

# THE ROLE OF THE MOSCOW AGGLOMERATION IN THE SOCIO-ECONOMIC DEVELOPMENT OF CENTRAL RUSSIAN REGIONS

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**Abstract.** The paper presents comparative analysis of strategies of socio-economic development of 4 subjects of Russia — Vladimir, Ivanovo, Ryazan, and Yaroslavl regions, development scenarios, taking into account the influence of the Moscow agglomeration. The analysis includes Strengths, Weaknesses, Opportunities, and Threats associated with the proximity of the regions to Moscow and the Moscow region, as reflected in the SWOT analysis of the regions. It reflects the advantages of implementing interregional infrastructure projects for each of the regions.

**Keywords:** regional competitiveness, integration resource of the region, strategy of social and economic development of the region, strategy scenarios, SWOT analysis, Moscow, Moscow region, Moscow agglomeration, Vladimir region, Ivanovo region, Ryazan region, Yaroslavl region.

**JEL codes:** C82, M10, O18, R50, R58

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## Introduction

The study subject is Moscow, Moscow region, and 4 regions bordering Moscow agglomeration – Vladimir, Ivanovo, Ryazan, and Yaroslavl regions. Moscow is the capital of Russia, a federal level city, the administrative center of the Central Federal District (CFD) and the center of the Moscow region, although is not part of the region, and the center of the Moscow metropolitan area. The Moscow region borders with 7 Russian regions: Vladimir, Kaluga, Ryazan, Smolensk, Tver, Tula, and Yaroslavl regions. It should be noted that in recent years only three constituent territories of the Russian Federation (Moscow, Moscow region, Kaluga region) were donor regions, while the other six were subsidized regions.

The Moscow agglomeration (Moscow as a federal city and the Moscow region) acts as a key growth point for the national economy, where enormous financial, material, labour, technological, and other types of resources are concentrated. This makes it possible to provide intensive social and economic development of both the Moscow agglomeration and its neighboring regions with joint production and infrastructure innovation projects (Veselovskii & Nikolaev, 2021).

The Moscow region takes the first place in Russia in terms of housing construction, the second in terms of retail trade turnover, the third in terms of gross regional product (GRP). The Moscow region continues to outpace economic growth. The region is one of the leading regions in terms of population education level, with only Moscow having it higher, and it noticeably exceeds all regions of the Central Federal District. Favorable conditions for business development are being created in the Moscow Region. The region is part of

the Moscow agglomeration – the largest in Europe in terms of population, and it is the economic, financial, trade, scientific, cultural, information, and innovation center of Russia. The region continues to concentrate economic activity within the closer "economic belt" of the Moscow region, localized around the Moscow Ring Road (MKAD) (Moscow Region Socio-Economic Development Strategy up to 2030, 2021).

As noted in the Strategy for Socio-Economic Development (hereinafter – the Strategy) of the Moscow region, here is the list of the conceptual aspects of development until 2030:

- balanced territory development with minimal disproportions (in economic conditions and social sphere, in the level and quality of life of the population, in the environmental impact);
- developed social sphere, which should ensure high social standards of quality and safety of life;
- Digital Moscow region (developing and distributing smart technologies, accelerated digitalization of the economy and social sphere, developing wireless communication technologies and conditions for creating smart cities, creating data centers, developing industrial Internet and Internet of Things, etc.);
- smart public administration, using project approach and risk management (openness and accessibility of state bodies, high involvement of civil society institutions and residents in solving urgent issues of social and economic development of the Moscow region).

The Moscow region is a major world-class transport and logistics hub. The region's logistics complex has been steadily developing over the last decade and has been one of the growth drivers even in the years of crisis. Development of the transport and logistics complex by 2030 will ensure:

- the creation of modern and sufficient energy and engineering infrastructure;
- high standards in logistics, high-speed and safe transportation;
- Clean Moscow region — an area of rational nature management, which provides a harmonious joint development of industrial-infrastructure and natural-environmental complexes, etc.

The Strategy notes, "in the long term, the Moscow region will have higher requirements for the quality growth of both the living environment and the goods and services produced in the territory of the region. A proper response to these requirements will allow the region to maintain and strengthen its leadership position in the competition for human capital and investment" (Moscow Region Socio-Economic Development Strategy up to 2030, 2021).

The region creates favorable conditions to intensify social and economic development, applies modern approaches to the organization of public administration, motivates business and investments, develops social infrastructure, which creates ample opportunities for further increasing the competitiveness and attractiveness of the Moscow region for living and doing business.

Social and economic development projects in Moscow and the Moscow region have a decisive influence on economic growth, lead to the lifting of infrastructural constraints, the transformation of the institutional environment of the economy, the transfer of positive experience to other Russian regions.

A serious challenge to the development of Moscow and Moscow region is the demographic aging, which leads to lesser in labor supply in the labor market. Thus, the share of people over working age increased throughout 2005-2019 from 21.8% to 26.9% in Moscow and from 23.1% to 24% in the Moscow region (Regions of Russia. Socio-economic indicators, 2020).

The Moscow region labor market is integrated into the single labor market of the Moscow metropolitan area. The Strategy states that the labor force in the region is expensive compared to the nearby Russian regions (except Moscow), and there is a significant outflow of the most valuable and qualified personnel to Moscow, which limits the human resource potential of the regional development. The scale of daily labor (commuting) migration of the region's inhabitants to the capital is linked to higher salaries in the capital, diversity of labor supply, and developed transport infrastructure. Thus, there are internal and external (from other regions) labor flows of migrants in the Moscow agglomeration.

There are long-term studies of the impact of the Moscow agglomeration on the social and economic development of the Central Russian regions. For example, V.Y. Lyubovny notes that Moscow, unlike many world capitals, plays not only the role of the national economy management center, but also concentrates a powerful and highly qualified scientific and production potential and acts as a generator of innovations for

the Russian economy in this regard. Moscow together with Moscow region (where the metropolitan functions are also implemented) forms a special "metropolitan region" (Lyubovnyi, 2007).

B.D. Babaev in his work "Moscow: Donor Or "Vampire"?! (2009) shows the monopolistic-competitive advantages of Moscow, its role in the formation of the Moscow macro-region, defines these processes as high-scale, having an extremely strong impact not only on the social and economic development of the Moscow region, but also on Moscow itself (Babaev, 2009).

B.D. Babaev, E.E. Nikolaeva, and A.I. Novikov study the combination and contradiction of interests in the investment sphere in the influence of Moscow on the Ivanovo region, the development strategy of one of the municipalities (Gavrilovo-Posadsky district) within Moscow's interests, etc. (Babaev, Nikolaeva & Novikov, 2008).

N.V. Zubarevich points to Moscow's agglomeration advantages and the strong attraction of population and investment to the metropolitan region; new task of macro-regions — implementation of major infrastructure projects (Zubarevich, 2019). V.N. Leksin states that material, financial, human, and other resources are pulled into large urban agglomerations (Leksin, 2019). The place and role of the largest agglomerations are considered by O.V. Kuznetsova (Kuznetsova, 2019) et al.

### **Purpose of the study**

The proximity to Moscow and the Moscow region plays an important role in the social and economic development (SED) of the Upper Volga regions – Vladimir, Ivanovo, Ryazan and Yaroslavl regions. This proximity is considered a competitive advantage of these regions in their own Strategies. But in real economic life, on the one hand, there is interregional competition for resources, especially with the leading regions of the CFD, such as Moscow and the Moscow region, and, on the other hand, there are increasing opportunities for regions to build up integration potential with the Moscow agglomeration through development of their own potential (production, investment, innovation, infrastructure, institutional, etc.). In this article our aim is to assess the way the development of socio-economic relations with the Moscow agglomeration is emphasized in the new updated strategies of 4 regions (Vladimir, Ivanovo, Ryazan, and Yaroslavl regions), what the threats of such "neighborhood" are, and what are the ways to overcome them.

Integration aspects are reflected in scientific research (Libman & Kheifets, 2007). L. Grigoryev, N. Zubarevich, and Yu. Urozhayeva note that "the current form of interregional competition is a loser both for its subjects and for society as a whole". The authors distinguish Russia's macroregions and their unique features, noting the increasing connectivity of their main markets (labor, capital, locally produced consumer goods, etc.) (Grigoriev, Zubarevich & Urozhaeva, 2008).

### **Study methodology**

One of the methods for the analysis of SED of regions and regional policy is the analysis of regional development strategies and programs. For example, I. Nikolaeva and O. Tochilkina focus their analysis on the content of regional strategies, their elements (mission, goals and objectives, external environment analysis, strategic alternatives) (Nikolaev & Tochilkina, 2006). The methodological basis of our study was a comparative analysis of regional strategies (Finalized drafts of strategies of constituent entities of the Russian Federation, 2021; Strategy for socio-economic development of the Vladimir region until 2030, 2021), including mission, competitive advantages, development scenarios, strengths and weaknesses, opportunities and threats (SWOT-analysis).

### **Study contents**

Our analysis showed significant differences in population, wages, unemployment, and migration between the Moscow agglomeration and the 4 regions studied. As can be seen from Table 1, the population in the 4 regions under study is declining. As a result, in 2019, population of the Vladimir region was 91% of the 2005 level, 90% in the Ivanovo region, 93% in the Ryazan region, 95.5% in the Yaroslavl region. The average monthly nominal wage of employees of organizations is the lowest in the Ivanovo region (29.4% of the wage in Moscow, 50% of the wage in the Moscow region), in the Vladimir region – 34.5% and 58.8%, in the Ryazan

region – 37% and 62.5%, in the Yaroslavl region – 38.5% and 66.7%, accordingly. According to sample surveys of the labor force in the pre-COVID economy, the unemployment rate was the lowest in Moscow (1.4%) and Moscow region (2.7%), highest in Yaroslavl region (5.4%), while in Vladimir, Ivanovo, and Ryazan regions it averaged about 4%.

**Table 1** – Some indicators of social and economic development of regions

	Population, by the end of the year, thousand people.		Average monthly nominal accrued wage of employees of organizations, rubles	Unemployment rate*, % of labour force
	2005	2019	2019	2019
Moscow	10924	12678	94294	1.4
Moscow region	6784	7691	55555	2.7
Vladimir region	1486	1358	33076	4.0
Ivanovo region	1102	997	27553	3.8
Ryazan region	1189	1109	34488	3.9
Yaroslavl region	1313	1254	36016	5.4

\* according to sample labor force surveys, annual average

Source: *Regions of Russia. Socio-economic indicators, 2020*

Population migration plays an important role as an indicator of social and economic well-being of the region. As can be seen from Table 2, for the period 2013-19, there was a stable migration growth of the population only in the Moscow agglomeration and the Yaroslavl region. In 2019, migration growth was observed in all surveyed regions.

**Table 2** – Migration growth rates per 10,000 people population<sup>1</sup>

	2013	2014	2015	2016	2017	2018	2019
Moscow	90	57	92	24	89	79	38
Moscow region	140	149	120	141	111	140	144
Vladimir region	-4	-1	-11	-2	-21	-24	20
Ivanovo region	-5	-7	-22	-13	-22	-33	8
Ryazan region	16	4	0.01	17	8	-4	21
Yaroslavl region	38	35	37	28	7	3	8

<sup>1)</sup> Sign (-) indicates a decrease

Source: *Regions of Russia. Socio-economic indicators, 2020*

As can be seen from Table 3, the pandemic period led to a significant reduction in migration to Moscow, Ivanovo region (2.5% of the previous inflow), Moscow region (less than a half of the previous inflow), and Ryazan region (about 33% of the previous inflow). And in the Vladimir and Yaroslavl regions, the migration growth has changed to a decline.

**Table 3** – Migration growth (+) / decline (-) of population, people

	2019	2020
Moscow	+47,584	+1,614
Moscow region	+110,198	+51,250
Vladimir region	+2,693	-1,594
Ivanovo region	+816	+20
Ryazan region	+2,327	+821

	2019	2020
Yaroslavl region	+1,023	-964

Source: Key indicators of the socio-economic situation of the constituent entities of the Russian Federation in 2020

In the strategies of the studied regions, we put migration to the Moscow agglomeration in the Threats in the SWOT analysis: for example, this is the pendulum migration of the economically active population from the Vladimir region to the Moscow and Nizhny Novgorod agglomerations; centripetal processes in population migration between Ivanovo region and Moscow (resettlement to permanent residence, pendulum and rotational migration); low migration attractiveness of the region for highly skilled labor migrants of Yaroslavl region; migration outflow of the most qualified personnel from the Ryazan region to Moscow and neighboring regions.

For example, the Ryazan region Strategy notes three main attraction points of the region's population: the first is Moscow as a major scientific and educational center, labor market, and sales market. The second is Ryazan as an intraregional center of attraction of population especially from small towns of the region (Kasimov, Rybnoye, Ryazhsk, Sasovo, Skopin). The third are the centers of the neighboring regions, which are within 2-4 hours' reach (Voronezh, Lipetsk, Nizhny Novgorod, Tula) (Ryazan Region Socio-Economic Development Strategy up to 2030, 2021).

The analysis of competitive advantages of Vladimir, Ivanovo, Ryazan, and Yaroslavl regions showed that the strategies of these regions claim a favorable geographical location associated with proximity to Moscow. For example, the Vladimir region Strategy notes "a favorable geographical location within international transport corridors, developed transport network, and proximity of major markets – Moscow and Nizhny Novgorod – are the most important prerequisites for the implementation of its transit potential" (Strategy for socio-economic development of the Vladimir region until 2030, 2021), and the Ryazan region Strategy states "a favorable economic and geographical position: comparative proximity to Russia's largest regional market – the Moscow agglomeration" (Ryazan Region Socio-Economic Development Strategy up to 2030, 2021).

The impact of being a neighbor to the Moscow region is most clearly reflected in the SWOT analysis of SED of the regions.

The SWOT analysis of the Vladimir region points out the Strengths such as the proximity to high-capacity sales markets (Moscow and Nizhny Novgorod agglomerations) and active trade contacts with Moscow and the Moscow region; main industrial centers of the region (Vladimir, Murom, Kovrov, Gorokhovets) along major transport highways, including the federal highway M12 Moscow-Kazan, a fairly good environmental situation in the region, despite the proximity to Moscow. Rich cultural heritage, natural and historical monuments, being a part of the Golden Ring of Russia, availability of the Small Golden Ring (Aleksandrov, Yuryev-Polsky, Suzdal, Vyazniki, Gorokhovets, Murom, Gus-Khrustalny, Vladimir) determine the tourist attractiveness of the Vladimir region, allow it to support small business, create new jobs in the region, form the Vladimir tourist product, including for Moscow residents, for 1-2 days.

The Weaknesses include pendular migration of the economically active population to the Moscow and Nizhny Novgorod agglomerations; strong dependence on the sales markets of Moscow and the Moscow region. A reduction in the number of employees at existing enterprises and high rates of understaffing at the region's enterprises is causing an outflow of working-age people, primarily to the Moscow region, which has a higher standard of living, quality of life, and a higher labor market supply. At the same time, the Vladimir region is dealing with a high level of registered unemployment in comparison with other subjects of the Central Federal District, there is a shortage of skilled workers, qualified managers in the administration of municipalities. And the shortage of qualified personnel, in turn, limits the growth of productive and innovative sectors of the economy.

Significant losses of the region's producers in case of negative phenomena in the markets of Moscow and Moscow region are cited as Threats. The Moscow region acts as a strong competitor in the struggle for federal support of agriculture and for investments, including foreign ones. Moscow and the Moscow region are considered as strong centers of attraction of investments and innovations (Strategy for socio-economic

development of the Vladimir region until 2030, 2021).

Strengthening the presence of Vladimir producers in the markets, including Moscow and the Moscow region, is seen as an Opportunity; another one is attracting foreign investments due to the territorial proximity to Moscow and location on the transport corridor; finally, investment programs in the region by major corporations of the country (Gazprom, Russian Railways, Rosseti) are also considered an Opportunity.

In SWOT analysis of Ivanovo region, here are the Strengths which may be of interest to external investors, consumers of goods and services: high potential of sales markets for goods and services produced in the Ivanovo region; good level of development of transport and telecommunication infrastructure; convenient transport and logistics interchange; availability of vacant production sites with communications and power, heating capacities and relatively low cost of land plots; availability of infrastructure to accommodate production and other investor facilities (industrial parks, business centers, etc.); rich historical and cultural heritage and picturesque natural landscape (Ivanovo Region Socio-Economic Development Strategy up to 2024, 2021).

The Weaknesses include social inequality, low-income levels, contributing to significant migration of able-bodied population to Moscow and neighboring regions.

Among the Threats are the high attractiveness of the Moscow agglomeration for young people; tensions in the labor market; competition from neighboring regions. One of the factors reducing the quality of human capital and causing personnel shortages for the region's economy at present and in the medium term is the "outflow" of specialists to work in neighboring regions with higher wages (Ivanovo Region Socio-Economic Development Strategy up to 2024, 2021).

The analysis of external factors influencing the development of the Ivanovo region highlights macrofactors (macroposition) – the position of the region in the global economy; mesofactors (mesolocation) – the position of the region in Russia and microlocation – the position of the region among its immediate neighbors – the regions of the Center and the North of the European part of Russia. As noted in the Strategy, the most significant impact on the SED of Ivanovo region comes from microfactors, including Moscow and Moscow region, which "determine the centripetal processes of population migration between Ivanovo region and Moscow. At the same time, there is both resettlement for permanent residence (insignificant scale) and temporary migration for employment (pendulum and rotational migration), which is significantly large" (Ivanovo Region Socio-Economic Development Strategy up to 2024, 2021).

The Strategy names interregional differentiation as one of the main problems of Ivanovo region: the region lags far behind a number of neighbouring CFD regions in terms of per capita GRP, average per capita income and average wages; the region is characterized by a reduced level of investment attractiveness. As stated in the Strategy, "the need to reduce the scale of commuting will encourage regional authorities to pay more attention to the growth of salaries in organizations and enterprises in the region and to create conditions for increasing the number of jobs. And in this case, the micropositioning of Ivanovo region will have a positive impact on the level of the regional SED, including on the standard of living of the population. At the same time, the very growth of the population's income will be ensured, inter alia, by expanding the agglomeration influence of Moscow, which is an increase of investment in various spheres of tangible and intangible production. Also, the region's micropositioning will positively impact the development of the region through the strengthening of interregional ties for the supply of food and light industry products" (Ivanovo Region Socio-Economic Development Strategy up to 2024, 2021).

The region's Opportunities are: advantageous geographical position; availability of land plots suitable for agricultural use; vacant sites for investment projects. Opportunities in the region are also related to the export of medical services. There is a large complex of various medical institutions in the region, including the Gorodkov Federal Research Institute of Maternity and Childhood that applies modern reproductive technologies (Ivanovo Region Socio-Economic Development Strategy up to 2024, 2021). Moscow has invested in the reconstruction of the Ivanovo-Yuzhny airport, in housing (SU-155 Construction Company), etc. (Babaev, Berendeeva & Smirnov, 2007). Other large investment projects with money from Moscow (construction of 2 cattle-breeding complexes by Dymov, etc.) are currently underway.

In Ryazan region, here are the Strengths noted in the SWOT analysis. The region has a unique cultural heritage: historical, architectural, and archaeological monuments, more than 30 public and private museums. The region belongs to the regions with favorable opportunities for domestic and inbound tourism; it is possible to develop almost all types of tourism there: cultural and educational, therapeutic and recreational, active, ecological, business, pilgrimage, rural, etc. (Ryazan Region Socio-Economic Development Strategy up to 2030, 2021).

Threats include the migration outflow of the most qualified personnel to Moscow and neighboring regions. The Strategy notes that Ryazan has transformed into a densified, uncomfortable metropolis that has lost its competitive advantage in terms of urban environment over the Moscow agglomeration.

Opportunities for the development of the Ryazan region are related to the development of new technologies (robotics, new materials, medical technologies) due to the increased consumer demand of the population and industry of the Moscow agglomeration; as well as improved interaction with the fast-growing regions of Central and Southern Russia (Voronezh, Krasnodar, Rostov-on-Don, and Sochi). In order to reduce migration outflows, to preserve young people and the inflow of highly qualified personnel, it is noted that it is necessary to develop the science and education sector (Ryazan Region Socio-Economic Development Strategy up to 2030, 2021). Development opportunities of the Ryazan region are also related to forming high-tech health services. For example, the section Priority 1. Human Capital indicates the development of medical tourism (specialization of the Ryazan region – vascular surgery, dentistry, ophthalmology, otorhinolaryngology, cosmetology). Priority 2. High Technologies, Points of Growth provides an active promotion of the brand of medical institutions of the Ryazan region, including dental, in Moscow and the Moscow region (Ryazan Region Socio-Economic Development Strategy up to 2030, 2021).

The section Business Climate, Support for Entrepreneurship provides for "assistance to regional producers for access to networks, including the Moscow agglomeration (emphasis on fast-growing organic food markets)" (Ryazan Region Socio-Economic Development Strategy up to 2030, 2021).

Section 5.8. Priority 8. Spatial Development divides the Ryazan region into 6 economic zones: Metropolitan, Eastern, Eastern Transit, Southwest Transit, Northern Tourist, Southern Agrarian. Metropolitan includes Ryazan, Zakharovskiy, Rybnovskiy, Ryazan districts. It accommodates businesses of all clusters allocated in the region, and the economy of the territory is mainly oriented to the markets of Ryazan and Moscow. These areas have a well-developed suburban agriculture. As written in the Strategy, the development of greenhouse farms is promising here. There is more low-rise construction, including private houses in countryside. Well-developed sphere of services is oriented on transit flows (hotels, trade establishments, restaurants, etc.). Entertainment services are also developed (Ryazan Region Socio-Economic Development Strategy up to 2030, 2021).

Section 5.8.2. Smart Specialization of Municipalities of the Ryazan Region defines the creation of a website Active citizen (a similar website has been operating for 7 years in Moscow), and for Sasovskiy Municipal District, there is a task to further develop a network research platform for mastering modern educational technology Individual Style of Educational Activity, created by the Moscow State Pedagogical University (Ryazan Region Socio-Economic Development Strategy up to 2030, 2021).

The Strategy of the Ryazan region also presents a PEST analysis, which notes that "the economy of the Ryazan region develops in general according to the development dynamics of Russia, to a large extent depends on the development of the Moscow region and the prospects of manufacturing industries <...> Unemployment is at a stable average level (surplus labor force moves out of the region, including leaving to work in the Moscow agglomeration)" (Ryazan Region Socio-Economic Development Strategy up to 2030, 2021).

The SWOT analysis of the Yaroslavl region also takes into account the region's proximity to the Moscow region as its Strengths: advantageous geographical location (transport corridors, proximity to markets, proximity to the Moscow agglomeration (in terms of placement of production facilities to be withdrawn). Also citizens of Moscow and residents of other cities may be attracted by such Strengths of the region as developed transport infrastructure (airport, major railway junction, waterways and motorways); availability

of high potential for improving the quality of social services, large recreational potential, extensive historical and cultural heritage (the region positions itself as a "pearl" of the Golden Ring of Russia), which in general makes it attractive for external tourists. Health services are among the best in terms of quality and accessibility in the CFD, and the level of quality of education services significantly exceeds the standards established in Russia (Yaroslavl Region Socio-Economic Development Strategy up to 2025, 2021).

The Weaknesses, which can affect the interregional movement of labor force, include a shortage of workers and low migration attractiveness of the region for highly skilled migrant workers (Yaroslavl Region Socio-Economic Development Strategy up to 2025, 2021).

Among the Threats is the growing competition from neighboring regions in the markets for investment and labor resources.

The region's broad set of Opportunities is linked to the metropolitan area:

- bringing the borders of the Moscow agglomeration closer to the borders of the Yaroslavl region;
- increasing pace of relocation of production and office functions from the congested and "expensive" Moscow region to other regions;
- presence of foreign companies willing to locate their production facilities in Russia (not only in the Moscow region — author's note);
- availability of mobile skilled workforce in other regions;
- further growth of internal and external tourist flows;
- increasing inflow of investors from the metropolitan agglomeration, etc. (Yaroslavl Region Socio-Economic Development Strategy up to 2025, 2021).

Yaroslavl region is one of the largest centers of domestic and inbound tourism in Russia – such types of tourism as historical, water, recreational, beach, industrial, etc. are developing. As noted in the Strategy, Yaroslavl region is becoming a weekend recreation center for residents of the Moscow agglomeration (Yaroslavl Region Socio-Economic Development Strategy up to 2025, 2021).

Strategic priorities (drivers) of development include, among other things, taking advantage of the close proximity to the Moscow agglomeration to occupy the market in order to transfer office functions and production of Moscow companies (Yaroslavl Region Socio-Economic Development Strategy up to 2025, 2021). Moscow productions are relocating because, as research shows, the regions with a higher level of production activity actively involve labor resources in production activities, attract more investment, and innovate more actively (Babkova & Panakhov, 2018).

The Strategy notes that Yaroslavl is currently an attractive city for Moscow companies in terms of the transfer of some business processes and individual productions.

Target clients for the transfer of functions and productions to the Yaroslavl region are:

- manufacturing companies interested in moving production out of Moscow;
- large companies in the service sector;
- big banks;
- insurance companies;
- major telecommunications companies;
- companies with partial state investment;
- Internet developers, data centers.

A number of companies, both private and state-owned, have already assessed the attractiveness of Yaroslavl for relocation of back offices and service departments, including VympelCom, Raiffeisenbank, Severstal, HeadHunter, and the Agency for Housing Mortgage Lending. Today, companies either themselves or with the help of consultants determine the attractiveness of regions according to several indicators. The experience of these companies shows that Yaroslavl and Rybinsk can become one of the key cities for the adoption of service units and production facilities (Yaroslavl Region Socio-Economic Development Strategy up to 2025, 2021).

It is interesting to analyze regional development scenarios of integration processes with the Moscow agglomeration. For example, the Strategy of the Vladimir region provides for 3 development scenarios



(Strategy for socio-economic development of the Vladimir region until 2030, 2021). The inertial scenario involves a lower economic growth rate compared with the leading regions of the Central Federal District, low attractiveness for Moscow investors, and a limited inflow of new major investment projects.

Innovative scenario of the region stipulates knowledge economy sector and transition to innovative way of development, which will allow to provide domestic and foreign markets with ready-made industrial and consumer goods, to produce goods under the brand Made in Vladimir Region recognized by customers, while withstanding competition, including with the largest Moscow manufacturers. This scenario will provide a significant inflow of capital, enhance the development of the social sphere, more efficient use of resources, increase the parameters of human capital, and increase the role of innovation in the economy. The parameters of the labor force will improve, including an increase in the cost of labor; the use of the latest technology will reduce labor shortages and lead to an increase in labor productivity. If the innovative scenario is implemented, the economic growth rate will be significantly higher than in the leading regions of the CFD.

The target scenario assumes intensive use of all types of resources, intensification of investment and innovation-technological factors of development of Vladimir region, outstripping average Russian rates of economic growth, strengthening integration processes between Vladimir region and Moscow agglomeration (by adoption of complementary strategies and programs of social and economic development). It assumes the development and launch of projects based on public-private partnership, as well as conditions to attract major investors from the Moscow agglomeration. In this case, the Vladimir region can act as a universal techno-promotional platform, using not only its own developments, but also the achievements of the recognized scientific centers of Russia. The development of this scenario may change the flow of labor resources. On the one hand, there will be an inflow of highly qualified specialists, first of all, of technical specialties. Highly qualified specialists moving from other regions of Russia, as well as non-resident graduates of vocational education institutions who will stay to live and work in the region, will be an important reserve for improving the quality of human resources in the regional economy. On the other hand, there will be a growing outflow of labor resources from the Vladimir region, as modernized production technologies make it possible to reduce the workforce due to automation and computerization of production processes. In this case, people will be able to realize their professional abilities in the developed neighboring centers, including Moscow and Moscow region, where working conditions and salary level are much higher than in the Vladimir region. Such movement of labor flows will also increase integration processes between regions.

Tourism development will also unite neighboring regions. In tourism, the Vladimir region plans to develop both traditional directions (historical and cultural tourism) and new ones (health improvement, business, event, ecological, sports, pilgrimage, rural, car trips, weekend recreation). As it is noted in the Strategy of the Vladimir region, "the implementation of the targeted strategic alternative will lead to the Vladimir region taking the path of intensive development due to close interaction with the existing leader, the Moscow region" (Strategy for socio-economic development of the Vladimir region until 2030, 2021).

The Ivanovo region Strategy outlines 2 scenarios – conservative and intensive.

If the conservative scenario is implemented, the region can: reduce investment activity and demand for products of a number of sectors of the economy, grow unemployment and decline in incomes of the population, increase migration flows to more developed Russian regions.

The intensive scenario as a strategic one envisages the attraction of large investors to the textile industry, machine building, and metal processing, and the agro-industrial complex sector; forming conditions for high-class tourists' stay in the region; implementation of promotional programs for Ivanovo-made products on the Russian market; targeted investment marketing of the Ivanovo region, creation of an attractive image of the region among the Russian population, Russian investors. In case of active economic growth in Ivanovo region, it is expected: increase in investment activity, reduction of unemployment and income growth, reduction of population outflow, growth of domestic and external demand (Ivanovo Region Socio-Economic Development Strategy up to 2024, 2021).

The foundation for acceleration of innovative development of the Ivanovo region is, in particular, "the proximity to Moscow – a potential technology supplier, a carrier of the latest knowledge and competencies,

the largest consumer of innovative products" (Ivanovo Region Socio-Economic Development Strategy up to 2024, 2021).

The development of integration potential of regions can be considered in terms of regional potentials. For example, regional power systems have long been integrated. The energy system of Ivanovo region is a part of the unified energy system of the Center and has intersystem connections with Vladimir, Nizhny Novgorod, Kostroma, and Yaroslavl energy systems. At present, the transport infrastructure of the regions of Central Russia, their transport and transit potential is actively developing. The objectives are to improve not only the quality and accessibility of transport services, but also the degree of integration of the region's transport network into the transport network of adjacent areas.

Table 4 presents examples of the development of regional potential (production, transport and logistics, transit) taking into account interregional relations.

**Table 4** – Competitive advantages and objectives, objectives for their development as part of the development of integration potential

	Competitive advantages of the region for the development of this potential	Areas of potential development
Production potential (Yaroslavl region)	<ul style="list-style-type: none"> <li>- availability of qualified workforce;</li> <li>- a high quality higher education system;</li> <li>- advantageous location — 282 km from Moscow;</li> <li>- lower labor costs;</li> <li>- low other operating costs;</li> <li>- relatively low rental rates;</li> <li>- availability of technology parks, ready-made sites with communications;</li> <li>- comfortable environment for living and leisure activities;</li> <li>- transport accessibility (cities located at a distance of 200-300 km from the capital, preferably on the route of the company's logistics flows, good roads and rail express trains are welcomed);</li> <li>- population size (at least 200,000)</li> </ul>	Yaroslavl and Rybinsk may become one of the key cities for the adoption of service units and production facilities
Transit potential (Vladimir region)	<p>The Vladimir region is a major transit hub with a wide range of logistics services and developed transport infrastructure.</p> <p>Competitive advantages:</p> <ul style="list-style-type: none"> <li>- advantageous geographical location of the Vladimir region;</li> <li>- position in the area of international transport corridors;</li> <li>- a developed transport network and proximity to the largest markets — Moscow and Nizhny Novgorod — are the most important prerequisites for the region's transit potential</li> </ul>	<ul style="list-style-type: none"> <li>- construction of the high-speed railway line VSM-2 Moscow-Kazan-Yekaterinburg;</li> <li>- reconstruction of the Dobrynskoye airport airfield;</li> <li>- Construction of a high-speed toll road within the MTC in the direction Moscow-Nizhny Novgorod</li> </ul>

	Competitive advantages of the region for the development of this potential	Areas of potential development
Transport potential (Ivanovo region)	<ul style="list-style-type: none"> <li>- advantageous geographical location for the promotion of goods to the neighboring Russian regions, close proximity to Moscow, the region's close proximity to major federal highways</li> <li>- well-developed transportation network</li> <li>- important railways and waterways that pass through the region and connect the Central and Western regions with the Eastern and South-Eastern regions</li> </ul>	<ul style="list-style-type: none"> <li>- construction of the eastern bypass of Ivanovo as a transit transport corridor that eliminates the transport gap between federal highways and connects 4 administrative centers (Vladimir, Ivanovo, Kostroma, Yaroslavl) with a single highway</li> <li>- organization of high-speed railway traffic on the Moscow-Ivanovo section (Lastochka trains)</li> </ul>
Transit potential (Ryazan region)	<ul style="list-style-type: none"> <li>- good transport accessibility (two federal highways, Russian railway corridors to the east and south)</li> </ul>	<ul style="list-style-type: none"> <li>- organization of high-speed railway traffic on the Moscow-Ryazan section.</li> <li>- reconstruction of railway station Ryazan-1</li> </ul>

Source: composed by the authors

As can be seen from Table 5, completion of major infrastructure projects provides advantages for both the capital and the transit region, which leads to the idea of forming the Moscow macroregion (Babaev, 2009) as a system with developing production, transport, logistics, and other subsystems.

**Table 5** – Regional advantages in the implementation of major infrastructure projects

Project (region)	Advantages for the Moscow agglomeration of Moscow capital	Benefits for the region
Construction of a high-speed railway VSM-2 Moscow-Kazan-Yekaterinburg (Vladimir region)	<ul style="list-style-type: none"> <li>- increased accessibility of cultural-historical heritage and recreational facilities</li> <li>- expansion of the market for logistics services from the center of the country to the regions</li> <li>- unloading of the Moscow transport hub</li> </ul>	<ul style="list-style-type: none"> <li>- additional budget revenues of the Vladimir region — 125 bln rub.;</li> <li>- more than 20 thousand new jobs;</li> <li>- GRP growth (forecast) — 13%</li> <li>- increased accessibility of cultural-historical heritage and recreational facilities</li> <li>- prerequisites cost-effective logistics centers in the Vladimir region, which will contribute to a greater coverage of the territory and markets</li> </ul>
Transfer of service units from the Moscow agglomeration to the Yaroslavl region.	<ul style="list-style-type: none"> <li>- focus on the capital's functions as Russia's cultural, social and political center</li> <li>- investment of free capital of Moscow entrepreneurs in facilities at prices significantly lower than those in Moscow</li> <li>- strengthening the position of the capital's businesses in finance, trade, and services</li> </ul>	<ul style="list-style-type: none"> <li>- increasing strategic sustainability of the region's economy, balancing the budget through economic diversification;</li> <li>- the emergence of new highly skilled jobs; new competencies;</li> <li>- reducing the outflow of workforce to Moscow;</li> </ul>

Project (region)	Advantages for the Moscow agglomeration of Moscow capital	Benefits for the region
		<ul style="list-style-type: none"> <li>- investments in the facilities preparation and production development;</li> <li>- increase in budget revenues in the form of taxes;</li> <li>- stimulation of the consumer and service market;</li> <li>- development of a system of related businesses and outsourcing;</li> <li>- Increasing the region's human resource potential through job creation in modern technology area</li> </ul>

Source: composed by the authors

The efficiency of these projects is quite high. For instance, according to the estimates of the Center for Strategic Research, only during the first 10 years of operation of the Moscow-Kazan high-speed railway, additional budget revenues of the Vladimir region may reach 125 bln rub. More than 20 thousand jobs will be created to serve the airport complex and high-speed railway. The growth of GRP is predicted at 13% of tourist flow (Strategy for socio-economic development of the Vladimir region until 2030, 2021).

In the Transport Strategy of Russia for the period up to 2030, it is planned to build a high-speed toll road in the Moscow-Nizhny Novgorod direction as part of the MTC, which will relieve the burden on the Moscow transport hub to connect the administrative centres of neighboring regions bypassing Moscow (Kaluga-Tver-Vladimir-Ryazan-Tula).

Certainly, an important factor in using the advantages of geographical location and other competitive advantages of the regions is the administrative resource, activity, and efficiency of not only the federal, but also the regional authorities. For example, back in 2006, the government of Ivanovo region and the Northern Administrative District of Moscow signed an agreement on trade-economic, scientific-technical and cultural cooperation, and a similar Agreement was signed between the administration of Furmanovsky municipal district and the administration of Molzhaninovsky district of the Northern District of Moscow (Babaeva, Berendeeva & Smirnov, 2007).

The social capital of the governors of the subjects of Russia also plays an important role. S.S. Voskresensky, the Governor of Ivanovo region, Deputy Representative of the President of the Russian Federation in the Northwestern Federal District from 2012 to 2014, Deputy Minister of Economic Development of the Russian Federation from 2014 to 2017, since October 2017 is in charge of the Ivanovo region. Governor of the Yaroslavl Region D. Yu. Mironov since 2013 is in administration at the Ministry of Internal Affairs of the Russian Federation, since July 2016 runs the Yaroslavl region. Governor of the Ryazan region N.V. Lyubimov served as Minister of Economic Development of Kaluga Region since 2004, Deputy Governor of Kaluga Region since 2016, was elected as a member of the State Duma of the Russian Federation, was a member of the Budget and Taxes Committee, and headed a subcommittee for cooperation with the Accounts Chamber of the Russian Federation.

### Conclusions

The strategies we have analyzed are large-scale science-based research, the result of an in-depth analysis of the current social and economic situation, the potential of the regions, trends in the development of macro-, meso- and microeconomics.

The strategies of SED in Russian regions reflect the ongoing integration processes between the regions

through the movement of labor flows, investments, innovations. Moscow agglomeration (Moscow and the Moscow region) is seen as a strong center of attraction for labor, investment, and innovation.

In the SWOT-analysis of the regions (Vladimir, Ivanovo, Ryazan, Yaroslavl regions), the Threats include the migration outflow of the most qualified workforce to Moscow and neighboring regions, associated with significant interregional wage difference. At the same time, the regional Strengths and competitive advantages include the proximity to the Moscow region.

The Strategies note that the territorial location close to the Moscow agglomeration dictates the change of industrial production of the regions to the needs of these major markets (in the Vladimir region, it is also an attention to the Nizhny Novgorod agglomeration). It is noted that the regions will embark on a path of intensive development through close interaction with Moscow and the Moscow region, and the development of specialized types of production and the creation of joint clusters with the Moscow agglomeration on their basis will significantly accelerate economic growth and the living standards of the population.

The opportunities of Central Russian regions to enter the markets of Moscow agglomeration and other regions with their products and services expand, developing new technologies, implementing certification of products, ensuring their compliance with international standards, promoting them in the markets by holding exhibitions, fairs. The strategies also note the opportunities for regional development in connection with the formation of high-tech services (in health care, etc.)

Since these regions are crossed by federal highways from Moscow, the strategies consider incorporation into federal transit corridors and access to markets, development of roadside infrastructure services on transit highways.

Interregional competition poses serious tasks to the regional authorities economically (development of the region's competitive advantages and positioning of the region within the development of Russia as a whole and the Moscow macroregion in particular) and socially (ensuring high quality of life and comfortable environment for the population).

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