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Urban Identities in Russian Cities and the Prospects of their “Smart” Development

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ABSTRACT

This article deals with the urban identity and its connection with the urban dwellers' willingness to take part in the processes of decision-making concerning the future of their cities, their rejection, or, on the contrary, acceptance of the vision of “smart” development promoted by city leaders. The study gives special attention to the gap between the citizens' perceptions of their cities and the ideal image of their city (perception-expectation gap). The study provides an overview of the contemporary approaches to the concept of “smart city”, and approaches to urban governance and city identity. The study focused on three Russian cities—Tyumen, Tobolsk and Khanty-Mansiysk, located in Tyumen region in Western Siberia. Our surveys were conducted in November 2020 and involved the residents of these cities aged 18 to 70. In total, 877 people were surveyed in Tyumen, 443 people in Tobolsk and 498 people in Khanty-Mansiysk. The questionnaire, which was specially designed for this study, was aimed to measure the residents' level of attachment to their cities and their perception-expectation gap. Significant differences were revealed between the cities in terms of the strength of their residents' urban identity, their emotional attachment to their cities, and expectations about their further development. We found that the larger is the perception-expectation gap, the less emotionally attached the citizens are to their cities and the less committed they are to contributing to its future development and prosperity. These research findings can be of interest to urban policy-makers, regional and national governments. The proposed research methodology can be adapted and/or expanded for further cross-city and cross-country analysis.

Received 3 May 2021

Accepted 16 December 2021

Published online 30 December 2021

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KEYWORDS

smart city, urban governance, social space, social context, city identity, citizen participation

ACKNOWLEDGEMENT

This work has been supported by the grant of the Russian Foundation for Basic Research (project No. 20-011-00305).

Introduction

Urbanization and the development of information and communication technologies (ICTs) are bringing radical change to modern cities and the world in general (Bibri & Krogstie, 2019). The visions of what the city of the future should look like are more often than not shaped by the “smart city” concept, which offers a universal view on how cities may integrate into the information society. A “smart city” comprises a set of aspects such as economy, mobility, environment, people, governance, environment, etc. (Giffinger, 2007). This concept also implies a set of goals of urban development as well as resources and tools for reaching them.

Cities are dynamic systems whose prosperity to a great extent depends on the local governments’ ability to take into account the complexity of the processes of urban development and the specific local contexts. Moreover, modern cities are facing enormous technological, informational and other pressures, which affect people’s daily lives, urban economy, urban space and so on. A viable way to respond to these pressures is offered by the “smart city” concept. However, digitalization as a core element of this concept may cause resentment and erosion of trust on the part of urban dwellers, who may be wary of the new technologies taking control of their daily lives, for example, of the city governments’ attempts to track and collect data about their activities (through video surveillance or facial recognition software). Therefore, the main challenge of the implementation of “smart city” projects is to overcome this lack of trust. To this end, it is important to gain a better understanding of the citizens’ connections to the places they inhabit, in particular the nature of the relationship between what can be described as these people’s urban identity and the identity of the city. Urban dwellers may reject the new “smart” identity of their city that the government envisions and refuse to legitimize it. This negative scenario can be avoided if more attention is given to the social context and to civil participation in decision-making processes.

This study investigates citizens’ ideas about the cities they inhabit and about the ideal city they would like to live in. It is these ideas that local governments should focus on in order to promote the vision of a “smart city” and to gain the support of local communities. Thus, one of the research tasks we aim to address in this paper is to provide an overview of the contemporary research on the themes of urban identity by showing its connection to the practices of city governance and the “smart city” concept. We also present and analyze the results of the survey that

encompassed the residents of three Siberian cities to show the correlation between these people's urban identities and their willingness to contribute to their cities' "smart" transformations in the future.

The above-described research tasks determined the structure of this paper: the following section outlines the conceptual framework of the study and provides an overview of the literature on the "smart city" concept, city governance, and urban identity. The third section describes the research methodology and data. The fourth section presents the results of the survey. The fifth section discusses the survey results and summarizes our main research findings.

The novelty of this study lies in the fact that it discusses the prospects of "smart" urban development by measuring the gap between the urban identity of the residents of three Russian cities and the identity of their cities constructed by local governments in accordance with the "smart city" concept.

Theoretical Framework

"Smart City" Concept

In contrast to the views upheld by the proponents of critical urbanism (Greenfield, 2013; Luque-Ayala & Marvin, 2015) and critical social theory (Brenner, 2009; Kitchin, 2014; Sheltona et al., 2015; Vanolo, 2016), we support the postulate that the "smart city" concept is based on the discursive logic of intellectual urbanism. This logic focuses on the goals and mechanisms of urban development, on the stakeholders steering the new processes, and on the need to integrate the "smart city" concept into the local context of each city (Caprotti & Cowley, 2018; Bramwell, 2020).

A detailed description of approaches and views on the "smart city" concept and its main structural elements is given in a number of works (Albino et al., 2015; Joss et al., 2017). Among other things, these studies emphasize the importance of urban dwellers and urban communities in understanding the essence of the smart city. A smart city is a result not only of a carefully planned project relying on the assemblage of innovative technologies but also of the practices and initiatives of different actors and parties with different interests (Coletta et al., 2019).

The focus on the social aspect, however, does not solve the problem of determining what a smart city is, and who smart citizens are. The inclusion of a person in the structure of a smart city does not solve the problem of how sociality and social contexts should be incorporated into this concept.

In our view, "smartness" should be measured through objective and subjective indicators, the former including material infrastructure and the latter opinions of residents (Albino et al., 2015, p. 14). Our study focuses on the latter aspect—the sociological parameters that can be used for city governance. In this respect, the term "social space" is quite relevant. It is defined as a spatiotemporal set of social ties, interdependencies and interactions, clashes of interests of different groups of citizens. This approach does not contradict the understanding of the city "as spatially polarized ensembles of human activity marked by a high level of internal symbiosis" (Scott, 2008, p. 548), but it takes further the idea that interactions determine the

location (Smirnyagin, 2016) and the ideas underpinning the theory of collective actions (Batty, 2013).

In the contemporary research literature, there are three main views on the role of smart technologies in cities. The studies of the first group emphasize the leading role that smart technologies play in urban development, economic growth, improvement of the living standards and so on (Baculáková, 2020). The studies of the second group adopt a more critical view of smart technologies and point out the risks connected with their increased use. These studies argue that people are becoming increasingly dependent on modern technologies (Biczyńska, 2019); that their application leads to the loss of privacy and social justice in modern society (Vanolo, 2014); and that the unprecedented use of smart technologies such as surveillance software absorbs sociality and helps governments increase their control over people (Schindler and Silver, 2019). The studies of the third group view smart technologies primarily as tools to achieve the goals of urban development (Hollands, 2015; McFarlane & Söderström, 2017).

Our approach to the use of smart technologies in cities is closer to the third view: one cannot escape the fact that modern urban dwellers increasingly rely on smart technologies in their daily lives (Woetzel & Kuznetsova, 2018, p. 66), and that these technologies form an important part of these people's perceptions of urban life and their expectations concerning the development of their cities in the future.

The question that remains open for discussion is who a smart citizen is. One of the indicators of "smartness" could be the social capital of urban dwellers (Deakin, 2014), that is, the ties and relationships between individuals based on trust and solidarity. Thus, we can define a smart citizen as an individual with high human, intellectual and social capital, who is pursuing the goals of personal development, the development of their community, city, and country as a whole. Such orientations result from the influence of many factors, including those related to urban identity of citizens.

City Governance

Modern city leaders in their decision- and policy-making should take into account a number of social factors (McFarlane & Söderström, 2017; Raco, 2018) related to the local context and characteristics of urban population. It is particularly important to ensure civil participation in decision-making and other processes on a regular basis in the conditions of digitalization (Angelidou & Psaltoglou, 2017; Cardullo & Kitchin, 2019; Joss et. al., 2017).

In our study we are going to analyze the urban identities of people inhabiting second-tier cities in Russia—these cities act as centres of territorial/regional development. In European practice, second-tier cities include small and medium-sized cities (up to 100,000 citizens) with their own development problems (Atkinson, 2019; Rodríguez-Pose, 2018). In the research literature, there are two main views on how national governments should be dealing with the cities of this type. According to the first view, second-tier cities are less competitive than larger cities which drive national development; therefore, state funds should be spent on supporting the leaders rather than their less successful counterparts (Crouch & Le Galès,

2012). The proponents of the second approach, on the contrary, argue that state funding should be allocated to second-tier cities to enable them to deal with their problems more effectively (Yavo-Ayalon et al., 2019, p. 796). We subscribe to the second view that second-tier cities with extra funds and other assistance from the state government would be more likely to make better use of their own resources (e.g., human resources) and thus develop more efficiently. Thus, innovative development of second-tier cities to a great extent depends on their abilities to retain a qualified workforce and ensure their citizens' support.

In Russia, second-tier cities include large administrative-territorial units of the regional level. These cities possess a considerable potential and are capable of benefiting from new resources although the positive effects may be not as strong as in the case of national capitals and megalopolises. For Russia, it is particularly important to provide sufficient support for second-tier cities and thus prevent qualified workforce from migrating to the country's two largest metropolitan areas—Moscow and St. Petersburg. The challenge of retaining the population in second-tier cities implies the need to develop concepts, strategies and models for the development of these cities, for example, the “smart city” concept. This concept not only offers a set of goals, tools, and resources but also provides an attractive vision of the future—an innovative, modern, digital city. What makes the “smart city” concept particularly attractive is that it shows the way to help struggling cities and areas to catch up with their more prosperous counterparts, improve their standards of living and become more competitive on the national and global arena. An important element of the concept is its focus on public engagement and on empowering the citizens by inviting them to take part in the process of decision-making.

There are two major topics discussed in relation to urban governance: citizen participation in urban development and new resources for urban development (Cruz et al., 2019, p. 1). We believe that these topics are in fact intertwined since citizen participation is by its very nature a social resource that can be used for urban development. Therefore, building the conditions conducive to meaningful citizen participation should be viewed as an important part of “smart city” projects. People's willingness to live in a smart city and contribute to its creation largely stems from their urban identity and ideas about the ideal city. It is also necessary to narrow the gap between the visions underpinning smart city initiatives and expectations of the key stakeholders, including urban citizens and communities (Myeong et al., 2021, p. 47).

In the research literature, there are three main approaches to urban governance: resource-based approach (Drozdova, 2019; Veselova et al., 2018), object-based approach (Kolodiy et al., 2020), and subject-based approach (Vorob'eva et al., 2019). The resource-based approach prioritizes the key factors that determine a city's development. One of the most urgent problems is to find the necessary resources (Bramwell, 2020). Nowadays more significance is attached to intangible rather than tangible assets (Morozov et al., 2020). Interestingly, one of the reasons behind the popularity of the “smart city” concept is that the smart city itself may be considered a resource (Sheltona et al., 2015). The object-based approach foregrounds the role of citizens: the main goal of smart governance is to enhance social development

(Tikhonov & Bogdanov, 2020). Within this approach, smart governance has much in common with the concept of multi-level governance in Europe (Grisel & Waart, 2011, p. 175). The subject-based approach aims to identify the key stakeholders involved in urban development and governance. In our view, the most productive strategy is to combine all the three approaches: not only is it important for a city to accumulate sufficient resources for further development but it is equally important that the city's residents were aware of the significance of these resources and recognized the need to use them. This condition is met if the urban dwellers' identity correlates with the identity of the city.

Social parameters of cities, for example, the local context, should also be taken into account in the practice of governance. The local context of each city is unique. Each of the city's subsystems, characteristics or elements can contribute to the implementation of a "smart city" project or, on the contrary, inhibit it. The question that needs to be addressed, both theoretically and practically, is how the universality of the "smart city" model can be combined with particularities of life in this or that city and its social space. The goals and tools of "smart city" projects are rather standardized and need to be carefully adjusted to the local context of each particular city. Otherwise, the clash between the general vision of "smart" urban development and the local context can cause conflicts in the future.

Urban Identity

The discussions surrounding identity and its various types, in particular civil identity (Drobizheva, 2018), show that this word, which used to be largely an academic term, has entered other, more general contexts such as governance. In fact, there are studies that point directly to the potential of identity for city development (Morozova et al., 2020). It is important to distinguish, however, between the urban identity of citizens and urban identity as the identity of a city itself since it is the interrelation of these two identities that shapes people's attitudes towards the visions of their cities' development in the future and their willingness to contribute to these transformations.

In his seminal work, *The Image of the City* (1960), Kevin Lynch defines identity as a "sense of place" or the extent to which a local inhabitant or a visitor to the city can recall or recognize this place as being distinct from other places, as being unique or having its own peculiar character (Lynch, 1960). He also points out that a public image of any city is the "overlap of many individual images" (Lynch, 1960, p. 46). Kees Terlouw in his study of regional identity distinguishes between "thick" and "thin" identities, that is, the well-established and more stable identities of old regions and more transitory and fluid identities of new regions as well as their "hybrid" types (Terlouw, 2012). He also points out four main aspects (or "shapes") constituting a regional identity: territorial (borders, land use patterns, territorial shape); institutional (institutions used for communicating regional identity, e.g., educational institutions and the mass media); symbolic (this aspect stems from stereotypes based on the territorial shape of a region and the characteristics of its population); and functional (the established role of a region in larger systems) (Terlouw, 2012, p. 709). Terlouw's reasoning is quite applicable to a city's identity.

It is also important to emphasize the role of the city dwellers' perceptions in shaping the identity of their cities. According to Pierre Bourdieu, the subject's perception of the social world arises as a result of its subjective structuring, which is directly related to the identity of the individual. The structuring by the individual of his perception regarding the city and its (city's) identity determines the urban identity of the city dweller (Bourdieu, 1993). City dwellers may be feeling a stronger or weaker connection to their cities. Borén, et al. (2020) put forward the concept of "intra-urban connectedness" to denote "the creation of new institutional arrangements between actors and institutions underpinning the local performance of a creative economy with a further dimension, which is a strong ... adherence to a political cause and particular urban identity" (Borén et al., 2020, p. 255). Therefore, intra-urban connectedness, which is partially based on citizens' urban identity, determines the city's overall readiness for innovation, e.g., for building smart city digital eco-systems.

Galina Gornova in the study of the structure of urban identity, which she defines as an established individual vision of oneself as an inhabitant of this particular city, the feeling of being naturally connected to this city, emotional sensation of belonging to this city and its community, describes its four main constitutive components: a cognitive component, affective component, value-normative component, and practical (behavioural/instrumental) component (Gornova, 2018). She argues that the cognitive and affective components play the most significant role in the development of city residents' urban identity.

The urban identity of citizens and the identity of the city itself are not static, their structures include a variety of constantly changing elements (D'Ambrosio, 2019; Rosa, 2013; Terlouw, 2009; Terlouw, 2012). The traditional city and its identity are transformed under the pressure of digitalization, acquiring new features and properties. This is what makes the study of the gap between citizens' perceptions of their cities, the identities of these cities, and the future visions of their development devised by city leaders particularly relevant.

Methods and Materials

Methodologically, our study relies on a number of previous studies (for example, Jabareen & Eizenberg, 2021; Radina, 2015; van Houtum & Lagendijk, 2001) and was conducted in accordance with the quantitative approach. We carried out sociological surveys in three cities of Tyumen region, located in the southern part of Western Siberia—Tyumen (816.8 thousand people as of 2021), Khanty-Mansiysk (104,054 people) and Tobolsk (102,000). Tyumen, which is the capital of the region, is the largest while Khanty-Mansiysk and Tobolsk have approximately the same population size. Our surveys were conducted in November 2020 and involved the residents of these cities aged 18 to 70. The questionnaire was specially designed for this survey and comprised 51 questions. In total, 877 people were surveyed in Tyumen, 443 people in Tobolsk and 498 people in Khanty-Mansiysk. The sample reflected the gender and age makeup of these city's population. The sampling error does not exceed 3% per single feature.

As was explained above, urban identity is viewed as a type of social identity that can be described by looking at its affective, cognitive, assessment and behavioral components. We focus on the affective (emotional) component—the feeling of belonging, the citizens’ emotional connection with the city. We are also interested in the motivations of urban dwellers—why they choose to live in this or that city and whether they are going to stay there in the future or would like to leave it.

The theme of urban identity was addressed in the question:

Do you agree with the following statements: A. In my city I feel really at home; B. Many things in the city remind me of my past. C. I have a sense of belonging to this city. D. My future is closely linked to this city. E. I feel close to the people of my town.

Each of these statements corresponded to one of the indices we used to calculate the Integral Index of Urban Identity. A 5-point consent scale was used to assess the respondents’ answers to this question: “1” corresponds to “everyone fully agrees”, “0” corresponds to “everyone completely disagrees”. The indices (see Table 1) were calculated by using the formula of equality ($0 \times$ “I completely disagree” + $0.25 \times$ “I rather disagree + $0.5 \times$ “Both yes and no” + $0.75 \times$ “I rather agree” + “I fully agree”). The integral index is equal to the sum of all indices divided by their number. The index value of less than 0.5 was estimated as the low degree of citizens’ emotional attachment to the city; from 0.51 to 0.8, as medium degree; and more than 0.8, as a high degree of emotional attachment.

To study the citizens’ actual perceptions of their cities, we asked them to choose from the list of ten characteristics, including innovative economy, transparent governance, business climate, and “smart” technologies:

- innovative, competitive economy
- transparent, open city governance
- digital (smart) technologies in city governance
- good business climate
- tigh standard of living
- comfortable environment
- high level of education of its citizens
- tourism
- friendly community
- unique, high-quality products by local manufacturers

Then the citizens were asked to choose the characteristics of their ideal cities. For both questions, the same set of 10 characteristics had to be rated on a 5-point scale. In the first question, “1” meant “this does not apply to my city at all” and “5”, “this fully applies to my city”. In the second question, “1” meant “It does not matter” and “5”, “An ideal city must have this characteristic”. The questionnaire also included a question as to how the respondents would describe the role of their cities in the development

of their regions and the country. The list of characteristics included 15 positive and negative statements:

- strategically important
- technologically advanced
- generator of creativity and ideas cultural, historical centre
- educational centre
- tourist centre
- centre for the development of technologies, innovation and entrepreneurship
- economic centre
- “smart city”
- a major hub for the exploration of northern territories
- destination for low-skilled migration
- talent factory
- province in all respects
- exporter of resources, including labour resources
- I don't know

The respondents could choose any number of characteristics or add their own ideas. It should be noted that in all the three locations only a small number of respondents chose the characteristic “smart city”.

Data Analysis and Results

The results of our analysis have shown significant differences in the urban identities of the citizens of the three cities under consideration (Table 1). In Tyumen, residents show a relatively high level of attachment to their city: 80% of respondents perceive Tyumen as their home, almost 70% of them connect their future with the city (integral index, 0.71). The situation in smaller cities—Tobolsk and Khanty-Mansiysk—is somewhat different. In terms of the sense of “feeling at home” in their cities, residents of Khanty-Mansiysk have shown similar results to residents of Tyumen (statement *in my city I feel really at home*—Index 1, emotional attachment). The integral index for residents of Khanty-Mansiysk, however, is smaller than the integral index for Tyumen—0.67, which can be explained by the differences in people's responses to the two statements—*Many things in the city remind me of my past* (Index 2, rootedness), and *my future is closely linked to this city* (Index 4, future). Khanty-Mansiysk, like many cities in the north of Tyumen Region, is a city of migrants who come from the “mainland” and consider Khanty-Mansiysk as a temporary place to stay and who sooner or later plan to go back to their hometowns or elsewhere. This explains the weakness of the residents' connection with the city's past or future of the city and correlates with the data on the length of residence in the city. In Khanty-Mansiysk, the average length of residence is 19 years, while in Tyumen it is 28.2 years, and even more in Tobolsk, 32.4 years.

Although Tobolsk has the longest average period of residence, its integral index is the lowest, 0.65. In Khanty-Mansiysk, 77% of respondents agreed with

the statement *in my city I feel really at home* (Index 1, emotional attachment), in Tyumen, 80%, and in Tobolsk, only 61%. Citizens of Tobolsk connect their past with the city, which has a rich history, and associate it with an array of unique historical and cultural monuments and they envision it in the form of its unique historical and cultural monuments (in fact, Tobolsk scored the highest as a cultural and historical center). However, the citizens do not feel emotional attachment to the city or to its community, and they do not see their future in it.

19% of the respondents from Tyumen, a quarter of the respondents from Khanty-Mansiysk and 30% of the respondents from Tobolsk have shown a low level of attachment to the city, that is, their urban identity is not very strong (the index is below 0.5).

These data are confirmed by the correlation with their responses to the question about their attitudes towards the city (the affective component of urban identity) (Table 2).

Table 1
Indices of the Identity of Citizens in the Cities of Tyumen Oblast

Judgments	Tyumen	Tobolsk	Khanty-Mansiysk
1. In my city, I really feel at home	0.81	0.69	0.80
2. Many things in my city remind me of my past	0.66	0.68	0.57
3. This city is really close to me	0.75	0.68	0.75
4. My future is closely linked to this city	0.73	0.65	0.63
5. I feel that I am close to the people of my city	0.59	0.53	0.61
Free Index	0.71	0.65	0.67

Table 2
Attitude of Citizens to the City of their Residence, %

	How do you feel about the city you live in?				
	I am glad that I live here	I am rather pleased, but many things do not satisfy me	I do not have peculiar feelings towards the city	I do not like to live here, I would like to leave the city	
Tyumen	64	25	9	2	100
Tobolsk	32	55	8	5	100
Khanty-Mansiysk	61	27	8	4	100

As was discussed in the theoretical section, an important factor is the gap between the citizens' perceptions of the real city they inhabit and their ideas about the ideal city they would like to live in. We found that residents of the three Siberian cities were quite unanimous in their ideas about an ideal city. They most often prioritized a comfortable living environment, high standards of living, democratic city governance and good business climate—these characteristics were the most frequently chosen as attributes of an ideal city (Figure 1). Only in Tobolsk, where the

authorities and residents place high hopes on the city’s development into a major tourist centre (Table 4), attractiveness for tourists turned out to be a significant characteristic for an “ideal city”.

The perception-expectation gap is significant in all the estimated parameters of the three cities. It reaches the highest level in Tobolsk—the city with the lowest urban identity index (Figures 2–4).

The gap between the residents’ vision of an ideal city and their perceptions of the real cities (or the perception-expectation gap) correlates with the values of the integral urban identity index. The larger is this gap, the weaker is the urban identity and the greater is the respondents’ desire to move to another place (the Spearman correlation coefficient is 0.198 and 0.216 if the error is less than 0.001, respectively). The average gap in the 10 parameters we considered is 1.5 times higher in the group of the respondents who would like to leave the city in comparison with those who are satisfied with their life in the given city. The contradiction between the perceived reality of urban life and the residents’ expectations indicates their rejection of the city’s identity and also reveals the weakness of social ties in the city.

The priorities indicated by the respondents’ choices are a comfortable urban environment, good business climate, a close-knit and friendly community, and high standards of living (see Table 3 below), i.e., the same parameters that determine these people’s visions of an ideal city.

Figure 1
Ideas about the “Ideal City” in the Cities of the Survey, Average Ratings on a 5-point Scale

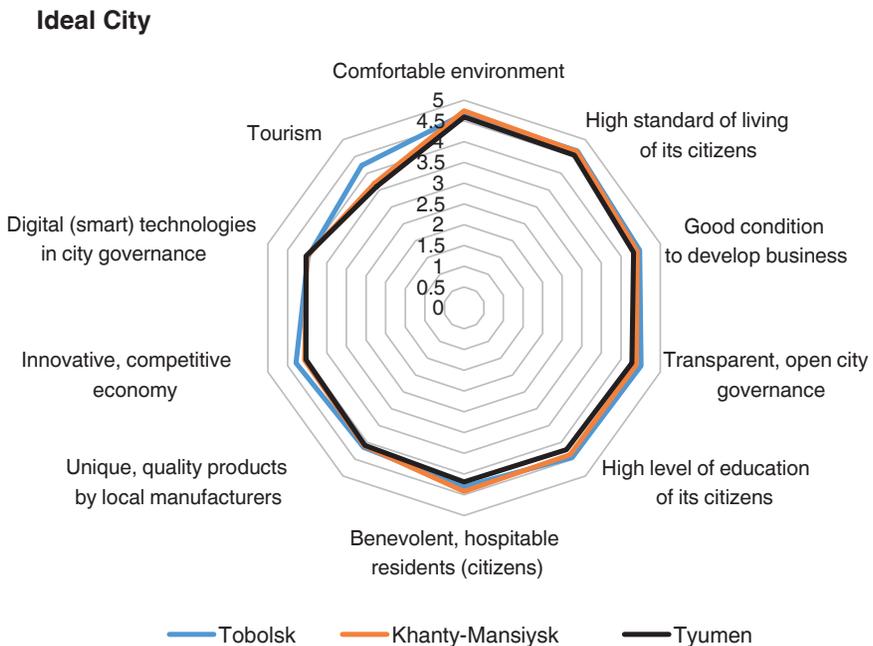


Table 3

Correlation by Spearman Criterion between City Identity Index and the Gap in Estimates of Characteristics of their City and of the Ideal City

City Characteristics	City Identity Index
Innovative economy	0.127
Transparent, open city governance	0.148
Digital (smart) technologies in city governance	i.c.**
Good condition to develop business	0.157
High standard of living of its citizens	0.152
Comfortable environment	0.246
High level of education of its citizens	0.144
Tourism	i.c.
Benevolent, hospitable residents (citizens)	0.165
Unique, quality products by local manufacturers	0.128
Average gap in ideas on 10 parameters***	0.198

* in all cases, the maximum bilateral significance, that is, the probability of error is lower than 0.001;

**i.c. — irrelevant correlation;

***average gap in ideas about the ideal city and the city of residence = sum of all gaps divided by their number

Table 4

Rating of the most Popular Statements about the Role of the City in the Development of Oblast and of the Country as a whole, %

How would you characterize the role of your city in the development of the region and the country as a whole. My city is:	Level of Citizens' City Identity			Total from Sample in Each City
	Low	Average	High	
<i>Tyumen</i>				
1. Strategically important	32	36	38	36
2. Educational centre	25	31	37	32
3. Cultural, historical centre	15	29	38	29
8. Smart city	9	15	21	16
<i>Khanty-Mansiysk</i>				
1. Cultural, historical centre	28	42	47	40
2. Strategically important	17	38	38	33
3. Tourist centre	18	22	34	24
10. Smart city	8	10	15	11
<i>Tobolsk</i>				
1. Cultural, historical centre	55	64	74	64
2. Tourist centre	47	44	65	51
3. Province in all respects	45	25	9	27
11. Smart city	2	1	2	2

Level of Citizens' City Identity:

Low – Consolidated City Identity Index, $I \leq 0,5$

Average – $0,51 \leq I \leq 0,8$

High – $I > 0,8$

The residents' assessment of the status of the city, its role in regional and national development is also of interest. The respondents were offered 15 characteristics, out of which they could choose any number of options or they could add new ones. (see Table 4 below)

Each city has shown its own unique configuration of characteristics in this respect: Tyumen and Khanty-Mansiysk are perceived by most of their citizens as *strategically important*, as a *centre of technological development, innovation and entrepreneurship*, and as an *economic centre*. Tobolsk is seen primarily and exclusively as a cultural, historical and tourist centre (the remaining “positive” statements accounted for no more than 8%). In addition, 27% of Tobolsk residents describe their city as *a province in all respects* while similar opinions were voiced only by 8% of the respondents in Tyumen and 13%—in Khanty-Mansiysk. As for the “smart city” characteristic, in Tyumen it is in the middle of the ranking (8th position), in other cities it is closer to the bottom (10th position in Khanty-Mansiysk and 11th in Tobolsk).

Discussion and Conclusions

The success of smart city projects depends on the willingness of urban authorities to take into account the city's social context, primarily the social space and its key element—the identity of urban dwellers and the identity of the city. It is, therefore, necessary to address the perception-expectation gap, that is, the gap between the urban dwellers' vision of the actual cities they inhabit and their expectations constituting the image of an “ideal city”. This gap, in its turn, correlates with the citizens' acceptance or rejection of the vision of their cities' “smart” development in the future. We believe that this gap can be narrowed if the concept of urban identity is institutionalized in strategies of urban development. In their decision-making, city managers should give due regard to the identity of the city's residents, their needs, interests, and priorities.

Our analysis of the identity of the inhabitants of Siberian cities Tyumen, Tobolsk and Khanty-Mansiysk has shown different local contexts, which should be taken into account in governance practices. Interestingly, the residents of Tyumen have shown the strongest emotional connection with their city while in Khanty-Mansiysk, on the contrary, a large part of the population tend to see this city as a destination for labour migration; people often do not associate their future with this city and plan to move elsewhere. An interesting case is presented by Tobolsk, which in Kees Terlouw's terms, is a city with a “thick” identity: even though many of the respondents have reported that they feel that their past is strongly connected to this city, they are not satisfied with the prospect of connecting their future with it—in fact, Tobolsk has shown the lowest integral index of urban identity among the three cities under consideration.

Our findings can be of interest to national and regional policy-makers and city managers since they reveal the importance of the social factor for planning smart urban development and other reforms. At the moment, in the eyes of the urban dwellers we surveyed, the “smart” city is not a significant characteristic or an important element of their cities' new identities.

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