

Regional Differentiation in the Russian Federation - a Cluster-based Typification

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Abstract

The paper presents an empirical typology of the regions of the Russian Federation (RF). Based on indicators defining the socio-economic situation of all 89 regions (federation subjects) of the RF, the paper allows for a type-wise characterisation of regions identified according to their outstanding economy-related problems. Using a procedure for region's ordering within multidimensional space (region's ranking) in relation to the base year 1992 and within year-to-year series (1993, 1994) a clustering of all RF regions according to their principal type and problem character is obtained. The resulting typification provides a methodological and procedural basis for monitoring the socio-economic situation in the regions of the RF, can be helpful in preparing scientific foundations of a comprehensive targeted government program and presents an element for further studies on regional development in the Russian Federation.

1. Introduction

Most regions of the Russian Federation (RF) are considered problem regions today. The rapid transition from the planned economy system to a market-oriented economy has resulted in enormous socio-economic changes affecting all the 89 regions that form the subjects of the RF. Yet even before this change there were substantial differences between these regions resulting from the inequality of its economic environment, its diverse infrastructures, endowment with natural resources and the multinational structure of its population who inhabit that Euro-Asian vastness of the country quite unevenly. These differences have been aggravated by the political and socio-economic changes of the last decade: the adaptive potentials of the regions to a market economy exhibits large variations.

This paper attempts to give an empirical differentiation of all 89 regions (federation subjects) of the RF according to their problem character. This will be done in three steps:

- 1) a short description of the regional division of the RF and the salient nature of their problems
- 2) an elaboration of a set of indicators defining the socio-economic situation in all 89 regions of the Russian Federation plus procedures to replace groups of correlated indicators with single estimated (synthetic) targets and to order regions within multidimensional space (regions' ranking) in relation to the base year 1992 and within year-to-year series (1993,1994)
- 3) a clustering of all Russian Federation regions according to their principal types and drawing on the regional typification and providing a rationale for the sorting out of backward and prosperous regions, those in depression and those considered to be border areas and a description of the problem character of the specific types.

2. Problem regions in the RF

2.1. Regional division in RF: special features

In this Statement, a region is understood to mean a subject of RF, where the most essential feature is the presence of governmental authorities and municipal administration on its territory. The regions conforming to this rule represent 89 subject of RF (see illustration 1 of the Annex).

Republics.....	21
krays.....	6
oblasts.....	49
cities of federal importance....	2
autonomous oblast.....	1
autonomous okrugs.....	10

The current administrative and territorial set-up, which came into being many years ago, has become obsolete and stands apart from the countries of the world that can be identified with Russia in the number of population inhabiting its territory. Consider 55 oblasts and krays, of which a major portion (located in the European Russia) is represented by those of smaller size, devoid of pronounced line of business and conditions favourable for a comprehensive development. Thus, the most extremely differentiated territorial entities found in the Greater Volga area vary in terms of territory by a factor of 7, in terms of population by a factor of 20, and in gross product by a factor of 40. The inequality is even more evident throughout the Russian Federation as a whole.

On the other hand, the eastern part of Russia is noted for very large administrative and territorial entities.

The problems of socio-economic development in the territories are compounded by the problems of national and ethnic nature. Indeed, there are 32 administrative and territorial entities in the RF regional structure representing national republics, autonomous units and okrugs. The debates are underway in this country as to what subjects of the Federation (oblasts, krays or national republics) should be

granted sovereignty, and the amount thereof. Attention is drawn to substantial differences in taxation and budgetary fiscal policies pursued with regard to certain regions. It is also pointed out that national territorial entities has already taken advantage over their exclusively Russian counterparts in setting up such institutions as president, parliament, etc. It should be noted, however, that only four autonomous entities can boast the number of their population exceeding 1.5 mln each, where as the number of oblasts in the Federation noted for the same make up 46%, with the krays the figure running into 100% whatsoever. And only five Russian autonomous territories show the predominance of indigenous population. That the RF administrative structure should undergo significant changes has become imminent. The press is abundant in all sort of suggestions and proposals, pointing in particular, to the federative systems of Germany or USA as examples to follow. Immediate solution to the issue, however, is hardly expedient given the current economic situation in RF.

A number of RF subjects, such as autonomous okrugs, autonomous oblasts and cities of federal importance are incorporated territorially into other RF subject (krays, oblasts). For example, Tyumen Oblast has two more subject, i.e. Khanty-Mansi and Yamalo-Nenets autonomous okrugs. The same can be said about other RF subjects, including Krasnoyarsk and Khabarovsk Krays; Irkutsk, Chita, Kamchatka, Perm, Arkhangelsk Oblasts, etc.

RF has multilayer regional structure. Considering a region as RF subject, we can see that the upper level (rank) of the regions is made up of economic zones and interregional association, while their lower level (rank) incorporates administrative entities of different levels, such as Oblast-center cities, city areas, towns, urban-type settlements, and other inhabited localities or their conglomerates.

Economic zones are the object of government forecasting, accounting and statistical records, working out of major interregional programs aimed to implement a long-range strategy of plant location and development and bringing solution to social and ecological problems within their territorial boundaries. The economic zones will be established at the Federal government level (see illustration 2 of the Annex).

The economic zoning of over 30-year long standing would hamper the progress of transition towards market economy. Some zones are too large and cumbersome in their structure. The inequality of economic potentialities in some zones is remarkably measured by a factor of 4 to 5. The other are noted for multi-industry economic structure involving up to seven or eight major industries and dozens of primary-industry plants (businesses). Thus, a zone's specialization is becoming rather doubtful. Moreover, the economic zones have no bodies of power of their own and are outside the administrative structure system.

Transition to market economy calls for the objectives of economic management of a given territory being radically changed. This is reflected in the setting up in the 1990's of a number of interregions in RF, whose status revealed a fundamental difference from that observed in the network of economic zones. These associations can be illustrated as follows:

Central Russia	Northern Caucasus
Black-soil belt	Greater Volga
North-Western Russia	Siberian accord
The Urals	Far-East

Interregional associations of the RF subjects will be formed on their own initiative keeping in view their common socio-economic targets and ecological problems. Once recognized, they would boost the association members into coordinating their activities, strategies and policies, and into pooling their resources to ensure their more efficient use. «The Siberian Accord» may well illustrate the case, being an interregional association created on the basis of Siberian republics, krays and oblasts. The concurrence of borders formed by interregional associations and economic zones is not altogether ruled out.

2.2. *Problem regions' salient features*

The problem regions categorization involves not only the subjects of the Russian Federation as a whole, but certain portions of the oblasts, krays, republic or contiguous areas of the neighbouring spatial entities. Furthermore, taking into

account the vastness of a number of RF subjects, it is feasible to sort out a few problem areas within each of them, thus making it possible to effect government control over and render target assistance for the localities in need, without extending it to well-developed hubs of RF subjects.

The salient features to identify the problem regions are:

- a dire need to deal with a major problem, failing which is likely to undermine the country's socio-economic situation, its political stability, bring about environmental disaster, etc.;
- availability of the resources potential which is of paramount importance in resolving the most urgent socio-economic problems of the country;
- economical and geographic, or geopolitical factors, as well as natural resources characterizing a particular significance of a region - making imperative a specific governmental guidance by federal bodies of power;
- shortage of a region's own resources needed to address the problems occurring at the federal level, thus earnestly prompting direct or indirect participation of the state in rendering support and organizational assistance to a region;
- the feasibility of following the program-objective approach, making use of specific forms of the programs implementation and formally arranging the problem region status to become an object of government control.

2.3. Degree of problem elaboration

Now that the problems of providing support for depression-stricken and backward RF regions have become of top priority, the studies on their unequal development have intensified (works by A.Treivish, T.Nefyodova, N.Petrov et. al.). A preliminary survey to be discussed at the Committee for Regional Problems of Russia under the Presidential Council was prepared under the guidance of L.V.Smirnyagin in the Analytical Center under the President of the Russian Federation. The survey substantiated the vital need to control the development of depression-stricken areas, presented preliminary results of computations aimed to select such areas,

and put forward some points of discussion regarding the priority of rendering federal assistance to the cited areas.

In our opinion, the main disadvantage of the survey prepared by the Analytical Center lies in somewhat artificial approach to the notion of «depression-stricken» regions, which has come to include the backward, depression-stricken crisis-prone, and other types of regions. As a result, the specifically-oriented, target «treatment procedures» of the above areas have become an impossibility in itself. Detailed analysis of the computations outcome has revealed the need for improvement in the procedure outlining the technique of selection of depression-stricken and backward regions, including regional typification. The fact is that the region selection following three criteria (setback in production, growing unemployment and low living standard), which is fairly good for the developed countries of relatively little interregional inequalities, proved not so good in Russia of today, where certain regions either demonstrate extremely pungent inequalities or are strongly affected by the crisis situation in economy and society at large.

These disadvantages notwithstanding, the authors have undoubtedly done a job of vital importance. The survey has become the basis to further streamline the posing of the problem in question and the procedures employed in a series of studies, which are dedicated to the problem regions issue treated within the bounds of the research INTAS-94-1149 Project.

3. Indicators and procedures used for typification of regions

3.1. *Initial indicators system*

Provisions have been made to secure a comprehensive coverage, which included 100 factors categorized into primary (statistical) factors and secondary (estimated targets) factors. Primary initial indicators will be clustered according to the integrated factors as follows:

Unemployment. There are several types of unemployment, including concealed, structural, seasonal, sex and age-related, etc. It would be appropriate to consider

here the category of the registered unemployed, as the fundamental step in estimating the general situation with regard to this particular factor.

Crime. The relevant basic data are routinely compiled and processed at special analytical units under the Ministry of Internal Affairs. The interred assessments could be found from time to time in periodicals.

Political situation. This is the least estimable in quantitative terms factor of social stability in a region where accessible statistical data collected on a regular basis are non-existent. At the same time, a region's social situation is dramatically affected by the fact that federal and executive authorities are at a deadlock; political parties and currents are active in their strivings, as are leaders of strike and trade-union movements; political and economic credo of the qualified majority in administrative bodies shows its opposition to the government course.

International relations. Nowadays this is a major factor destabilizing a region's social situation. Alongside the objective processes such as the rise in national consciousness, movement «to restore historical justice» involving the nationalities that inhabit a region, the struggle for economic and political sovereignty would bring about selfish motives of preserving (or winning) political and economic power.

There is one special feature about the cited processes, which is their latent ripening culminating in a sort of explosion during social aggravations, or even in an armed conflict.

Ecology. There have been setup regular bodies in the form of regional and federal Committees for Ecology. Here the only difficulty is how to switch from step-by-step efforts in assessing the environmental pollution to integrated estimates of a territory's ecological balance.

Consumer market behaviour. A variety of approaches based, for instance, on the use of a number of consumer goods baskets - physiological, minimal, rational, actual, etc. - make it possible to assess the rated capacity of consumer market in a region, i.e. the amount of goods and services to be consumed by its population. Real supply of these goods and services may not meet the eventual requirements estimated through one of the above approach, let alone the actual demand

determined by the price ratio and real incomes of the population. Regarding this indicator, major emphasis is placed on the most critical consumer goods.

Price indices for consumer goods and foodstuffs. These indicators, which directly signal an aggravated social well-being, serve at the same time to indirectly measure the situation at consumer market.

Individual incomes. This indicator involves the rated personal incomes inferred from all income-related sources including wages and salaries, business activities and individual household, pensions, scholarships, allowances, social security payments, government budgeted subsidies to set off the prices for staple foodstuffs and services from nonproductive sphere. This is a substantial part of social spendings, and their abolition is likely to directly affect the population consumer budget. In fact, the averaged income indicators are of little value in trying to explain their impact on the rise of social tension in community. Hence, a differentiated approach is required both in sorting out the income groups on the one hand, and the job skill rating on the other (remember miners' strikes or teachers and doctors unrest).

Integrated data on economic activity. This is a traditional set of economic indicators characterizing the volume and dynamics of production and consumption of goods and services in a region. The most important indicators here are the estimates concerning growth and decline of production, as well as its structure (needed to access the potentialities of an established economic complex).

Factors aggravating socio-economic tension. These are all the other factors triggering any manifest bounds of the tension which are, first and foremost, latent (or concealed) health hazards resulting from human activities along the road of historical advancement, such as nuclear power stations, secret zones of radioactive contamination (Chelyabinsk Oblast, Southern Altai, etc.). There are some other factors prompting the unwanted course of events unrelated to the above sources. These are: our nearby neighbors outside the RF territory undergoing the processes that adversely affect our domestic situation. The effects exerted by our neighbors could be estimated by experts in terms of eventual exacerbation or mitigation of this particular factor and its role for our internal situation. To illustrate the case, general stability estimates made for Omsk Oblast and Krasnodar Kray

would vary in full accord with what is called socio-political climate characteristic of their external neighbors.

Another group of factors might be stipulated by some reasons found outside a region under consideration, i.e. sweeping changes in government's highest echelons, turning the course of economic reforms, aggravation of foreign-policy or foreign economic situation.

Drawing on the primary indicators, at the second stage there will be estimated the initial indicators describing socio-economic situation which, as a rule, reflect a set of standards of living and economic development comparable with other regions. Besides, the indicators specifying the behavior of socio-economic processes in regions will be also included, acquiring especial importance since this enables us to find out the regions of socio-economic homogeneity, thus allowing for even more correct forecast of the relevant indicators progression.

Secondary initial indicators are as follows:

1. **Density of population** of a region's residents. It will be computed as the ratio of the number of inhabitants to the region's area.
2. **Infrastructure pattern** of a territory. To be calculated as the ratio of the length of hard-type roads to the density of population.
3. **Share of own incomes** in the consolidated budget in its total expenditures. This indicator that characterizes a region as a whole reflects, first, the degree of its self-sufficiency with own sources of financing. Second - the level of state support for the region from the federal budget. Third - different principles of income sources formation inasmuch as region's budget is concerned.
4. **Level of development of non-productive sphere.** From the available scanty number of factors describing the situation in and development of non-productive sphere of a region, we have taken two with regard to public health: the number of doctors and patient beds. The former is higher for urban territories, the latter stands for districts less developed in infrastructure. Simultaneous study of these factors makes it possible to eliminate the impact of structural differences in averages following the «town-village» criterion.

The next group of indicators brings us closer to a region's population, their incomes and employment:

1. **Unemployment rate** in active population. This indicator will be calculated as the ratio of relevant primary factors involving the registered number of working population and the number of active population.

2. **Per-capita incomings**. These are to be defined as a ratio of average per-capita returns to the minimal standard basket cost comprising 19 items. This indicator is primarily distinct in adjusting the population incomes to the form comparable by regions.

3. **Privately held lands**. This factor is indicative of several aspects, including the development of market reforms in a region, activities of its authorities, indirect characterization of natural-and-climatic potentialities of the region, feasibility of gaining incomes in kind, etc.

4. **Provision with privately owned cars**. In this case the factor is targeted to indirectly make up for the inadequate statistics of money incomes of the population and to see how they can be redistributed between regions.

5. **Putting residential buildings into service**. This indicator enables one to cast the light upon general situation on civil construction of a region, principal investors' potentialities, the altitude of authorities towards the problem. Since it is calculated in terms of physical indicators, it is unlikely to be price-distorted.

Lastly, here is a group of indicators to characterize a region's economy:

1. **Retail turnover**. This is a frontier indicator which, under «normal» conditions is connected with income of population, economic structure of a region, and level of production of consumer goods.

2. **Decline-in-industrial production index**. Computed as physical index of industrial production, it reveals the scale economic decline. It is set to assume that the situation in industry is a pacing factor in the development of the rest of the industries in a region's national economy, i.e. agriculture, construction, transport and communications, etc.

3. **Structure of industrial production: weighted estimate**. Regional and industry-oriented industrial structures previously entered into the primary factor data base

will be brought together in this indicator following specifically prescribed weights. Such an indicator is designed to define regions noted for good prospects or no prospects of industrial structure.

4. **National economy income.** This is an integrated factor generalizing financial outcome in economy. Being added to the number of population actively gained in national economy, the factor can specify the profitability of economy by regions on comparative basis. Correctness of its application will be even enhanced once the income is freed from the price factor to make use of integrated indices, or implicit price deflators.

3.2. Role of factor analysis in aggregating initial indicators

In order to establish general patterns pointing to the essence of a phenomenon under study, a group of correlated indices is replaced with the calculated (synthetic) value, or what is known to be a factor.

Arrangement of factors and departing from a great number of initial variables to form a relatively small set of major factors appropriately simplifies the problem of choosing indices which provide for the diagnostics of socio-economic development of a region.

As a result, the initial list has been reduced from 100 to 20 indices to be provisionally broken down into five groups:

Group 1 - «Living standard», which is understood to mean the ratio of income to the subsistence level, general unemployment level, provision of people with accommodation, cars, meat and meat products, as well as vegetables per capita.

Group 2 - «Industrial and financial development of a region» - indicates an averaged per capita volume of industrial production, unit investments, index of physical volume of production, per-capita taxation in a region.

Group 3 - «Agricultural potential of a region» - comprises four major indices of agricultural per-capita production, such as grains, potatoes, meat and milk.

Group 4 - «Level of social well-being» - contains indices indicating the development of regional social sphere. The most prominent of them (in terms of

factor-related loadings) are as follows: the quality of transport and communications of a region, i.e. a network of hard-type roads; availability of major airports; level of railroad transportation service; location of non-freezing ports; level of telephone communication; putting accommodation into service; fixed non-productive assets value per capita; volume of paid consumer services sector per capita; provision of medical service.

Finally, *group 5* - «Ecological situation in region» - focuses on pollution of water, air and soils by man.

3.3. Procedure for typification clustering

It is aimed to provide rationale for the selection of classification criteria and regional typification following the multidimensional nature of space.

The procedure is based on comparative analysis, making use, in particular, of taxonomic techniques. The essential point of these techniques is the taxonomic distance that serves to measure the proximity between the objects under study (in the context of our interpretation - the RF regions) in the multidimensional space of socio-economic indicators. The calculated distances make it possible to determine relative location of each region, thus enabling their typification and classification.

The approach employed to set up typological clusters of regions is related to multidimensional rankings of the indicators and computation of aggregative ranking measures, such as total rank, average rank, etc. The cited approach would work with non-transformed indicators and allows the ranking weights of certain indices to be duly introduced in accordance with initially propounded hypotheses.

Identification of regional types is strongly dependent on the chosen system of diagnostic indices. That is why the primary informative set formed through the use of factor analysis techniques was later on refined and specified. To this end, a series of classifications as per clusters of variables (living standard, industrial development, agricultural production, social sphere, regional ecology) were performed, the data obtained being carefully correlated.

Table 1 shows coefficient of correlation for the regions' ranks with regard to different systems of classifying criteria (first number in the cell), and it shows the significance level of the coefficient of rank correlation (second number) - with significance of the correlation coefficient estimated at a 5% level. One can see the link between typologies in such clusters of indicators as living standard (six variables), industrial development (four variables). Rankings of living standard and industrial development reveal especially close relationship reaching 0.47.

It should be pointed out that regional rankings by industrial development and basic indicators of agricultural production (four indicators) demonstrate a weaker inverse relation. As to regional ranking with regard to social sphere indicators, relation with the regional ranking in industrial development and agricultural production indicators is not very strong and approximately the same.

Classification on generalized ecological ranking of regions virtually has no link with any ranking systems. There is but a negligible inverse relationship with the ranking involving industrial development indicators.

Given that key variables in identifying depressed regions are recognized elsewhere to be the standard of living and industrial development indicators, and keeping in view the specific historical path taken by Russia after 1917 (setting up powerful industrialization, transition from an agrarian into industrial-agrarian country), the greater weight in multidimensional rankings by regions should belong to the clusters of indicators of industrial development and living standard. In the meantime, the indicators from social sphere, ecology and agriculture are likely to become additional, complementary ones helpful in specifying the regions ultimate ranking.

3.4. *Methods of considering typologies behavior*

Having obtained the pattern of how regions are differentiated in the multidimensional space of indicators, we are failing to consider such an important point as development behavior. Indeed, it is the comparative behavior alone that will make it possible to estimate the trends in a region's development, to perceive either depressive or progressive way of its development.

The pattern and predominant trend of region's development could only be established by analyzing its situation in correlative systems of sequential time rankings. A single time profile (ranking) per se looks rather indefinite and stochastic, especially in the middle of its range spread. The relative stability could be found in marginal, or extreme, regions, i.e. the best and the worst in their development.

As evidenced by statistical studies on correlative classifications in two sequential time profiles, the coefficient of correlation of regions' ranking proved to vary from 0.43 to 0.56. Graphically speaking, the rankings are noted for a fairly diffuse middle portion and clearly-cut «tails».

This very circumstance proves helpful in identifying backward and most advanced regions. Trends in the development of the rest of the regions could be assessed by reviewing their rankings over sequential time spans and through their primary factors. In this doing, it is imperative that the ranking distribution be considered in individual time profiles, which is conducive to defining the singularities in ranks distribution and to finding out the degree of nonhomogeneity in the totality of regions under study.

4. Clustering of RF regions based on their typification methodology

4.1. General differentiation of regions

Regional typification procedure set forth in Section 2 of this Statement enables one to represent all the RF regions in a determinate order both for a single year and in dynamics over the reforms-oriented years. The available statistics would permit your overview of regional development behavior over the years 1992-1994. Unfortunately, you will fail to make adequate correlations due to lack of some data, e.g. unemployment level for the years 1992-1993. True, there will also be found a wide range of representative indicators which provide for a fairly adequate data correlation on a year-to-year basis.

The three-years findings on the living-standard and industrial development figures are entered into Table 2. The regions have been arranged according to the 1992 ranking outcome. Consider some results of particular interest.

Twenty three subjects of RF were estimated at a very low average rank as of 1992 that didn't exceed 30.00. However, starting from 1992 their number was reduced to 22 to become 18 in the year 1994. The picture is the same at the other end of the Table. There were 21 regions in 1992 with ranks over 54.00. in 1993 and 1994 their number became 17 and 13, respectively.

The whole picture looks like this. At the outset of reforms we saw regions' scattering and their sharp differentiation as per degree of adaptability to the market related reforms. Now let us have a look at the end of the list (rank exceeding 50.00). here you can find almost all the regions that are in a position to export (beyond the ex-USSR borders) raw materials and their primary treatment products, i.e. oil and oil products, gas, coal, ferrous and non-ferrous metals, gems, timber and woodworking, mineral fertilizers. Accordingly, the upper part of the Table will contain the regions of agricultural and industrial orientation, as well as regions whose branch structure is notable for mechanical engineering, light and food industries.

The cited «scattering» revealed a pronounced spatial trend. Of 21 regions ranked over 54.00, eleven were to be found in Siberia and the Far East, where as four belonged to the Urals area. The rest of the eastern regions were largely to be ranked among economically unfortunate ones. Their list was extended by the republics of Northern Caucasus and by a number of Oblasts from the middle belt of Russia.

The year 1994 saw a specific compression of the rank-based environments. Thus, many regions registered as «backward» managed to improve their stands relative to others, and many «advanced» regions, on the contrary, lost their grounds. Changes of different type also took place and are shown in Table 3.

Here are our explanations of the above facts. Following the balanced pattern of regions' differentiation of 1992, they were divided into two groups. The average rank of so-called backward regions forming the 1st group was less than 40.00. The 2nd group regions named «successful» were ranked 40.01 and more. Further on

the 1994 rank revision versus the ranks of 1992 was studied to find out the degree of difference existing between the regional ranking levels within the two-year space of time.

The significant alteration in a rank that would result in changes (worsening or otherwise) of the above level was assumed the one amounting to no less than 5 units. Hence six types of regions have been categorized as follows:

- 1) backward regions with level set to be aggravated;
- 2) backward regions retaining their level;
- 3) backward regions with level set to be improved;
- 4) successful regions with level set to be aggravated;
- 5) successful regions retaining their level;
- 6) successful regions with level set to be improved.

The outcome of regional typification leads us to the conclusion that they are highly mobile relative to each other. Thus, of 88 regions only 28 retained their level (types 2 and 4 shown in Table 3), i.e. less than a third from the total number. Out of backward regions, as of 1992, eight worsened their level, 14 retained it, and 20 improved their ranked level, with a number of Oblasts (center-cities of Tambov, Ryazan, Kaluga, Kursk, Kaliningrad, Lipetsk), Stavropol Kray and the city of St.Petersburg entering into the category of relatively successful regions. Now consider the bulk of successful regions as of 1992, where seven improved their level, 14 retained it and 25 worsened. A number of regions of their category, namely republics of Altay and Udmurt; Primorskiy and Khabarovsk Krays; Arkhangelsk, Rostov and Sakhalin Oblasts - all became ranked among the backward regions in the year 1994.

As is evident from the analysis, the dominant role among the regions that improved their level belongs to the cities of Moscow and St.Petersburg, and Oblasts of Central Russia. Eastern regions of the country gave in. Out of 33 regions of the worsened level, eight account for Siberia, seven - for the Far East and another seven account for the Ural, thus amounting to 22 regions, or 2/3 from their total number. Among those that improved their level there are three from Siberia, two

from the Far East, with none from the Ural. If the situation is going on unbridled, nearly all the Eastern Russia will turn into a very huge region in depression.

Since the indicators of agricultural development in this research are rather complementary in importance, it is not only the regions' ranks and their behavior that become a subject of interest - the feasibility of regions' self-sufficiency in staple agricultural produce has become a matter of principle.

The 1990-1994 findings are indicative of the fact that decline in the volume of agricultural produce involved all the regions. There was one exception in the produce concerned - the potatoes - of which the yield displayed a rise in many a region. Food ration might well be said to have sadly changed, offering potatoes rather than meat. Most regions have been demonstrating the dramatically progressive problem of a drop in food indicators. For instance, per capita meat production has shown a 1.8% fall in Khabarovsk and Primorskiy Krays, Amur and Magadan Oblasts, Chukotka and Taymyrskiy Autonomous Okrugs. Similar problem with milk is affecting virtually all those regions, as well as Murmansk and Sakhalin Oblasts, Koryak AO. And there is a growing dependence on the part of northern and Far-Eastern areas of Russia upon the food-stuffs' delivery from the «mainland», or upon the imports of the same. First and foremost, food shortages would make a very serious impact on the population of so-called «unsuccessful» regions.

4.2. Identification of backward, depressed and successful regions

No formally accepted list of problem regions has been made available so far, let alone their typification. A variety of proposals are put forward instead. If economic ones were assumed as fundamental to provide for the regional typification, all the subjects of RF, in our comprehension, could be categorized into the types of regions as follows:

- 1) traditionally backward
- 2) depressive
 - a) pre-reform
 - b) newly created

3) traditionally developed (industrial and industrial-agrarian)

a) adapted

b) critical (non-adapted)

- conversion-type (no-admission cities including)

- imports-oriented

- export-oriented

4) as-per-program developing (raw-materials-based)

a) existent

b) potential

General description of these groups of regions, analysis of what caused economic problems and how to have a good grip of a problem can be found in Table 4 of the Annex.

The process typification in RF has to be complemented with what constitutes the identification of the most specific predominant problems of a region (whether geopolitical, ethnic or ecological). The relevant analysis data are available in Table 5 (see the Annex). Here are the elaborations subsequent upon a complementary analysis:

1. Any region may be placed among different types of problem regions, depending on the dominant factor of its situation. The possibility is not ruled out that the same region will be found in several types of region, given several problems specific to it. For example, Republic of Dagestan falls both into category of traditionally backward and natural disaster-prone regions; Republic of Buryat is not only a depressed region of Russia. It is a territory to be relegated to a group of regions wanting special ecological protection.

2. Owing to special importance attached to the problem of Russia's striving for its independence in food stuffs provision, Altay Krai and Kurgan Oblast should be categorized among depressed regions in want of the backing from the agrarian sector of economy.

3. Kamchatka and Sakhalin Oblasts have to be treated as order regions of strategic importance. At the same time, Sakhalin Oblast - similar to Magadan Oblast - shall

also be considered a type of raw-materials-based regions. Moreover, Kamchatka can be seen as a specially guarded entity. And all the three Oblasts should be taken as «unable to be adapted» for newly created conditions.

4. Republics of Northern Caucasus can be regarded as traditionally backward regions, but they should belong to a special group noted for commanding relatively large internal reserves appropriate for self-development.

The above types of regions differ in economic climate, the degree of adaptation of well-established economy for new performance conditions, and also differ in substance and urgency of the dominant problem and government approach to resolving it.

Along with «old» problems there emerged «new» ones because of changes in political and economic situation of the country. New legislation governing the formation and development of problem regions is being made, since these regions are involved in external economic activities. New laws are primarily intended for free economic and customs zones and border districts. The regions which, despite all the «reforms»-related hardships and the ensuing drop in the basic socio-economic indicators, retained their leadership in standardized production industries (and these regions form a greater part of the subjects of RF), can be included into category of developed (industrial and industrial-agrarian) ones. In these regions, all the principal indicators of production output and living standards are above those averaged throughout the country. This group of regions largely includes the subjects of the Russian Federation that had mostly adapted to new economic relations, can boast sufficient development potentialities and had succeeded in entering the system of government control being established today.

At the same time, there are some subjects of RF among developed regions whose economy is in *critical* situation. Their pre-reform period was characterized by indicators exceeding the average throughout Russia, but these subjects failed to adapt to new economic conditions. They need economic restructuring in order to make the most of the industrial, research and human resources potentials, to make the output more competitive, thus forming new economic ties. These districts are thought to be those where military-industrial complex predominates and there are cities and towns of no-admission type forced to restructure their plants, which is

hardly feasible without government support (e.g. provided by implementing the Conversion federal program, etc.).

Backward and **depressed** problem regions are of particular importance in regional pursued in Russia.

The subjects of RF are considered backward, or traditionally backward, which have not become adequately developed throughout the Soviet era for a number of reasons. As a result, all their socio-economic indicators proved inferior to those typical for the country as a whole. The new reforms had added to their aggravated situation and today these subjects have no established potential to promote their development. The regions of this type could be categorized into three groups of RF subjects, including: 1) those located in the North of Russia with its unfavorable climatic conditions; 2) those located in favorable climatic conditions and 3) a group of Northern Caucasus republic offering most favorable living conditions for the population and factors conducive to production development.

The fundamental difference between the depressed and backward regions lies in the fact that, despite lower-than-average-economic indicators of depressed regions, previously they were rather economically developed demonstrating prominent performance in some aspects. However, these regions lost their stand due to several reasons, such as depletion of natural resources because of aggravated geological conditions, drop in demand for the production output of a region, or because of lowering of product competitiveness.

After analyzing the typologies behavior of the RF subjects it became possible to identify a group of regions likely to be called flatly unsuccessful or crisis-laden, even when viewed against the background of overall decline in the volume of production. Some authors, e.g. A. Treivish and T. Nefyodova identify three types of crisis districts:

- zone of armed spatial conflicts in the Northern Caucasus, primarily in Chechnya;
- borderlands being reduced to poverty, among them ethnic, northern, caucasian and just peripheral regions;
- districts in depression of classical style, characterized by severe setback in production and unemployment.

Of course, the terms used here might present the points at issue, but the philosophy to identify the territories is surely out of question.

That Chechnya per se should be given an individual approach goes without saying. When we come to consider the second group of RF subjects, the term «traditionally backward» regions approach to be most suitable. There are 16 of them overall, including republics of Ingush, Dagestan, Adygey, North Osetian, Karachay-Cherkess, Kabardin-Balkar, Kalmykiya-Khalmg Tangch, Tyva; Yevreyskaya Autonomous Oblast; Autonomous Okrugs: Taymyrskiy, Evenkiyskiy, Koryak, Aginskiy Buryat, Ust-Ordynskiy Buryat, Nenets, Komi-Permyak.

Accordingly, «traditionally backward» regions could be provisionally subdivided into three groups. The first group has incorporated virtually all the national spatial entities to be found in the Far North areas or districts of status similar to them in human habitat and transport accessibility. To these we can refer Komi-Permyak, Evenkiyskiy, Taymyrskiy (the city of Norilsk excluding), Nenets and Koryak Autonomous Okrugs. All of them are noted for the poorest ranking indicators of economic activities and low living standards. No changes about them are likely to come forward in the offing, therefore the population of the cited regions are expected to be in want of constant government concern and its direct support.

Economic and social situation in regions under consideration would undergo sweeping changes only if here was an in-depth development of their natural resources. The greatest chances here are with Nenets and Evenkiyskiy AO (the Barents sea problem region and the Siberian platform), where oil and gas recovery should be started. While launching a new oil-and-gas complex in these territories, previous experience must be embodied lest the blunders made in developing the natural resources of Yamalo-Nenets and Khanty-Mansi AO should be repeated.

The second large group of backward regions formed through national spatial entities of Northern Caucasus (where Chechen and Ingush republics take a specific stand for independence. All of them can boast fairly favorable conditions for life and traditional forms of management. Some of these republics are in possession of resources' potentialities to develop a variety of industries, and are the recognized recreational areas. Their current indicators of economic development, and especially of living standard, are low, which can be accounted for

by a sharp fall in demand for natural resources, severance of traditional economic ties with other regions, lack of economic occupation, and large families. In this case the initial computation base needs a more careful approach, given that a large portion of active population from Northern Caucasus is traditionally engaged outside administrative borders of their spatial entities.

Now consider the third group of backward regions (characterized by satisfactory natural conditions) where the Republic of Tyva has been outstanding in its importance after it was incorporated in the USSR. It has ample natural potentialities to develop such a branch of agricultural sector as live-stock farming. Unfortunately, inadequate transport accessibility in the republic reduces the opportunity of its active involvement in inter-regional market. The republic once missed its chance to improve the situation with transport and hence the economy (the opinions of its leaders then varied on the feasibility of venturing a railroad to connect Tyva with well-developed centers of Siberia). This for many years complicated the setting up of economic basis to secure its self-development.

The assistance will be needed by Republic of Kalmykiya, too, although its resources potential appears to be quite sufficient. In all probability the major problem here will be to restore the natural environment balance affected due to harmful economic activity. The expected aid may be directed to provide for the restoration.

Of course, there is hardly any reason to go on with labelling Buryat Autonomous Okrugs (in the territory of Chita and Irkutsk Oblast) as backward. Initial boost in the form of federal support is a must. Afterwards an appropriate attitude on the part of the administration of respective Oblasts would be quite enough, in particular through agreements on cooperation in certain spheres of activity.

The situation is still more alarming in Yevreyskaya Oblast. Its main problems are the drain of local inhabitants and loss of industrial market. Issues concerning the development of this Oblast should, in our opinion, be tackled in terms of geopolitical (border) problem regions development.

Groups of depressive regions

Some research argue that depressive regions include a semiring of areas in the center of the Russian Federation, east of Moscow, and separately located Pskov

and Kurgan Oblasts. It is Ivanovo Oblast, according to them, that epitomizes this type of regions. Yet our studies, as of the later 1994, qualify as depressive regions Ivanovo, Arkhangelsk, Kirov, Kurgan, Chita and Amur Oblasts; republics of Udmurt, Chuvash and Buryat; Khabarovsk and Primorsky Krays - 11 regions in total, with an area of 2940.600 km², population 14729000.

Disparity in data obtained with other researchers can be explained by a wider score of the indices to be analyzed, more sophisticated procedure of data processing and regions' ranking. There is, however, yet another factor of significance, which is the typology behavior. The findings of this behavior, shown in Table 2 and 3, lead us to an unambiguous conclusion that the position of many regions have been improved since 1992 when they were referred to a landslide, i.e. crisis group. A large portion of these regions, particularly those found in Central Russia, had left the category of backward regions. In other words, even if there was further drop in the volume of production and living standard - their pace was much less than the average relevant figures in the country as a whole.

The list of 11 regions indicated above, which are the subjects of RF, was made up conventionally in the following manner: the regions with fairly high level of industrial development (as distinct from traditionally backward regions) were placed among depressive ones. Out of the regions that in 1992 were in the group of backward ones were taken those that showed no improvement in their level of development in 1994 and that were found in critical position owing to a number of additional factors.

Following this pattern, Republics of Chuvash and Buryat, Oblasts of Amur, Kirov and Kurgan were placed among depressive regions. Out of backward Oblasts that displayed a trend for improvement, Ivanovo and Chita Oblasts were included into depressive category, because they suffered a dramatic drop in all indicators of living standard and production sphere. Out of recently successful regions, there were categorized as depressive Republic of Udmurt, Arkhangelsk Oblast, Khabarovsk and Primorskiy Krays, which demonstrated a rapid drop of living standard and production output indicators over recent years. These are the formal criteria, while the intrinsic prerequisites of ultimate formation of a group of depressive regions will be discussed below.

Depressive regions of «classical» type are the Republic of Buryat, Chita and Kurgan Oblasts. The rate of development in the republic was slowed down many years ago due to its peculiar position within the catchment area of Lake Baikal. The republic's economy became depressed because of the ban on the use of mineral and natural resources, i.e. actually on the establishment of production branches which could have otherwise become beneficial for the republic. It appears that only the formation of single-purpose economic management mechanism set to follow the restrictions on the development of economy in the given territory while implementing parallel «offset» measures, could resolve the problem of creating a basis for the republic's self-development.

A special system of program-oriented efforts is needed for Chita Oblast. Dramatic drop in overall indicators of its economic activities was caused by a single-sector pattern of its economy and a slump in production output. Here, like in Amur Oblast, There is an urgent need for a careful elaboration of development prospects taking into account a greater use to be made of the resources potential - in particular, development of the production capacity of the Udokan copper deposit - and the role played by these regions as the border strategic territories.

As far as the «fate» of republics of Chuvash and Udmurt goes, including Arkhangelsk and Kirov Oblasts, it is likely to be sealed along with the problems of conversion and diversification of industrial productions in these regions.

Settling the problems of Khabarovsk and Primorskiy Krays is of major political and geopolitical importance. Their current position is largely conditioned by their separation from the main industrial consumers and what is most important - from the sources of complex-supporting materials, especially from utilities supply. Restructuring of industrial production at the malatary-industrial complex plants should be performed in the context of the «Conversion» program and activities aimed to restore the Russian fleet importance in the Pacific rim. Adjustment of transportation rates would make it possible to bring fuels to these territories and to help them in selling their fishing products. However, the problem of paramount importance to the development of Khabarovsk and Primorskiy Krays lies in promoting the integration between the subjects of Far-Eastern Russian Federation,

and in establishing a common economic space and strengthening the Russian stand in the Asian-Pacific region.

Among the depressive regions the position of Kurgan Oblast is rather specific. Its industrial development and living standard show a dramatic decline. The most important feature of its depressive status, however, is the loss of its place in the large-scale division of labor in Russia. In fact, starting from the pre-reform times, Kurgan Oblast had been losing its value as the most important food grains base of Russia (in this respect Altay Kray must also be included in the depressive districts group). At the same time, the value of both the regions as commodity grains suppliers to meet Russian requirements has strongly increased following the collapse of the USSR. In this context, the imperious want in implementing the relief program for depressive districts is to work out the efforts aimed at recovering the agriculture both in Kurgan Oblast and Altay Kray. Industry development, also of importance to these districts, could be dealt with in the framework of general pattern of government control over national economy.

4.3. Characteristic of regions of unstable position

This category of regions incorporates 50 subjects of RF, including eight republics, three krays, 36 Oblasts, one city of federal jurisdiction, two autonomous okrugs (see Table 6 of the Annex).

In terms of socio-economic indicators these region's group is intermediate between successful and unsuccessful ones, however, the sluggish indicators behavior would impede the provision a clear-cut diagnostics. There are the regions that call for the most careful approach, because their unstable socio-economic development is very sensitive to political and economic shifts of external and internal origin.

5. Conclusions

- 1) The results provide a methodological and procedural basis designed to continue monitoring the socio-economic situation in the regions of Russia, and tracking the alterations occurring in major typological groups of the regions.
- 2) This basis allows a scientific foundation of a comprehensive targeted government program purposed to support depressive and backward regions of Russia. The borders of depressive regions (and of traditionally backward ones) might not coincide with administrative borders of the subjects of RF. The status of depressive or backward region shall be granted only after the analysis of technical and economic indicators has been completed for a time span of 10 to 15 years, and for a definite term, the objective being very precise and aimed to either restore or update the economic basis of development to the effect of reviving the part played by a region in the territorial division of labor.

Recommendations concerning the development of such a region and its way out of depressive state call for systemic studies to identify the conditions conducive to its self-development (once it gets sufficient «forces» to recover its economy). Each case would involve reviewing of what caused low-grade economic indicators and elaborating a specific system of efforts to be made in order to do away with depressive state (terms, amount of allocations and the project implementation mechanism).

- 3) An important trend of further studies on regional development in RF is to identify the regions capable of fulfilling the function of most effective regional «growth poles», of reaching swiftly yet another level in its development in qualitative terms, and of becoming a hub for the inception of new economic relations, innovative designs, positive structural changes (to become leading regions, driving-ahead-regions).

These types of regions do exist in Russia, but they need certain government support via special program-oriented efforts in the context of the state's regional policy, primarily on the basis of a variety of most-favored-region treatment approaches, indirect control-levels and incentives.

- 4) Given the scarcity of government resources to implement different programs of regional support, it is very important to provide a programs' competitive edge, which is the case, e.g. in the regional policy of the European Union.
- 5) At present, the international community is engaged in rendering technical and financial assistance to RF, thus prompting yet another trend of research - how to create a favorable atmosphere in depressive and backward regions for foreign investors.

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