



Assessment and Analysis of Resource Approach to Formation of Strategic Potential of Economy of the Region

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ABSTRACT

The present article offers the developed and proposed factorial estimation model for the total potential of the enterprise sector (in the region), including six factors describing the aggregate economic potential of the region as a set of conditions, resources and factors ensuring the reproduction process in it, depending on their level of internalization and recycling. Results of the study allow to systematize all existing approaches to the factors of production, as well as to improve these approaches according to the priority factor, effective usage of which streamlines branch structure of regions, reproductive and technological structure of capital investments and fixed assets, enhances the effectiveness of fixed capital.

Keywords: Regional Economy, Locality Management System, Labor Resources

JEL Classifications: P25, J53

1. INTRODUCTION

The most important task of any economic system is sustainable, balanced development. Despite the elaboration of sustainability issues, there are many controversial, unresolved issues, which is due not only to the dynamism and to versatility of the problem, but also to a critical level in the interaction of human civilization and the environment. The task of determining the internal resources of economic development, the solution of which is associated primarily with the development of new approaches to defining the essence, structure and methods of assessing the sustainable socio-economic development of the region in modern conditions is becoming more and more important issue.

In the economic literature on the definition of the same potential, there are often a number of different points of view. While complex in its structure, the potential of the sustainable socio-economic system requires a fundamentally new approach to the system of its management by the state and the regions. The most important

task is a reasonable assessment of the potential and resources of the region with a view to a more efficient use and distribution. The current tools of economic evaluation factors of the economic development are still far from being perfect.

Forming the convenient and effective methods and tools for the sustainable development capacity measurement, allowing to give a clear interpretation of the results, represents a significant importance for both research and as management needs.

2. THE MAIN PART

Taking into consideration the significant number of publications and researches carried out in this direction (Novoselov, 2012; Novoselov and Akhmadov, 2012; Novoselov and Novoselov, 2015; Zakharova et al., 2015), and giving them a greater importance, it is necessary to note once again the lack of unity of positions and opinions on the said issues, thus this problem still has no obvious solution. All this only determines the need

for systematization of scientific results to find new research ways in these areas.

The effectiveness of the functioning and development of regional complexes in market conditions characterized, above all, by the degree of the realization of the subsystem's own resources and, in particular, the strategic components of its elements, which eventually form the strategic potential of regional and its sectorial complexes.

The resource concept was the most adequate for the study of sources and mechanisms of regional economic development in the radically changed conditions of the competition.

It's safe to state that strategically coordinated development of the region's potential is limited to "bottom" and "top" by the corporative, sectorial and territorial priorities, imperatives and guidelines of the expanded reproduction of economic systems in the region and its complexes. There is also the need for their constant modernization and multidimensional harmonization in compliance with the main criterion - the unity of competitiveness, stability and safety of the process.

Thus, the methodological basis of the total resource potential, along with the theory of the production factors, is the theory of regional reproduction process, covering the interconnectedness of all subjects, factors and conditions of the regional economy.

Only an interconnected set of all factor and resource markets (consumer, capital, money, labor, status, information, etc.) ensures the effective development of the regional economy.

In the scientific literature, there are different approaches to the separation of the resources types.

One such classification involves the allocation of four kinds: Land, capital, labor and enterprise. From the standpoint of the possibility and reality of quantifying, the other classification is rather popular: Material, financial and human resources. From the standpoint of evaluation of the enterprise's resource potential as the ability to perform the intended processes and generate the desired results, it is convenient to divide the entire set of resources into three groups: Physical infrastructure (long-term resources, due to the essence of the process), current assets (assets, ensuring the implementation of the process) and human resources. These three types of resources, combined in the production and technological process ensure the achievement of the targets (Lutgen and Van der Linden, 2015; Kovalev, 2001; Makkaeva, 2008).

Resources of the first two groups are presented in the balance, i.e., they have a unique valuation. Human (labor) resources are not presented in the financial statements (except for expenses and arrears of wages that are subject to management accounting and internal analysis).

Material and technical base is only a part of the enterprise assets, however, is the most significant part that defines, in particular, the sector of the enterprise, and some ability to generate revenues and profits in the required volumes.

The labor resources are different from the material ones by the necessity of their remuneration, so their analysis is performed in four areas: Availability and condition, the movement, usage, and incentives.

The corresponding figures should characterize:

- The composition and structure of employees;
- Education and training;
- The share of managerial staff;
- The turnover of staff in various sections;
- The productivity of labor in general, by employee category and by department;
- Average wages in general categories of employees and departments;
- Effective usage of working time;
- The changing rate of the average wage, compared with the rate of change in output and profits;
- The effectiveness of systems for retraining, and others.

Traditionally, the factors are understood as: "Resources of the production activity and the economy in general (land, labor, capital, entrepreneurship); the driving force of economic, industrial processes, influencing the result of production, economic activity." However, such understanding does not exactly differentiates the resources and factors, it reduces the composition of the latter in the spirit of the neoclassical synthesis.

In a broad sense, the regional (branch) factors include:

- Economic and geographical location,
- Population and labor resources,
- The production unit,
- Infrastructure,
- Localized natural resources - energy, minerals and raw materials, biological, water,
- Transport factor,
- Scientific and technical potential,
- Form of territorial organization of the economy,
- Quality of management,
- Social climate, and others.

In addition, all the factors are grouped into permanent and temporary ones, cyclic and non-cyclic. The permanent factors include: NTP, territorial concentration of capital, government regulation. By the time factors include those that act occasionally: Regional social or other conflicts, natural disasters and other emergencies.

Cyclicity (recurrence) in the factors' actions is caused by seasonal fluctuations in production, product's and resources' life cycles, as well as the effect of general economic cycles, fluctuations in investment activity, and others. The factors determining the specificity of the non-cyclic nature of social production in a specific region.

Despite selected properties, from the position of involvement in the process of social production, factors differ from the resources and reserves, which is often ignored.

Based on the foregoing, it's safe to state that the factors of production arise from the involved in this process and resources are endogenous variables of regional economic systems, and environmental factors - independent or indirectly dependent on exogenous variables, or economic conditions. To measure the potential of socio-natural economic systems there must be a distinction between the resources and factors of production and the conditions of their development.

Terms of the overviewed systems create an environment with developed sectorial production; they are more stable and act as social or natural environment circumstances, formed and dominating at the moment and determining the course of reproduction. The concept of the situation or the particular situation lines up the type of the conditions, which is unstable and is able to change anytime, the business institutions must take this into consideration.

Natural and social conditions also act as a precondition of the regional process of reproduction. The necessary conditions for this process may be present or absent, but in a sense, they can be created, denied, taken into account or demanded. They serve as an input data: If conditions are met, and correspond to the real needs of the region and the interests of its subjects, than their reproductive process is accomplished successfully.

Thus, the concept covers the natural environment and public exogenous factors that create a regional environment and limiting the operation of the main endogenous factors of production. But exogenous factors act in relation to the production of not only as conditions. At their initial development, they become resources that may be involved in the production and become a factor. Therefore, the conditions of transition to the resources determine potential of the region or industry and factor components.

Metamorphosis is completed in the gross regional product (GRP) representing the summary of the results of the region's industrial activity (sectorial) and its enterprises in physical and monetary terms, the structure of costs and benefits, in their functional flows.

Since the economic system of the region cooperates with both natural and social systems, its sustainability objectively implies a proportional reproduction of economic, social and natural base in all their components, and the general expression of the development opportunities in the region is considered to be its economically estimated aggregate resource potential.

In a market economy, the resource potential of the region and its cross-industry reflects the state of the territorial complexes in the form of reproduction of the labor, technical, natural, institutional, organizational and informational capital.

It is important to note that the system of indicators that can be used as the basis for calculating the values of factors depends on the purpose of evaluation. There is, for example, an integrated socio-economic indicator "Human Development Index" proposed by United Nations Development Programme experts, and taking

into account per capita income, life expectancy, level of education. This index is certainly not a comprehensive measure of human development, as it does not reflect the structural, functional and dynamic characteristics of the human factor, the real well-being and creative abilities (Torres-Coronas et al., 2014).

The development of the information factor can be measured by indicators of the state of information and communication technologies, the extent of their use for the cooperation of all segments of the population and business growth activity in the creation and dissemination of information technologies.

Indicators of technical and technological equipment of the region measure the quantity and accessibility of labor sources to producers, the dynamics of technological change, renewal of fixed assets and so on, because the development of indicators and indicators for assessing resource potential of regional factors - is a special subject of study, which is devoted to special works.

Thus, the specificity of formation of the production (services) volume in each region is consistently determined by the general conditions, available resources and the proper factors of economic activity, among which now stand endogenous human, technical and technological, natural, organizational, institutional, and information resources.

The conditions of each sectorial production change by the extraction, compensation, accumulation and exhaustion, disposal and destruction of resources, carried out under the influence of both endogenous factors and the performance of enterprises and exogenous factors - environment and resources, and macro- and mega-environment. Therefore, the potential branch (region), firstly, depends on the mechanism of effective conflict resolution of the conversion process of the exogenous factors into the endogenous ones, and, secondly, by the search technique and the mobilization of reserves of endogenous factors.

Consequently, a comprehensive analysis of human, material, technical, institutional, organizational, informational and financial resources formation and development of regional or sectorial production can more fully identify the strategic reserves of potential growth, simulate processes and to use them to develop appropriate mechanisms for the implementation of these models into management practices.

The total capacity of the enterprise sector (in the region) should include almost all areas of activity: Management, production, scientific research, finance, marketing, and others.

$$P \geq P_p, P_{mt}, P_f, P_{sp}, P_{ou}, P_m, \dots$$

Where,

P – Cumulative potential,

P_p – Potential of the personnel of the enterprise (vocational, motivational, sociocultural);

P_{mt} – Potential of material base (extent of capitalization of assets, mobility, wear, technological equipment);

P_f – Potential of financial resources (volumes, structure of finance,

extent of centralization, dependence on credit resources);
 Psp – Potential of strategic planning (existence of mission of the company, system of the purposes, target programs of development, center of strategic planning);
 Poa – Organizational and administrative potential (OAP) (type of organizational structure, management styles, leaders, adoption of administrative decisions, corporate culture);
 Pma – Marketing potential (MaP) (market share, positioning of goods, image of the company, brand).

The basis of decision-making management is an effective attraction and allocation of scarce resources, the factors and forces between capacity building and its use, reproduction between the complex and its links in the production of intermediate and final products. This, in dynamic and difficultly predicted environment, creates the conditions of strategic risk and uncertainty, requiring the priority use of resource-factorial approach to the development of analysis and development methods of strategic potential, taking into account the specifics of each regional industry. Based on the said conditions and the principles of isolation, we should agree to the opinion of scholars who claim that the methodological basis for the definition of the aggregate resource potential, along with the theory of the factors of production, is the theory of regional reproduction process, covering all subjects of relationships, factors and conditions of the regional economy.

Based on the facts above, we can conclude that, overall economic potential of the region – is a set of conditions, resources and factors providing the reproduction process in it, depending on their level of internalization and recycling. It takes into account the volume of real resources and factors located within a particular region and field expressed in specific qualitative and quantitative indicators, which express the potential of their implementation.

In other words, resources available for use as factors of reproduction with regard to their quality, quantity and combination determine the overall economic potential of the region.

Most modern scientists and economists consider the factors of production rather than as resources (natural, material and labor), but the parameters that have a direct impact on production. This approach also makes it possible to significantly expand the list of factors of production, incorporating the technology, production, information (Novikov et al., 2015; Karepova et al., 2015).

According to an author's position, production can be presented as purposeful process on creation of production or rendering service for satisfaction of public and personal needs, i.e., in other words is a production system in which transformation of factors of production in a ready-made product is carried out (a product or service). Thus, all factors of production work are interconnected and supply each other. The economic model of production specified in the article, thus urged to reflect communications between resources, expenses and results of production represents the following scheme of production:

Production factors (human resources, means of labor, objects of the labor) - The expenses connected with consumption of production factors: The live work (compensation - FROM); means of labor (depreciation - And); objects of the labor (material

inputs - MZ) other expenses-Production-the Income (profit) = Sales proceeds - minus cumulative production expenses (OT + A + MZ) minus other expenses.

The researches of different approaches to the concept and estimates of production factors and resource potential of enterprises and industries in the region, presented in numerous publications, monographs and other scientific publications, allows you to make a generalized conclusion is this. Indicator of the resource potential is to integrate all the affecting characteristics of the internal and external environment, namely:

- The potential labor resources (personnel) (MP);
- Production capacity (state equipment and depreciation of fixed assets) (PP);
- Potential financial resources (FP);
- OAP;
- MaP (competitiveness and position in the market);
- Information potential (IP); the potential quality of service (KP).

The methodological basis for determining the total resource potential (PSB RP) of industry, along with the theory of the factors of production, is an approach that covers all subjects of relationships, factors and business environment of the industry.

Only the interconnected set of all factor and resource markets (consumer, quality, capital, money, work, status, information, etc.) ensures the effective development of regional (branch) of the economy.

In the article (Brekke, 2015; Bostanov, 2007; Omura et al., 2015) the following approach to the assessment of the resource potential and strategic industry is set out. Strategic resource potential (SRP) of the industry, in its opinion, is the difference between the realizable and promising opportunities ability to convert the aggregate resources available in the factors of production for products (services), satisfying the maximum purchasing power in the interests of "society - state - region - industry - productivity the consumer."

SRP of development of the region's sector is defined as a difference between its potentially possible value on the beginning (SRP_{begin}) and end of realization (SRP_{end}) strategy (potentially possible in the future). The last represents the special importance as the gap assessment between necessary and actual parameters of its components by realization of actions for reforming and optimization of a control system of branch is important for ensuring sufficient level of strategic potential.

This approach to an assessment of strategic resource capacity of branch is used and in work (10) which author defines SRP indicators as works of cumulative resource capacity of branch and an integrated indicator of social and economic production efficiency of production (services) to an assessment of strategic resource capacity of agrarian and industrial complex of the Chechen Republic.

$$SRP = (CRP * KSEE)_{begin} - (CRP * KSEE)_{end}$$

To increase the realization efficiency of the strategic potential of the region's economic complex it is necessary to carry out the

factorial analysis of influence of all making SRP on the beginning and for the end of the period of realization of strategy. Then - to develop the mechanism allowing to define an optimum level of use of this potential that, in turn, demands definition of its structure and an assessment of all components it elements.

The technique of an assessment of strategic resource capacity of branch offered in the works mentioned above gives the chance to develop the program of actions of a sustainable development of the enterprises and branches of the region on the forthcoming prospect.

With all due importance of the researches' results of the specified authors, we consider that the technique stated by them needs specification and completion.

First, it regards the indicators of cumulative resource potential – CRP.

We will consider the assessment of an indicator of cumulative resource capacity of branches of the region offered by us.

Its essence consists in the following:

Structurally CRP of branch it is presented by the following making indicators:

- Potential of a manpower - MP;
- Potential production - PP;
- Potential of financial resources - FP;
- OAP;
- MaP;
- IP;
- Investment and innovative potential - IIP;
- Natural and raw potential – NRP;
- Technological potential – TP;
- Socio-political potential – SPP.

The indicator of CRP of branch in works (Novikov et al., 2015; Kovalev, 2001) is defined, as:

$$CRP_{branch} = (k_1 * MP_{branch}) + (k_2 * PP_{branch}) + (k_3 * FP_{branch}) + (k_4 * OAP_{branch}) + (k_5 * MaP_{branch}) + (k_6 * IP_{branch}) + (k_7 * IIP_{branch}) + (k_8 * NRP_{branch}) + (k_9 * TP_{branch}) + (k_{10} * SPP_{branch})$$

Here: k_1, \dots, k_{10} - the share coefficients showing the importance of each factorial indicator of CRP which in the sum make unit. Share coefficients are defined by an expert method (estimates and poll), leaning in information aspect on system of branch monitoring.

We consider that use at these calculations of method of expert evaluations isn't rather objective and exact and therefore we suggest to define an indicator of CRP, how average geometrical the sums of all 10 components of indicators, i.e.:

The making (factorial) indicators of resource potential thus are defined by quantitative measurements according to standards or for actual data as follows:

$$MP_i = NW_{fact} / NW_{necessary}$$

Where,

$NW_{necessary}$ – respectively, the actual average number of the workers occupied in this i – oh branches, and the necessary number determined by data of the economic analysis of efficiency of use of a manpower of the same branch;

$$PP_i = W_{fat} / FA_i$$

Where,

W_{fat} и FA_i – respectively, the cost of wear of fixed assets and their initial cost on this branch specified according to revaluation at the moment of time;

$$FP_i = (OC + LC)_{i\ fact} / (OC + LC)_{i\ necessary}$$

Where,

$(OC + LC)_{i\ fact}$ и $(OC + LC)_{i\ necessary}$ – respectively, the actual sum of own and attracted in this branch capital and the sum of the same capital calculated taking into account an assessment of financial and operational requirements and achievement of necessary indicators of profitability of production in this sphere;

IP_i (OAP_i) – are defined, respectively the following ranges of sizes:

- From 0 to 0.5 - low level of transparency of information for the enterprises, the organizations and investors (respectively, the low level of the organization and management);
- Over 0.5 and to 1.0 - average level, respectively;
- Over 1.0 and to 1.5 - above the average level according to all set of branches, respectively;

$$MaP_i = VRP / VMP_i$$

Where,

VRP_i and VMP_i – respectively, the volumes of the realized and made production in this branch characterizing supply and demand on sales markets, price policy, volumes and consumer activity in these markets, etc., i.e. defining functions, tasks and the organization of marketing activity;

NRP_i - s defined by an expert assessment fortune in total all the following sizes making a natural source of raw materials in this branch ranges:

- From 0 to 0.5 - the low level of a condition of a natural source of raw materials;
- Over 0.5 and to 1.0 - the average level, respectively;
- Over 1.0 and to 1.5 - above the average level according to all set of branch, respectively;

$$TP_i = SCE_i / SCE_0$$

Where,

SCE_i – the average specific cost of expenses (on production of a unit of production) in this branch for the last 3 years;

SCE_0 – the same indicator on average on group of the same branches of other regions (in quantity - m):

$$SCE_0 = \frac{1}{m} \sum_{i=1}^m SCE_i$$

SPP_i – is defined by an expert assessment of a condition of the social sphere and a political situation in this region and in this territory, influencing to straight lines or indirectly results of activity of this branch. It is characterized by ranges of the following sizes:

- From 0 to 0.5 - the low level of a socio-political situation;
- Over 0.5 and to 1.0 - the average level, respectively;
- Over 1.0 and to 1.5 - above the average level by a similar assessment in other regions, respectively;

Further, the strategic resource capacity of branch (SRP_{OTP}) it is expedient to determine, how work of CRP and an integrated indicator of economic efficiency of production of each branch.

$$SRP_{branch} = (CRP_{branch} * EE_{branch\ beginning} - (CRP * EE_{branch\ end}))$$

Strategic resource capacity of the region is defined how the sum of strategic resource capacities of all branches of the region, considering the last structurally as the sum of branches of the region of material and non-material production.

$$SRP_{reg.} = \sum CPII_{branch\ i} = \sum (k_1 * SRP_{branch\ 1} + k_2 * SRP_{branch\ 2} + \dots + SRP_{branch\ n})$$

Here: i – Changes from 1 to n , where, n – number of branches of the region.

$k_1 \dots \dots \dots k_n$ - The share coefficients showing the importance of an indicator of strategic resource capacity of each branch of the region, making unit in the sum. Share coefficients are defined by an expert method of estimates, leaning in information aspect on system of regional monitoring.

3. CONCLUDING REMARKS

The sustainable development of the region's economy is characterized by a set of factors and communications, and it is impossible to fully express those by methods of the determined analysis.

First, we have the factors defining system of indicators of social and economic development of the region which, being, various according to the destination, to a way of an assessment take place here and on units of measure, at the same time are in a condition of numerous interrelations among themselves which need to be estimated.

On the other hand, it is also necessary to estimate interrelations in system of resources between various capacities of the region which are also numerous and difficult to formalize.

Thirdly, both considered systems are also a condition of multiple communications with one another. It needs to be estimated, as only in this case it will be possible to bring them together for the solution of the main task: Development of a technique of an assessment of strategic potential of development of the region providing a sustainable development of its social and economic system.

We suggest to solve this problem, using as a link between these two systems, an indicator of the GRP, estimating consistently interrelations of indicators of the first system (indicators social and

economic development) with VRP indicator, and indicators of the second system (resources and capacities of the region) – also with VRP indicator. Thus, we suggest using methods of the multiple correlation analysis allowing revealing interrelations in difficult multiple-factor systems.

Thus, the offered techniques of an assessment of SRP for each economy sector and the region in general are forming objective base. It can be used for further development and improvement of methods of an assessment of strategic potential of a sustainable development of regional social and economic system, defining development of the main actions of strategy of social and economic development of the region.

REFERENCES

- Bostanov, K.A. (2007), Methodological approaches to the assessment and management of resource potential and the socio-economic efficiency of housing and communal services: dis. Cand. Ekon. Science. K.A. Bostanov. Kislovodsk: KIEP.
- Brekke, T. (2015), Entrepreneurship and path dependency in regional development. *Entrepreneurship and Regional Development*, 27(3-4), 202-218.
- Karepova, S.G., Karabulatova, I.S., Novikov, V.S., Klemovitsky, S.V., Stratan, D.I., Perova, A.E. (2015), New approaches to the development of methodology of strategic community planning. *Mediterranean Journal of Social Sciences*, 6(3), 357-365.
- Kovalev, V.V. (2001), Analysis of Financial and Economic Activity: Logic and Content of Internet Resources. St. Petersburg: Campaign Satellite. p101.
- Lutgen, V., Van der Linden, B. (2015), Regional equilibrium unemployment theory at the age of the internet. *Regional Science and Urban Economics*, 53, 50-67.
- Makkaeva, R.S.A. (2008), Forming strategic resource potential of regional production complexes and industries (for example, AIC of the Chechen Republic): Abstract. Cand. Diss. Kislovodsk: KIEP.
- Novikov, S.V., Klochko, E.N., Yarushkina, E.A., Zhukov, D.M., Dianova, V.A. (2015), On peculiarities of the virtual economy of modern Russia: Categories, virtual relationships, educational constructs. *Mediterranean Journal of Social Sciences*, 6(3), 247-257.
- Novoselov, S. (2012), Environmental entrepreneurship: The essence, especially the development of engineering. Part 2. *Herald Don: Electronic Scientific Journal*, 4-2(23), pp.107.
- Novoseloa, N., Novoselov, S.N. (2015), Institutionalnye imperatives, financial and information tools of industrial systems. *Business Law*, 2, 229-234.
- Novoselov, N., Akhmadov, M.E.I. (2012), Ensuring the reproductive development of the regional economy, taking into account the factors of financial, investment, consumer and institutional. *Engineering Herald Don: Electronic Zhurnal*, No. 1. Available from: <http://www.ivdon.ru>.
- Omura, A., Todorova, N., Li, B., Chung, R. (2015), Convenience yield and inventory accessibility: Impact of regional market conditions. *Resources Policy*, 44, 1-11.
- Torres-Coronas, T., Vidal-Blasco, M., De Andrés Sánchez, J. (2014), Proactive networking behaviour and emotional intelligence among entrepreneurs. Paper Presented at the Proceedings of the 24th International Business Information Management Association Conference - Crafting Global Competitive Economies: 2020 Vision Strategic Planning and Smart Implementation. p148-159. Available from: <http://www.scopus.com>.
- Zakharova, E., Prokhorov, V., Shutilov, F., Klochko, E. (2015), Modern tendencies of cluster development of regional economic systems. *Mediterranean Journal of Social Sciences*, 6(5), 154-163.