The role of green marketing in regional sustainability

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Abstract. The article raises questions of analysis of the mutual dependence of regional social, economic and environmental situation. In total, their indicators form the concept of regional sustainable development. The authors carried out a comparative analysis of the regions of the Volga Federal District, identified the leading regions (Tatarstan and Bashkortostan) and outsider regions (Saratov region). The study showed a direct relationship between the studied indicators, which means that the growth of any of them will positively affect the state of the others. Green marketing in the context of regional development is designed to increase the attractiveness of the region from an environmental standpoint, which should lead to an increase in socio-economic indicators.

1 Introduction

The issues of using ecological marketing in activating the socio-economic development of the region are studied to some extent by various authors [1]. Environmental marketing, in fact, when adopting sustainable development goals, is a manifestation of territory marketing (environmentally oriented), its further genesis, expressed in the formation and correction (if necessary) of the green image of the region, attracting internal and external target audiences focused on environmental priorities, creating environmentally adapted infrastructure and development of the human capital of the territory involved in the environmental agenda. The problem of image and attraction of target audiences, as well as the development of human capital and the search for investments for the formation of green infrastructure, is associated with the construction of an appropriate brand of the region.

Today, the uniform dynamic development of certain territories of the country is an important condition for building a modern competitive economy. Each region needs to take care of creating a positive image, increasing the level of entrepreneurial activity, labor initiatives of its citizens, the standard of living of the population, and enhancing investment flows. The traditional programs of regional development, which we inherited from the Soviet times, have ceased to effectively fulfill the functions assigned to them. Today, a new look at regional planning and development, consumer orientation, the ability to shape and intelligently transform the market, taking into account existing and potential needs, balance

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development sectors and think from marketing positions, learn how to “sell” the name of your region are required.

The region, as an object in the market, reveals to external persons in relation to this region the attractiveness of natural, material, technical, financial, labor, organizational and other resources concentrated in the region in order to develop production, social, environmental, cultural, innovation and investment spheres this territory. The region, offering its resource potential, opportunities and competitive advantages, that is, its attractiveness as an object, in order to stimulate demand for target groups of potential investors, needs related information services [2].

We can say that this version of the territory marketing system coincides with the standard interpretation of the marketing concept. But at the same time, the content base of the territory marketing structure is distinguished by the following elements: it is a verified and reasoned local economic policy, the importance and expediency of which is determined by the growing competition between regions; this policy is focused on the maximum satisfaction of the needs of the development of the regional economy, the social sphere of the territory, the interests of entrepreneurs [3]. The whole range of territory marketing tools is used to improve the quality of life of all social strata of the population and each individual inhabitant of the region.

For a dynamic productive stable integrated development of the territory, it is necessary to use all the tools of regional marketing in a complex and unified system, excluding contradictions of influence between them and using the possible synergy effect from the implementation of several simultaneous measures at once in related areas of the economic life of the region. Only in this case, activities for regional development will not be carried out pointwise and chaotically, causing individual outbursts of interest from external investors in investing in the region, but planned and continuous, ensuring economic growth not only in the business sector, but also in the social life of local residents [3].

2 Methods and materials

In order to substantiate the effectiveness of the use of green marketing to form a positive image of the region, approaches were analyzed to assess the level of sustainability of the socio-economic situation of the region, taking into account the environmental factor, and the simplest and, at the same time, the approach of A. Lukina that meets the requirements of this study was chosen [4]. The evaluation algorithm consists of 5 consecutive steps:

1. Collection of an information base on selected indicators characterizing the stability of the socio-economic situation in the region;
2. Determination (calculation) of indices of social, environmental and economic sustainability for all regions selected for comparison;
3. Calculation of the integral sustainability rating for the regions and the formation of a rating with the participation of all subjects;
4. Infographics with fixing the positions of the regions on the map;
5. Analysis of the results and clarification of the green marketing goals necessary for the implementation.

The following were used as benchmarks:

1. Social:
   – Population density;
   – Child mortality.
2. Economic:
   – Sen index;
   – Index of financial stability of the region.
3. Environmental:
   – Volumes of emissions into the environment;
– Wooded area;
– Use of water resources;
– Energy efficiency.

Recognizing the interest and significant scientific elaboration of this approach to the selection of indicators, it is important to note the appropriateness of appropriate consideration of regional development, based on the formulated goals of sustainable development in the context of social, economic and environmental components. This will make it possible to conduct a balanced assessment of significant parameters and draw scientifically based conclusions regarding the choice of strategic guidelines and the implementation of certain tactical steps within the framework of territory marketing, which in the current situation is the management concept of green marketing.

It should also be noted that the construction of this approach focuses on analytical marketing tools, marketing communications and work with target audiences, coordinating the interests of stakeholders, however, the problem of forming a green image of the region, building an appropriate brand and implementing marketing strategies for the development of the territory has not been adequately reflected.

3 Results

For greater clarity, the regions of the Volga Federal District were analyzed (Table 1).

<table>
<thead>
<tr>
<th>Region</th>
<th>Social</th>
<th>Economic</th>
<th>Environmental</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tatarstan Republic</td>
<td>1</td>
<td>1.6</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Udmurt republic</td>
<td>1</td>
<td>2.2</td>
<td>1.4</td>
<td>2</td>
</tr>
<tr>
<td>Perm region</td>
<td>1.5</td>
<td>1.7</td>
<td>1.4</td>
<td>2</td>
</tr>
<tr>
<td>Republic of Bashkortostan</td>
<td>1</td>
<td>2.5</td>
<td>1.6</td>
<td>3</td>
</tr>
<tr>
<td>Samara Region</td>
<td>2</td>
<td>1.5</td>
<td>1.6</td>
<td>3</td>
</tr>
<tr>
<td>Nizhny Novgorod Region</td>
<td>2.5</td>
<td>1.2</td>
<td>1.8</td>
<td>4</td>
</tr>
<tr>
<td>Mari El Republic</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Chuvash Republic</td>
<td>1.5</td>
<td>3</td>
<td>2.4</td>
<td>5</td>
</tr>
<tr>
<td>Kirov region</td>
<td>2.5</td>
<td>2.2</td>
<td>2.5</td>
<td>6</td>
</tr>
<tr>
<td>Orenburg region</td>
<td>2</td>
<td>2.7</td>
<td>2.5</td>
<td>6</td>
</tr>
<tr>
<td>Ulyanovsk region</td>
<td>2.5</td>
<td>2.2</td>
<td>2.5</td>
<td>6</td>
</tr>
<tr>
<td>Republic of Mordovia</td>
<td>2.5</td>
<td>2.8</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Penza region</td>
<td>3</td>
<td>2.7</td>
<td>3.3</td>
<td>8</td>
</tr>
<tr>
<td>Saratov region</td>
<td>3</td>
<td>2.8</td>
<td>3.4</td>
<td>9</td>
</tr>
</tbody>
</table>

According to Table 1, there is a significant difference in the indicators of the regions, so it is advisable to unify the assessments and bring it to a single point scale. Further, it is proposed to divide all regions of the Volga Federal District into three conditional groups according to the current situation relative to each other: developed, medium and lagging behind.

To do this, it is necessary to take the largest (a) and the smallest indicator (b) within each of the indicators and divide all regions into three groups by a simple arithmetic operation, thus determining the interval step. Then, for each region, assign numbers to the region for each indicator, where 1 is the best indicator; 2 - average; 3 is the worst indicator.

You can determine the region number using formula 1.

\[ 1 \in (b + 2x; a); 2 \in (b + x; b + 2x); 3 \in (b; b + x), \text{ where } x = (a - b)/3 \]
Each of the above indicators plays a role in the sustainable development of the region. The final rating reflects a comprehensive assessment of the level of development of the region in comparison with other regions of the Volga Federal District.

The total values of the indicators presented in the table as the level of development of a particular sphere in the region should tend to one, which means a high level of development of the corresponding sphere. In these calculations, the Republics of Tatarstan, Mari El, Bashkortostan and the Udmurt Republic have such values in terms of indicators. If the total value of the indicators tends to three, this means a low level of development of a particular region in this area.

It can also be seen from the data in the table that, with the best value for social indicators, which all the same republics have, the value of the economic indicator also tends to unity (tends to the best indicator) only in the Republic of Tatarstan, in other cases, the indicator values tend to the worst value. This means that with a good social environment, an appropriate standard of living for the population is not ensured.

Based on the generalized indicator, a rating of the stability of the regions was compiled.

![Fig.1. Rating of regions of the Volga Federal District](image)

The diagram traces the relationship of these indicators with some deviations in individual regions. The Perm Territory stands out the most, it is one of the "leaders" in terms of the outflow of the population, while it ranks second in terms of socio-economic development among the regions of the Volga Federal District. The Orenburg region, being among the "outsider regions" in terms of socio-economic development, also has the largest outflow of population. And on the contrary, the Republic of Bashkortostan, being among the "leading regions" in terms of socio-economic status, has the largest population growth. The remaining regions show a genuine relationship between the analyzed indicators.

4 Discussion

Studies by other authors indicate that the territories act as a single territorial space, the development of which requires the use of green marketing strategies [4, 5]. In addition, a number of researchers directly point to the need to build a green image of the territory and develop an appropriate brand, since this can make it possible to intensify work with target audiences, in particular investors, who, due to environmental requirements for processes throughout the entire business cycle, will incur additional costs. [6]. At the same time, they
do not disclose the issues of building and managing the image of the region in the direction of its environmental component step by step.

From the point of view of studying cases that are being implemented in the regions, one can cite as an example a development that analyzes the issues of attracting investors and activating green industries in agriculture in the Far Eastern macroregion of Russia [7-9]. But this case does not explore the issues of building a green image, but only considers options for finding a balance between the economic effects of ongoing projects, social effects and environmental efficiency.

The directions of marketing management influences in the focus on the social and infrastructural development of the territory is a hierarchy with relationships. Marketing management impact can be directed to:

- Economic processes, subjects representing the stakeholders of the territory (internal and external involved from the external economic space);
- The economic space of the territory as a whole (within the framework of establishing priorities for social and infrastructural transformations in the future).

The impact on economic processes determines the coordination of the interests of the subjects of interaction in economic, social and environmental areas. The impact on the economic space causes the transformation of the general opportunities for doing business in the region, taking into account the interests (priorities) of stakeholders in the focus on a new quality of economic, social and environmental effects.

Together they form a qualitatively new level of social and infrastructural development of the territory.

5 Conclusion

As part of the analysis, it was determined that comparing the values of indicators of socio-economic and environmental development of different regions is not always possible, since many indicators have different expressions, and therefore the analysis is generalized. The research methods used contribute to the visual display of the results of a comprehensive assessment and comparison of indicators.

A comparative analysis of the subjects of the Volga Federal District in terms of development sustainability indicators indicated a significant differentiation of regions, there are both leading regions and outsider regions. The regions that have favorable indicators for socio-economic development and positive values of migration are the Republics of Tatarstan and Bashkortostan. The region that has the worst indicators used in the analysis, in terms of socio-economic development, was the Saratov region.

The analysis shows that more than half of the subjects have low indicators of the standard of living of the population, however, when correlating the indicators of socio-economic development with indicators of the environmental situation, their relationship has been established. Based on the fact that the priority for the country is to improve the sustainability of the situation of the territories, and the resources and capabilities of the regions are often limited, in strategic planning it is necessary to pay great attention to the qualitative and quantitative improvement of these indicators through the implementation of appropriate effective measures.

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