A Regional System to Forecast the Social-Economic Development: The Case of the RF Regions

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Abstract:

The world economy and the consumer culture of the population are changing rapidly. Informatization and high technologies have influenced the way of life on all spheres.

In this environment the improvement of the mechanisms for regional development and the forecasting techniques to achieve it has been characterized as one of the most important issues in regional economics.

In these modern conditions, the development of a single regional policy should aim to achieve the key goals set by the Russian government in its attempt to improve the national regions by considering it as an integral part of the country’s development strategy.

Keywords: Region, economy, regional economy, forecast, forecasting methods, social-economic development, strategic planning.

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1. Introduction

The problem of the regional development in Russia is related to the overriding necessity of elimination of the unjustified inequality of the social-economic standing of regions, the need for development of the natural resources, the ecological balance support, the improvement of the territorial structure of the economy to ensure the employment of the population and other regional issues (Andreyev and Borisova, 2012).

This is the reason why in modern conditions great emphasis is put on the topicality of the study and use of the new, efficient methods of affecting the socio-economic processes in the region for example, by forecasting the socio-economic development of the constituent entities of the Russian Federation.

2. Methodology

The analysis and the forecasting of the socio-economic development is the starting point for work on the regional development management. Based on the substantiated forecast the objectives of the social-economic development of the region are determined while the policy measures and priorities in the development of the regional economic complex are specified (Rupeika-Apoga and Solovjova, 2016).

Forecasting the socio-economic development of a region is to foresee the future state of the economy, an integral part of the government regulation of the economy aimed at setting the trends of development of the regional complex and its structural components (Akhmetshin et al., 2017). The current economic situation in Russia requires the knowledge of the prospects for development not only of the whole country but of its separate regions (Fetisov and Oreshin, 2007). The crucial function of the executive authorities of the constituent entities of the Russian Federation is the development of the scientifically substantiated forecast, the strategy and the program of the social-economic development of the region (Granberg, 2000). On this basis thereof, the objectives of the social-economic development of the region are determined and the policy measures and priorities in the development of the regional economic complex are specified. Despite the rapid development of the forecasting theory the term ‘forecast’ has not gained a single exact definition. Different interpretations of it may be found in the literature. Therefore, based on the existing approaches of the definition of a forecast it may be formulated as follows. A forecast is a scientifically substantiated judgment of the possible state of an object in the future (Azriliyan, 1997; Grima et al., 2017; Shekhovtsov and Shchemlev, 2017).

As noted in the literature, the identification of the essence of forecasting is inextricably associated with the necessity of the design of specifically forecasting system of concepts including the correct definition of the term forecast and delimitation thereof from such terms as foreseeing, plan, program, project, estimates, assumption, suggestion, hypothesis.
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Forecasting does not feature a directive nature. In other words, the fundamental distinction of a forecast from a specific plan consists in the fact that a forecast provides information for substantiation of the decision and selection of the planning methods. It indicates the possibility of one or another development path in the future and a plan specifies the decision concerning the possibility that will be implemented by the society. A forecast of the social-economic development of the region incorporates a set of individual forecasts representing the future of different spheres of the social life and the comprehensive economic forecast representing the development of the economy and the social sphere of the region in the generalized form (Magsumov, 2016). The individual forecasts estimate:

- The demographic situation in the country;
- The status of the natural environment including such spheres as proved reserves of the subsoil resources, land, water and forest resources;
- The future state of technological solutions and possibility of integration in production;
- Main factors of production (capital, labor, investments);
- The scope and the dynamics of the population demand for products and services;
- The effective demand of the population for products and services;
- The rates of development of branches of the national economy, territories and other socially relevant areas of activity.

In a comprehensive economic forecast, the future development of the regional economy the future of the economy of the region as an integral formation is presented (Anonymous, 1995). The development of a comprehensive forecast is based on the scientific grounds that adequately explain the operation and the development of the regional economic complex (Vasilyeva, 2008). For the development of a forecast for the social-economic development, a comprehensive analysis of the situation in the region is required by following the aspects of:

- Demographic situation (birth and mortality rate, duration of life, migration);
- Natural environment (mineral deposits, climate, water and land resources, soil composition, flora and fauna);
- Social sphere (the state of education, health care, culture, science, crime rate);
- Regional finances (the state of tax potential of the territory, financial standing of the economic entities);
- Social standard of living (average income, wages, minimum subsistence income, consumer basket);
- Production sphere (overall production, sectoral structure, output indices movement);
- Ecology (volume of polluting emissions, implementation of environmental measures).
Within the forecasting theory there are a lot of criteria by which forecasts are classified. Some of them are presented in Table 1. However, the most appropriate in respect of the socio-economic forecasts is the classification of the socio-economic forecasts by the temporary criterion. From the perspective of this criterion the forecasts of the socio-economic development are divided into the long-term, mid-term and short-term (Mosina, 1985).

**Table 1: Classification of forecasts**

<table>
<thead>
<tr>
<th>Attributes of the forecast classification</th>
<th>Kinds of forecasts</th>
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<tbody>
<tr>
<td>Timeliness (forecasting horizon)</td>
<td>Short-term</td>
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<tr>
<td></td>
<td>Mid-term</td>
</tr>
<tr>
<td></td>
<td>Long-term</td>
</tr>
<tr>
<td>Forecasting types</td>
<td>Searching</td>
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<td></td>
<td>Regulatory</td>
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<tr>
<td>Degree of probability of future events</td>
<td>Variant</td>
</tr>
<tr>
<td></td>
<td>Invariant</td>
</tr>
<tr>
<td>Method of presentation of the forecast results</td>
<td>Dot (point)</td>
</tr>
<tr>
<td></td>
<td>Interval</td>
</tr>
</tbody>
</table>

The long-term and mid-term forecasts serve as the basis for the strategic choice of the region, the specification of the objectives of the sustainable state, the balanced development, their quantitative parameters or standards with account for the strong points and imbalances of the regional system, the capabilities of financial support and the suggested effect of the external conditions.

The short-term forecasts are developed by the executive authorities of the Russian Federation annually. The forecasted data serves as the basis for drafting of the regional budget. By design of the short-term forecast model the highest priority is the indicators characterizing the financial situation in the economy and by separate groups of economic entities such as households, small and medium business, entrepreneur sector and the population (Vasin et al., 2017).

The socio-economic forecasting is based on the following principles: scientific validity, systemacity, alternativeness, adequacy and purposiveness. The principle of the forecast systemacity suggests investigation of the quantitative and qualitative regularities in the economic systems, construction of such logical chain of investigation according to which the process of working out and substantiation of any solution starts out from determination of the general objective of the system and subordinating the activity of all the constituent subsystems to fulfillment of this objective. At the same time, this system is considered as part of a larger system that also consists of a certain number of subsystems.

The principle of scientific validity means that in the socio-economic forecasts the comprehensive incorporation of requirements of the objective economic laws shall
be based on the application of the scientific tools, extensive examination of achievements and the national and foreign experience in the forecast formation.

The principle of the forecast adequacy to the objective regularities characterizes not only the process of identification but also the evaluation of the sustainable trends and interrelations in the development of the economy and the creation of the theoretical equivalent of the real economic processes with the exact and complete simulation thereof.

The principle of the forecast alternativeness is related to the possibility of development of the enterprise and its separate links along different paths, upon different interrelations and structural relations. Upon transition from simulation of the established processes and trends to foreseeing the future development thereof there arises the necessity to design the alternatives, i.e., determination of one of the two or a few possible and often mutually exclusive paths of the economy’s development.

The targeting principle predetermines the active nature of forecasting since the forecast content is not reduced to foreseeing only but includes the objectives that shall be achieved in the economy by means of the active actions of the public authorities and management.

Forecasting of the regional development is performed according to the general principles of prognostics and territorial forecasting (Korableva and Kalimullina, 2016). The main theme among these principles are; systemacity and consistency, variability and continuity as well as reliability and accuracy of the forecasts.

The main forecast functions are; scientific analysis of the economy, social, scientific-engineering processes and trends, investigation of the objective relations between the socio-economic phenomena of development in the specific conditions during a certain period, assessment of the forecast object, identification of the objective alternatives of the economic and social development, accumulation of the scientific material for reasonable choice of the specific solutions (Orlov, 2006).

The scientific analysis is performed by three stages, the retrospection, the diagnosis, and the prospection (Azriliyan, 1997). Retrospection means the stage of forecasting at which the history of development of the forecast object is investigated to obtain the systematized description thereof. At the retrospection stage, the collection, the storage and processing of information, the sources required for forecasting takes place. The optimization of both the source content and the methods of measurement and presentation of the retrospective information, the specification and the final formation of the structure and the composition of the forecast object is determined.

Diagnosis is the forecasting stage at which the systematized description of the forecast object is examined for the purpose of identification of the trends for its
development and selection of the forecasting models and methods. At the diagnostics stage, the analysis of the forecast object underlying the forecast model is performed. This analysis is completed not only with design of the forecast model but with selection of the adequate forecasting method.

Prospection is the forecasting stage at which according to the forecast data the forecasts of the object development in the future are made, the estimation of the forecast reliability, accuracy or validity is performed as well as fulfillment of the forecast target by means of consolidation of the specific forecasts based on the forecasting principles. At the prospection stage, the missing information about the forecast object is found, the previously obtained one is specified; the adjustments are introduced to the model of the forecast object according to the recently obtained information.

Investigation of the objective relations between socio-economic phenomena is performed during the process of design of the mechanism of use of the economic laws representing the material cause-and-effect relations between the phenomena and their repeatability under. Along with that by forecasting it is necessary to consider the uncertainty determined by the probable action of the economic laws, incompleteness of the knowledge thereof, presence of the subjective factor by making the planned decisions, incompleteness and insufficient reliability of information.

The evaluation of the forecast object is based on the combination of the determinacy and uncertainty aspects. Determinism is the philosophical concept acknowledging the objective regularity and causality of all the natural and social phenomena. By the absolute determinism the possibility of the alternative selection of solutions is eliminated. Upon the absolute uncertainty the exact presentation of the future is not possible. Therefore, in the absence of either aspect forecasting loses its sense.

Identification of the objective alternatives of the process under investigation and trends for its development suggests the necessity of choosing between the mutually excluding possibilities. The economic and social processes shall be subject to control, the optimal proportions shall be determined according to the long-term goals set.

Implementation of the forecasting functions allows specifying the general and specific approaches constituting its scientific framework. The following general scientific approaches are used in forecasting. The historical and the comprehensive (integrated) ones. The historical approach consists in consideration of each phenomenon and process with reference to its historical forms. During the process of forecasting, one shall take as a premise that the modern state of the object under investigation is the expected result of its preceding development and the future is the expected result of its development in the past and present. The comprehensive approach suggests considering the object under investigation with reference to other
processes and phenomena. Within the frameworks of it the genetic (research) and regulatory (target) approaches are distinguished.

In case of the genetic approach, the ultimate target is determination of the possible states of the forecast project over the long term with account for persistence of the existing trends of development of this object. At that the conditions that may change these trends are not considered.

By using the regulatory approach, the objective is the determination of the methods and the term of achievement of the possible forecast object in the future. The possible ways of the changing trend due to intensification of production, changes in its structure, dynamics of economic indicators and performance are investigated and forecasted. Both mentioned approaches are interrelated, supplement to each other and as a rule they are used jointly ensuring the comprehensive analysis of the forecast phenomenon or process.

The selected method and technique plays an important role in forecasting (Zavyalova and Akhmetshin, 2018). The forecasting technique is one or a few mathematical or logical operations aimed at obtaining the specific result by forecasting. The examples of such techniques are smoothing or matching the time series and the calculation of the weighted average.

Aganbegyan et al. (1972), made a great contribution to the development of the methodology of forecasting of the socio-economic processes. The forecasting methods mean the set of techniques and methods of thinking that allow making conclusions as to certain reliability of the future development of the object based on analysis of the retrospective data, exogenous (external) and endogenous (internal) relations of the forecast object as well as measurements thereof within the phenomenon or process under consideration.

By estimates of the national and foreign scientists today there are over 200 forecasting methods, but the number of the basic ones is much lower (Svetunkov, 1999). Many of these methods rather refer to techniques and procedures taking into consideration the peculiarities of the forecast object. The others represent a set of separate techniques differing from the basic ones or from each other by the number of individual techniques and the sequence of use thereof (Korableva et al., 2017).

The available sources contain different principles of the forecasting methods classification (Mosina, 1985). One of the most important criteria of the forecasting methods classification is the degree of formalization that covers the forecasting methods completely. The second criterion of classification is the general principle of action of the forecasting methods, the third one is the method for obtaining the forecasting information.
Thus, by the degree of formalization (by the first criterion of classification) the methods of economic forecasting may be divided into the formalized and the intuitive. The intuitive forecasting methods are used in the cases when it is not possible to make allowance for the effect of many factors due to the significant complexity of the forecast object. In this case the experts’ estimates are used. At that end the individual and participatory estimates are distinguished.

The individual experts’ estimates include; the ‘interviewing’ method suggesting the direct contact of an expert with the specialist according to the scheme question-answer, the analytical method when the logical analysis of any forecasted situation is performed, the analytical reports as they are prepared, the script writing method based on specifying the logic of the process or phenomenon over time under different conditions (Yiğit and Tarman, 2016). The methods of the collective experts’ estimates include the commission method, method of collective generation of ideas (brainstorming), ‘Delphi’ method, matrix method. This group of methods assumes that by collective thinking, firstly, the accuracy of the output is higher, secondly by processing of the individual independent estimates made by the experts at least productive ideas may appear. Thus, the group of formalized methods includes the two subgroups; extrapolation and modeling. The first subgroup includes the methods least-squared, exponential smoothing, moving averages. The second one includes the methods structural, network and matrix modeling.

### 3. Results

Further, let’s consider the legal framework for regulation of forecasting of the socio-economic development of the regions of the Russian Federation. By analysis of the legal framework for forecasting of the socio-economic development of the regions of the Russian Federation, one shall proceed from the fact that the specified issues feature the inter-industry nature. The socio-economic sphere incorporates the issues of the health care, education, physical education and sports, development of production, social insurance and the financial activity of the state. According to the Art. 71 of the Constitution of the Russian Federation in the jurisdiction of the Russian Federation are; establishments of fundamentals of the federal policy in the sphere of the national, economic, environmental, social, cultural development of the Russian Federation, financial regulation, federal budget, federal taxes and charges (p. “f”, “g”, “h”).

In the joint jurisdiction of the Russian Federation and the constituent entities of the Russian Federation are; protection of rights and freedoms of a human and citizen, general issues of education, science, culture, physical education and sports, coordination of the health care issues, protection of a family, motherhood, fatherhood and childhood, social protection including social insurance, setting the general taxation and charging principles in the Russian Federation, administrative, administrative-procedure, labor, family, housing, land, water, forest law, subsoil legislation, environmental legislation (p. “b”, “f”, “g”, “h”, “j”) Art. 71 of the

Thus, the Federal Law ‘Concerning the government forecasting and the programs of the socio-economic development of the Russian Federation’ determines the targets and the content of the system of the government forecasting of the socio-economic development of the Russian Federation as well as the general procedure of design of the specified forecasts. At that it was established that the government forecasting of the socio-economic development of the Russian Federation is the system of the scientific substantiated ideas of the trends of the socio-economic development of the Russian Federation based on the market economy laws. The results of the forecasting of the socio-economic development of the Russian Federation are used by making by the legislative and executive authorities of the Russian Federation of the specific decisions in the socio-economic policy of the state.

It shall be noted that the above-mentioned provisions of the Constitution of the Russian Federation also predetermine the norm-setting competence of the public authorities of the Russian Federation in terms of setting the fundamentals of forecasting of the socio-economic development in the constituent entities. However, the specified issues are not subject to regulation by the Federal Law concerning the government forecasting and the programs of the socio-economic development of the Russian Federation. Along with that the federal law contains provisions concerning separate forecasting documents of the constituent entities of the Russian Federation.

Requirements to the specific documents incorporated in the system of forecasting of the socio-economic development of the constituent entities of the Russian Federation are contained in the budget legislation of the Russian Federation (Tsygichko, 1986). According to paragraph 1 Art. 169 of the Fiscal Code of the Russian Federation the budget estimate is made on the basis of the forecast of the socio-economic development of the Russian Federation, a constituent entity of the Russian Federation and municipal district is prepared for the period of no <3 years in the procedure specified by the supreme executive authority of a constituent entity of the Russian Federation, the local administration. In the explanatory note to the forecast of the socio-economic development they provided the substantiation of the forecast parameters including the comparison thereof with the previously approved parameters with indication of the causes and factors of the forecasted changes (Art. 173 of the Fiscal Code of the Russian Federation).

Thus, based on the constitutional provisions, considering the specified provisions of the legislation of the Russian Federation the constituent entities of the Russian
Federation are authorized to adopt the regulatory acts concerning the regulation of the system of forecasting the socio-economic development of the constituent entities of the Russian Federation (Husainova and Sazanov, 2014). For the purpose of implementation of the above-mentioned norm-setting competence the relevant legislative acts have been adopted in a number of the constituent entities of the Russian Federation.

Therefore, another important aspect shall be mentioned that has political complexion and has an adverse effect on the performance of the forecasting functions. It consists of the fact that forecasting as an important component of strategic decision is often considered by the public authorities of the constituent entities of the Russian Federation as an efficient instrument in the competition with other regions aimed at attracting the government financial support and investments. As a result in the regional strategies the excessively ambitious goals and tasks are set that are not supported by the real capacities and the forecast estimates are adjusted to these tasks (Kukarekaya, 2013).

4. Discussion

In the conditions of the complex federative structure of the Russian State consisting of the territorially, politically and economically characteristics separated yet connected by an important role is assigned to the regional forecasting surveys. Identification of the compromise alternatives of development that would meet the common national and regional interests is possible as the result of the joint efforts by the public authorities of the federal and subfederal levels. In this regard the most labor-intensive and detailed portion of work is formed directly by the constituent entities of the Russian Federation as it is important to represent in the regional forecasting documents the targets and the possibilities of development of the specific territory.

A forecast is the tool for analysis of the economic policy. It allows obtaining the analytical information that is necessary for managerial decisions. By forecasting of the socio-economic development of territories the objective trends of development of the branches of economy and the social sphere are identified, the comprehensive assessment of the socio-economic development of territories is performed, the actions promoting to the operating solution of issues are prepared (Tarman and Chigisheva, 2017). Therefore, it is important to work out the single understanding of the procedure of making the socio-economic forecast for a region.

Reliable prediction is possible in case of providing the statistics authorities with the quality information. Therefore, the system of interaction of the territorial state statistic committees with the public authorities of the constituent entities of the Russian Federation and local government authorities shall be improved. Forecasting plays the key role in the system of managing the processes of the socio-economic development of a region as the objective function of the decision-making process.
Selection of the wrong managerial decisions based on a false forecast may result in negative consequences of development of the regional system.

5. Conclusions

The analysis of the regulatory and legal framework controlling the issues of forecasting the socio-economic development of the Russian Federation and its constituent entities showed the presence of problems that significantly reduce the forecasting efficiency. On the basis of the regulatory documents adopted in the constituent entities of the Federation, it was established that in a number of regions the organization of the forecasting procedure is regulated by documents describing the process of the strategic planning in whole with the minimum concretization in terms of forecasting; in other regions a separate document with a more detailed description of the forecast design stages has been approved.

Moreover, the regulatory acts significantly differ from each other by the logic of construction, definition of the principal terms, the list of the forecast documents as well as by description of the sequence of procedures by the forecast design.

Thus on the one hand, different experience in forecasting is accumulated in the constituent entities of the Russian Federation which will allow selecting the best practice in the future and implementing it universally; on the other hand, we observe different interpretation of the forecasting activity defined by the legislation of the regional level and some lack of integration in the methodological procedures of design of the regional forecasts.

During the analysis of functioning of the established system of forecasting the socio-economic development of the Russian regions there was detected a number of other factors hindering or significantly impairing the quality of the regional forecasts. Among these factors are insufficient completeness and quality of the source forecast data, small period for forecasting, insufficient use of methods of the economic-mathematical modeling, absence of the single to all entities of the federation methodological platform for regional forecasting, software and information environment, absence of monitoring and assessment of the actual achievement of the forecast parameters by an independent authority, etc. Table 2 briefly presents the significant problems of forecasting the socio-economic development of regions and possible solutions are formulated.

**Table 2: The issues of forecasting the socio-economic development of regions and possible solutions**

<table>
<thead>
<tr>
<th>Issues</th>
<th>Possible solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Out-of-datedness, non-uniformity, inconsistency of the legal framework within which the system of forecasting the socio-economic development of regions</td>
<td>Improvement of the federal legislation in terms of defining:</td>
</tr>
<tr>
<td></td>
<td>1. The conceptual framework.</td>
</tr>
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<td></td>
<td>2. The list, content and structure of the</td>
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</tbody>
</table>
functions | forecast documents for each level of public authorities.
---|---
3. Liability for preparation of documents and their adequacy. | 4. Criteria of assessment of the forecast quality and procedure of control of the quality of forecast documents prepared

Insufficient quality, completeness and transparency of regional forecasts | Continuous monitoring of the economic situation in the region and publication of the monitoring results in the mass media; public discussion of the forecast drafts with involvement of the forecasting experts

Diversity of the information-software support of the forecasting activity in the regions | Implementation on the territory of all constituent entities of the Russian Federation of the single information-analytical complex designed by efforts of commercial structures and scientific-research institutes specializing in forecasting

The absence of the possibility to perform the deep retrospective analysis of separate socio-economic indicators because of changes in the procedures of indicator calculation, misreporting of the hidden economy | Operative removal of the problem of the data incompatibility for different periods of time by the statistics authorities by means of the data re-calculation according to the new procedure, development and application of the methods of estimation of the hidden economy

Low level of systemacity and flexibility of the forecast estimates, forecasting is performed by the scattered groups of indicators without deep systemic matching | Design and wide application of the economic-mathematical models describing the comprehensive alignment of the socio-economic parameters and allowing to flexibly re-arrange the system of relations in the changeable conditions

Absence of conditions for the active participation in the design of the strategic documents for the region on the part of the representatives of the science, business, civil society | Consolidation of efforts of the regional authorities, higher educational institutions, representatives of the leading economic sectors, banking sector aimed at improving the socio-economic forecasting by means of creation of an independent collective body

In our opinion, the implementation of the specified measures aimed at improving the forecasting of the socio-economic development of a region will allow improving the quality of the forecasts designed, ensuring the effective use of calculations in the managerial activity of the regional public authorities.

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References:


Vladimirova, L.P. 2005. Forecasting and planning in the market conditions. M.
