



**Positioning of the Republic of Mari El in Volga Federal District**

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**ABSTRACT**

In modern conditions the role of positioning and competitiveness of regions to fight for investments, innovations, high technologies considerably grew. Competitiveness of the region has to be considered on the whole complex of indicators which enter subsystems: population, economy, infrastructure, ecology. In work the scheme of blocks of components of competitiveness is used. On the basis of this scheme a set of diagnostic indicators was created. It includes twelve indicators characterizing a gross regional product, turnover of the organizations, innovative activity, transport network, emissions of pollutants, fixed assets, life expectancy, incidence, education level, the monetary income of the population, coverage by a television signal, investments. Comparative and competitive advantages of the Republic of Mari El are considered. A mark assessment of competitiveness of the region is given. Assessment of positioning of municipalities of the republic on a number of the indicators characterizing competitiveness is carried out. The Republic of Mari El loses in comparison with a number of regions of the Volga Federal District from the point of view of comparative advantages. The Republic of Mari El cannot be compared to other regions and in respect of manpower. Competitive advantages of the republic are weaker, than at other regions. The republic takes the last places in the district on a number of indicators. The republic has weak comparative and competitive advantages when positioning among other regions.

**Keywords:** competitiveness,, diagnostic indicators, population, economical geographical location, potential, resources



## **1. INTRODUCTION**

In the conditions of post-industrial development of regions the role of their positioning and competitiveness in fight for investments, innovations, high technologies considerably grew (Trofimov A. M., Rubtsov V. A., Tumashev A. R., 2009; Shkurkov V. V. 1967). Therefore it is important to find ways of assessment of competitiveness and positioning. Competitiveness of the region has to be considered on the whole complex of indicators which enter subsystems: population, economy, infrastructure, ecology. Assessment of competitiveness and positioning can be made also from positions of economical geographical zoning, and at various levels - the certain countries, regions and other, smaller territorial systems (Porter M.E. 1990).

## **2. METHOD**

In the works devoted to competitiveness and positioning of regions (P32 Comp. / Rosstat. □ M., 2011, Gabdrakhmanov N.K. 2014.) the scheme of blocks of components of competitiveness was developed. On the basis of this scheme a set of diagnostic indicators was created and positioning of the Republic of Mari El from various positions is analyzed.

Let's consider comparative and competitive advantages of the Republic of Mari El. Comparative advantages are understood as the geographical factors, natural resources, cheap work and other advantages given by the nature. They are not eternal and are not reproduced. Competitive advantages - are dynamic, connected with innovations, development of the human capital. They are boundless by the nature (Competitiveness of Russia in global economy /2003).

## **3. RESULTS AND DISCUSSION**

Let's consider comparative advantages of Mari El. First, we will consider the economical geographical location (EGL) and natural resources of the republic. The Republic of Mari El is located in the European part of Russia, is a part of the Volga Federal District, borders on the Kirov region, the Republic of Tatarstan, the Chuvash Republic, the Nizhny Novgorod Region. In the territory of the republic one airport of interrepublican value, the railway station and 14 railway stations, river port and three piers operates on the Volga River (Enright M.I. 1993). Through the territory of the republic the highway "Vyatka" runs (Cheboksary - Yoshkar-Ola - Kirov - Syktyvkar).



Thus, it is possible to carry an arrangement in the European part of the country to positive sides of EGP of the Republic of Mari El, an arrangement on several thoroughfares, and also the neighborhood with such advanced subjects of the Russian Federation as the Nizhny Novgorod Region and the Republic of Tatarstan.

The main minerals of Mari El are plaster, construction raw materials, peat, sapropel. The special attention is deserved by quartz sand which is used in glass production. On deposits of these Mari El raw materials is high on the list in the European part of Russia. One more important resource is the wood. The Republic of Mari El takes the third place on woodiness among subjects of Volga federal district (53,7%).

On the area of the territory the Republic of Mari El takes the thirteenth place among regions of Volga federal district.

Thus, having rather quite good EGP and possessing mineral deposits the Republic of Mari El, loses in comparison with a number of regions of Volga federal district from the point of view of comparative advantages since has neither more valuable natural resources, nor the big area.

The Republic of Mari El cannot be compared to other regions and in respect of manpower. The republic has the smallest population among regions of Volga federal district and the prospects of its increase too are not observed: coefficients of a natural and migratory increase are negative.

The coefficient of a natural increase of the population in 2010 in the Republic of Mari El made -2,5. From 2006 for 2010 this coefficient changed with -5,3 to -2,5. What it is possible to consider, positive dynamics. Besides It should be noted that for all years of this period decline in population in Mari El was less, than in the federal district on average (Official Internet portal of the Republic of Mari El: <http://portal.mari.ru/> ).

However the demographic situation in Mari El is worse, than in six other regions of Volga federal district, especially if to consider that in the Republic of Bashkortostan and the Udmurt Republic coefficients of a natural increase are positive.

The coefficient of a migratory gain in Mari El in 2010 made -23. On this indicator the situation in Mari El is worse, than in 9 regions of Volga federal district, especially if to consider that in five regions a positive migratory gain.



The Republic of Mari El does not attract great interest and of the foreign citizens who are carrying out work in Russia. On this indicator the republic takes the 14th place among regions of Volga federal district. In 2010 according to data of the state statistics in the Republic of Mari El carried out work of 483 foreign citizens, it is much less, than in other regions of the district (for comparison, the Chuvash Republic, takes the 13th place in Volga federal district with 1798 foreign citizens). Besides during 2007 - 2010 the number of foreign workers in Mari El, as well as in other regions of the federal district was reduced.

As a result the republic has the population, smallest in Volga federal district, at working-age (only 445,6 thousand people).

During 2006 - 2010 there was some change in distribution of the population on age groups. For this period the share of the population increased is more senior than working-age from 18,29% in 2006 to 19,71% in 2010. The share of the population is younger than working-age for this period was reduced from 17,1% to 16,45%.

Let's consider some indicators on the basis of which we will try to estimate existence of competitive advantages. As it was already told above, competitive advantages are in many respects connected with innovations. At the beginning we will consider such indicator as number of the created advanced production technologies.

During 2006 - 2010 in Mari El according to data of the state statistics 6 advanced production technologies, at the same time in 2008 - 2010 - any are created. On this indicator of Mari El takes the penultimate place in the Volga Federal District. Also penultimate place is taken by the republic and on number of the used advanced technologies (as of 2010).

As the second indicator we will take innovative activity of the organizations. This indicator characterizes extent of participation of the organization in implementation of innovative activity during the certain period of time (P32 of Federation. 2010). On this indicator the Republic of Mari El takes the 11th place (7,9%), advancing the Saratov region (6,4%), the Kirov region (7,4%) and the Ulyanovsk region (7,6%). Besides it is possible to note that in the Republic of Mari El the lowest costs of technological innovations in the Volga Federal District: only 221,7 million rubles in 2010.



Thus, it is possible to draw a conclusion that the Republic of Mari El has weak comparative and competitive advantages when positioning among regions of Volga federal district.

Let's in addition characterize economy of the Republic of Mari El. On a gross regional product per capita the republic takes the 14th place among regions of Volga federal district. In 2009 VRP per capita made 98359,9 rub. In structure of gross value added in 2009 main types of economic activity were the processing productions (21,4%) and agriculture, hunting and forestry (16,8%).

The cost of fixed assets in 2010 made 225000 million rubles. On this indicator of Mari El takes the 14th place to Volga federal district and 71 places in Russia. At the same time degree of wear of fixed assets in the republic makes 60,4% (2010). It is the worst indicator in the federal district. Fixed assets in wholesale and retail trade (77,1%), construction (52,9%) both transport and communication (51,2%) are most worn-out. However It should be noted that wear of fixed assets in rural and forestry, and also mining in the republic below than in absolute majority of regions of Volga federal district.

On the volume of the shipped goods of own production, the performed works and services with own forces on mining of Mari El takes the 14th place among regions of Volga federal district and the 78th place in Russia. On the processing productions she also takes the 14th place in Volga federal district. In structure of volume of the shipped production on the processing productions production of oil products (23,9%), production of foodstuff (20,5%) and production of electric equipment (14,0%) have the greatest share.

Let's consider position of the Republic of Mari El on production of some types of production of the processing productions.

From 2006 for 2009 the republic increased production of meat and an offal from 27,3 thousand tons to 35 thousand tons. As a result on production of meat and an offal of Mari El takes the 3rd place to Volga federal district and the 14th place in Russia. On production of Mari El cellulose takes the 3rd place to Volga federal district and the 8th place in Russia. On production of paper the republic takes the 4th place in the district and 9 Russian Federation, on production of a cardboard the 3rd place in Volga federal district



and 9 in the Russian Federation. Let's note the 14th place in Russia on production of tractors for rural and forestry (from 20 regions of the Russian Federation where there is this production). However among regions of Volga federal district it is not the best indicator: The Republic of Tatarstan, the Orenburg region and the Republic of Mordovia take leading places in the Russian Federation (P32 of Federation. 2010). One more important industry in Mari El is production of refrigerating appliances. Here the republic occupies one of leading places in Russia (Regions of Russia. Main characteristics of subjects Russian ).

Agriculture of the republic can be characterized as follows. On production of agriculture the Republic of Mari El traditionally takes the last place in the Volga Federal District. But by data for 2010 Mari El could outstrip the Ulyanovsk region. As a result by data for 2010 the Republic of Mari El on production of agriculture takes the 13th place to Volga federal district and the 47th place in Russia. In Mari El the smallest acreage of crops in the federal district. From 2006 for 2010 potatoes acreage (from 18,9 thousand hectares to 20,6 thousand hectares) and acreage of vegetables grew (from 3,7 thousand hectares to 6,5 thousand hectares).

On gross collecting Mari El grain the place to Volga federal district and the 50th place in the Russian Federation, on gross gathering vegetables 9 the place to Volga federal district and the 30th place in the Russian Federation takes the 14th place to Volga federal district and the 54th place in the Russian Federation, on gross gathering potatoes 10 (in 2010).

It is not allocated with Mari El and high places on livestock production indicators. During 2006 - 2010 the number of number of cattle was reduced from 143,3 thousand to 107,1 thousand heads (the 14th place to Volga federal district and the 58th place in the Russian Federation). Better situation with a livestock of pigs: during 2006 - 2010 it increased from 120,7 thousand to 147,6 thousand heads (the 13th place in Volga federal district and 37 in the Russian Federation). As a result of reduction of a livestock of KRS there was a decrease in production of milk from 260,9 thousand tons in 2006 to 214,4 thousand tons in 2010.

The following is characteristic of the construction sphere of Mari El. On amount of works, executed by the form activity construction, the republic takes the 14th place in



Volga federal district. The Republic of Mari El since 2000 constantly increases commissioning of houses. In 2010 it made 304 th.sq.metr of total area. On this indicator of Mari El advances the Republic of Mordovia, since 2004. Rather not bad the republic on an indicator of commissioning of houses on 1000 people of the population looks. This indicator made 436 sq.m (the 7th place to Volga federal district and 21 places in the Russian Federation).

Let's consider some indicators characterizing transport of the Republic of Mari El. On goods turnover of the Mari El motor transport takes the 14th place in Volga federal district (369 million ton-kilometers). The same 14th place is taken by Mari El and on a passenger turnover of buses (57 million passenger-kilometers). At the same time It should be noted that till 2009 the Republic of Mari El on a passenger turnover of buses advanced the Republic of Mordovia. On density of public railway tracks of Mari El takes the 14th place to Volga federal district and the 58th place in the Russian Federation. On density of public highways with a hard coating of Mari El takes the 10th place to Volga federal district and the 36th place in Russia. At the same time it should be noted that Mari El differs in rather low specific weight of highways with a hard coating in the general extent of public highways: in 2010 it made 62,7% (the 13th place to Volga federal district and 71 places in Russia).

In end of the review of economy of the republic we will consider some indicators of communication. On the volume of the communication services rendered to the population counting on one resident of Mari El takes the 13th place to Volga federal district and the 76th place in Russia. The coverage of the population television broadcasting in 2010 in the Republic of Mari El made 99,8%. It is a very good indicator if to consider that it is slightly lower in Bashkortostan, Mordovia, Tatarstan, Perm Krai, Nizhny Novgorod. The Orenburg, Penza, Samara, Ulyanovsk regions and is significantly lower (only 92,3%) in the Udmurt Republic. But it is necessary to consider that in Mordovia and Tatarstan, in difference from Mari El rather big coverage of the population digital telecasting.

Summing up the result of assessment of positioning of Mari El on various branches of economy, it is possible to draw a conclusion that except for several separate indicators



the Republic of Mari El loses in the economic plan to all regions of the Volga Federal District.

Let's calculate the indicator characterizing positioning of Mari El within the Volga Federal District. Calculation is made on the basis of the set of instruments for diagnosis of indicators made in the previous works (P32 Comp. / Rosstat. □ M., 2011). It includes twelve indicators:

1. VRP per capita (rub);
2. An indicator of a turnover of the organizations which are not connected with operation of natural resources (POONPR) (billion rubles);
3. Level of innovative activity of the organizations (%);
4. Density of transport network (km on 1000 sq.km. of the territory);
5. Emissions of pollutants in the atmospheric air falling on one inhabitant (tons);
6. Indicator of Fixed Assets (IFA);
7. The expected life expectancy at the birth (years);
8. Incidence on 1000 people of the population;
9. Indicator of Education Level of the Working Population (IELWP);
10. The population share with the monetary income is lower than the size of a living wage (%);
11. The population share having an opportunity to adopt television programs (%);
12. Investments into fixed capital per capita (rub).

For assessment and rationing of indicators the mark method at which the total was received by summation of the weighed points on separate indicators was used.

For determination of weight of each indicator we use a method of comparison of indicators by means of coefficient of correlation (The Republic of Mari El in figures. 2011). This method consists that the general indicator originally is proved, and then each of indicators is compared with it by means of correlation coefficient. The highest coefficient of correlation ( $r_k$ ) is defined and the weighing coefficient  $\gamma_i$  pays off.

$$\gamma_i = r_i/r_k$$

As the generalizing indicator VRP indicator per capita - as the most generalizing indicator characterizing economic activity of the region was chosen. For assessment the five-point scale was used. For each indicator reference points between which distance



was divided into five pieces were defined. Depending on to what of pieces value of an indicator got, to it was appropriated from one to five points. For negative indicators the return scale was used. As a result on each region score was found. On this bag of points regions were ranged and took places with 1 on 14.

The Republic of Mari El on score took the last 14th place among the subjects which are a part of Volga federal district. The republic got total point equal 11,41. The next on score to Mari El the Kirov region (13,32), the Penza region (13,77) and the Ulyanovsk region (13,79) were regions of Volga federal district. Loses to these regions of Mari El about two points that is rather essential. Lag from leaders of Volga federal district very big. So, to three leaders of Volga federal district: (23,87) Mari El lose to the Republic of Tatarstan (27,69), the Nizhny Novgorod Region (24,5), Perm Krai more than ten points. Such lag from other regions is connected with the fact that on six of eleven indicators used in calculations of Mari El gained the minimum point. These are such indicators as POONPR, level of innovative activity of the organizations, an indicator of fixed assets expected life expectancy at the birth, the population share with the monetary income is lower than the size of a living wage, investment into fixed capital per capita.

On indicators density of transport ways and PUORN the republic gained 2 points.

Therefore, it is possible to note problems of the Republic of Mari El as in economic, and social spheres. At the same time It should be noted that in the Republic of Mari El rather low emissions of pollutants in the atmosphere. It positively affected total point.

Comparing received earlier by other researchers in whom older statistical data were used (for 2007), results with ours it is possible to notice the following. By those calculations the Republic of Mari El also with the smallest total point took the 14th place among regions of Volga federal district. The republic also got the minimum point on six indicators and got excellent point for low emissions in the atmosphere. As we see, the position of the Republic of Mari El in Volga federal district in comparison with 2007 did not change.

Now we will consider mutual positioning of municipal districts within Mari El. The Republic of Mari El consists of three city districts and fourteen municipal districts.

Let's consider positioning of municipal districts on five indicators characterizing economy and the social sphere:



1. The average monthly added salary of workers;
2. Number of the registered crimes (on 1000 people of the population);
3. Turnover of the organizations;
4. Retail trade turnover per capita;
5. Investments into fixed capital per capita.

On each indicator we will appropriate to municipal districts from 1 to 5 points (by analogy with a method of calculation of positioning of regions in Volga federal district).

We will determine a position of the municipal district in Mari El by addition of points.

As weighing of points is not made, all indicators have identical weight. On the basis of statistical data (4) total points were calculated and municipal districts were ranged.

The highest places were taken by Zvenigovsky and Orshansky districts. Zvenigovsky district on all indicators got not less than three points. Orshansky district has the maximum point on the salary and turnover of the organizations, but on investments and retail trade turnover he received only 2 points. The group of leaders includes also Volga and Medvedev's districts.

The average group includes the Soviet, Sernursky, Kilemarsky, Morkinsky, Mari-Tureksky, Paranginsky districts. Very little the Kuzhener, Novotorjyalsky and Yurinsky districts lag behind them.

The smallest total point gathered Gornomariysky district. On all indicators except for the registered crimes it gathered on 1 point.

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