

Complex Analysis of Prospects of the Volga Federal District Regions Development: Methodology and Practice

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Abstract: Decentralization of public administration of country's economy has led to strengthening of a regional authorities role in economic processes regulations. Differences in social and economic development of each region dictate necessity of integrated indicator formation of region's social and economic attractiveness (SEA index). Methodological approaches to justification of integrated indicator of region's social and economic attractiveness are considered in this article. The article also explains its definition, theoretical justifications of indicators included in its structure.

Key words: Economic attractiveness of a region • Development indicators • Methodology of a region's economic attractiveness determination • Social and economic development.

INTRODUCTION

Analysis of regions' current state allows to mark out its separate features that have essential impact on economic development of certain regions.

A concrete system of indicators for determination of a separate region's social and economic attractiveness and prospects of its development is constructed. In general, a system of indicators represents a set of integrated and single characteristics defining a level of social and economic attractiveness.

It is essential that characteristics of social and economic attractiveness of a separate region within a system of indicators, should include measurable (objective) and immeasurable (subjective) data.

To determine values of measurable indicators instrumental, calculated and statistical methods are generally used. Sociological and expert methods are applied for qualitative descriptions of immeasurable indicators of region's social and economic attractiveness.

MATERIALS AND METHODS

According to above-stated, we present methodological approaches to justification of an integrated indicator of region's social and economic attractiveness (SEA index), its definition is given,

indicators included in its structure are theoretically proved, as well as factors influencing an index of region's social and economic attractiveness that found complex reflection in the economic-mathematical model presented by us in the following paragraph of this research are revealed.

On the basis of complex multivariate research 12 blocks of factors that have the strongest impact on its level were identified in order to solve a problem of defining quantitatively measured indicative indicators of region's social and economic attractiveness [1-5].

- Level of road and transport infrastructure development.
- Demographic potential of regions.
- Manpower resources development extent.
- Information and communication technologies development.
- Agricultural potential;
- Industrial potential.
- Power complex development extent.
- Market infrastructure development level.
- Investment appeal.
- Scientific and educational potential;
- Criminogenic factor.
- Environmental well-being degree.

Table 1: Growth dynamics of region's values of composite integral index of social and economic attractiveness (SEA index)

	2005	2006	2007	2008	2009	2010	2011	Growth in %, 2010 by 2005.
Republic of Bashkortostan	462,78	493,12	538,8	582,48	567,83	568,39	574,0739	24,0
Mari El Republic	305,97	319,02	328,77	332,33	353,5	370,01	373,7101	22,1
Republic of Mordovia	337,63	339,17	357,77	392,73	412,99	412,97	417,0997	23,5
Tatarstan Republic	541,04	552,79	658,35	718,43	724,56	726,42	733,6842	35,6
Udmurt Republic	362,4	376,58	397,14	415,97	433,94	429,64	433,9364	19,7
Chuvash Republic	372,55	372,45	415,02	425,41	437,14	447,89	452,3689	21,4
Perm Territory	421,7	444,53	497,11	547,24	541,06	574,44	580,1844	37,6
Kirov Region	279,16	330,63	351,95	381,07	380,99	376,98	380,7498	36,4
Nizhny Novgorod Region	446,46	523,41	526,65	581,19	576,83	576,2	581,962	30,4
Orenburg Region	372,4	386,89	420,97	446,87	470,7	470,42	475,1242	27,6
Penza Region	355,85	356,69	396,39	412,62	435,59	457,91	462,4891	30,0
Samara Region	553,42	603,8	649,75	685,84	631,98	632,62	638,9462	15,5
Saratov Region	507,06	524,91	558,32	591,3	606,8	614,7	620,847	22,4
Ulyanovsk Region	356,84	363,44	399,73	449,87	449,85	442,23	446,6523	25,2

This group of indicators is reflected in integrated indicators.

Indicative indicators for each block of factors on the basis of the conducted research were identified for a quantitative assessment of social and economic attractiveness level of Volga federal district regions. Selection criteria for creation of an integrated indicator (index) of regions' social and economic attractiveness was carried out from available statistical basis. System of indicators doesn't include expert indicators or indicators based on results of economic subjects polls.

Some of the above-stated indicative indicators have both quantitative and qualitative character and characterize some aspects of regions' social and economic system development from the qualitative party [5,6].

Empirical approach which is based on a well-known in statistics as an index method of combining multivariate indicators is offered to solve the problem of comparing these indicators included in calculation of an index of social and economic attractiveness of a region. This method allows us to calculate an integral indicator – "an index of region's social and economic attractiveness". This index can be used both in pair and multiple comparisons [7].

Dynamics of indicators' values for the period 2005-2011 explicitly points to the fact that in Volga Federal District two groups of regions were formed with homogeneous degree of social and economic attractiveness (Table 1). The first group included regions, which values of composite index of social and economic attractiveness (SEA index) is higher than 500 points. These are Tatarstan Republic, Samara Region, Saratov Region, Nizhny Novgorod Region, Perm Territory and the

Republic of Bashkortostan. This group of regions is characterized by high level of factors' values that generate a high level of competitiveness and increased dynamics of social and economic growth.

The second group of regions consists of: Orenburg Region, Penza Region, Chuvash Republic, Ulyanovsk Region, Udmurt Republic, Republic of Mordovia, Kirov Region and Mari El Republic. The regions included into considered group, possess insufficient level of competitiveness and also are characterized by mediocre dynamics of social and economic development against the background of the leading regions.

At the same time, there are regions possessing increased level of SEA index growth rates in the second group. While some regions from the first group, despite high values of social and economic attractiveness, showed that a composite integral index growth rates were lower than the average values in the whole Volga Federal District throughout the analyzed period of time. Besides, for the analyzed six-year period of time phenomena, characterized by multidirectional development of social and economic attractiveness and gross regional product were observed [8,9].

Thus, there is an urgent need of classification of Volga Federal District regions according to a level of actual SEA index values created at the time of 2011 together with dynamics of GRP growth and also SEA index growth, an index in time (Figure 1).

RESULTS AND DISCUSSION

A diagram presented in Figure 1 shows existence of four groups of regions (Table 2) differentiated by level and dynamics of SEA index development and gross regional product.

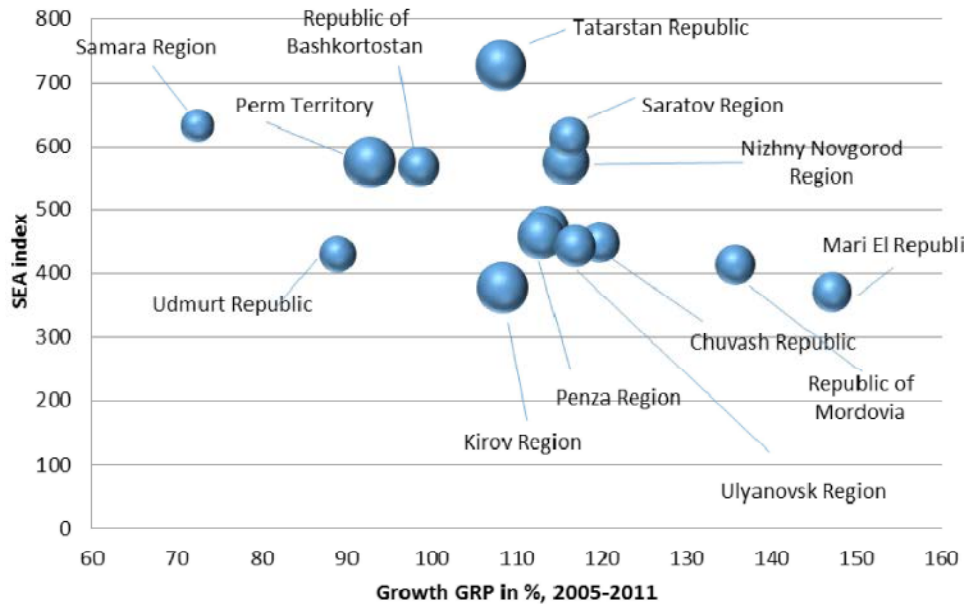


Fig. 1: Positioning of Volga Federal District regions according to indicators: actual value of SEA index - GRP growth dynamics in 2011.

Table 2: Multidimensional classification of Volga federal district regions

	High level of SEA index	Low level of SEA index
High Level of GRP of Dynamics	Tatarstan Republic, Saratov Refion and Nizhny Novgorod Region	Kirov Region, Penza Region, Orenburg Region, Chavash Republic, Ulyanovsk Region, Republic of Mordovia and Mari El Republic
Low Level of GRP Dynamics	Samara Region, Pern Territory and Bashkortostan Republic.	Udmurt Republic

- In the first quadrant regions possessing high level of gross regional product dynamics and are also characterized by high values of integral composite index which reflects level of social and economic attractiveness. This group of regions includes: Tatarstan Republic, Saratov Region and Nizhny Novgorod Region.
- In the second quadrant, which is characterized by high GRP dynamics and low values of SEA index, entered: Kirov Region, Penza Region, Orenburg Region, Chuvash Republic, Ulyanovsk Region, Republic of Mordovia and Mari El Republic. This group of regions is most massive of all.
- Regions with low indicators both in GRP dynamics and in SEA index belong to the third quadrant. This quadrant consists only of one region of the whole Volga Federal District –Udmurt Republic.
- The fourth quadrant includes Samara Region, Perm Territory and Bashkortostan Republic. These regions showed relatively low values than average ones

across Volga Federal District, values of GRP growth rates, but, at the same time, high level of SEA index during 2005-2011.

Most likely, high values of GRP growth rates in the regions which have entered into the third quadrant (Kirov Region, Penza Region, Orenburg Region, Chuvash Republic, Ulyanovsk Region, Republic of Mordovia and Mari El Republic), are caused by low base effect.

At the same time a structure of the regions which have entered into the fourth quadrant seems to be extremely interesting in the analytical plan. They are Samara Region, Perm Territory and Bashkortostan Republic. Most likely, these regions possessing very high values of SEA index are beginning to show exhaustion of economic growth factors. That is, for considered regions threat of decrease in their competitiveness in medium- and long-term prospects starts being formed [10]. Thus, the high level of production and organizational base reached in recent years in these regions start to be limited in connection with exhaustion of resource base and

insufficient number of realization on territories of considered regions new, innovative, competitive investment projects providing formation and development of new directions of economic growth.

The carried-out regions classification also revealed that there are only three regions which are completely meet the case, defining a high level of competitiveness in structure of Volga Federal District, following the results of seven years' development during the period 2005-2011. They are Tatarstan Republic, Nizhny Novgorod Region and Saratov Region. In this case, the absolute leader is Tatarstan Republic - both in terms of GRP growth rates and in a level of growth index dynamics, which reflects social and economic attractiveness.

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