

Adaptation of a Technique of Assessment of Resource Potential to Conditions of the Raw Territory

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Abstract—Regional development opportunities are primarily determined by their level and structure of the resource potential. The most important indicators of the regional economy state are: availability of natural resources, the structure of the able-bodied population, the level of its education, the state of production capacities and the amount of financial resources. However, the pressing issue of the regional development management is the choice of areas for the most efficient use of the available resources. The article contains a review of the indicators for assessing the use of the enterprise's potential adapted to raw territory conditions. Interpretation of the assessment factors values of the raw territory resource potential in accordance with its condition levels is proposed in the article. On the basis of these values there is a matrix of the development proposals of the raw territory resource potential in the context of its components. Recommendations based on the results of the assessment were used in the oil and gas sector development strategizing.

Keywords—Territory potential, raw territory potential assessment, raw territory, production potential, financial potential, resource potential.

I. INTRODUCTION

The starting point for program development is the strategic analysis of the internal and external environment of any economic system, as it allows assessing external threats and opportunities considering its strengths and weaknesses. Unstable external environment requires adjustments to the targeted development orientation of economic entities, as well as long-term activity programs to eliminate arising strategic gaps by improving the use of existing capacity. Therefore, efficiency of economic units functioning depends on correctness and rationality of decisions made in the specified direction [10,15]. The decisions made should be based on accuracy, adequacy and timings of resource potential condition analysis. By this we mean a set of resource, production and financial potentials of the object of the study.

II. RELEVANCE OF THE STUDY, SCIENTIFIC IMPORTANCE WITH QUICK OVERVIEW OF THE LITERATURE

In the context of constant changes in oil and gas sector macro-environment, the study of the so called "raw territories" development trends is becoming increasingly important.

Raw territories include regions meet certain conditions. The main conditions are:

- Resource base – significant reserves of any material (hydrocarbons, coal, etc.);

- accumulated production potential, most of which is concentrated in one basic industry.

Changes in the economic situation, first of all in property relations, created prerequisites for adjusting the development strategy and the territorial entities needs. Within this framework, it seems necessary to choose and justify a strategy for their future operation using appropriate methodological tools. The analytical review of modern scientific research [13] on the problem of choosing the most promising directions and means of economic entities development in the oil and gas industry allows us to draw certain conclusions. The existing theoretical and methodological base requires its adaptation and transformation to a specific object of research [7,8]. However, the proposed toolkit focused on the conditions of oil producing enterprises operations can be used for territorial entities in view of their similarity in certain characteristics. Indicators showing the state and level of the resource potential use of the economic entity can be used as the basic criteria allowing to draw parallels between the indicated economic units.

III. PROBLEM STATEMENT

In order to achieve an adequate assessment of the value and quality of the territory's potential, it is possible to use a system of indicators for assessing the potential of industry enterprises, with their systematization and adaptation for the regional level. Due to objective influence of the development level on large industrial companies' social and economic development of raw territories such an assessment is reasonable and correct. Thus, it is required to: transform corporate indicators to the regional level; rank them according to the criteria for resource potential size and sectoral structure of the territories; formulate a recommendations pool depending on the range of values found. Implementation of these values ensures the maximal regional opportunities use.

IV. THEORETICAL PART

The most common adaptive tools that allow to consider the specificity of the object of study include the construction of matrices. However, it makes sense to note that the development of industrial (oil and gas) territories directly depends on the features of the construction of municipal entities and the existing production, servicing and social infrastructure (resource potential).

Production in cities has a clear sectoral focus and, as a rule, represented by one or several enterprises, often structural subdivisions of oil companies. These objects determine the direc-

tion and development level of a settlement and act as city-forming enterprises, which ensure significant revenues to the local budget and where the most part of the population is employed. This is why it is expedient to carry out a strategic analysis of the raw material territories activities on the basis of diagnosing the current and prospective state of their resource potential, as well as on the changes in the regional structure. To evaluate this dynamics, it is proposed to use a matrix formed on the basis of the McKinsey-General Electric matrix (see Table 1).

TABLE I. "SECTORAL STRUCTURE / RESOURCE POTENTIAL" MATRIX

Resource potential of a territory				
High	7	8	9	<i>Sectoral structure of a territory</i>
Medium	4	5	6	
Low	1	2	3	
	Mono	Medium	Poly	

From the perspective of the problem being studied, the determination of the state level and the resource potential use of territorial entities presuppose the consideration of a number of evaluation indicators with a delimitation of the raw material concepts, production and financial potentials [2,5,11]. However, the first one is available hydrocarbon reserves with certain quantitative and qualitative characteristics and it is less subject to management influence. Depending on the sectoral structure of the territory, raw material potential determines its development stage in a certain extent. As for the production and financial potentials, they depend directly from the sectoral structure of the region being studied [12].

In this regard, it seems practical to select the appropriate indicators and set variation ranges of their values for both scales in order to subsequently position the object being studied in this matrix [3,14]. For example, we can characterize the value of the resource potential with a number of factors presented in the table 2.

TABLE II. FACTORS FOR THE RESOURCE POTENTIAL OF THE OIL AND GAS TERRITORY ASSESSMENT

Factor	State level		
	Low 1-2	Medium 3	High 4-5
Resource potential			
Level of hydrocarbon raw material reserves depletion, %	More than 50	50	Less than 50
Production potential			
Production facilities	1 city-forming enterprise in the absence of service and social infrastructure	1-3 Production enterprises with poorly developed service and social infrastructure	A wide variety of enterprises in production, service and social infrastructure
Labor potential (active part of the population), %	Less than 50	50	More than 50
Financial potential			
Financial stability (independence)	Subsidized region	Equal ratio between own and control revenues	Self-sufficient territory
Financial solvency (liquidity)	Territorial budget is unprofitable	Territorial budget is balanced	Territorial budget is profitable

It stands to mention that the set of factors used as an example is not complete and the only possible. It can be easily transformed by the analyst depending on the objectives and depth of analysis.

The conducted studies confirm the need to interpret the results of each matrix quadrant.

V. PRACTICAL RELEVANCE, PROPOSALS, RESULTS OF IMPLEMENTATION AND EXPERIMENTAL STUDIES

As recommendations we can propose the conclusions in Table 3 [4,9,17].

TABLE III. INTERPRETATION OF THE STRATEGIC ANALYSIS OF THE STATE RESULTS AND CHANGES IN THE RESOURCE POTENTIAL OF THE RESOURCE TERRITORY

Quadrant number	Main conclusions (and recommendations) for		
	Resource potential	Production potential	Financial potential
1,2,4	Entry into new oil areas Refusal to develop unprofitable deposits Carrying out geological and organizational and technical measures	Search for the opportunities of establishing a service and social infrastructure. Development of labor potential	Identification of growth reserves of own revenues of the territorial budget. Searching for opportunities to attract external sources of financing the budget deficit Restructurisation of budget expenditures
3,5,6	Preliminary assessment of the field development efficiency and decision-making depending on its results (refusal or producing)	Identification and mobilization of reserves in order to achieve the planned gross regional product value Service and social infrastructures development Labor potential development	Mobilization of growth reserves of own incomes of the territorial budget Graduation of the territory self-sufficient status Rationalization of budget expenditures
7,8,9	Maintaining size and quality of the raw material potential using continuous monitoring of development parameters	Maintaining the current level of productive potential use Investments in long-term development	Maintaining the current level of financial potential Using excess financial resources to finance social programs and long-term development of the territory

Proceeding from the above, considering achieving well-argued results, it seems practical to construct a matrix for each element of the resource potential and compare them using overlapping [21]. As a result, this allows to make appropriate adjustments to the existing management strategy and tactics of the operation.

VI. CONCLUSION

The use of the methodical approach proposed in the study makes it possible to identify the most problematic and promising areas in the activities of the economic entity - the oil and gas region. However, at the same time it allows to develop strategically oriented, justified and aimed at creating conditions for the sustainable development of territorial education solu-

tions for managing the resource potential. The toolkit proposed above was used in the development of a strategy for socio-economic development of the northern mono-raw area. Considering methodical recommendations based on the results of the diagnostics of the resource potential, there are the priority directions of the development of the municipal formation singled out, among which, in addition to the extraction of hydrocarbon raw materials, there are such spheres as service, construction, timber processing, public catering, etc [6,16,18-22]. The choice of these areas is primarily based on the resources available to the region, as well as its role in interterritorial interaction. The implementation of the developed strategy confirms that the evaluations are correct and allows us to conclude that we can use the proposed tool for managing the development territories practice

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