TERRITORIAL SUBJECTS DEVELOPMENT PLANNING SYSTEM MODIFICATION FOR IMPROVING LIFE QUALITY OF THE POPULATION

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Abstract. The article outlines directions for improving the national planning system based on the criterion of life quality of the population. A methodology for coordinating the national strategy and planning documents of state subjects is proposed, the main advantage of which is choosing and structuring a set of complex criteria that evaluate the compliance of the planning documents developed at the regional and municipal levels with the national strategy. The methodological tools of the study include comparative, systematic, retrospective-historical approaches, oriented to objective reflection of reality, albeit from different epistemological points of view. The proposed methodology will allow to ensure the balanced development of state subjects, coordinate the activities of the authorities at various levels of the hierarchy.

Keywords: life quality of the population, regional planning, management, indicative planning

1. Introduction

Planning is necessary to ensure sustainable development of the state and its subjects, improve life quality of the population, achieve balance between current and long-term goals. In the period of transformational changes in Russia, planning was rejected as a relic of the Soviet past. It was believed that the plan and the market are incompatible concepts, and even opposed to each other. However, the fallacy of this thesis was soon recognized.

Today the "invisible hand" (according to Smith) is gradually beginning to be replaced by a "visible hand". A French economist and sociologist Jacques Sapir wrote convincingly about that: "economic systems of Western countries function not in accordance with the logic of the market, but as a combination of market, organization, networks and administration, which are combined in different ways in specific geographic and historical conditions" (Sapir,2001). This leads to a certain strengthening and development of accounting and control functions of government, necessary for fulfilling its civilizational functions. Here it is appropriate to recall the words of J.M. Keynes, "the state cannot but create a centralized control system" (Keynes,1978, Khazal, A. W., Sari, A. M., & Jun, W. X. 2016).

However, planning alone does not solve key social and economic problems. The success of planning, as the world experience shows, is determined by many factors. And first of all, whether the developed program document has public support. Only in this case the plan will turn into a kind of guide to action, and will not be another successfully developed document.

Thus, it is objectively useful and timely to conduct a study aimed at analyzing domestic and foreign experience of regional and indicative planning with the aim of modifying the national planning system aimed at improving life quality of the population.

2. Literature Review

Theoretical and methodological basis of the research was made by scientific and practical developments of Russian and foreign scientists in the sphere of regional planning and welfare of the population, the complex analysis of which allowed to form the author's position and determine further directions for improving the planning system in Russia.

The scientific and practical experience accumulated in the Soviet period, free from ideological component, is of great practical and theoretical interest. In particular, in the 1920s, a system of categories was established, scientific planning tool was determined, and forms and methods of planning were tested (Bazarov,1926; Díaz-Barrios, Jazmín, Morela Pereira-Burgos, and Wendolin Suárez-Amaya. 2018; Belousov,1987; Gladkov,1939; Krzhizhanovsky,Strumilin, Kondratiev,Bazarov,1989; Krzhizhanovsky,Kviring,Kovalevsky,1930).

The implementation of the GOELRO plan set the task to develop the fuel and energy balance of country, coordinating the construction of power plants with generation and consumption of electricity. This served as a kind of impetus to the development of the methodology of inter-industry balance. And, if in Russia this method was forgotten for ideological reasons, the leading countries of the world widely used the "input-output" model developed by Leontiev (Leontiev,1990) in the development of socio-economic development programs.

In the works of a number of Soviet economists, researches was carried out in the sphere of rational location of production and regional management structure, which determined territorial proportions and inter-industry relations. The main part when designing a development plan is not the location, but the development of productive forces, of

course, in a territorial context, which will stimulate growth of social production efficiency and improvement of life quality of the population. Of particular importance are researches devoted to the problem of territorial-production complexes, which were studied by the following scientists Aganbegyan,1988; Bandman,2014; Granberg,2001; Schnyper,1996 and others.

The ideas of territorial-production complexes and other concepts of production concentration found their logical continuation in M. Porter's theory of industrial clusters (Porter,2000). Clusters and territorial-production complexes have a number of similar features: first of all, the interdependence in the development and location of their constituent enterprises. The cluster acquires certain competitive advantages due to internal specialization and standardization of its enterprises, which leads to a significant reduction in costs, contributes to saturation of the regional food market with quality and inexpensive goods and services.

The cluster model allows to implement and realize innovative developments, including those for the subjects of consumer cooperation, thus stimulating creation of a special form of innovation - the "cumulative innovation product" that is spreading fast among the cluster participants. This principle allows us to consider the cluster as the most promising form of interaction from the point of view of efficiency. Since not only the producer of final products is responsible to the "buyer" in economic form, but all participants in the cluster association share commercial risks between themselves, and in return receive a prize for these risks - profit.

Returning to the analysis of the Soviet heritage, it should be noted that the idea of creating a three-tier system of districts is of a certain interest for improving modern planning system (Pertsik,2006; Lappo,Pertsik,2002):

1) powerful economic district - an "economic center", which focuses on the production of all major products in order to eliminate wasteful transportation;

2) main economic district where local fuel, mineral fertilizers, etc. are produced;

3) region (territory) producing mass consumer goods.

As a result, "the framework of the territorial structure of the national economy" was formed.

Foreign researchers also focused attention on developing national economy frameworks (with a certain degree of modification). This idea was developed in the concept of the growth poles by F. Perry and J.-R. Boudeville (Boudeville,1966), according to which there is a center of accumulation and transfer of innovative impulses from one economic sector to another. Today, this theory finds its practical application in the development of programs of "point" free economic zones, business zones in depressed regions, etc.

Of particular interest to Russia are the French indicative plans. Their main function is to establish priority enterprises or industries, investments in which led to a synergistic effect. The state encouraged investments in these areas of activity, not by administrative methods, but by economic - tax and credit incentives (Dudkin,1997; Evgrashin,1998). In France, it is not the indicative plan itself that is of key value, but the procedure for its development and adoption, which includes a large number of iterations, aimed to identify the opinion of the population and private industry regarding the future development of the territory. This approach is of current importance for Russia, where the population often does not have active civil position, does not participate in discussing important issues for the development of the territory.

An excellent example of creative study of positive foreign experience and its adaptation to national conditions, that Russia could advisably learn, is Japan. In the Japanese practice of planning we can find separate elements of the Soviet experience, freed from voluntarism and weaknesses. For example, planning proceeding from final needs was not practiced in the USSR. Plans were designed according to the principle "from what has been achieved." This led to the fact that strong business executives had to hide real production capacity, they constantly needed to seek a compromise between self-supporting benefits and planned tasks. In Japan, they found a way out and connected seemingly incompatible: planning proceeding from needs with capacity planning (Senchagov,1990; Konichi,1987; Kovach, Dallago,1990).

Thus, in order to create a viable system of national planning, it is necessary to carefully study the domestic experience of territorial planning, free it from the existing ideological voluntarism, creatively adapt the experience of the world's leading countries in the field of indicative planning to modern Russian realities, and then organically integrate the elements obtained into the economy management system.

3. Data and Methodology

To improve the stability and balance of development, we propose to use the methodology for evaluating the compliance of planning documents developed at different levels of government, with national development strategy (Morozova,2011).

To evaluate the compliance of the planning documents developed by different state subjects with the national development strategy, integral indicator R (index of the assessed plan quality) is used, which is calculated as the sum of products of the complex criteria (K_i) values by weight characteristics of the criteria significance v_i according to the following formula:

$$R = \sum_{i=1}^{n} v_i K_i, \quad (1)$$

where K_i – values of complex criteria; v_i – weight characteristics of complex criteria significance K_i; i– number of a complex criterion.

Complex criteria K_i represent the result of a certain mathematical operation on a group of p initial indices b_{ij}, $j = 1, 2, \dots, p$, characterizing the object under study.

Summation operation is usually used as such a mathematical operation, based on the hypothesis of additivity of individual contributions of b_{ij} to the complex indicator K_i. Calculations are performed using the weighted sum formula:

$$K_i = \sum_{j=1}^{p} w_{ij} b_{ij}, \quad (2)$$

where w_{ij} – given weights that estimate relative significance of the j^{th} index in the construction of the complex criterion; b_{ij} – partial criteria for estimating a complex criterion K_i; i – the number of a complex criterion; j – the number of a partial criterion within the i^{th} complex criterion.

Values of w_{ij} and b_{ij} are to be specified.

At the next stage it is expedient to select a set of complex criteria for evaluating the compliance of plans of individual territories with the national strategy. For this purpose, weight characteristics of significance are determined for each complex criterion. The evaluation is performed by an expert method, which introduces a certain error in the calculations in view of the subjectivity of experts' opinions and the level of their professional qualifications.

As a result, the following data will be obtained:

K_1– compliance of the development plan with socio-political interests (social consensus) and socio-economic development of the country as a whole v_1=0,25;

K_2 – compliance of the territory development plan with the requirements of setting and solving problems by the program-target method, $v_2 = 0{,}15$;

K_3 – evaluation of the effectiveness of using budgetary resources for implementation of the territorial development plan, $v_3 = 0{,}15$;

K_4 – characterization of the process of management and control organization over the implementation of the territorial development plan, $v_4 = 0{,}15$;

K_5 – effectiveness of the territory development plan for improving life quality of the population, $v_5 = 0{,}3$;

Then we choose partial evaluation criteria b_{ij}, each of which is to be necessary, and all together sufficient to characterize some aspect of the designed territory development plan (see Figure 1).

After that, an alphabet of state classes is formed for the initial partial indicators (for example, a sequence of scores from 0 to 10).

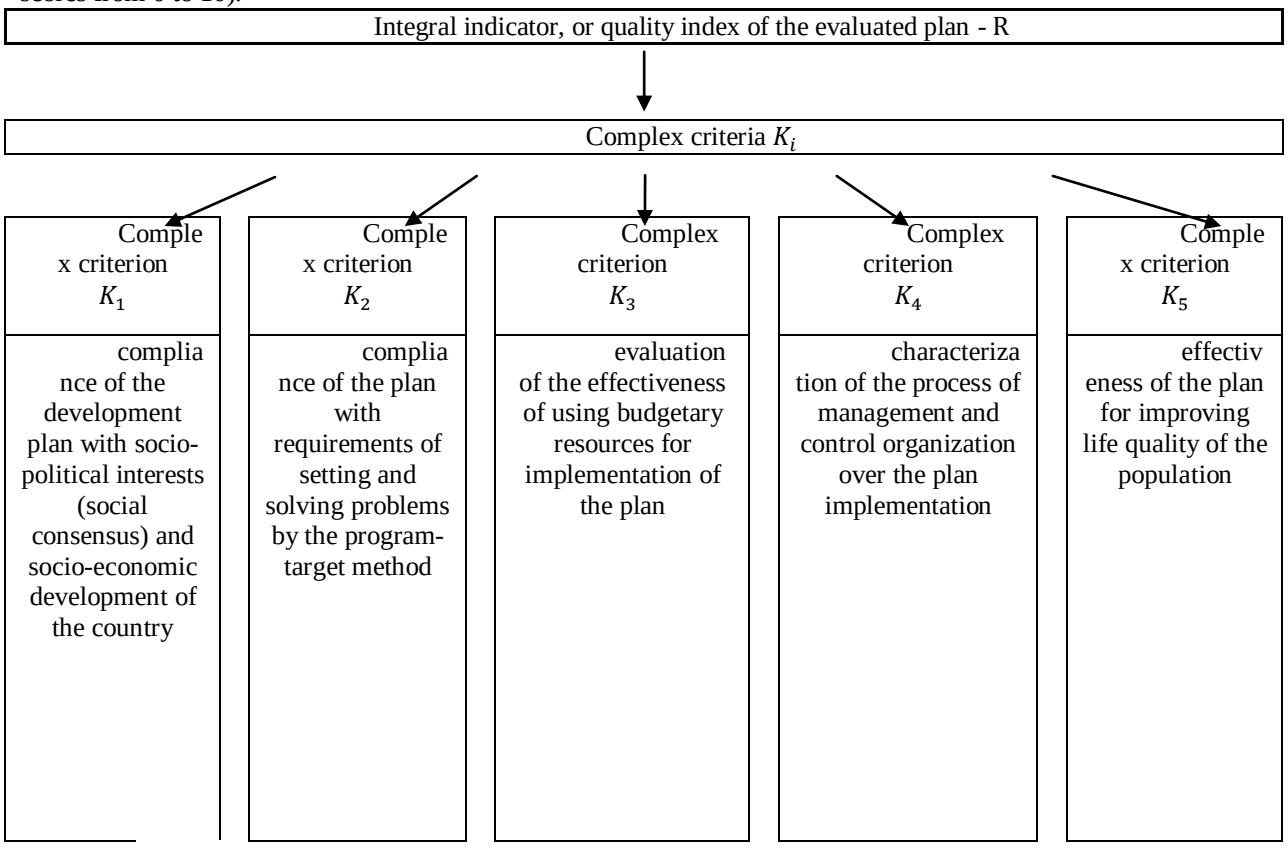

Figure 1. Algorithm for calculating complex criteria for evaluating the compliance of territory development plans with national strategy

In addition, it is necessary to standardize the values of selected partial criteria of assessment, which will allow to convert scores to b_{ij}; as a result of such a procedure all the initial parameters in different measurement scales will be

expressed in a single dimensionless scale, after which it is possible to perform mathematical operations with their values to obtain an integral indicator of the object state.

For standardization of real values by b_{ij} criterion the following formula will be used:

$$b_{ij} = \frac{a'_{ij} - a_{ij(min)}}{a_{ij(max)} - a_{ij(min)}}, \quad (3)$$

where a'_{ij} – expert value for partial criteria b_{ij} for evaluation according to score scale; $a_{ij(max)}$ – maximum possible expert value for partial criterion b_{ij} according to score scale; $a_{ij(min)}$– minimum possible expert value for partial criterion b_{ij} according to score scale.

After that we determine the weight coefficients w_j for partial evaluation criteria, taking into account their partial contribution to the aggregate evaluation.

According to the chosen type of desirability function, an integral indicator R is calculated in accordance with formula (1), which evaluates the level of correspondence of the territory development plan to the national strategy. The methods for weighing the informativeness of partial indicators and the procedure for selecting them in the construction of complex criteria are based on two approaches: informal - taking into account the knowledge and experience of qualified experts, and formal - on the basis of methods of applied mathematical statistics. The proposed methodology for harmonizing the national strategy and planning documents for development of territories will allow to ensure the development balance and practical effectiveness of the documents being developed (Morozova,2016).

4. Empirical Results

Let us show the practical significance of the proposed methodology. As an example, let's take the Socio-economic Development Strategy of the Krasnodar Territory until 2020, the Concept for the Improvement of Regional Policy in the Russian Federation and the Concept of the Strategy for Socio-Economic Development of the Regions of the Russian Federation for 2005-2020. We will evaluate compliance of the Strategy of Socio-economic Development of the Krasnodar Territory to 2020 with the national development strategy of the Russian Federation.

Let us evaluate partial criteria:

$a_{11} = 5$	$a_{12} = 5$	$a_{13} = 10$		
$a_{21} = 5$	$a_{22} = 10$	$a_{23} = 10$		
$a_{31} = 10$	$a_{32} = 10$	$a_{33} = 0$	$a_{34} = 5$	$a_{43} = 10$
$a_{41} = 10$	$a_{42} = 10$	$a_{43} = 10$		
$a_{51} = 5$	$a_{52} = 5$	$a_{53} = 10$		

Let us standardize expert values:

$b_{11} = 0.5$	$b_{12} = 0.5$	$b_{13} = 1$		
$b_{21} = 0.5$	$b_{22} = 1$	$b_{23} = 1$		
$b_{31} = 1$	$b_{32} = 1$	$b_{33} = 0.5$	$b_{34} = 0.5$	$b_{35} = 1$
$b_{41} = 1$	$b_{42} = 1$	$b_{43} = 1$		
$b_{51} = 0.5$	$b_{52} = 0.5$	$b_{53} = 1$		

Let us calculate complex criteria using formula 2:

$K_1 = 0.4 \cdot 0.5 + 0.3 \cdot 0.5 + 0.3 \cdot 1 = 0.65$;

$K_2 = 0.35 \cdot 0.5 + 0.35 \cdot 1 + 0.3 \cdot 1 = 0.825$;

$K_3 = 0.15 \cdot 1 + 0.2 \cdot 1 + 0.3 \cdot 0 + 0.15 \cdot 0.5 + 0.2 \cdot 1 = 0.625$;

$K_4 = 0.25 \cdot 1 + 0.35 \cdot 1 + 0.4 \cdot 1 = 1$;

$K_5 = 0.5 \cdot 0.5 + 0.2 \cdot 0.5 + 0.3 \cdot 1 = 0.65$.

Let us calculate the integral indicator using formula 1:

$R = 0.25 \cdot 0.65 + 0.15 \cdot 0.825 + 0.15 \cdot 0.625 + 0.15 \cdot 1 + 0.3 \cdot 0.65 = 0.725$.

Let us present a graphic illustration of the results obtained (see Figure 2).

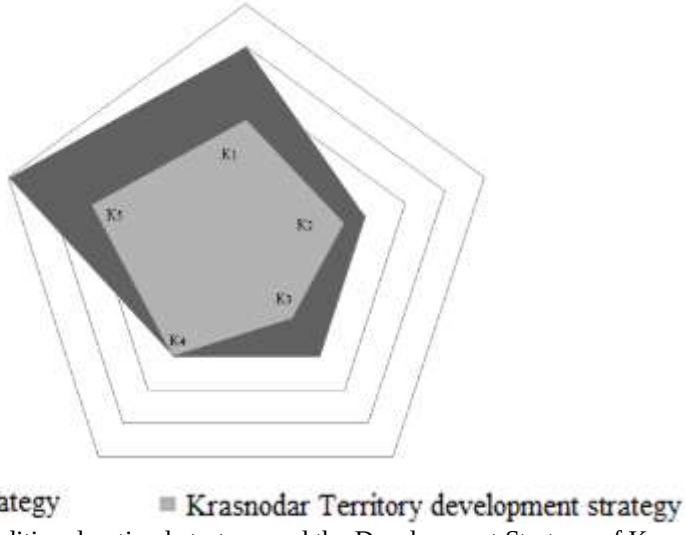

Figure 2. Comparison of the conditional optimal strategy and the Development Strategy of Krasnodar Territory

As can be seen from the calculations, the value of the final indicator of the Strategy is not very high. Figure 2 shows that the advantage of this strategy is its complexity (four values of the optimal and real strategies align on the axis), the principles of program-target planning (K_2) are used quite effectively. The main opportunities for improving this strategy are related to the increase of its social orientation (K_5)) and the compliance of the program (plan) with socio-political interests (social consensus) and socio-economic development of the country (K_1). The distance between optimal and real strategies for these axes is the biggest.

5. Conclusion. The proposed approach will ensure coherence in the development of various state subjects, improve the quality and practical effectiveness of the planning documents for territory development based on the criterion of the population life quality. To further improve the national planning system, it is necessary to determine legislatively the status and procedure for the development of indicative plans, which will eliminate the existing legal vacuum. In addition, it is necessary to complete missing institutions of coordination and control for the implementation of the territorial development plan.

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