

The Impact of the Information Eco-environment on the Investment Attractiveness of the City

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Abstract

The information eco-environment of the city, aimed at attracting investment, is designed to solve the problems of forming investment attractiveness, protection from unscrupulous investors, obtaining reliable information when justifying the implementation of investment projects, participation in them. Considering the dynamism of modern investment processes, the creation of an effective information eco-environment is an important component of the development of the investment process, especially from the point of view of ensuring effective interaction of its participants and attracting a wide range of investors to the investment activity process. Therefore, it is necessary to assess the impact of the information eco-environment on the processes of investment in the urban environment and increase the investment attractiveness of the city. However, the features of information support of the investment market specifically at the municipal level remain insufficiently studied. Based on the analysis of literary sources and an expert survey, this article examines the forms of information disclosure that are most effective from the point of view of investors; factors of investment attractiveness that should be paid attention to when forming an information eco-environment. Finally, this article suggests the identification of key areas of development of the urban information eco-environment, which can be transformed into the investment attractiveness of the city. The results showed that the systematic use of the information eco-environment of the city should create conditions for users to receive the necessary

information promptly, which contributes to the activation of investment activity, increasing its efficiency.

Keywords

City, Investment Activity, Investment Attractiveness, Urban Information Environment, Forms of Information Disclosure.

Introduction

The investment segment of the financial market is one of the main ones for the development of the socio-economic system at the regional and municipal levels (Bykova et al., 2021; Korolev et al., 2018).

Various information is constantly exchanged between various participants in this activity during the implementation of investment activities, between the performers of individual stages of investment activity (Voronova et al., 2021). From a practical point of view, information is a factor that reduces uncertainty, its importance is great because it is impossible to manage the processes of investment activity without information (Hevner, Chatterjee, 2010).

The process of investing in the urban environment depends on a variety of social, economic, financial, environmental, and other features of the city. The urban environment must meet many characteristics to obtain the attracted investment resources, that is, it should be investment-attractive (McDonald et al., 2018).

The category "investment attractiveness of a city" is relative, it has a subject specification – it is applied to a group of similar subjects and only in comparison with each other, it is dynamic, that is, it has a temporary specification – it characterizes the city at a certain point in time since influence factors lead to its change (Przybył, Kachniarz, Ramsey, 2020). Noting the novelty and intensity of the development of research on the investment attractiveness of the city, we can give several definitions of this category (Table 1).

Table 1 Definition of the category "investment attractiveness of the city"

Source	Definition
Snieska, Zykiene (2015)	the ability of the city's economy to attract and retain companies with stable or growing assets, to maintain stable or growing living standards of those who participate in their creation
Yao, Chen, Zhang, (2021)	the ability of a city to produce goods and services that are of high value relative to the compared products of other cities. Non-commercial municipal services are part of the investment attractiveness of the city
Panaseikina (2010)	the city's ability to attract information flows, technology, capital, culture, people, and organizations that are important for the city and the region, and along with that, the ability to support and develop the quality and standard of living of residents, as well as the ability to create a favorable innovation environment in which companies can develop their competitiveness

Various information is constantly exchanged between various participants in this activity during the implementation of investment activities (Jacobsen, 2009), between the performers of individual stages of investment activity (Nesticò, De Mare, 2018). From a practical point of view, information is a factor that reduces uncertainty (Bruneckienė, Zykienė, Stankevičius, 2016), its importance is great because it is impossible to manage the processes of investment activity without information (Sáez, Perriáñez, 2015).

A. Geymen et al. (2008) note that the information support of investment activities should be considered not as a one-time action, but as a systematic activity, urban economic policy, due to the growing competition between cities for new investments.

Assessment of the investment environment of the city opens up new opportunities for diversification for investors, increases the guarantee of investing funds in urban investment projects (Khruklov, Mityagin, Repkin, 2016; Rigamonti, Sterpi, Grosso, 2016; Balova et al., 2021). The level of investment processes increases with the rapid achievement of a consensus of interests between the subjects of the investment process, therefore, a mandatory element in the definition should be the consideration of the requirements of potential investors, the provision of which is an important condition for a high image assessment of the city (Wu, Xu, 2020; Servillo, Atkinson, Russo, 2011). The subjective opinion of a potential investor regarding whether this object can become a means of achieving his/her goals and to what extent is of decisive importance in choosing a particular investment object (Belderbos, Dua, Slangen, 2020).

Analyzing the investment problems, researchers (Guo et al., 2021; Ding, Lai, 2012) point to the lack of information or its insufficiency as a negative sign of modern investment processes. Weak information support – lack of statistics, the divergence of sources, insufficient transparency – is a factor that hinders the investment process (Pires et al., 2018). The inferiority or insufficiency of information about the conditions for the implementation of an investment project, as well as the costs and results associated with it, lead to the appearance of investment risk, which causes situations that result in losses incurred by the investor or a decrease in the effectiveness of the project (Li, 2011).

At the same time, according to the researchers, the specific efforts of the municipalities-recipients of investments to create an information eco-environment for attracting investment should be aimed at:

- Search for new investors and establishing long-term relationships, which includes activities to identify potential investors, through correspondence, calls, Internet

- communication, holding an investor forum, seminars, and individual presentations for a certain circle of investors (Khrulkov, Mityagin, Repkin, 2016);
- An individual approach to investors, which provides for the provision of information, services on the principle of a "single window" regarding the receipt of permits and various assistance (Wu, Xu, 2020);
 - Formation of the investment image of the city based on the multiplication of investment attractiveness factors, which is carried out through such organizational measures as focused advertising, PR events, promotion of "success stories" and the like (Servillo, Atkinson, Russo, 2011).

All the studies are of great theoretical and practical importance, but the declared problems are as complex and diverse as the municipal sector itself, and therefore there are no uniform recipes for forming the investment attractiveness of the city by creating an adequate information eco-environment. Thus, despite a significant number of scientific developments on the above-mentioned issues, the features of information support of the investment market specifically at the municipal level remain insufficiently studied.

The purpose of the study is to determine the influence of the information eco-environment on the investment attractiveness of the city.

The hypothesis of the study: the systematic use of the information eco-environment of the city should create conditions for the timely receipt of the necessary information by users, the establishment of long-term relationships, the provision of services on the principle of a "single window", the formation of the investment image of the city, which contributes to the activation of investment activity, increasing the investment attractiveness of the city.

Research Objectives

1. To identify and determine the importance of investment attractiveness factors that should be paid attention to when forming an information eco-environment;
2. To propose directions for the formation of an information eco-environment, considering the established factors of investment attractiveness.

The article consists of an introduction, a literature review, methods, results, discussion, and conclusion.

Methods

Research Design

We believe that to prove the hypothesis, it is necessary to use a mixed type of research design based on a combination of requirements for data collection and analysis necessary to achieve the research goals. In particular, we took into account the peculiarities of the combinatorics of elements of qualitative and quantitative approaches within the framework of one study. Therefore, we chose the following methods for collecting information: literature analysis, a priori ranking method, expert survey method. Literature analysis using theoretical methods (analysis, synthesis, comparison, generalization) – for the study of scientific literature regarding the state of the research problem.

The a priori ranking method was used to determine the weight and rank of investment attractiveness factors that should be paid attention to when forming an information eco-environment.

The expert survey method was used to determine the content of investment attractiveness factors that should be paid attention to when forming an information eco-environment.

At the first stage of the research, the sources of information necessary for the implementation of the research goal were selected: articles published in journals indexed by Scopus and Web of Science, and speeches at conferences of researchers from different countries containing conceptual provisions on the impact of the information eco-environment on the investment attractiveness of the city (21 sources).

At the second stage of the study, an expert survey was conducted (by e-mail) to determine and rank the factors of investment attractiveness that should be paid attention to when forming an information eco-environment.

The criteria for selecting experts (24 people) were the presence of articles on this topic published in journals included in the Scopus or Web of Science citation databases in the amount of at least 3 or work experience of at least 10 years in municipal government bodies.

At the third stage of the study, the analysis of the collected information was carried out, with the interpretation of the results obtained.

The Procedure, Research Tools

When implementing the a priori ranking method, an individual expert assessment of investment attractiveness factors was given, which should be paid attention to when forming an information eco-environment, using ranks. In the process of evaluation, the factors of investment attractiveness were determined by the degree of decreasing their influence on the effectiveness of the investment process, which is the target function. Therewith, the factor of investment attractiveness, which should be paid attention to when forming the information eco-environment, which has the greatest influence, was evaluated by the first rank (Figure 1), the second rank was assigned to the next in importance, etc.

The algorithm for implementing the method was as follows:

1. The individual assessments of all experts were summarized in a table of a priori ranking.
2. The sum of the ranks of each investment attractiveness factor was calculated and the final rank – the place of the investment attractiveness factor was determined on its basis.
3. To determine the specific weight of each factor of investment attractiveness, the experts evaluated each of the factors in points from 1 to 10. The specific weight was determined as the ratio of the total amount of points of the corresponding factor to the total amount of points.

Statistical Analysis

The study used numerical calculation methods using the Microsoft Excel software product, with the help of which the rank and specific weight of investment attractiveness factors were calculated, which should be paid attention to when forming the information eco-environment.

Results

Most experts associate the active use of existing and the development of potential "points of attractiveness" of investments with a variety of factors, those circumstances, and conditions that contribute to attracting investment resources to the city. All these factors affect the investment attractiveness of the city in different combinations and to a different extent (Table 2).

Table 2 Factors of investment attractiveness that should be paid attention to when forming an information eco-environment

No.	Factors	Characteristics	rank
1	resource	a set of tangible and intangible elements of a city that have market value or contribute to attracting the attention of target consumers to the city, increasing demand for other elements of the city and the region it belongs to	1
2	technologically-innovative	accumulated knowledge resource, creative, highly qualified and educated personnel, new technologies and innovations, an economic environment favorable for the emergence and diffusion of innovations and technological development, the principle of a "single window" of municipal services	2
3	social	a set of external and internal factors that are formed in the social environment of the city and determine the investment strategies of the city	3
4	organizational issues	quality of municipal management	4
5	image-based	a set of factors for the formation of a favorable image of the city in a market economy to establish harmonious relations with the target audience	5

Compiled based on an expert survey

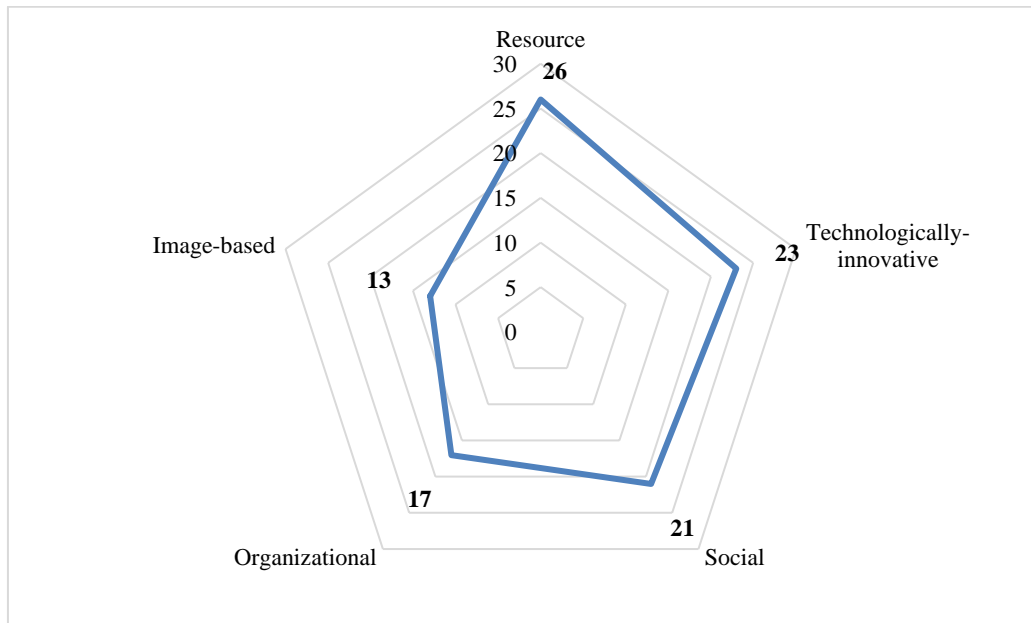


Figure 1 Specific weights (%) of factors of investment attractiveness, which should be paid attention to when forming the information environment of the city

Discussion

Let us consider in more detail the factors of investment attractiveness (Table 2), which should be paid attention to when forming the information eco-environment and, accordingly, the directions of forming the information eco-environment, considering the established factors.

Resource factors of investment attractiveness are the result of the favorable geopolitical position of the city (for example, in Russia it is Kaliningrad, Vladivostok), favorable climatic conditions (Sochi, Sevastopol), the presence of certain factors of production

(natural resources, production funds, labor, etc.). The investment attractiveness of a city is also determined by the investment attractiveness of firms and enterprises located on its territory, the success of investment activity, in turn, depends on the development of productive forces and the resource potential of the city (Bruneckienė, Zykienė, Stankevičius, 2016). Therewith, in statics, investment attractiveness can be assessed by the state of the economy in a particular territory in the current period, but in dynamics, it should be considered as the potential opportunities of the city. The city, which currently occupies the highest positions according to statistical and rating indicators, can simultaneously demonstrate a tendency to decrease investment attractiveness, if we take into account the intentions of the target audiences: the population, visitors, business (Sáez, Perriáñez, 2015).

Experts also suggest adding modern city infrastructure to the technological and innovative factors of investment attractiveness – information and communication (communication facilities), logistics (an effective system for managing flow processes within the city, the presence of logistics centers, motorways, airports, railways, etc.), urban infrastructure and the institutional development of market relations and e-commerce, administrative and managerial ("supermarkets of social services", "single window", etc.). According to experts, they were assigned to this group, and not to the previous one, due to their understanding not as physical objects, but as elements of providing technology for creating a municipal product.

At present, we can talk about a change of priorities in the field of investment attractiveness of cities in the direction of qualitative characteristics of factors: attracting qualified and enterprising population; creating and attracting educational and scientific organizations; attracting bank capital; creating competence centers in various branches of knowledge, etc. (Ding, Lai, 2012).

Thus, for the city of Cleveland (USA), the depression of which was caused by the collapse of traditional heavy industry, investment attractiveness was the result of a complex multilateral dialogue between the business elite, the intellectual elite, the leaders of self-government, and the city administration. Due to the purposeful information activity on the capitalization of knowledge and skills that characterize the human resources of the city, today Cleveland positions itself as a leader in the field of technical know-how (Geymen, Yomralioglu, Baz, 2008).

The main social factors of the investment attractiveness of the city include the level of development in the society of the institute of local self-government, legal culture, the institute of municipal law, civil society institutions, as well as the composition, flexibility,

and mobility of the urban social environment, its readiness for new social practices that require the adaptation of society to changes (Nesticò, De Mare, 2018). Thus, in Rostov-on-Don, with the help of local businesses, the Plevn Culture and recreation park were equipped under a concession agreement, where a dolphinarium, an ice arena were opened, a fountain was built, attractions and children's playgrounds were placed, lanterns were installed. The number of investments under the concession agreement, which was concluded for 49 years, amounted to 498.8 million rubles. The tourist and recreational zone on the embankment of the Don River was arranged according to a similar principle. The contract was concluded for 32 years, and the number of investments for landscaping amounted to 330 million rubles (Voronova, Umarov, 2021).

The organizational factors of the investment attractiveness of the city, according to experts, include organizational structure, decision-making system, innovative management technologies, development of information systems and improving the efficiency of business and municipal institutions, organization of information monitoring (both to obtain information from other cities and regions, and to adjust their information policy); support of the feedback system with urban target audiences; formation of databases; development of "social networks", public safety (Panaseikina, 2010). This can also include the participation of the city in investment and other economic programs for the development of territories that allow financing urban projects from external sources (Snieska, Zykiene, 2015).

We can cite the project of renovation and redevelopment of the historical center of Tula as an example. In 2015, representatives of the Tula business at the auction purchased an abandoned industrial zone for 40 million rubles within walking distance from the historical center of the city – the Tula Kremlin. Within three years, at an investment cost of 150 million rubles, this territory was transformed into a fashionable creative cluster "Iskra". According to one of the businessmen, "without the support of local authorities, both "information" and "infrastructure", the project would hardly have taken place in its current form" (Voronova, Umarov, 2021).

The organizational factors of the investment attractiveness of the city also include urban marketing, which includes research aimed at forecasting, identifying trends in the city market; monitoring of public opinion; assessment of the market situation and market potential of the city, forecasting trends in the development of the city; formation of a system of constant monitoring of the requirements and prospects of markets; monitoring of prices in the consumer market; management of the state and dynamics of supply and demand; analysis of the city's tourism product and forecasting tourism development (The

state seeks to attract private investment in projects to create a comfortable environment in Russian cities, 2020).

The image factors of the city's investment attractiveness, according to experts, include a combination of such city images as "social," "price," "competitive," "logistical," "budget," "tax," "tourist" and others. The role of information eco-environment, according to researchers (Belderbos, Dua, Slangen, 2020), is the formation of a positive image of the city, its prestige, business, and social competitiveness, the formation, and consolidation of a clear positive image of the city and the region; the development and promotion of local brands; shooting videos and films on the life of the city and of the region, their streams on the different target audience; the publication of special issues of image and presentation of the literature, designed for different target groups (Jacobsen, 2009); the attraction of the city is the investment, new economic agents, government and commercial contracts, increasing the participation of the city and its actors in the implementation of Federal programs, increasing the efficiency of using their resources outside the region.

Thus, Southampton (Great Britain) has focused its efforts on improving the city's image among investors and ensuring its reputation. Hosting events, often in partnership with commercial real estate agents or publications such as the Estates Gazette, and speaking at national events such as MIPIM, were important elements of the city's interaction with investors. The launch of the city's master plan for 200 investors in 2012 was the beginning of this campaign. The Master Plan and the Action Plan of the city center provided investors with confidence in the future development of the city. These projects catalyzed further investments, increasing the prestige of the city. This approach has secured investment in the city center worth almost 2 billion pounds, plus another 1 billion pounds of investment in the rest of the city (McDonald et al., 2018).

Conclusion

Thus, the results of the study confirmed the hypothesis that the systematic use of the information eco-environment of the city should create conditions for users to receive the necessary information promptly, establish long-term relationships, receive services on the principle of a "single window", form the investment image of the city, which contributes to the activation of investment activity, increase the investment attractiveness of the city.

A perfect information eco-environment is characterized by information about the overall organizational and economic potential of the city, its resource provision, investment mobility, that is, the willingness of municipal authorities to direct efforts to the

implementation of the project, socio-economic stability, and a well-founded strategy for the development of the urban environment.

This topic will receive further research in the analysis of marketing components in the mechanism and criteria for evaluating participants in investment projects aimed at optimizing the process of their cooperation and obtaining mutual benefits from the investment.

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