new options for rating federal districts by assessing the achievability of the designated level of NDGs indicator, for example, falling into the “confidence interval” ( $\pm 2\text{--}5\%$  deviation from the set level) and/or scaling the assessment based on a step-by-step distance from the required value ( $\pm 5\text{--}10\%$  deviation, step from the required level).

In conclusion, we should emphasize that at present there is an objective need to develop and apply similar assessment methods for the implementation of the indicators that are stated in the national development goals of Russia and all national projects. Such approaches make it possible to model and forecast options for the achievability of set goals, calculate the level of effectiveness obtained, and therefore allow evaluating the effectiveness of project implementation from the initial stage – at the level of creating ideas – to the final one, including its further development (scaling of the project). This is very important at a time when Russia is addressing strategic tasks of import substitution, socio-economic development and industrial sovereignty on the basis of such projects. Our methodology can be useful and interesting to specialists, scientists, researchers and administrative staff who deal with the problems of development and assessment of socio-economic indicators, including the implementation of national projects that affect the possibilities of achieving national development goals in Russia.

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