Quantitative and qualitative assessment of the region's competitiveness

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Abstract— The leading role in achievement of competitiveness of the region belongs to clusters, which create the critical weight necessary for competitive success of the separate enterprises in certain branches.

The assessment of potential and success of a clustering of the region assumes the quantitative analysis of statistical data and the qualitative analysis of existence and structure of the resource base necessary for ensuring competitiveness of the enterprises of the region in certain areas.

Identification of those concrete sectors of economy in which achievement of competitive advantages of the enterprises of the region, i.e. the analysis of clusters is possible.

Index Terms— Competitiveness of the region, clustering potential, quantitative analysis, qualitative analysis, coefficient, innovation.

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1 Introduction

Competitiveness of the region is defined as existence of these or those competitive branches or segments of branch, and ability of regional authorities to create conditions to the regional enterprises for achievement and deduction of competitive advantage in certain areas.

According to Porter, clusters - "working in a certain area, and also mutually supplement each other and it is characterized by joint action of a sample, from the point of view of the geographical position, the companies and the organizations which are based in system of the neighborhoods". (Портер Майкл «Конкуренция». -М.Изд.дом «Вильямс». 2005)

Clusters create the critical weight necessary for competitive success in certain branches.

Foreign experience shows that many countries of the world use cluster approach for joint activity of subjects of different social spheres: firms, their clients and institutes of knowledge. The research of influence of clusters on development of economy conducted in the European Union has shown high innovative activity of the cluster companies – about 60% while out of clusters this indicator makes about 40-45% (Ленчук Ю.Г., Власкин Γ .А./ Кластерный подход в стратегии инновационного развития зарубежных стран. / http://www.innoclusters.ru/ 2015).

Therefore one of tasks in system of increase of competitiveness of the region –

to reveal region clustering potential.

The solution of this task requires carrying out the analysis of competitive stability of the enterprises of the region which is understood as rootedness of economic entities in the environment, their ability to maintain in the long-term period own individual competitiveness when using opportunities of environment (Environment in management call the environment of direct and indirect contacts of object. It consists of a microenvironment (the environment of direct contacts) and a macro environment (the environment of indirect contacts)).

The analysis of competitive stability of the separate enter-

prises is supplemented with the analysis of competitive stability of branch that is group of companies of the region, letting out uniform or technologically almost uniform production.

The analysis of competitive stability is carried out to three stages:

- Quantitative analysis of competitive stability, that is definition of a market position of branches of the region;
- The qualitative analysis of existence and structure of the resource base necessary for ensuring competitiveness of the enterprises of the region in certain areas, i.e. conditions of competitive stability.
- Identification of those concrete sectors of economy in which achievement of competitive advantages of the enterprises of the region, i.e. the analysis of clusters is possible.

2 QUANTITATIVE ANALYSIS OF COMPETITIVE STABILITY

As the statistics reflecting competitive stability of branch in the region and the potential of it's clustering the coefficient of shower production and coefficient of specialization of the region on this branch can serve coefficient of localization of this production in the territory of the region.

The coefficient of localization pays off the relation of specific weight of this branch in structure of production of the region to the specific weight of the same branch in the country.

The coefficient of shower production is estimated in the relation of specific weight of branch of the region in the relevant structure of branch of the country to the specific weight of the population of the region in the population of the country.

The coefficient of specialization of the region on this branch is determined as the relation of specific weight of the region in the country by this branch to the specific weight of the region in GDP of the country.

If settlement indicators it is more or are equal to unit, therefore, these branches act as branch of market specialization and in them or there are clusters, or their creation is possible. During the forming of clusters and a choice from them the most priority it is necessary to estimate dynamics of coefficients of localization as the increase in value of indicators in dynamics testifies to possible further prospects of growth of clusters, and decrease – about possible need of increasing the product range, need of modernization of production or about not prospects of a cluster in the future.

3 QUALITATIVE ANALYSIS OF CONDITIONS OF COMPETITIVE STABILITY

The quantitative analysis of the enterprises and branches is supplemented with the qualitative.

Results of this analysis stage – definition of existence and structure of the resource base necessary for ensuring competitiveness of the region in certain sectors of economy. These results are formed on the basis of the analysis of a complex of conditions, each of which separately and all together, makes a basis of competitive stability:

The production factors necessary for conducting competitive fight in this branch. Quality standard of existence and availability of natural, material, labor, infrastructure and other factors of production (are available/are inaccessible)

Demand in domestic market for production of branch. Demand in domestic market for production of branch is estimated by means of quantitative and quality indicators.

Among quantitative indices the following acts:

- Shares of production of the branch realized within the region in the last 3-5 years;
- Coefficient of interregional marketability (pays off as the export relation from the region of this production to its regional production);
- A share of the similar production of producers of other regions realized in the studied region including import.

Among quality indicators it is necessary to estimate the level of insistence of buyers of the region to the range, novelty and quality of this production (high/average/low).

The analysis of quantitative and quality indicators is integrated into a summary assessment of domestic demand – "interested / indifferent"

Competitive branches suppliers or other accompanying branches in this region. The assessment of this condition has the defining value for the conclusion about existence of a cluster and about conditions of its competitive stability. In the analysis quantitative and quality indicators are used.

As quantitative indices shares of the suppliers of branch located within the region.

Among the qualitative estimates of the following components are necessary:

- Existence and degree of activity of professional non-profit organizations in this branch (associations, the unions);
- Existence and degree of activity of the research organizations connected with this branch;
- Existence and level of the establishments of professional education connected with this branch;
- Existence and degree of activity of the non-profit organizations promoting this branch;
- Interest and extent of assistance of public institutions to the enterprises of this branch;

The analysis of quantitative and quality indicators is integrated into a summary assessment of the related and supporting branches – "are present/absence"

The factors motivating formation of effective strategy of the organization and management of the enterprises the most important of which is the competition in domestic market. The factors motivating formation of effective strategy of the organization and management of the enterprises including the competition in domestic market are estimated by means of quality indicators (are present/ absence).

The received estimates allow creating branches, which as a result of the integrated group unite in three groups:

- Of branch with a high potential of existence of a cluster needing information support and the minimum operating influence;
- Of branch in which creation of clusters at the purposeful long operating influences is possible;
- Of branch in which creation of clusters demands the considerable expenses incomparable to the expected effect.

4 RESULTS AND DISCUSSION

IJSER Results of the third analysis stage – determination of nature of the operating impacts on competitiveness of the region - are formed on the basis of the analysis of clusters of the enterprises of the region. The analysis of clusters can be made in various directions: institutional organization of clusters, internal motivation of initiation and maintenance of clusters, comparative competitiveness of participants of a cluster, strategic potential of clusters.

Institutional organization of clusters:

During the cluster analysis the groups of clusters, which are characterized by the following signs, come to light:

- Structure (existence of the organization);
- Stability (constant structure of participants);
- Observability (for the state and municipal statistics). Internal motivation of initiation and maintenance of clusters:

Besides, for formation of clusters it is necessary to consider motivation of participants. Here the following bases of a clustering (motives) are possible:

- Production of uniform production;
- Uniformity of the main buyers large government or semi-government institutions;
- Ensuring mobility of work and the capital in a cluster;
- Other motives.

Comparative competitive strength of participants of a cluster: The competitive strength of its certain participants can be the factor determining the competitive force of a cluster. Here the following models are possible:

- A cluster with approximately identical competitive strength of participants;
- A cluster where the competitive strength of the central participants considerably surpasses the competitive strength of the others;
- A cluster in which the competitive strength of peripheral participants much more surpasses the competitive force of the central;
- The cluster consisting from it is a competitive weak

participant.

Competitive force of clusters:

As criteria of an assessment of strategic potential of clusters the following can be used:

- 1) Growth rate of production of branches in which the central enterprises of a cluster in comparison with growth rate of economy in general are occupied (branch growth);
- 2) Growth rate of production of a cluster in comparison with growth rate of branch in general (cluster growth);
- 3) Share of production of a branch cluster in a gross regional product.

Statistics in dynamics in 3-5 last years are necessary for calculation:

- Growth rate of branch:
- Growth rate of economy in general: GDP of AR;
- Growth rate of a share of the studied enterprises: the volume of the made production of the central enterprises of a cluster in kind; comparable prices and actual prices;
- Share of production of a branch cluster in a gross regional product: the volume of the made production of the enterprises, which are (potentially) making a cluster in kind; comparable prices and actual prices.

Thus, the multiple-factor cluster analysis allows revealing potential opportunities of the region in ensuring competitiveness.

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