

Second-tier agglomerations of Ural region: The capacity for creative reindustrialization

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Abstract. The author deals with the concept of second-tier agglomerations in Sverdlovsk and Chelyabinsk regions of Russia and their capacity as centers of creative re-industrialization. There are six such agglomerations in the Urals (Greater Serov, Greater Tagil, Kamensk-Uralskii, Greater Kyshtym, Greater Miass, and Magnitogorsk), which differ in the number of population, economic sustainability, and transport accessibility from the leading cities of region, that is, Ekaterinburg and Chelyabinsk agglomerations. While the agglomerations mentioned are typically comprised of monotowns and thus depend upon the industrial sector (mining, metallurgy, machine-building, nuclear chemistry), they are capable of developing cultural industries; a necessary precondition in the ability to attract extra consumers from the largest cities. Thus, transport accessibility is the decisive factor in determining the strategies for making up creative and cultural industries in particular agglomerations. The author concludes that, even though Greater Kyshtym possesses the optimal transport accessibility, a set of environmental and legal issues will prevent it from developing rapidly. The transport accessibility and economic potential of Greater Miass and Kamensk-Uralskii make these second-tier cities suitable for launching a program of creative reindustrialization.

Key words: Industrial towns; Spillover effect; Monocity; Cultural industries; Monotowns; Creative reindustrialization.

1 Introduction

The Ural region is known to be an old industrial region with a long history. One might distinguish three waves of industrial colonization. The first one happened in the 18th century, when more than 100 iron factories were founded, mostly along the eastern slope of Ural mountains, yet also on Kama river. These industries were using charcoal as fuel and water as source of energy. The second wave happened at the end of the 19th century, when a set of larger, state-of-the-art steel mills were founded, as well as first copper refineries, typically with the support of international investors. The third wave started with Soviet industrialization and was mostly over by the end of the 20th century, creating the huge, well-equipped complexes of metallurgy, machine-building and chemical industry. Unlike the ‘Rust Belt’ of United States, heavy industry of Urals mostly survived crisis of the end of the

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20th century; a pivotal role was played by the cohort of well-equipped, finely-planned concentrated plants and factories that emerge within the third wave of industrial development of Urals.

As Savin and Letyagin demonstrated, since the beginning of the 21st century the labor in Russia was outflowing from agriculture and manufacturing to construction, wholesale and retail trade, as well as transport and communication; however, the sectors which grow almost two times larger, were financial activities and hotels and restaurants [1]. In turn, Turgel stress that most studies of the phenomenon of creative economy are dealing with the creative placemaking, a strategy of deploying cultural industries within the space of particular city [2]. Some other authors stress the importance of different aspects of ‘playing’ the local card in adding value to creative and cultural production, like increasing the visibility of production process or developing features of authenticity [3; 4]. There is also a debate on whether creative industries have to be studied through specifying particular creative sectors or through specifying certain creative occupations of workforce regardless of sector [5]. An important feature of such creative placemaking is that creative towns are transforming from places of production. from which goods has to be transferred and delivered to customers, to places of production-and-consumption. In cultural industries, *place sells*. In addition, large cities, which were associating with economic prosperity, in recent times are “losing their halo as gateways out of poverty” [6].

The creative placemaking, in turn, goes far beyond the urban renewal. Poon stresses that ‘understanding cultural design implies the city’s resourcefulness in preserving valuable social and historical contexts’ [7]. Thus, not only particular historical landmarks, but the very zones of historically emerged settlements are subjects of careful design that has pay special attention not only to aesthetics and comfort, but also to authenticity and historical-social validity of cities. In Ural case that means sensitivity to the historical emergence of the second-tier cities as industrial centres possessing certain industrial pride, a sense of the place as locus of living-and-production of generations of workers and engineers bringing on their distinct culture and ways of life.

2 Hypothesis and methods

The hypothesis of the actual paper is the following: the creative re-industrialization of the second-tier cities of Ural region has to be analyzed in terms of concentration, that is, of ability of particular cities to accumulate particular resources to develop a creative placemaking. These include human, financial, cultural-geographical and transport resources. Simplifying the matter for the purposes of the paper, we consider the overall population of cities as human resources, the net revenue of local enterprises as financial resources, and the driving distance from the first-tier regional cities – Ekaterinburg and Chelyabinsk – as transport resources. The cultural and geographic environment has to be assessed on the basis of qualitative expertise. Such approach demands that we trat second-tier cities as agglomerations rather than formal ‘cities’ within respective municipal boundaries. That would allow us to estimate their population resources in more precise manner. The analysis of these types of resources will allow us to specify the most prospective and promising agglomerations, and to characterize the most immense actions to be taken to implement the potential into social and economic practice of creative reindustrialization.

3 Results and discussion

There are different ways to count the number of second-tier cities in Sverdlovsk and Chelyabinsk regions. However, in terms of agglomerations – that is, cities, located within a

50 km radius from the central settlement of agglomeration – we might specify the six clusters of towns with overall population over 100 000: Greater Serov, Greater Tagil, Kamensk-Uralskii, Greater Kyshtym, Greater Miass, and Magnitogorsk. These are the second-tier agglomeration cities across Sverdlovsk and Chelyabinsk regions (Table 1).

Table 1. Second-tier agglomeration cities in Sverdlovsk and Chelyabinsk regions.

Agglomeration	Central town	Population, thousand people	Net revenue, 2022, mln rubles	Distance from Ekaterinburg, km	Distance from Chelyabinsk, km
Greater Serov (Servo, Krasnoturinsk)	Krasnoturinsk	300	112,497	384	591
Greater Tagil (Nizhny Tagil, Verkhaya Salda, Nizhnaya Salda)	Nizhny Tagil	460	240,839	141	348
Kamensk-Uralskii	Kamensk-Uralskii	164	190,443	100	181
Greater Miass (Miass, Zlatoust, Chebarkul)	Miass	414	245,611	232	105
Greater Kyshtym (Kyshtym, Kasli, Ozersk, Snezhinsk, Karabash)	Kyshtym	193	89,186	148	98
Magnitogorsk	Magnitogorsk	410,5	412,848	512	307

Among these six agglomerations, four emerged as factory settlements of first wave, and only two belong to the second and third waves (Greater Serov and Magnitogorsk, respectively). It is easy to notice that the youngest agglomerations are also the most remote from the key centers of region. It is important to consider an agglomeration rather than formal city. For instance, Kuznetsova, analyzing spatial aspects of Russian specific economic zones, emphasizes that rarely such zones are being deployed in second-tier cities; in Sverdlovsk region such zone was located in small Verkhaya Salda [8]. However, Verkhaya Salda has to be approached in context of its agglomeration processes, and thus belong to Greater Tagil agglomeration; as such, that belong to a second-tier agglomeration.

All second-tier agglomerations of region are based upon the industrial sector in terms of economic sustainability. Most of the metallurgical, machine-building or chemical industry in these agglomerations survived the crisis of the 1990s and are functioning nowadays in a stable manner. Thus, heavy industry creates the economical foundation in these agglomerations. However, industrial profile of each agglomeration is different. In Greater Serov, mining and metallurgy remains key spheres. Greater Tagil is the city of mining, metallurgy and production of light alloys. Kamensk-Uralskii emerged in the 20th century mostly as a city of aluminum production, yet nowadays it relies upon pipe production and light alloys. The industry of Greater Kyshtym combines mining, copper processing, and chemical production of nuclear materials. Greater Miass has complicated industrial profile which include automobile production, metallurgy, science-intensive machine-building, and mining. Finally, Magnitogorsk almost entirely relies on metallurgy. To sum up, the key industrial sectors of second-tier agglomerations include metallurgy (iron, copper), metal processing (pipe production, light alloys), and transport machine-building. Also, most

agglomerations depend on the economic power of leading plants created in the Soviet era during the third wave of industrial development: Nizhny Tagil Metallurgical Combine, Uralvagonzavod and VSMPO in Greater Tagil, Kamensk-Uralskii Metallurgical Plant and Sinara Pipe Plant in Kamensk-Uralskii, Ural Automotive Plant in Miass, certain nuclear chemical plants in Greater Kyshtym; and, finally, famous Magnitogorsk Metallurgical Combine in Magnitogorsk. Even Greater Serov, though its most important steel mill was founded in the end of the 19th century, in Soviet era became a location for heavy mining and aluminum production at Bogoslovsky Aluminum Plant in Krasnoturinsk. In recent time, however, these plants are mostly incorporated into larger industrial corporations. The presence of TMK in Kamensk-Uralskii, EVRAZ in Nizhny Tagil, Russian Copper Company in Greater Kyshtym is quite important in every aspect of social and economic life of these agglomerations [9; 10].

What is the need for creative reindustrialization, if the traditional industrial heavyweights are functioning stable? The creative reindustrialization in these locations is not the way to compensate for the devastation of industry and to save the city from economic doom. Each of these agglomerations possess certain sustainability in terms of industrial production and cannot be counted as 'Rust Belt'. It is rather a tool of prospective development and growth, and compensates not the diminishing contribution of industrial factories, but rather the lack of growth ambitions shown by these factories. It is hard to consider creating a new industrial giant in any of second-tier agglomerations; scarcely will industrial production serve as a tool of growth. However, existing industrial excellence could be used to mobilize the economic stability these industrial sectors produce for diversification, and growing up the creative sectors which could serve as tools of growth. The COVID-19 pandemic stimulated the growth of domestic tourism in Russia [11]. Overall diversity of cities is seen nowadays as a factor of spatial sustainability in Russia [12]. And in the absence of huge, state-initiated development projects, the sustainability of second-tier cities in Urals depend on politics of corporate structures in development of agglomerations [13]. The example of Magnitogorsk, where local corporate governance is eager to invest into the cultural activities is illustrative.

The emergence of creative industries will inevitably require to attract extra consumers. Even the biggest second-tier agglomerations are too small (both in terms of population and in terms of total revenue) to create the demand capable of serving as a driver for creative reindustrialization. Such reindustrialization, as it partially transforms former production places into places of production-and-consumption, is in constant need of overflow of consumers from different locations.

Such overflow effect depends, most importantly, on the capacity to attract traffic from larger cities. In terms of such capacity, Greater Kyshtym appears to be the most profitable, while Greater Serov and Greater Magnitogorsk seem to be the less. However, an excellent position of Greater Kyshtym is counterbalanced by the fact that most of local population are living in the towns of nuclear chemical factories under the special regime of access; these towns are not easily visitable, which exclude them from economy of impression and tourism, and also severely limits the possibility of investing. In addition, Karabash, which is a part of this agglomeration, is a place with badly damaged ecology, which, in combination with nuclear factories, poses certain threat to the attractiveness of the location.

Greater Miass and Kamensk-Uralskii seem to be in the most profitable position among the second-tier cities. They possess relatively fine transport accessibility. Of course, the transport corridors still have to be optimized for transfer of people in addition to its capacity to transport the goods. The Urals inherited from Soviet era a vast system of railways but a rather weak net of automobile highways. The key highway runs north to south, from Serov via Nizhny Tagil and Ekaterinburg to Chelyabinsk. Both Kamensk-Uralskii and Greater Miass are situated somewhat aside; there is no fast and easy way by car to either location.

Kamensk-Uralskii possess better economic productivity, while Greater Miass is more populous.

Both locations are diverse in historical terms, and both have rich history, reflecting every period of life of industrial Urals, as well as natural attractions. The latter is especially important for Greater Miass, which is located in proximity of Taganai natural park and the most picturesque part of Ural mountains around Zlatoust, includes the territory of Chebarkul with its numerous lakes, and also makes use of Turgoyak lake, widely known across Urals as a resort place. The development of domestic tourism remains important for these agglomerations. Greater Miass is among the locations with a stable reputation for recreation – like, say, Sysert in proximity of Ekaterinburg [14]. Of course, the search for an effective strategy will also require from second-tier agglomerations certain creativity in reshaping and representing themselves, the manipulations with local identities and authenticity. In case of Greater Miass, the identity of a place is quite complex, for it emerged as conglomerate of factory settlements emerged in the 19th – 20th centuries [15]. Still, the growth of cultural and innovative industry has to result in improving environmental sustainability [16]. In Kamesnk, there are no mountain landscapes, but the city itself has vast green zone in the very central part of it with Iset river flowing through with impressive rocky shoreline.

As for the historical, cultural and aesthetic qualities of these agglomeration, both of them possess undoubtable potential, even though natural landscapes are recently dominating local tourist activity. Zlatoust (western flank of Greater Miass) is among the oldest factory-towns of the region, with valuable historical architecture and rich narrative identity. The central part of Miass is the late 19th century commercial town which also presents significant historical importance. In addition, the northern part of Miass, Mashgorodok, is an exemplary Soviet town constructed in the 1960s – 1980s for one of the defense industries. The interconnection of historical industrial profile (gold-mining) and natural beauty is aptly packed into a nickname of ‘Golden Valley’, widely popularized in 1930s – 1950s by local writers. The reputation of Zlatoust as a place of skillful metal-working (steel engravings, particularly *armes blanches*) might provide solid base for the development of local arts; and in Miass, a large geological museum an Ilmen natural reserve provides extra attraction.

In turn, Kamensk-Uralskii has an old town with the complex of factory administrative buildings of the first half of the 19th century, and two ‘socialist cities’ of the 1930s built in the constructivist architectural style – Sinara and Krasnaya Gorka, the latter is a settlement of aluminium plane, and is a well-preserved example of urban environment of the 1930s–1950s. The city also possesses ostensible industrial pride based upon the history of local aluminium production (Kamensk remained a sole Soviet producer of that metal during the Great Patriotic War which gave special significance to the city), which opens the ways for industrial tourism.

4 Conclusion

The comparative analysis of Ural second-tier agglomerations in terms of their potential to develop a creative sector in addition to already existing industrial specializations shows that none of these agglomerations is in superior position. Some of these have limited transport accessibility due to their geographical location; some are, so to say, lack financial resources to re-invest into new spheres; and some has problems with reputation in terms of environmental sustainability or cultural-aesthetic heritage. The ability to cleverly use the spillover effects in relation to local industries (resource support) and to largest cities (consumers overflow) will remain at the heart of any successful strategy for creative development. The combination of these factors is apparently most beneficial for the agglomeration of Miass, with Kamensk-Uralskii also possessing certain potential.

The success, however, will depend first and foremost upon the capacity of local cultural industries to transcend formal administrative boundaries and to attract consumers overflow from both Chelyabinsk and Ekaterinburg. Both Kamensk-Uralskii and Greater Miass have to be included into a general scheme of improvement of transportation that unites Ekaterinburg and Chelyabinsk. That might probably require creation of a special agency capable of organizing such scheme on the territories of both Sverdlovsk and Chelyabinsk regions, to overcome the administrative boundaries. Same applies for the mastering of cross-municipality relations, especially in the case of Miass and Zlatoust.

The key weakness of these two locations in the relative weakness of their cultural and historical heritage infrastructure; there are no top-class historical museums, and historically valuable quarters are not in fine shape. The leading local industries is not quite willing yet to participate in cultural activities, thus delaying the full-scale rise of industrial tourism. The reliance upon the relatively abundant natural resources for recreative businesses plays a trick with the cities mentioned, as it prevents the growth of cultural attractions. Anyway, to move towards creative place-making both agglomerations has not only to reform their museum and cultural facilities (for recently these are rather outdated) but also to install their own creative zones for leisure, commerce and crafts, preferably on the basis of old parts of towns, and to develop more permanent and direct involvement of local large industries into cultural and creative activity – for example, Ural Automobile Works in Miass and Sinara Pipe Plant in Kamensk. From the governmental structures that would demand the investments into communal infrastructure and repair in the clearly specified zones of special cultural importance, and also the broader action to manage the larger 20th century living quarters which cannot be fully transformed into a cultural zone but present local cultural context (like the Mashgorodok, the settlement of defense industries in Miass, or Krasnaya Gorka in Kamensk-Uralskii).

Thus, three key actions to be taken are the following: the increase of transport availability from both Ekaterinburg and Chelyabinsk, the creation of historical-cultural zones of aesthetic recreative place-making, and the establishment of strong relations with certain large industrial partners to make use of the cities' valuable historical context, their sense of place and authenticity.

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