AGGLOMERATION PROCESSES ON THE RUSSIAN EUROPEAN NORTH: 
VOLOGDA REGION EXPERIENCE

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Abstract
The article presents the key features of the development of urban agglomerations at 
presents. There are shown the agglomeration processes features which are currently taking 
place in the Vologda region. It is justified that the monocentric Vologda agglomeration is 
being formed in the region. This is based on the research of the scientific literature, the main 
strategic documents and the use of the existing methodological tools. The tightness of the 
connection between the core and the reference territories has been proved on the basis of an 
analysis of key trends in the socioeconomic development of these municipalities in 1991-
2016. On the basis of conducted sociological surveys of the inhabitants of Vologda and 
adjacent municipal districts, as well as heads of these municipalities, there were identified 
socio-economic, industrial, cultural and other links of these territories. There were identified 
the key challenges and threats for the further development of agglomeration processes and 
substantiated the priority directions for managing the development of the Vologda 
agglomeration.

Keywords: city, urban agglomeration, sociological survey 
JEL classification: R12

1. Introduction

While tracing the evolution of the settlement forms it should be noted that at the present 
time new forms are emerging to replace urban and rural settlements, which are usually formed 
as a result of the rapprochement of several settlements in the process of their growth. Such 
formulations in modern economic literature are generally defined as agglomerations.

The accumulated socio-economic potential of a large city (the core) in agglomerations is 
evitably projected onto nearby settlements which in this case are transformed into their 
"socio-economic satellites." In turn, the satellites provide the nucleus with various resources 
expanding its potential. Proceeding from this, it can be noted that the distinctive feature of the 
agglomeration is the functional complementarity of urban and rural settlements located in the 
zone of its existence, i.e. we are talking about mutually beneficial cooperation and 
cooperation.

In the scientific literature (Artobolevsky S.S., 2007; Volchkova I.V., Minev N.N., 2014; 
S., 2009) and regulatory legal acts there are many definitions of this phenomenon. The term 
“Agglomeration” (from the Latin agglomerare – to attach), researchers usually consider in 
terms of two approaches:
- in the geographical sense: as a close cluster (group) of cities and other populated areas, 
united by industrial, social, labor and cultural-household connections, infrastructure facilities, 
the general use of inter-settlement territories and resources;
- in the administrative sense: a management structure formed on the basis of a voluntary 
decision of neighboring municipalities with the aim of effectively managing joint 
development, implementing intermunicipal projects.

Urban agglomerations, which are rapidly developing around the world, and which often 
consist of dozens, and sometimes hundreds of settlements, including rural settlements, are 
closely connected with each other (Kozlova, O.A., Makarova M.N., 2014; Kurushina, E.V., 
Petrov, M.B., 2018). At the same time, foreign experience indicates the presence of 
significant effects for the territory from the development of agglomerations. According to the 
study PwC conducted in 2017 economic growth in agglomerations occurs by 0.3 pp. faster 
than in the whole country. Household incomes in agglomerations increased by 4.7 thousand
US dollars more than average household income in the country over the period from 2001 to 2016. The nuclei in most cases showed even better dynamics than the agglomeration as a whole.

Agglomerations are more attractive for residents, as they create more jobs. The population increase in them is 0.5 pp. faster than in the whole country. The agglomerations are more attractive in terms of working conditions than the country, which is expressed in a higher increase in employed per 1000 people (more by 20 employed). The labor market here is more balanced - it is easier to find workers of scarce specialties than the national average.

According to PwC's projections the share of the largest agglomerations in world GDP will increase from 38% to 43% by 2030. The average annual growth rate will be by 1 pp. ahead of the world average growth rate (3.7% vs. 2.9%).

Russian practice also demonstrates the competitive advantages of these territories. In particular, the Moscow agglomeration is considerably ahead of Russia in 11 out of 13 indicators (only the agglomeration of Beijing has higher indicators - 12 out of 13), including: GDP growth (by 1.4 pp.), population 1.2 pp.) and migration (8 migrants per 1,000 people) (“The effect of scale. First global ranking of agglomerations” / PwC Russia).

In this regard, the creation of favorable conditions for the development of urban agglomerations and highly urbanized areas as poles of accelerated socioeconomic development is currently assigned as one of the main activities of the Government of the Russian Federation until 2018 (approved by the Government of the Russian Federation on May 14, 2015). In 2018, it is planned to adopt the Concept of the Spatial Development Strategy of the Russian Federation for the period until 2030, where a significant role will be assigned to urban agglomerations.

At the same time, it is extremely important conducting not only scientific but also practical study of the prerequisites for the formation of agglomerations, the identification of the nature and strength of the links of these territories. The core of which is not the largest cities (more than 500 thousand people) and "millionaires" (more than 1 million people) but large (with a population of more than 300 thousand) and medium-sized cities, because in these entities there are already several other processes in their power integration processes. These circumstances determined the relevance of this article.

2. Research methods

Currently, agglomeration processes are quite active in the European North of Russia. Here, a network of cities is formed, which act as a kind of "support frames" for the development of adjacent territories, concentrating in themselves a significant production, financial, personnel and other potential. The study of agglomeration processes in the Vologda region is of great practical interest, which acts as a "bridge head" in the development of the European North of Russia, as it is a region that integrates these territories along the "North-South" line.

The study of trends in the transformation of space in the region suggests that the agglomeration processes in the region are currently intensifying. However, discussions between scientists and practitioners still do not subside on the subject composition of these agglomerations. What is the configuration of the emerging agglomeration? There are two fundamentally different points of view.

1. The Vologda-Cherepovets agglomeration (polycentric) (nucleus: Vologda and Cherepovets; agglomeration zone: Vologda, Gryazovets, Sokolsky, Cherepovets, Sheksninsky, Kadui districts, Figure 1).

2. Vologda agglomeration (monocentric) (core: Vologda, agglomeration zone: Vologda, Gryazovets, Sokolsky districts) and Cherepovets (monocentric) (core: Cherepovets, agglomeration zone: Cherepovetsky, Sheksna and Kadui districts, Figure 2).

The analysis of the scientific literature, normative and legal documents, as well as the research conducted by us, testifies to the formation of two independent monocentric agglomerations in the region: Vologda and Cherepovets.

So, the well-known Russian urban scientist (Lola A.M., 2013) allocates 146 agglomerations in Russia, including Vologda and Cherepovets.

In the draft Concept of the Strategy of Spatial Development of the Russian Federation for the period up to 2030, developed by the Ministry of Economic Development of the Russian
Federation in 2016, two agglomerations were singled out in the Vologda Region: Vologda and Cherepovetskaya.

**Figure 1: The Vologda-Cherepovets agglomeration (polycentric)**

*Composition: 2 cores (Vologda and Cherepovets), agglomeration zone: Vologda, Gryazovets, Sokolsky, Cherepovets, Sheksninsky, Kadyusky districts.*

**Figure 2: The Vologda agglomeration (monocentric)**

**Composition: core: Vologda, agglomeration zone: Vologda, Gryazovets, Sokolsky Districts**

In the Strategy of Social and Economic Development of the Vologda Oblast until 2030 (approved by the Decree of the Government of the Vologda Region of October 17, 2016 No. 920), one of the tasks within the framework of the priority "formation of the efficiency area" is the formation of two "three-tier" agglomerations: Vologda, Sokol, Gryazovets and Cherepovets (Cherepovets, Sheksna, Kadyui).

It should be noted that in his studies, N. Zubarevich (2017) and S. Artobolevsky (2007) critically treated the idea of a regional government in the mid-2000s, regarding the support of the development of the Vologda-Cherepovets agglomeration, considering that there is no objective agglomeration process in these territories for this, and the two nuclei do not have stable links with each other.

In favor of the formation of two independent agglomerations testifies a retrospective analysis. In particular, it should be noted the historically developed industrial-consumer and trade relations between Vologda and the settlements of the Vologda, Sokol and Gryazovets regions since the 16th century. The commercial development of Vologda certainly influenced the growth of settlements throughout the province, especially those close to it. In particular, the fact that Vologda became a large warehouse point as a result of trade relations between
Russia and England played a significant role in the revitalization and expansion of the city of Kadnikov after 1569.

To study the development degree of these links, we use the existing methodological tool for assessing agglomeration processes in science.

At the present time in the domestic scientific literature (in particular, in the re-search of G. Lappo, P. Polian, 2007; Puzanov, A., Popov A., 2017) including on the basis of the study of foreign sources, were developed a whole series of methodological approaches and criteria for separating the boundaries of urban agglomerations.

The results of our analysis and calculations for this tool indicate that at present agglomeration links are being formed between Vologda and Vologda, Gryazovets, and Sokol districts (Table 1).

**Table 1. The conformity of the Vologda agglomeration with the criteria for agglomerations in a number of methods**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Methodology IGRAN¹ (G. Lappo, P. Polyana)</th>
<th>Methodology CNIPgrad² (F. Listengurt)</th>
<th>Unified methodology (P. Polyan, N. Naimark)</th>
<th>The Vologda agglomeration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Population size of the core</td>
<td>No less than 250 thousand people</td>
<td>No less than 100 thousand people</td>
<td>No less than 250 thousand people</td>
<td>320,7 thousand people</td>
</tr>
<tr>
<td>2. Temporary accessibility from the outskirts to the center (taking into account the average speed of 60 km/h)</td>
<td>No more than 1,5 hours</td>
<td>No more than 2 hours</td>
<td>No more than 1,5 hours</td>
<td>2 hours (Biryakovo settlement of Sokol district - 121 km)</td>
</tr>
<tr>
<td>3. The number of urban settlements in the agglomeration zone</td>
<td>No less than 5</td>
<td>No less than 3</td>
<td>No less than 4</td>
<td>4 units (Gryazovets, village Vokhtoga, Sokol, town of Kadnikov)</td>
</tr>
<tr>
<td>4. Population of satellite cities</td>
<td>No less than 50 thousand people</td>
<td></td>
<td></td>
<td>56,7 thousand people</td>
</tr>
<tr>
<td>5. Proportion of population of urban settlements of the agglomeration zone in the total number of urban population</td>
<td></td>
<td>No less than 10%</td>
<td></td>
<td>16,3%</td>
</tr>
<tr>
<td>6. The coefficient of agglomeration development</td>
<td>No less than 1</td>
<td>No less than 0,1</td>
<td>No less than 1</td>
<td>1,5 (type: least developed agglomerations)</td>
</tr>
</tbody>
</table>

Source: compiled by the author based on an analysis of the literature

Conformity of the Vologda agglomeration with the criteria for agglomerations in a number of one of the key indicators is the agglomeration development factor, which is defined as follows (1):

\[ K_a = P \cdot (M \cdot m + N \cdot n), \] (1)

where \( P \) - the population of the agglomeration (million people); \( M \) is the number of cities in the metropolitan area; \( N \) - number of urban-type settlements in agglomeration; \( m \) is the

¹ Institute of Geography, Russian Academy of Sciences
² Central Scientific Research and Design Institute of The Ministry of Construction and Housing and Communal Services of Russian Federation
proportion of the urban population in the agglomeration population; n - the proportion of the population of urban-type settlements in the population of the agglomeration.

The classes of agglomeration development according to the methodology of the Institute of Geography of the Russian Academy of Sciences are determined on the basis of the value of the development factor:

1) more than 50 are the most developed;
2) 10 to 50 - highly developed;
3) from 5 to 10 - developed;
4) from 2.5 to 5 - underdeveloped;
5) less than 2.5 - least developed;

For the Vologda agglomeration the following value was obtained: \( K_n = 1.5 \).

Thus, the calculations carried out for a number of methods indicate that the Vologda agglomeration, according to the presented classification, currently belongs to the category of monocentric, least developed and emerging, but it meets all the criteria for the separation and delimitation of agglomerations, as indicated above, which in fact testifies to the presence of agglomeration effects in the territories under consideration.

For an objective study of the specifics, problems and prospects for the formation of the Vologda agglomeration, it is advisable to analyze the key long-term trends in the socio-economic development of the territories, and to reveal the general patterns of development of these municipalities. Analysis of the conditions and possibilities for the formation of the Vologda agglomeration should involve research not only on the materials of official statistics, but also on the active use of empirical data obtained during sociological surveys. In this regard, it is extremely important to conduct a sociological survey among the residents of the municipal formation "City of Vologda" and the municipalities forming part of the Vologda agglomeration formed (Vologda, Gryazovets, Sokol districts), heads of these municipalities regarding the specifics, problems and prospects for the formation of integration ties.³

3. Results

The conducted analysis of social and economic development of the Vologda city, Vologda, Gryazovets and Sokol districts in 1991-2016. allowed to identify a number of key trends in the development of these territories:

- The increase in the number of permanent residents for the period under review was observed only in the city of Vologda (by 19,800 people or by 7%), while in the whole region and in the regions in question, on the contrary, it was recorded a decrease (in the region - by 13% 11% in the Vologda region, 28% in the Gryazovets district, and 24% in the Sokolsky district). At the same time, it should be noted that a single vector of development for Vologda and the Vologda region has been observed in this area in recent years (population growth of these territories). It was formed, including due to the migration here (primarily to Vologda) of the population from the Gryazovets and Sokol districts;

- In the period under review, the industry in Vologda was developing at a higher rate (growth in the prices of industrial production in 1991 amounted to almost 76%) and the

³ To solve this problem, in October 2017, a sociological survey was carried out among residents of the municipal districts forming part of the Vologda agglomeration (Vologda, Gryazovets, and Sokol districts). The sample size of the survey is 300 people aged 18 years and over (100 people in each district). The sample is purposeful, quota. Representation of the sampling efficiency of ensuring the observance of proportions between the urban and rural population, the sex-age structure of the adult population of the districts.

When conducting a survey of the inhabitants of Vologda, the total population was 248929 people. The sample size is 800 people. The distribution of respondents by sex and age corresponds to the general population of Vologda (according to sex and age indicators of statistical collections). The sampling error is not higher than 4%.

When polling heads of municipalities, the questionnaires were sent to the heads of the Vologda, Gryazovets and Sokol districts, Vologda, as well as the heads of all the settlements that make up these regions (a total of 33 respondents). A similar questionnaire was sent out also in all other municipalities of the Vologda region. The number of samples and completed questionnaires allows you to make a sample error of no more than 4-5%. The heads gave assessments of the situation based on the results of the last calendar year (2016). The results are presented in % of the number of respondents who answered the question.
Vologda region (an increase of 5.1 times); while in the Gryazovets and Sokol districts there was a decline of 49.4% and 26.3%, respectively. This indicates significant changes in the industrial production of the study areas: some degradation of industrial potential in the Gryazovets and Sokol districts and its concentration in the core of the agglomeration and the Vologda region;

- In agriculture, there was a general reduction in the acreage of crops in all types of farms: in the Sokol district by almost 59%, Gryazovets by 26.3%. At the same time, the least of all is the destructive data Vologda region (a decrease of 6.5%). At the same time, despite the reduction in crop areas, it was possible to increase the gross harvest of grain and leguminous crops (an increase of 8%, and in the Vologda region - 32%) due to increased crop yields. The processes of intensification are also characteristic of dairy and beef cattle breeding;

- there was an increase in the pace of housing construction in the Vologda agglomeration. Thus, for the period under study in Vologda district, the volume of housing stock increased by almost 83%, in Vologda - by 69%. Quite good dynamics shows the sector in the Gryazovets area. At the same time, the growth rates of agglomeration housing exceeded the values for the whole region. At the same time, the level of its improvement was higher than the average for the region. So, in 2016 about 68% of housing was provided with water supply (against 61%), sewerage - 64% (55%), and centralized heating - 61% (50.6%);

- The sphere of trade of Vologda is now more oriented towards the inhabitants of the Vologda region adjacent to the city. In turn, residents of the city also purchase part of the products in the Vologda region during their regular trips to dachas, recreation in the district, etc.

Agglomeration processes are also manifested in the concentration of population, production and economic activity in these territories. In particular, in 2016 years. the Vologda agglomeration accounted for about 14% of the oblast's total industrial output (3.5 pp. growth since 1991), 43% of the cattle population in the region (by 13 pp.), 34% of the acreage of crops (by 9.5 pp.), 30% of meat production (by 5.3 pp.), about a third of the region's tourist flow (Table 2).

**Table 2. The share of the territories of the Vologda agglomeration in the general regional values of key social and economic indicators, %**

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</tr>
</thead>
<tbody>
<tr>
<td>Number of permanent rural population</td>
<td>18.9</td>
<td>19.4</td>
<td>19.1</td>
<td>20.6</td>
<td>21.5</td>
<td>21.5</td>
<td>21.7</td>
<td>21.8</td>
<td>+2.9</td>
</tr>
<tr>
<td>Volume of industrial products</td>
<td>10.5</td>
<td>11.4</td>
<td>11.2</td>
<td>10.5</td>
<td>11.4</td>
<td>13.6</td>
<td>14.5</td>
<td>14.1</td>
<td>+3.5</td>
</tr>
<tr>
<td>Crop area of agriculture</td>
<td>24.9</td>
<td>30.5</td>
<td>31.9</td>
<td>33.2</td>
<td>34.0</td>
<td>33.9</td>
<td>35.1</td>
<td>34.4</td>
<td>+9.5</td>
</tr>
<tr>
<td>Livestock number of cattle</td>
<td>29.8</td>
<td>36.6</td>
<td>39.7</td>
<td>40.9</td>
<td>41.7</td>
<td>43.2</td>
<td>43.0</td>
<td>42.7</td>
<td>+12.9</td>
</tr>
<tr>
<td>Production of meat</td>
<td>24.8</td>
<td>29.4</td>
<td>31.6</td>
<td>34.6</td>
<td>29.7</td>
<td>27.9</td>
<td>30.1</td>
<td>30.1</td>
<td>+5.3</td>
</tr>
<tr>
<td>Tourist flow</td>
<td>n/a</td>
<td>n/a</td>
<td>24.8</td>
<td>24.9</td>
<td>33.2</td>
<td>35.4</td>
<td>33.2</td>
<td>34.9</td>
<td>+10.1*</td>
</tr>
</tbody>
</table>

Source: calculated on the basis of data of Federal State Statistics

One of the facts testifying to the presence of agglomeration links between the study areas and the regional center is the active movement of the population in these directions. So, according to the polls conducted by VolRC RAS, 31.6% of Vologda residents visit the regional center every day and 10.2% of the Sokol district, and once a week - 22.4 and 13.3% of their residents, respectively. Among the key objectives of these trips is the purchase of personal consumption products in the city (on average in the regions - 57.3%), visits to relatives (30%), cultural and sports events (24%). Every fourth inhabitant of the Vologda region has a permanent job in the regional center (Table 3).
Table 3. The objectives of the visit to Vologda by residents of districts, % of the number of respondents

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Vologda District</th>
<th>Gryazovets District</th>
<th>Sokolsky District</th>
<th>Average on areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>I purchase products for personal consumption</td>
<td>65</td>
<td>59</td>
<td>48</td>
<td>57.3</td>
</tr>
<tr>
<td>I visit relatives, acquaintances</td>
<td>44</td>
<td>13</td>
<td>33</td>
<td>30</td>
</tr>
<tr>
<td>I attend cultural and sporting events</td>
<td>29</td>
<td>21</td>
<td>21</td>
<td>23.7</td>
</tr>
<tr>
<td>I have a permanent job here</td>
<td>25</td>
<td>4</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>I visit a sanatorium, recreation centers or tourist sites</td>
<td>7</td>
<td>8</td>
<td>17</td>
<td>10.7</td>
</tr>
<tr>
<td>I have my own dacha, land, a country house or an apartment</td>
<td>9</td>
<td>2</td>
<td>2</td>
<td>4.3</td>
</tr>
</tbody>
</table>

Source: calculated on the basis of data of Federal State Statistics

The residents of the regional center also note the presence of links with the districts. The closest interaction of Vologda is with the Vologda region: on average, 42% of the respondents in the city have a dacha, a plot of land, a country house; every third resident visits relatives, about 30% - goes there for fishing, hunting and picking berries. Every fifth resident works in the organizations of the Vologda region. Among the purposes of the visit of the Gryazovets and Sokol districts, leisure activities (fishing, hunting, etc.) prevail, as well as visits to relatives.

There is a desire of people to change their place of permanent residence within the Vologda agglomeration. Thus, the lower quality of life in the districts leads to the fact that a significant part of the population wants to move to the regional center (22% in the Sokol district, 20% in the Vologda region). The main reasons for the change of residence (100% of those who responded in Sokolsky and Gryazovets districts) and increased access to reception and quality of social and personal services (in Sokolsky and Gryazovets districts - 100%, in Vologda - 25%) is the employment in the city for new, more highly paid work. For residents of the Sokol district, there is a tendency to move in connection with the desire to improve the quality of housing conditions (100% of respondents). The availability of sufficiently developed connections between the territories of the Vologda agglomeration is evidenced by the surveys of the heads of these municipalities conducted by the VolRC RAS. It should be noted that, on average, the agglomeration has more chapters than the regional average, which indicate some form of intermunicipal ties. At the same time, the interaction of these territories takes place in the forms of pendulum migration (47.8%), industrial and economic relations between enterprises, organizations from neighboring municipalities (34.8%), agreements with local self-government bodies (30.4%), maintenance and infrastructure development (17.4%), etc. Thus, the analysis showed the presence and further development of close production, cooperative, cultural, recreational and other links of the territories under consideration.

4. Conclusion

In general, the results of the comprehensive analysis show that at present the emerging Vologda agglomeration has a number of strengths that will contribute to its development in the medium and long term.

First of all, they include its advantageous economic and geographical position (location in the North-West of Russia at the intersection of the most important transport communications). The city of Vologda, which is the core of the metropolitan area, is a well-developed transport hub and has a number of prerequisites for becoming one of the largest logistics centers in the European North of Russia, which will serve the production needs of not only the subjects of this region, but also the Arctic zone of Russia (Table 4).

The development of agglomeration is also shown by the growth of the total population in the territory due to natural population growth in Vologda and the migration increase (Vologda region).
In general, according to the territories in 1991-2016 in the city of Vologda there was an increase in the number of inhabitants by 6.6%, and by regions the population processes decline were not as rapid as in the whole region.

The active cultural life of the region was concentrated within the agglomeration. This was greatly facilitated by the status of the city of Vologda as the administrative center of the Vologda region, the cultural capital of the Russian North, the "capital" of Russian lace, oil, and flax. This circumstance leads to an increase in the tourist flow of these territories.

The relatively diversified structure of the real sector of the city's economy will also have a multiplier effect on the development of agglomeration areas, in which industry, construction, transport, tourism, etc. are combined in a harmonious proportion. Formation and further development on the territory of clusters (dairy, tourist, wooden housing construction, IT cluster).

Table 4. SWOT-analysis of the creation and development of the Vologda agglomeration

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>– advantageous economic and geographical position: location in the North-West of Russia at the intersection of the most important transport communications;</td>
<td>– poor diversification of the economies of agglomeration areas due to a general decline in investment activity;</td>
</tr>
<tr>
<td>– growth of the total population in the agglomeration area due to natural population growth in Vologda and migration increase (Vologda region);</td>
<td>– fragmented agglomeration stakeholders;</td>
</tr>
<tr>
<td>– the status of the city of Vologda as the administrative center of the Vologda region, the cultural capital of the Russian North, the &quot;capital&quot; of Russian lace, oil, flax;</td>
<td>– lack of full intermunicipal interaction;</td>
</tr>
<tr>
<td>– a relatively diversified structure of the real sector of the city's economy, in which industry, construction, transport, tourism combine in a harmonious proportion.</td>
<td>– the absence of a unified, mutually connected project for the development of Vologda and the adjacent districts.</td>
</tr>
<tr>
<td>– formed network of educational, scientific institutions and innovative infrastructure;</td>
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<tr>
<td>– established active urban communities, relatively high level of human capital development;</td>
<td></td>
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<tr>
<td>– presence and formation on the territory of innovative clusters (dairy, tourist, wooden housing construction, IT-cluster).</td>
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<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>– the formation of the regulatory and legal support for the functioning of the agglomeration on the territory of the country;</td>
<td>– dependence of directions and size of financial, investment flows on decisions of higher levels of government;</td>
</tr>
<tr>
<td>– capitalization of existing brands of the territory;</td>
<td>– an increase in the price of land, the rent of industrial and residential premises, the cost of labor;</td>
</tr>
<tr>
<td>– increasing the diversity of supply of goods and services for the population based on the use of the effect of agglomeration;</td>
<td>– Increase in the importance of the role of agglomerations-competitors (Cherepovets agglomeration);</td>
</tr>
<tr>
<td>– participation in federal and regional programs and projects for agglomeration development.</td>
<td>– congestion of the transport system, increase of anthropogenic impact on the environment;</td>
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<tr>
<td></td>
<td>– reduction of qualitative migration inflow into agglomeration.</td>
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Source: compiled by the author
In the city of Vologda there is a sufficiently developed network of educational, scientific institutions and innovative infrastructure. These circumstances are one of the key factors for the further development of the human and social capital of these territories.

Despite the identified advantages, at present there are a number of weaknesses and "bottlenecks" in the development of the Vologda agglomeration, which require "stripping". In particular, the economy of agglomeration areas is characterized by a weak diversification, aggravated, including, due to a general decline in investment activity in these territories.

Along with this, there is a need to understand and interrelate the interests of the main stakeholders in agglomeration (city authorities, districts, settlements, business community of these territories, the population, etc.), and to establish a full-fledged intermunicipal interaction, which is currently at the stage of formation. The development of this interaction also requires the formation of a unified, mutually connected project for the development of Vologda and the surrounding regions.

Further development of the Vologda agglomeration is facilitated by a number of factors of the external nature. Thus, at present, the vector in the direction of creating and developing large urban agglomerations is recognized as a priority at the highest echelons of power. In the light of this, the normative and legal support for the functioning of the agglomeration on the territory of the country takes place.

The creation of favorable conditions for the urban agglomerations development and highly urbanized areas as poles of accelerated socioeconomic development is enshrined as one of the main activities of the Government of the Russian Federation for the period until 2018 (approved by the Government of the Russian Federation on May 14, 2015). In 2018, it is planned to adopt the Concept of the Spatial Development Strategy of the Russian Federation for the period until 2030. In the Strategy of Social and Economic Development of the Vologda Region until 2030 (approved by the Decree of the Government of the Vologda Region of October 17, 2016 No. 920), the formation and development of the Vologda agglomeration is also one of the priorities of the spatial development of the region. In view of this, the participation of the Vologda agglomeration in federal and regional programs and projects is seen as promising, and financing is attracted for the implementation of priority intermunicipal projects.

One of the key opportunities for the development of the Vologda agglomeration is the further capitalization of existing brands of the territory; increase the diversity of supply of goods and services for the population on the basis of the use of the effect of agglomeration (primarily for residents of districts).

The most important task at the same time is the formation of a system for managing these processes, the development of the Strategy for the development of the Vologda agglomeration, and the attraction of funding for the implementation of projects and activities for its further development. The analysis showed that at present there are certain opportunities for participation of the Vologda agglomeration in federal and regional programs and the project (federal project "Safe and qualitative roads", regional project "Agglomeration of Vologda", a possible special federal program / subprogram "Development of urban agglomerations in the Russian Federation" in the future).

Accordingly, to start a purposeful management of the processes of formation and development of the Vologda agglomeration, it is expedient to implement the following measures:

1. To sign the Agreement on the intention of creation of the Vologda agglomeration
2. To sign the Agreement on the intention of creation and joint development of the Vologda agglomeration between municipalities that are part of the agglomeration.
3. Form the Coordinating Council for the development of the Vologda agglomeration.
4. Develop joint agglomeration, intermunicipal projects, which can later be declared in federal or regional agglomeration development projects. The most priority directions for these projects can be the following:
   - Conducting a single town-planning policy, coordinated development of transport infrastructure in agglomeration municipalities,
   - Trade and formation of a single market for the production,
   - Development of culture, tourism and recreation,
Joint use and development of communal infrastructure in the territory agglomeration, including through the establishment of inter-municipal organizations. The creation of a transport and logistics hub in a non-agglomeration area - experience in solving issues and problems of local importance, etc.

The implementation of these directions will create favorable prerequisites for the formation and enhancement of the effectiveness of the system for managing the development of the Vologda agglomeration.

5. Acknowledgments

The article was prepared in accordance with the state task for the Vologda Scientific Center RAN on the subject of research No. 0168-2019-0004 "Improving the mechanisms of development and effective use of the potential of socio-economic systems."

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