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The papers study the following problems: sustainable development of local production systems, business strategies of LPS, innovativeness of clusters, critical infrastructure protection, corporate social responsibility, environmental protection, local production system management, governance of local production systems in Bulgaria, Poland, Ukraine and Russia, policy guidelines with some measures of general application, aimed at problems observed in all LPS, and some specific measures differentiated according to a typology of local production systems.

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SECTION II REGIONAL ECONOMIC DEVELOPMENT AND GOVERNANCE

EVOLUTION OF SPATIAL STRUCTURE OF SIBERIA UNDER CONDITIONS OF SELF-DEVELOPMENT OF SIBERIAN REGIONS¹

*Suspitsyn S.A.*²

INTRODUCTION

The real growth of the regions of the Russian Federation depends on two main groups of factors influencing their dynamics: “targeted” (external) factors, induced by the impacts of the program-project solutions of large corporations and (or) the state and “genetically determined” (internal) conditions of development. Their overall impact on the development pathways of the regions affects the changes in territorial structure of the national economy. But even in the period of the most successful economic growth (between two crises in 1998 and 2008), the territorial structure of key indicators of social and economic development did not change significantly (Table 1). This conclusion is valid both for the macroregions of focused state attention (the Far Eastern Federal District (FEFD) and the North Caucasian Federal District (NCFD)) for which the federal state programs have been developed and financed but the result was either status quo or insignificant improvements, and for the “quasipriority” regions (Ural and Siberia), for neglected territories (the Southern Federal District (SFD) except Sochi, and the Privolzhsky Federal District (PFD) except Kazan), and even for the country economic activity centers (the Central (CFD) and the North Western Federal Districts (NWFd) with their powerfully developing cores – Moscow and St. Petersburg, their growth overlaps only the development gap of other regions of these districts).

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Table 1

**Changes in territorial structure of economic development indicators
of the Russian Federation macroregions in 2007 versus 2000 (%)**

Indicator	CFD	NWFD	SFD	NCFD	PFD	UFD	SFD	FEFD
GRP	1,4	-0,2	-0,1	0,4	-0,9	0,2	-0,4	-0,4
Real fixed capital formation	-2,4	3,3	-2,3	-0,1	-0,8	-3,2	3,2	2,3
Production of commodities	3,0	0,4	0,3	0,2	-1,9	-0,3	-1,3	-0,4
Consumer market	-4,9	-0,6	0,5	0,8	1,4	2,3	1,0	-0,5
Regional budgets	5,4	2,1	1,7	0,7	-4,9	-8,0	3,1	-0,1
Remuneration of labor	2,9	-0,6	-0,1	0,4	-0,5	-1,1	-0,5	-0,5
Average changes	0,9	0,7	0,1	0,4	-1,3	-1,7	0,9	0,0

Source: [1, 2]

For the regions located out of zones of active external influences the genetic factors determine more quiet dynamics of development, based on their own potencies and success in improvement of institutions, including those directed by the state social and economic policy¹. Numerous examples of weak apprehension of federal center reformations in industrial, investment and innovative policies etc. directed by the in the regions to a large extent could be explained by the low level of economic development, lack of conditions (institutional and related to resources) for their implementation and insufficient critical mass of federal initiatives and resources allocated by the state through program-strategic projects. It seems that actual development trends for the most regions of Russia will be closer to trajectories determined by the genetic scenario than to those determined by the modernized conception of Strategy-2020. Analysis of its proposals made in [5] identified several significant gaps: exaggerated attention to the institutional approach against the background of its absence in the real sector (in particular, vague provisions in industrial policy and in mechanisms of stimulation of domestic demand), vague notion (though traditional for such documents) of territorial aspects of national economic development etc.

DEVELOPMENT OF SIBERIA UNDER THE CONDITIONS OF GENETIC SCENARIO

The method of genetic scenario development is as follows. The array of regional indicators for 2000–2010 based on data provided by the Federal State Statistics Service of Russian Federation is used. Regions are described by 10-component vectors of the following indicators: production of commodities (in terms of industrial and agricultural production), real fixed capital formation, average salary, per capita incomes and housing construction, the state of the consumer market (retail turnover and marketed services), the unemployment rate, and fiscal capacity. All indicators are made comparable for the interregional comparisons: calculated per 1 person, adjusted to the conditions of 2000 and normalized to the average Russian level. The prepared data are used for the building

¹ It is natural to name a scenario of possible development of Russian regions based on genetic factors – genetic scenario. Methodology and examples of development of such scenarios are described in papers [3, 4].

summary indexes of regions, curves of region development genotypes based on specific series and summarized indexes, and for building of regional phenotypes system. By integrating varieties of partial estimates summary indexes comprehensively characterize the level of regional development; they exhibit the property to greater steadiness to the random fluctuations of the specific indicators as well. Vectors of regions summary indexes of form annual panels which can be considered in terms of increase ordered indicators. Comparison between annual panels of indexes (Figure 1) is characterized by close proximity of the curves which represent them (correlation coefficients are close to 1). Their averaging-out for a series of years represents the curve of development genotype in terms of “Summary index” indicator.

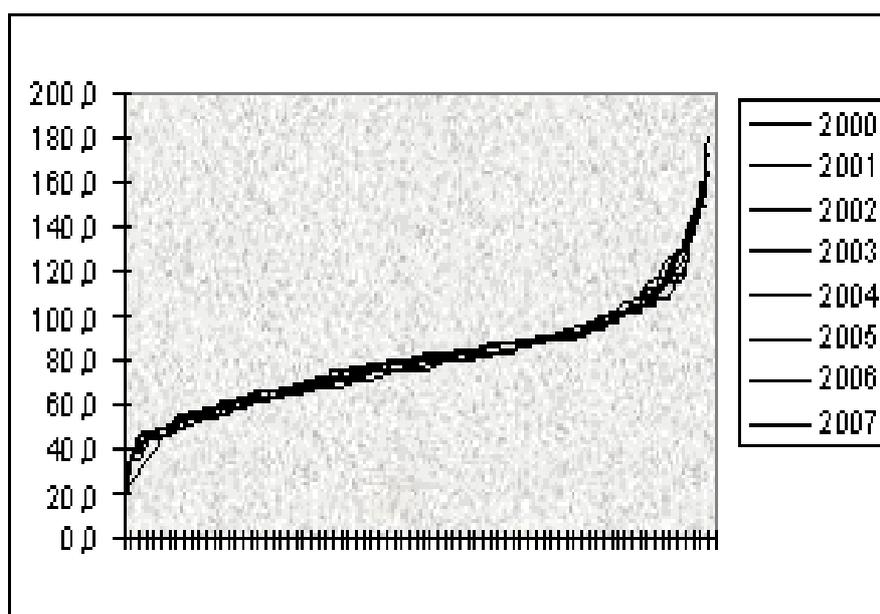


Fig. 1. Example of summary indexes annual panels of the Russian Federation regions in 2000–2007

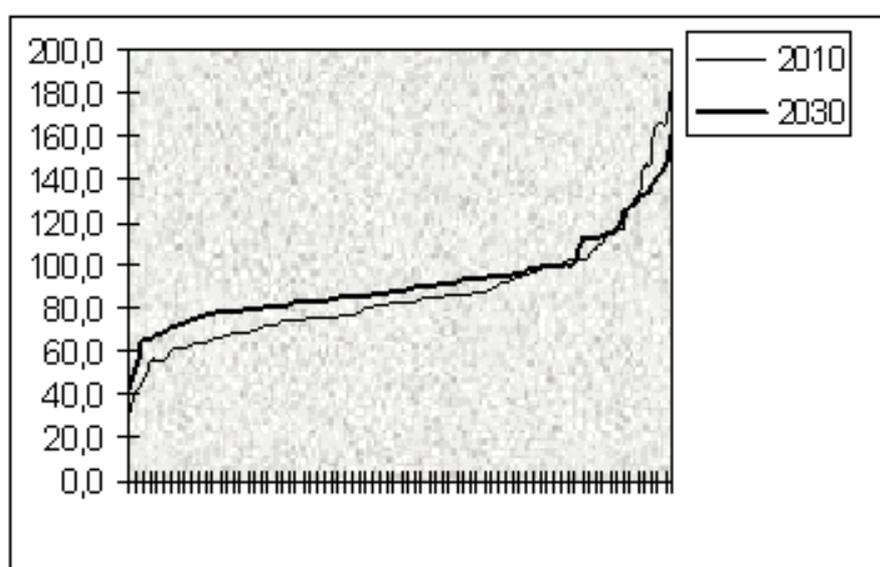


Fig. 2. Genotype curves of the Russian Federation regions development (based on summary index)

The same curves can be plotted for each indicator used in the calculations. They can be used for analysis of development of each region in the past, as well as for evaluation of its development in the future. Spatiotemporal characteristics of system region development are accumulated in the genotype curve when these curves themselves evaluate slowly in time. This curve variation range can be divided into a series of intervals, where for each of them summary indexes, representing group properties (phenotypes) of regions development, are calculated.

Calculations of estimated figures are based on the following supposal: if a region will be included in some group (saving its former place or changing the group) by the end of the period then its development will depend on dynamics of corresponding phenotype in the next time cycle. By processing of estimated indicators the genotype curves can be also plotted for the future periods and their possible evolution can be estimated as well. The general trend, estimated by the dynamics of summary indexes of regions, consists in some reduction of interregional differentiating by 2030 (Figure 2).

Calculation factor assessments of Siberian Federal District (SFD) and its regions development under the scenario conditions of genetic scenario are presented below in Tables 2–5.

Table 2

Dynamics of key indicators of SFD development, % to RF

Indicator	2010	2020	2030
Industrial production	83,2	84,0	84,4
Agricultural production	90,6	82,2	71,6
Real fixed capital formation	63,7	69,6	71,6
Per capita incomes	93,2	95,0	98,4
Retail turnover	77,6	81,0	89,2
Marketed services	74,2	82,1	88,4
Fiscal capacity	82,0	81,1	83,5
Housing construction	82,9	93,9	97,8
Index of business activity	84,1	88,1	89,3

Table 3

Siberian Federal District share in Russian Federation, %

Indicator	2010	2020	2030
Population	13,7	13,8	13,9
Industrial production	11,4	11,6	11,7
Agricultural production	12,5	11,3	9,9
Real fixed capital formation	8,8	9,6	9,9
Households incomes	12,8	13,1	13,6
Retail turnover	10,7	11,2	12,4
Marketed services	10,2	11,3	12,2
Incomes of regional budgets	11,3	11,2	11,6
Housing construction	11,4	12,9	13,6
Share of SFD on the average	11,6	12,1	12,4

Some conclusions, based on the data of Tables 2 and 3, are the following. Although it will prevail by 2030, Siberian economy lag from average level of Russian Federation economy will be reduced in 1.5 times (from 15 to 10%). Agricultural economy will be developing slower than Russian average owing to its more widespread growth in more favorable climatic and natural zones of European part of the country. Specific characteristics of living standards will reach Russian average: household income and housing construction.

SIBERIAN REGIONS UNDER THE SCENARIO CONDITIONS OF GENETIC SCENARIO

Due to manifestation of the “scale effects” weak Siberian regions will be developing a little faster than stronger ones, which, in particular, will manifest in reduction of interregional differences (the estimates of this reduction, calculated by summary index, will equal 31%) (Tables 4, 5).

Development of the Krasnoyarsk Krai can slow down within a framework of the genetic scenario which ignores East Siberian oil and gas province resource development megaprojects. Growth of the industrial production in the Krasnoyarsk Krai and the Kemerovo region will be lower than average in Siberian Federal District, in other regions it will be a little faster than average Siberian rates. All in all, the composition of investments in fixed assets will move closer to West Siberian regions (from 57% in 2010 to 60.5% by 2030). Agriculture will be developing faster in the regions of traditional land-use: the Altai Territory, the Novosibirsk and the Omsk regions. Territorial structure of other factors considered in the calculations – regional budget incomes, households, housing construction – evolves less noticeable.

Table 4

Summary indexes dynamics of the SFD regions, %

Region	2010	2020	2030	2030/2010
Republic of Altai	55,5	69,2	74,1	1,33
Republic of Buryatia	75,9	88,0	88,0	1,16
Republic of Tyva	46,7	63,2	67,5	1,45
Republic of Khakassia	68,4	69,9	71,7	1,05
Altai Territory	68,9	79,2	81,4	1,18
Zabaikalsky Krai	60,3	67,9	71,4	1,18
Krasnoyarsk Krai	100,3	99,7	99,4	0,99
Irkutsk Region.	82,8	89,7	90,4	1,09
Kemerovo Region	85,6	86,3	86,6	1,05
Novosibirsk Region.	97,7	98,9	100,5	1,03
Omsk Region	91,5	91,8	95,6	1,04
Tomsk Region.	83,8	87,2	85,2	1,02

Table 5

**Geographic distribution of economic strength
in Siberian Federal District, %**

Region	2010	2020	2030
Republic of Altai	0,7	0,9	1,1
Republic of Buryatia	4,5	5,0	5,0
Republic of Tyva	0,9	1,3	1,5
Republic of Khakassia	2,2	2,3	2,3
Altai Territory	10,4	11,0	10,8
Zabaikalsky Krai	4,1	4,4	4,5
Krasnoyarsk Krai	17,6	16,7	16,3
Irkutsk Region	12,5	12,8	12,7
Kemerovo Region	14,6	14,3	14,5
Novosibirsk Region	15,9	15,3	15,3
Omsk Region	11,2	10,6	10,6
Tomsk Region.	5,4	5,5	5,4

**DEVELOPMENT OF THE ALTAI TERRITORY
UNDER THE CONDITIONS OF GENETIC SCENARIO**

Coming to a fiscal capacity path of faster economy growth than Russian average is the total result of the development of the Altai Territory within the conditions of genetic scenario (Figure 3). Maximum advance is possible for the following indicators: investments, industrial production, housing construction (up to 20%). Per capita income, salaries and indicators of consumer market development (market services and retail turnover calculated per capita) will grow in a rate closer to all-Russian average.

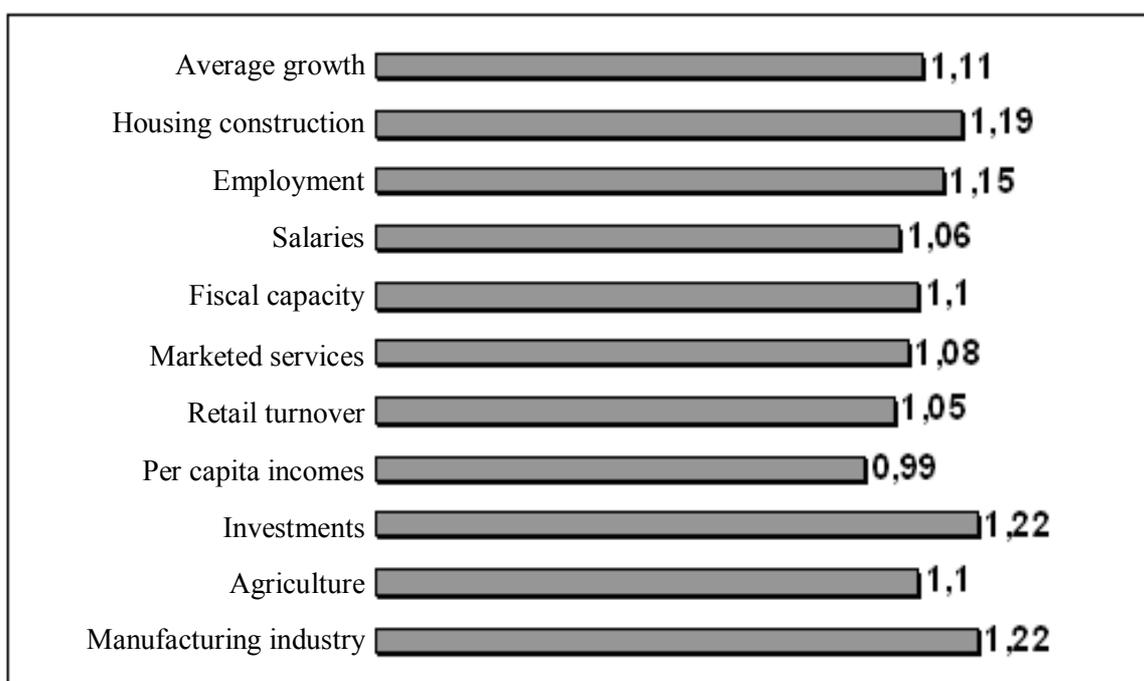


Fig.3. Growth of per capita indicators of the Altai Territory development by 2030 in comparison with the growth of the Russia average indicators.

CONCLUSIONS

There are no reasons to assume that Siberia is among regions of high priority state interests¹. Therefore, there is a high possibility that macroregion development will be close to the genetic scenario with outlying cases with regard to some regions where vectors of state, corporate and regional interests may approach each other from time to time. Motivations and conditions of self-development, manifested not only in mere possession of resources by a region, lie at the core of such scenario. In this case “self-development” means potential readiness of a region (confirmed, among other things, by the dynamics of its development in the previous years) to move to another phenotype of development usually of higher level, which is provisioned by the whole complex of institutional, related to resources, and structural conditions that part of other regions of this phenotype possess already. To provide the progressive advance of the regions along the development genotype curve (from phenotype to phenotype) – that is the new presentation of the state regional policy. The constructive manifestation of such a policy would be, firstly, the system of goal-oriented milestones for region development targeted at the regions capabilities; secondly, realistic ones, since they have been achieved by the regions of more advanced development phenotype; and thirdly, providing progressive growth dynamics of corresponding indicators.

Modernization as a new gradient of the concentration of intellectual, management, financial and other efforts and resources becomes more and more popular. Any facts and actions directed at improvement of today’s condition are being gathered under its flag. Cottage hospital received ultrasound device, school building was repaired, road surface was patched up, etc. All these activities are presented as victorious steps of gathering speed modernization. In reality cleanup, renovation of productive facilities based on existing technologies, rationalization of product flows, resources, finances, etc. is not modernization itself. One economy is better than another one, if with the same resources it gets better results from their utilization. First of all, the task of economy modernization is a process of key parameters growth of its efficiency, in particular, the output of the main production factors – labor and capital. And its accomplishment is possible only on the basis of profound reformation of technological, institutional and social structure of economy and society.

The regions are the “litmus paper” of seriousness of intentions to make radical steps in economy modernization. Self-sufficient primary elements of a country – municipalities and their associations – are the foundation of advanced economies. It can be very well expected, that if existing order of things regarding these elements will be preserved, successful transition to the sustainable economic development, as it is in the countries with advanced economies, is doubtful. Therefore, the main problems of Siberia are related not to the issues in relationships between its regions and the Federal Center (exclusively, selectively, some side issues might be resolved or being resolved at present) but to the common system of institutional conditions which do not motivate regions toward sustainable type of development. Unfortunately, existing state structure model does not evolve in this direction. Radical modernization should concern the very foundations of federal relations as well. While, at best, just a fourth of taxes collected in municipalities will be passed as their own revenue, any talks about sustainable financial base and growth of motivation of local communities towards economic activity are useless. The attention of federal gov-

¹ Territories, geopolitically important for Russia, are marked by their status through the federal targeted programs set up for them. There are four such programs: 1) for Southern Kuril Islands, 2) for the Russian Far East, the Transbaikal, and the Irkutsk region, 3) for the Northern Caucasus, and 4) for the Kaliningrad region. All attempts of the SB RAS and the office of Presidential Plenipotentiary Envoy to the Siberian Federal District to obtain the same status for Siberia have been unsuccessful yet.

ernment towards middle class formation, small business stimulation, etc. mostly bears a formal character of extraterritorial recommendations. It is not an element of system transformations of local economies and municipalities directed at formation of internal market, meeting consumer demand, and growth of living standards of population. Even assuming that specific directions of economic and social changes proposed on federal level are built on the basis of solid, system, consistent general concept, it should be acknowledged that upon reaching a certain points according to the industrial programs such consistency should be forgotten. Self-contained process of these programs implementation in particular parts does not provide harmonic and comprehensive picture of general improvements in the life of local communities. And this would be much desirable. If we plan to be among countries with advanced economy, it would not hurt to understand why it is comfortable for people to live there without any programs and incentives organized by supreme authorities, even in a smallest village, and here, even in a big city, there are lots of problems.

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