INNOVATION DEVELOPMENT

Major City Development Forecast: Designing the Innovative Future

Yuliya Georgievna LAVRIKOVA
Doctor of Economics
Institute of Economics, The Ural Branch of Russian Academy of Sciences
29, Moskovskaya Street, Ekaterinburg, 620014, Sverdlovsk Oblast, Russian Federation
lavrikova_ug@mail.ru

Ivan Aleksandrovich ANTIPIN
Ph.D. in Economics
Ural State University of Economics
62, Vos'mogo Marta Street, Ekaterinburg, 620144, Sverdlovsk Oblast, Russian Federation
aia87@mail.ru

Aleksei Anatol'evich PRYADEIN
Ph.D. in Economics
Ekaterinburg city administration
24A, Lenin Street, Ekaterinburg, 620014, Sverdlovsk Oblast, Russian Federation
de@ekadm.ru

Arina Valer'evna SUVOROVA
Ph.D. in Economics
Institute of Economics, The Ural Branch of Russian Academy of Sciences
29, Moskovskaya Street, Ekaterinburg, 620014, Sverdlovsk Oblast, Russian Federation
Gotika.bell@mail.ru

Abstract. The article describes the results of application of the authors' approach to forecasting the development of the city (in the case of one of the largest Russian cities − Ekaterinburg). The main results of the development of multi-variant long-term forecast of Ekaterinburg socio-economic development are presented: the provisions of the approach used to create such documents are set out, a brief description of the forecasting methodology is given, the key aspects of city life in the context of the proposed development scenarios are forecasted, the main risks of long-term development of the city are described. The study is based on the use of the whole set of forecasting methods such as mathematical modeling, balance and cohort-component methods, extrapolation methods and expert evaluation method. The article describes the situation in Ekaterinburg regarding other cities and evaluates key development prospects of a municipal unit. It is recommended to use the approach based on the given scenario "junctions" (each of which gives two alternative scenarios); this helped identify eight options for the city transformation. Three Ekaterinburg development scenarios are covered in detail, which provided an opportunity for considering economic and social components of a municipal system in different conditions. They are inertial, basic and innovative city development (the authors mark the importance of the innovation scenario). The authors also characterize the possible ways of transforming demographic potential, economic and human resources. The study also identifies the degree of risks and threats to Ekaterinburg long-term development, estimates external and internal (technological, infrastructural, demographic and environmental) risks. The obtained results are an important element of the city development planning system, since effective management of municipal socio-economic system development can only be implemented with proper presentation of possible directions of its transformation.

Key words: forecasting, development scenario, major city, demographic forecast, economic forecast, labor resource forecast.

The need for a qualitative upgrade of key strategic documents of different levels dictated, on the one hand, by dramatic changes of legal aspects of managing activity related to the implementation of strategic planning in the Russian Federation; on the other hand, by the transformation of a number of external political conditions and macroeconomic factors; makes it fundamentally important for management structures to clearly understand the long-term prospects for further development of the country as a whole and its separate territories [7, 10, 13]. Russian cities do not stand aside from the processes of long-term forecasting. In 2016, one of the largest of these cities − Yekaterinburg − developed a socio-economic development forecast of the municipal unit establishing the vision of the future state of the city up to 2035. Scientific support of the forecast was provided by the staff of the Institute of Economics of the Ural branch of the Russian Academy of Sciences. The purpose of the large-scale research is to develop the methodology of long-term development forecasting of as major city in difficult modern conditions, as well as to design the vision for the future city development.

Forecasting processes of municipalities are reflected in many scientific works [8; 12]. The term "design" is used by the authors in the study due to the fact that, first, forecasting the future vision for city development cannot be the result of a mental process of only one person or one group of people. The future of the city should be formed on the basis of different groups' perception: government, business, science, education, general public, etc. Uniting different points of view into a single visualization of the future city development is an independent and rather complicated process. Second, the process of forecast scenarios formation implies defining a set and sequence of relevant development scenario "junctions", which can also be associated with the process of designing the future.

The future of Russian million-strong cities, including Yekaterinburg, in 5–10 years is relatively the same. It is aimed at creating a high-quality urban environment on a par with world's major cities. In fact, we are talking about the construction of a "post-industrial city" with a developed service economy, modern trade, entertainment and public spaces [15–20].

In a sense, the solution of the set objectives is implemented during inertial development because even now in Yekaterinburg *a fairly high development rate is set* [4] and the specific features of common and almost inevitable "post-industrial" future of the city are mainly related to the development of the consumer market and mass construction. Within a broader planning horizon, 10–

20 years, the result of such *catching-up development of the city* is quite predictable and possible. Yekaterinburg currently has high ratings in many indicators (both absolute and per capita) compared to million-strong cities. However, this result will be deprived of the *main value* which only matters in long geo-cultural competition of cities for people and projects – originality.

The main goal of Yekaterinburg long-term development is the formation of future *city originality*. The struggle for originality and diversity is an investment in the city's prosperity, as well as competition for attracting "strategic investors", technology parks and clusters. The result of this competition is not visible in 2–3 years, but in 20–30 years.

When conducting scenario analysis, it is usually assumed that the space of possibilities is discrete and limited to the proposed set of scenarios (see, for example, [1–3; 7; 11; 14]). As a rule, inertial scenario ("What happens if nothing is done?") and the possible ways of deviation are indicated. A "window of opportunities" for each deviation is presented, within which management decisions may be made, deflecting the development of the system from the inertial scenario. It is implicitly assumed that after passing the "window of selection" it is impossible to change the choice; further development will have fixed character till the next "junction point". *This approach is not suitable enough for the decision-making process regarding city development*. As a rule, the "window of choice" embodies

not a single management action, but the choice of a certain strategy, which, like any strategy, may not be realized. Moreover, the development of the city is a continuous inertial process involving a large number of long-term processes derived from events many years ago (for example, urbanization as a process of rural population outflow to cities has been going on for over a century). Thus, city development scenarios must be designed in a different logic.

An alternative approach of Institute of Economics of the Ural branch of the Russian Academy of Sciences is based on the idea of "inevitable future". The review of the future of Yekaterinburg based on these concept scenarios includes the following variants *(Fig. 1)*:

1) the "inevitable future" – events, trends and technology which will be implemented *in any case* (example: in any

scenario, the problem of deterioration of construction and utilities will not disappear); "inevitable future" is defined by single trends and in no way depends on the accepted management decisions;

2) the "impossible future" includes events, trends, and technology which *will never be implemented* (example: regularly discussed develop-ment of the city in the logic of tactical urbanism will not form a new quality of urban environment, although moving towards this direction will generate a lot of interesting and useful solutions);

3) development scenarios – *long-term version of events* determined by social, technological and other trends. After selecting a preferred scenario it is possible to cover it with an own development strategy.

In this approach, the aim of decision-makers is to select the most subjectively

Figure 1. Scenario planning flow chart
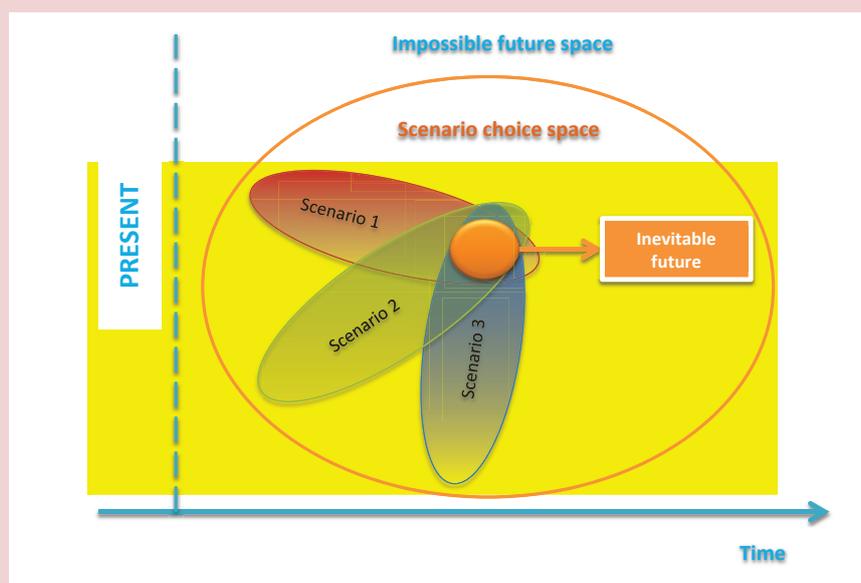
appropriate version of development. This version always includes the "inevitable future", but it can be more diverse on long time horizons. The objective of city management is to choose its own trajectory in the space of scenarios — its own scenario. The implementation of such a scenario has the project nature, with all possible alternatives to this scenario considered as its risks.

Yekaterinburg occupies the leading position among million-strong Russian cities after Moscow and Saint Petersburg. According to Rosstat, Yekaterinburg's *value of cumulative rating equals 1 (Tab. 1)*. Such high rating value is explained by, first of all, high wage level, developed trade, services and housing. Thus, among all Russian cities, only Moscow and Saint Petersburg are ahead of Yekaterinburg by standard of living. *However, it is difficult to use these cities as reference points due to fundamental differences in their economic structure*.

In the framework of setting the objective of long-term development of Yekaterinburg, work must be carried out simultaneously in *three time horizons*. However, at the stage of problem statement of developing a long-term forecast, taking into account tactical and local priorities of city development, more attention should be paid to methods of strategic urbanism.

In order to justify the scenarios of Yekaterinburg long-term strategy, the authors considered *three development scales* when working on a long-term forecast:

1) global development policy — defining the city's place in the global space based on the experience and indicators of development of similar cities in the world, justifying the vector of international relations;

2) regional development policy — the study of the role of Yekaterinburg within a historically bound administrative-territorial unit "city-region", as well as within the Ural Federal district,

Table 1. Comparison of rank positions of Yekaterinburg and other million-plus cities (2015)

Indicators	Yekaterinburg	Volgograd	Voronezh	Kazan	Krasnoyarsk	Nizhny Novgorod	Novosibirsk	Omsk	Perm	Rostov-on-Don	Samara	Ufa	Chelyabinsk
Population as of 01.01.2016	2	13	12	4	10	3	1	6	11	9	7	8	5
Number of employees in large and medium organizations	1	13	12	5	11	2	3	8	9	10	4	7	6
Fixed investment in housing construction	1	11	2	4	2	13	5	10	9	6	12	7	8
Retail turnover per capita	1	9	7	4	8	6	-	10	5	3	11	2	-
Public catering turnover per capita	1	11	10	4	9	8	-	7	3	2	6	5	-
Housing construction funded from all sources of finance	2	12	4	7	8	13	1	9	11	3	5	6	10
Average monthly wage	1	13	12	8	2	5	3	11	4	7	9	6	10

Source: results of socio-economic development of Yekaterinburg in 2015. *Economic Department of Yekaterinburg city administration*. Yekaterinburg, 2016. 202 p.

the implementation of the project Big Yekaterinburg, overcoming the adverse effects of agglomeration;

3) urban development policy – accounting for the priorities of socio-economic and spatial development, the city's functioning and activity.

The scenario space of city development is explained by a number of contradictions, each of which gives scenario "junctions". Eventually, the formation of Yekaterinburg development scenarios accounted for *three scenario options*, each having two alternative scenarios (*Fig. 2*).

Figure 2. Scenario options
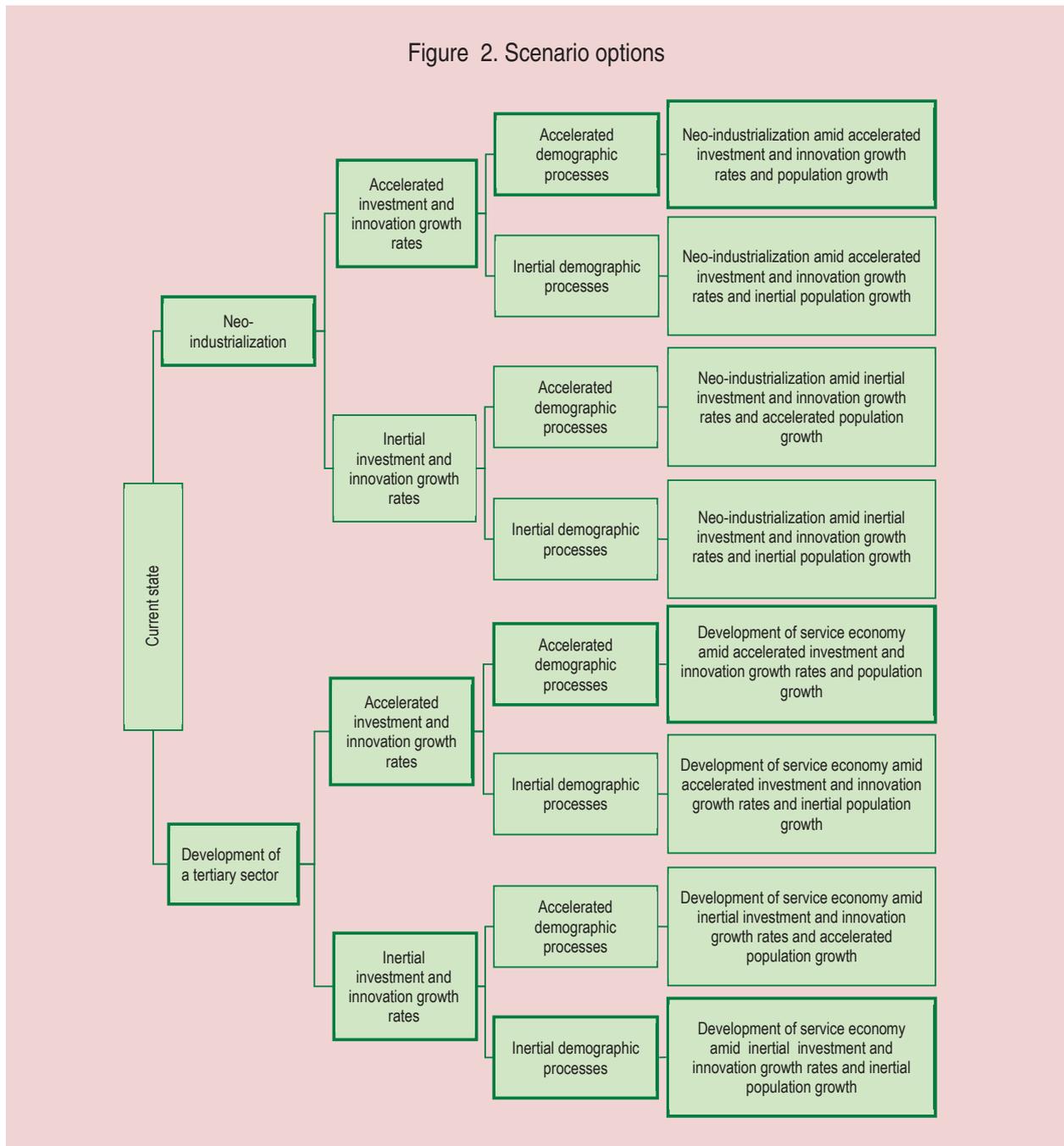
The main scenario "junction" — structural — defines two vectors of development: industrial and trade-and-service. In order to conduct forecasting calculations, the authors chose one scenario in the framework of industrial vector and two scenarios with trade-and-service vector.

Thus, three scenarios have been identified *(Fig. 3)*.

The scenario within the industrial vector – innovative – can also be referred to as *neo-industrialization amid accelerated investment rates and increased migration*. The current trends of uncontrolled growth of the trade sector are fully visible in inertial scenario which may lead to total city industrialization and the loss of its status of "a capital of an industrially developed region". Finally, the basic scenario will be implemented within the trade vector, with the preservation of industrial components of the city's economy.

Figure 3. Yekaterinburg long-term socio-economic development scenarios up to 2035
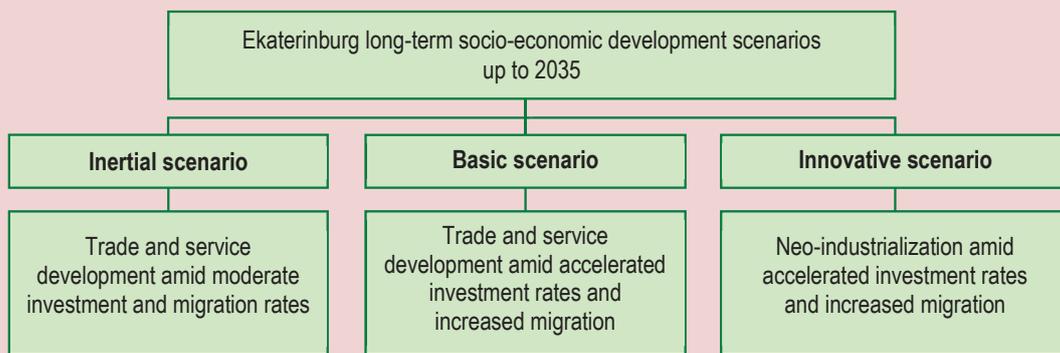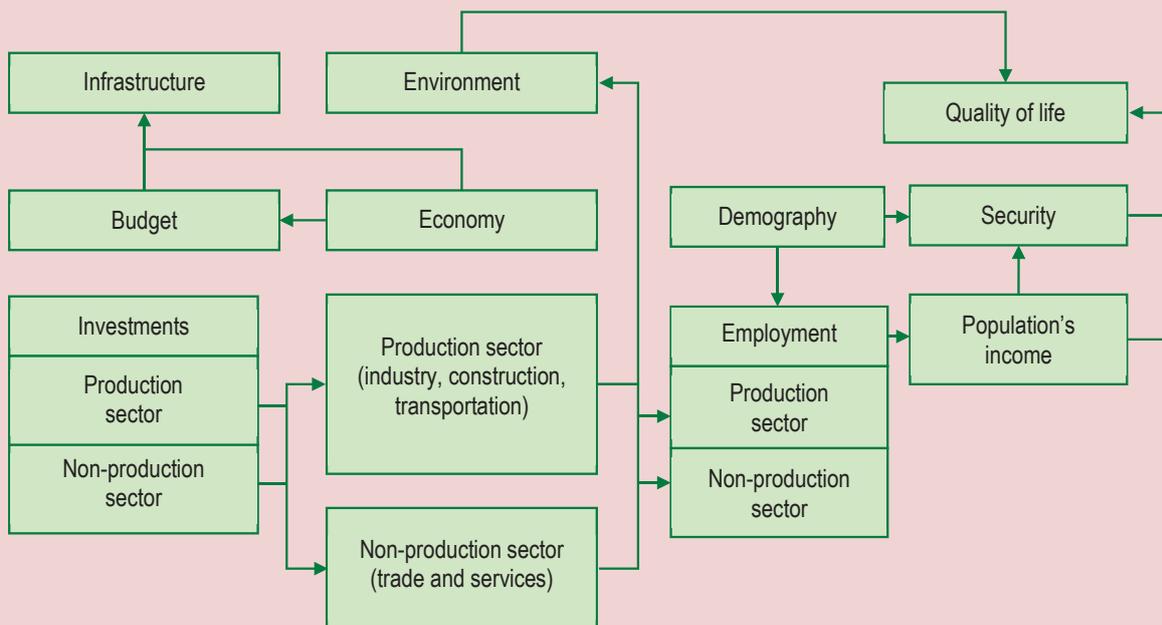
Figure 4. Forecasting indicators calculating methodology

The calculation forecast unit included economic and socio-demographic parts *(Fig. 4)*. The methodology of forecasting of *the unit of economic indicator*s the following groups of economic and mathematical models are used [5; 6; 9]: 1) models for the formation of scenarios based on the analysis of the most common proportions, restrictions and elasticities; 2) a system of balance models for obtaining consistent quantitative assessments of dynamics and structure of production and circulation in the long term by industry breakdown. The forecasting methodology of *the socio-demographic unit of indicators* uses the cohort-component method (ageing); extrapolation; expert estimations; balance of labor resources.

Specific aspects of a long-term forecast should be reviewed in detail. The first is the *demographic forecast*.

Forecast assessment of main trends of future demographic development is based on the nature of the demographic processes of the last decade, as well as demographic prerequisites of earlier years. The forecast is based on the assumption that fairly sustainable pattern of the population's reproductive behavior has already been formed and is characterized by a situation where families have one or two and sometimes three children, which is typical for most European countries nowadays.

It is assumed that the trends of the population's age structure formation will be *quite favorable (Fig. 5–7)* due to high attractiveness of the large city to migrants of active age. Although a small natural population growth is expected, it is assumed that positive migration balance will play a major role in the increase in the population of the city. According

Figure 5. Inertial scenario of Yekaterinburg demographic forecast, thousand people
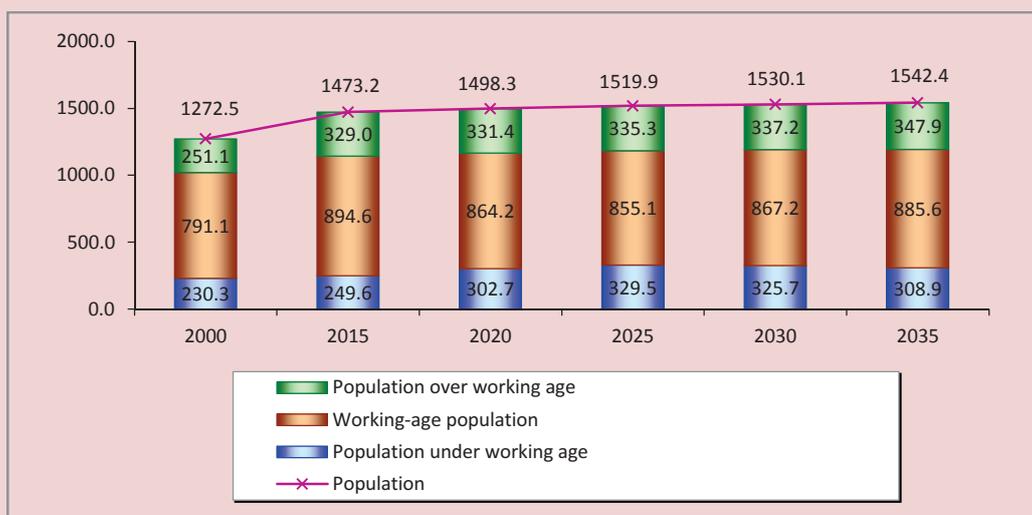
Figure 6. Basic scenario of Yekaterinburg demographic forecast, thousand people
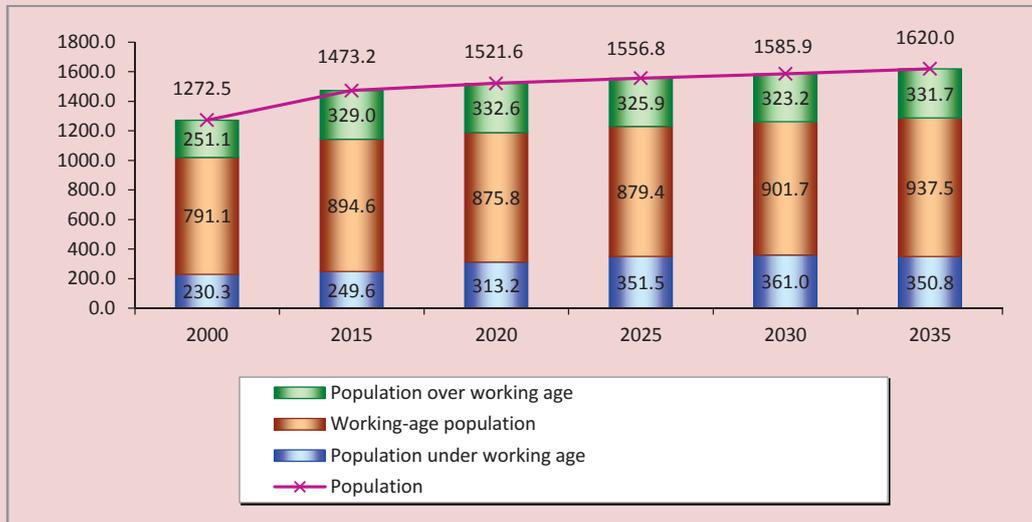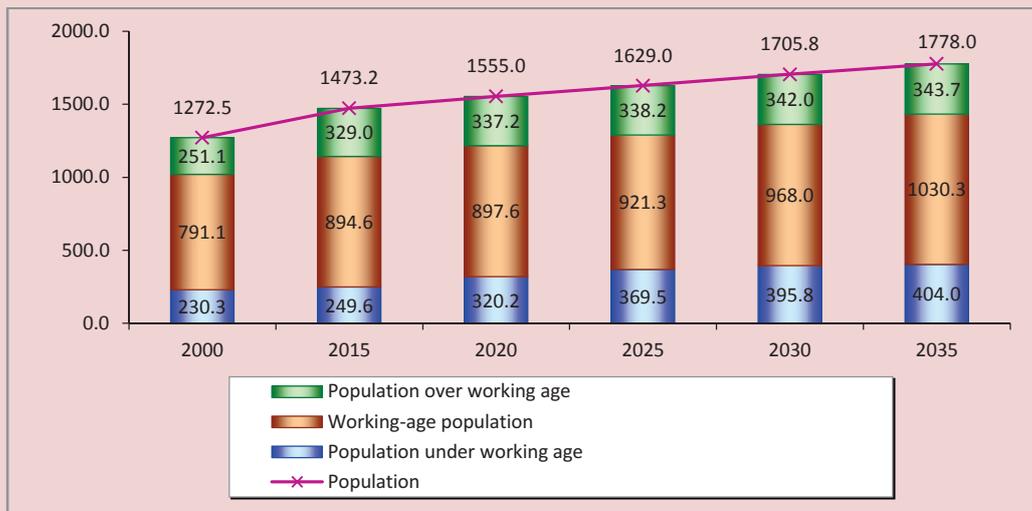

Figure 7. Innovative scenario of Yekaterinburg demographic forecast, thousand people

to the inertial scenario, migration gain (excluding migrant workers) will remain at the current level of 8 thousand people; the basic scenario implies migration balance of 10 thousand people; the innovative scenario – 15 thousand people.

It is expected that *population under working age* will increase in both absolute and relative terms on the basis of the fact that the city's economy attracts migrants of young age from other areas of the Sverdlovsk Oblast and other regions.

Working-age population decline will occur before 2025 due to the fact that the generation born in 1990s (years of a sharp birth rate decline) are now reaching working age. The situation will slightly improve in the period 2025–2030 when the generation of the 2000s will reach working age.

The population over working age will increase in absolute terms due to the general trend of population ageing; however, the period 2025–2030 will be characterized by its slight decline as a result of entering into this age group of a generation born in the second half of the 1960s and early 1970s, the number of which was lower than that of the generation of the 1950s and early 1960s. At the same time, a slight decrease in the proportion of population over working age is expected by the end of the period in favor of children and adolescents.

In all three options, there is a *decrease in adult mortality* (aged 20–69 and 70–80 of both sexes), which takes into account the advances of health care development and a relatively high demographic load on the working-age population. At the same time, by the end of the period, a slight *improvement in the age structure* is expected by all forecasting options.

The second aspect is a unit of economic indicators, the main of which is the *forecast structure of the economy*.

According to *the innovative (most preferable) scenario*, the city's economy will be characterized by equal values of shares of two key sectors – industrial and trade-and-service – 40% (*Fig. 8–9*). This will be achieved if average annual growth rates of industrial sector reach 106.3%, of trade-and-service sector – 105.9%. Strengthening the innovative development component will help discuss the neo-industrialization scenario characterized by the new quality of industrial growth, as well as by the formation of new industrial sectors. All this will give an opportunity to discuss the preservation of a unique historical mission of Yekaterinburg as a capital of an industrial territory.

Considering the fact that the starting conditions of the city's innovative development are coupled with overall economic stagnation, the authors suppose that the *basic scenario of the city's economic structure is more likely to be implemented*. According to it, the share of trade and services in the economy will increase both due to the development of traditional components (trade, public catering, personal services) and high-tech services for the industrial sector. Even if the same indices of industrial production remain, enterprises must create an extensive services infrastructure of logistics, product promotion, warranty service, brand creation, advertising,

Figure 8. Companies' turnover structure forecast (in the framework of Yekaterinburg development scenarios up to 2035), % of the total turnover
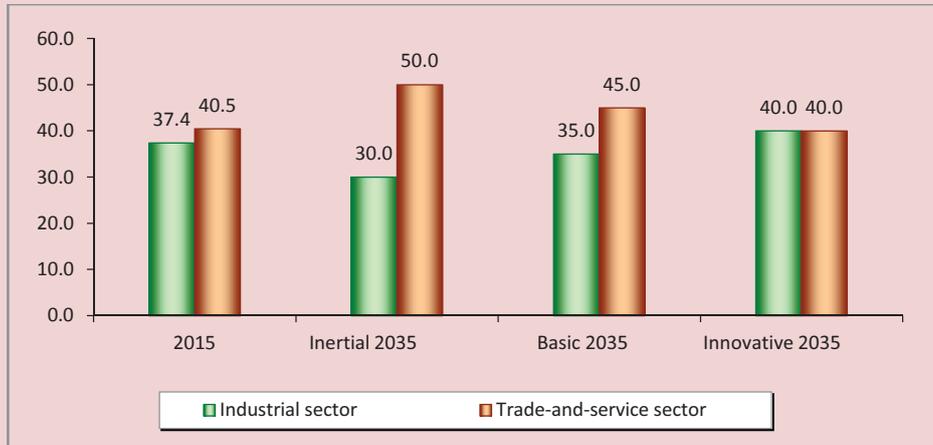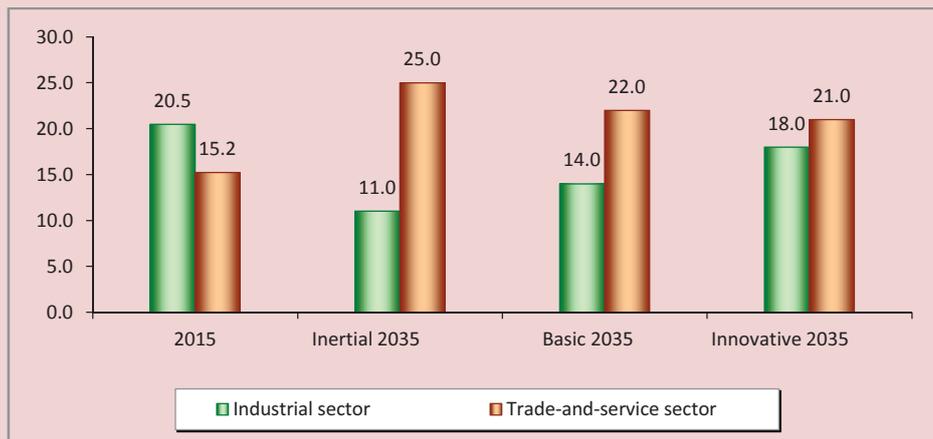

Figure 9. Forecast of the structure of employees active in economy (in the framework of Yekaterinburg development scenarios up to 2035), % of the total number of the employed

etc. Thus, with regard to the need to increase the share of trade-and-service sector in the city's economy, it is important to note that the authors discuss innovative, knowledge-intensive services, which Yekaterinburg industrial sector needs the most, rather than trade and catering.

The inertial scenario may lead to complete degradation of the city's industrial sector. Such a scenario is not denied, but is regarded as *the least preferable*.

The influence of structural changes can be seen quite well in *dynamic figures (Fig. 10–11)*.

Figure 10. Industrial sector development dynamics (in the framework of Yekaterinburg development scenarios up to 2035), sales turnover in big and medium companies (by type of activity C, D, E), billion rubles
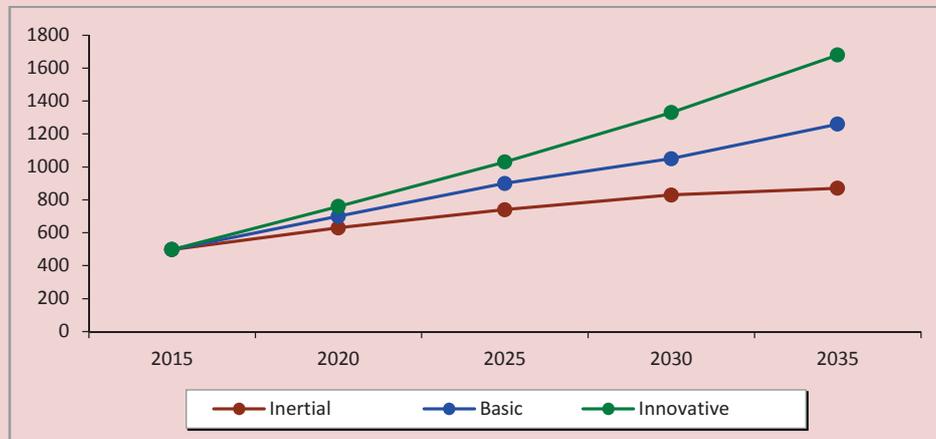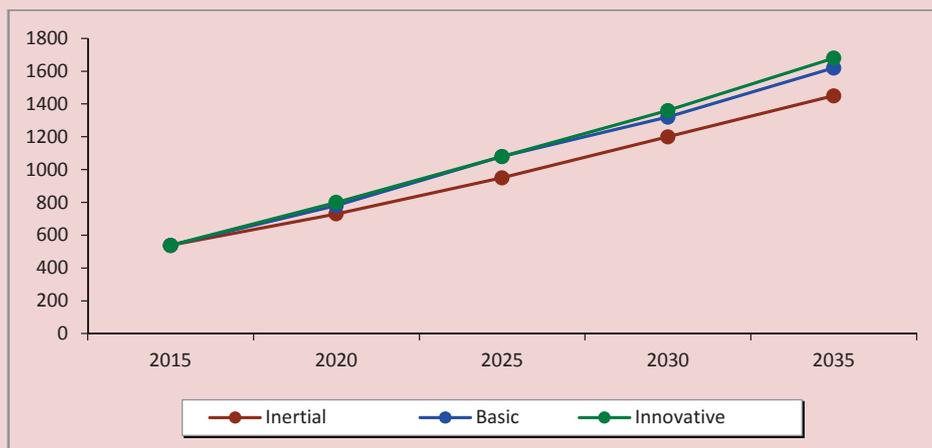
Figure 11. Trade-and-service sector development dynamics (in the framework of Yekaterinburg development scenarios up to 2035), sales turnover in big and medium companies, billion rubles

The loss of the city's industrial status is clearly visible in the inertial scenario. It is clear that the trade sector will grow at about the same pace as in the basic and innovative scenario. In case of the latter – at the expense of innovative services for the industrial sector. According to the basic scenario, by the end of 2035, the turnover of trade, public catering and paid services will increase 3 times, and industrial turnover – 2.5 times. According to the innovative scenario, by 2035, the share of both industry and trade will increase about the same – more than 3 times.

Up to 2035, investment dynamics will be characterized by accelerated growth rates of capital investments in all scena-

rios *(Fig. 12)*. The highest average annual growth rate of investment is observed *in innovation scenarios* − 108.9%. Capital investment spheres will change−significant funds will be allocated to infrastructure sector (especially to the development of transport corridors), and to high-tech industrial sector. This development will create opportunities for a significant leap forward in the development after 2035. In the *inertial scenario*, investments in the city's economy will reach the stage of saturation, which will lead to a slight slowdown in investment growth towards the end of the forecasting period. The innovative component of investment growth will not increase significantly. Housing construction and commercial sector will remain the main spheres of capital investments.

Construction growth dynamics *(Fig. 13)* will traditionally follow the company's turnover growth. The structure of construction facilities will be determined by the scenarios.

Public transport forecast dynamics *(Fig. 14)* is directly connected with the level of the city's motorization. When extending the existing trends, the city will face the situation of a sharp reduction in passenger traffic; however this will lead to the collapse of the city. More realistic scenarios − basis and innovative − suggest that, on the one hand, there will be an objective limitation of the level of motorization and, on the other hand, a substantial upgrading of public transport will take place, providing a higher comfort level and bus pass convenience.

Figure 12. Dynamics of growth of investment in fixed capital and productivity (annual growth rates in the forecast period), %
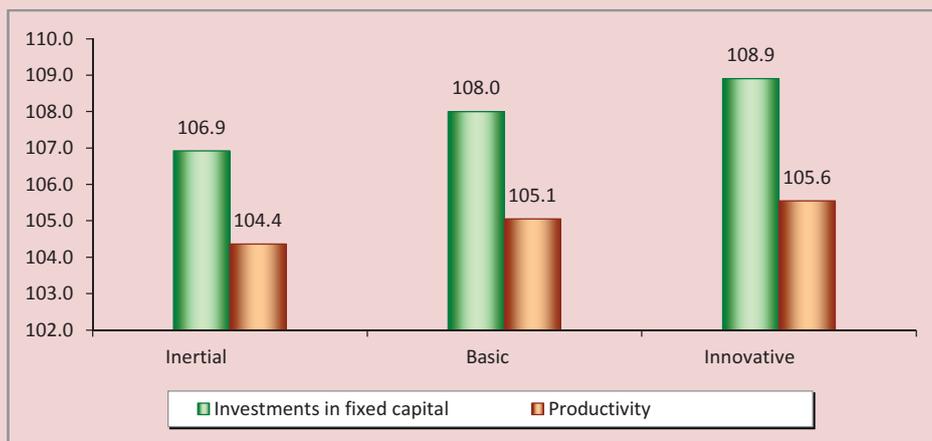
Figure 13. Construction dynamics (in the framework of Yekaterinburg development scenarios up to 2035), billion rubles
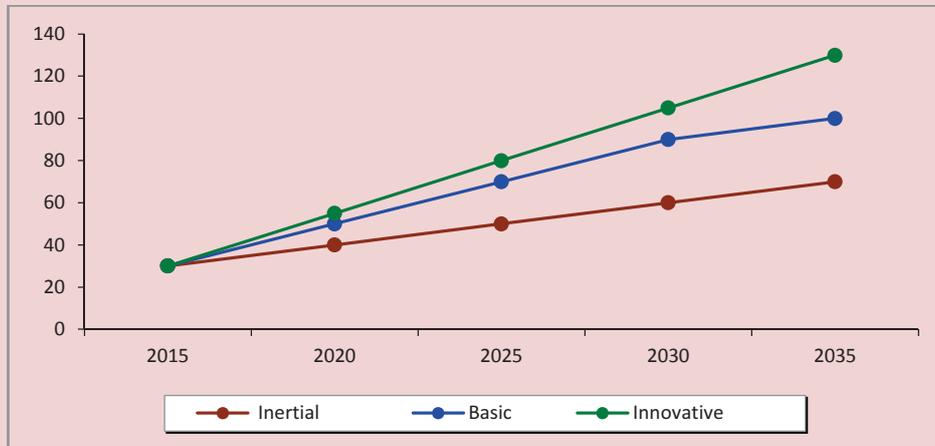
Figure 14. Public transport passenger traffic dynamics (in the framework of Yekaterinburg development scenarios up to 2035), million people
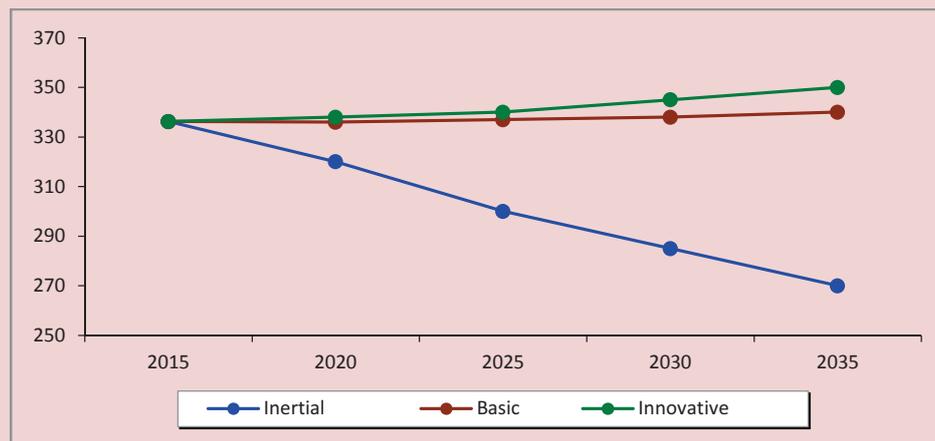
The last aspect of the forecast, but not the least is the *forecast of the labor market (Fig. 15–17)*. The forecast of the labor market for the first time takes into account informal employment.

Reproduction of informal jobs has a fairly steady growth pattern which is especially clearly manifested in the crisis periods in the economy. However, in the context of both stabilization and economic growth, this phenomenon is not reduced. One of the possible explanations is the increase in the number of young cohorts entering the labor market in recent years. Studies show that participation in informal employment is

Figure 15. Labor market situation forecast (inertial scenario)

Legend:
- Workforce size, thousand people
- Labor marker imbalance, thousand people
- Total number of vacancies, thousand units
- Level of registered unemployment, %
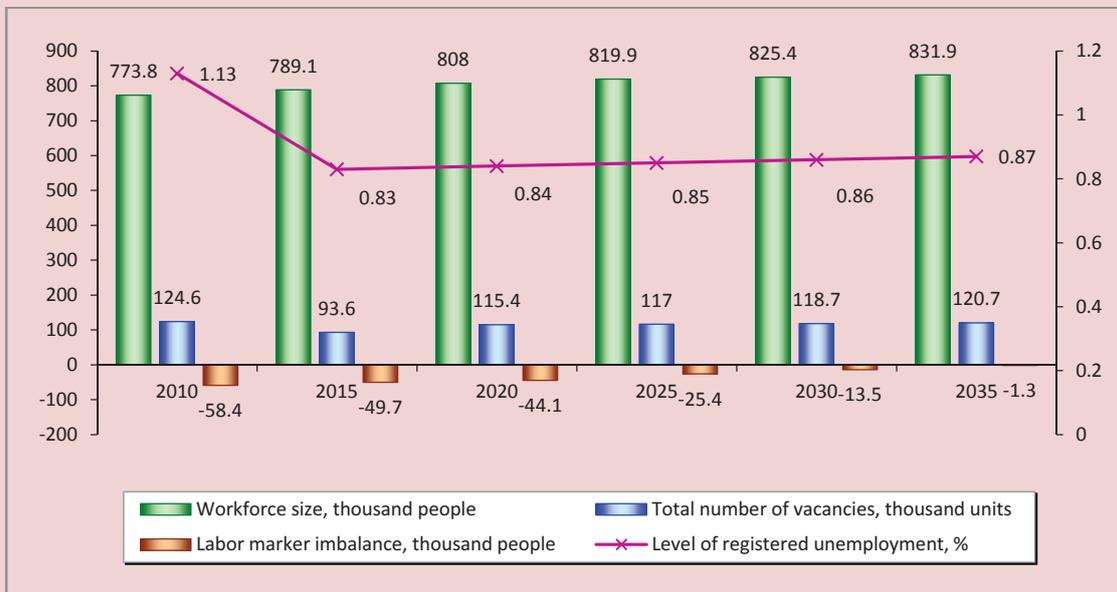
Figure 16. Labor market situation forecast (basic scenario)

Legend:
- Workforce size, thousand people
- Labor market, thousand people
- Total number of vacancies, thousand units
- Level of registered unemployment, %

Figure 17. Labor market situation forecast (innovative scenario)
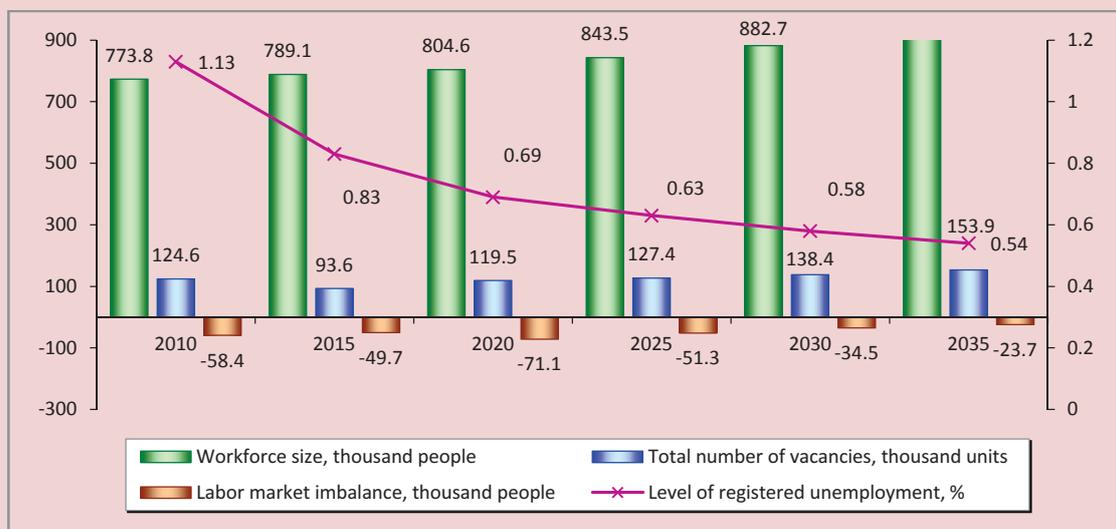
closely associated with age; the working-age population under 30 has the best chances of employment under the terms of informal labor relations.

In addition, statistics show that informal employment is concentrated in small and medium businesses operating in the sphere of trade and other services and construction. These spheres of economy by type of their activities are more sensitive to fluctuations in demand and need a flexible regulation of the number of the employed, which can only be provided by unregistered employment, especially among migrant workers, or employment by contractor agreement which Rosstat includes in the list of informal employment, which contributes to its growth.

The scope and role of the informal sector of employment in the Yekaterinburg economy should not be underestimated. The share of trade and services in the city is constantly increasing, increasing the prospects of informal sector growth. According to Rosstat, in 2015, the share of the employed in the informal sector in the Sverdlovsk Oblast amounted to 15.6% of the total employed population. In scenario variants of the Yekaterinburg labor market forecast, this indicator was taken into account when assessing the number of the informally employed, which, in all scenarios, amounts to more than 100 thousand people.

Registered unemployment will be insignificant in all three scenarios (in all three scenarios – less than 1% even during

crisis situations in the economy). Low values of tension and registered unemployment in the organized labor market may indicate the fact that a significant share of economically active and economically inactive population groups are attracted to the informal economic sector.

The authors focus on identifying the risks of future development. Long-term development of Yekaterinburg is determined by the processes attributable to both external and internal environment. Both external and internal environment in the long term are referred to as challenges occurring in development risks.

External systemic risks reflect global and Russian development tendencies. They are caused by the intensification of global competition which covers markets of goods, capital, technology and labor. The period up to 2035 is characterized by the restructuring of the global economy associated with the change in the balance between its economic centers, the increasing role of regional economic unions, and the spread of new technologies (information, nano- and biotechnologies). This, on the one hand, creates new opportunities for the development of international economic integration, the strengthening and improvement of the position of both the city and its enterprises in global markets, on the other hand, it increases demands to the city's competitiveness, its capacity for innovation and investment promotion. *Regardless of the development scenario external risks associated with global competition are high*.

Internal environment risks of Yekaterinburg vary. Four groups of risks are identified: technological, infrastructural, demographic and environmental *(Tab. 2)*.

Table 2. Risks of Yekaterinburg long-term development

Scenarios	Technological risks	Infrastructural risks	Demographic risks	Environmental risks
INNOVATIVE Neo-industrialization amid accelerated investment rates and population growth	High	High	High	High
BASIC Development of service economy amid accelerated investment and innovation rates and population growth	Moderate	Moderate	High	Moderate
INERTIAL Development of service economy amid inertial investment, innovation and population growth rates	Low	Low	Moderate	Low

1. Technological risks.

The development of scientific and innovation sphere of Yekaterinburg is influenced by a number of internal factors. Positive factors include: significant scientific advances and high educational level of staff working in the research-technological sector; significant fixed assets in industrial and research-technological spheres and the presence of accumulated capital in the city. There are internal factors that complicate the city's research-technological development, namely: underdeveloped market of scientific and technological knowledge and a not yet established system of technology commercialization; technological recession from the global level in most spheres and, as a result, the usurpation of many sectors of the Russian market, including Yekaterinburg, by foreign technologies or products developed on their basis; the acute lack of investment resources in industrial sectors; underdeveloped legal base of intellectual property; lack of concentration of investment and innovative resources.

2. Infrastructural risks.

Infrastructural risks are associated with the state and possible changes in the existing city infrastructure (transport corridors, public utilities, etc.). Infrastructural risks should be assessed when considering the scenarios of both extensive city development, formation

of urban agglomeration (this option implies the obligatory creation of a new infrastructure – roads, power grids, networks), and a more intensive use of the already developed territories (which implies increasing the load on the existing infrastructure). It is also necessary to take into account the fact that even significant economic investments do not always minimize infrastructural risks (infrastructure development, improvement of its qualitative characteristics may be impossible due to insurmountable technological restrictions).

Energy risks should be considered separately. As a result of power sector reformation, competition in the wholesale market of electric power will significantly increase; market mechanisms will work when consumers have a possibility to choose more profitable suppliers in this market. However, it should be born in mind that potentially dangerous consequences of the planned reforms, particularly the energy resource owners' possible desire to shift the risks on the population, the local governments' possible weakened leverage on the city's power supply system, the possibility of electrical networks eluding the control and influence of local authorities due to their transfer to the management of the Federal grid company with centralized pricing within them etc. In order to provide adequate

operation on the power market the city needs to have transmission capacities in sufficient quantity. The capacities of most of the operating power substations are overstretched, transmission lines, especially cable, are worn.

Thus, the assessment of infrastructural risks helps characterize the feasibility of each of the possible scenarios, as the mismatch of benchmarks and the available resources, including infrastructural, may cause the impossibility to achieve them.

3. Labor market development risks.

The analysis has helped identify positive and negative trends and risks of labor market development in the forecasting period. The factors and risks of negative impact are as follows:

– there is a problem of structural shortage of specialists, a clear shortage of industrial workers; the structure of higher education is dominated by humanities, management and economic specialties with the general decrease in the number of industrial specialties and underdeveloped educational training sector for the service sector;

– the degradation of the city's labor market as a result of the influx of low-skilled migrant workers; the growing illegal migration (including labor migration) contributes to the expansion of the uncontrolled market of goods and services, drug trafficking, aggravation of the crime situation. Risks are also associated with the absence of effective mechanisms of integration of migrants into the "host" society.

It should be noted that the main positive and negative factors affecting the demographic processes and labor market development and bearing significant risks characteristic for the inertial and innovative forecasting scenarios and will mostly vary only by degree of their manifestations.

4. Environmental risks.

Adverse environmental changes caused by human-induced impacts may be manifested in different types and forms; therefore, the assessment of such risks should consider not only chemical, but also thermal, acoustic, electromagnetic and other types of pollution. It is important to characterize such economic and social effects of negative environmental changes (the growing discontent among the population concerning their living conditions, the decline in investment activity due to tightened environmental standards, etc.).

The evaluation of possible changes of the citizens' comfort of the living environment is an important element of the city's socio-economic development, that is why the consideration of environmental risks in the forecasting is particularly important (moreover, the fact that environmental risks are mostly

caused by human activities concentrated in the city should also be considered).

Thus, this study develops epy existing theoretical and methodological approaches to the formation of a forecast of a major city using the possibility to choose its own trajectory in the space of scenarios – its own scenario defined by the scope of trends such as "inevitable future" and "impossible future". The implementation of such a scenario has project nature; all possible alternatives to this scenario are considered as its risks.

During the process of practical elaboration of possible city development scenarios the authors managed to identify several possible development areas, consider the characteristics of changes in certain aspects of city life in the context of each of them. It is obvious that the best variant of the city development is an innovative transformation; however, without active participation of local authorities and the support of the whole urban community the implementation of an optimal scenario will not be successful. Thus, the process of constructing the future of Yekaterinburg cannot be considered complete: the development of a long-term forecast is only the first step of effective strategic planning in a municipal unit, an important step towards the creation of a calibrated city development plan.

References

1. Bochko V.S. *Integrativnoe strategicheskoe razvitie territorii. Teoriya i metodologiya* [Integrative strategic development of a territory. Theory and methodology]. Ekaterinburg: Institut ekonomiki UrO RAN, 2010. 316 p. (In Russian)

2. Vazhenina I. S. Gorizonty territorial'noi konkurentsii v sovremennom ekonomicheskom prostranstve [Territo-rial competition prospects in today's economic space]. *Obshchestvo i ekonomika* [Society and economics], 2011, no. 3, pp. 67–85. (In Russian)

3. Vlasova N.Yu., Silin Ya.P. Gorodskaya politika za rubezhom [Municipal politics abroad]. *Akademicheskii vestnik Uralniiproekt RASSN*, 2009, no. 3, pp. 18–21. (In Russian)

4. Itogi sotsial'no-ekonomicheskogo razvitiya munitsipal'nogo obrazovaniya "gorod Ekaterinburg" v 2015 godu [Results of Ekaterinburg socio-economic development in 2015]. *Departament ekonomiki Administratsii goroda Ekaterinburga* [Economic Department of Ekaterinburg city administration]. Ekaterinburg, 2016. 202 p. (In Russian)

5. Kozlova O.A. *Zanyatost' naseleniya industrial'nogo regiona: problemy teorii i praktiki regulirovaniya* [Population employment of an industrialized region: issues of management theory and practice]. Ekaterinbrg: Institut ekonomiki UrO RAN, 2008. 224 p. (In Russian)

6. Kozlova O.A., Gladkova T.V., Makarova M.N., Tukhtarova E.Kh. Metodicheskii podkhod k izmereniyu kachestva zhizni naseleniya regiona [Methodological approach to assessing the quality of life of population in a region]. *Ekonomika regiona* [Regional economy], 2015, no. 2, pp. 182–193. (In Russian)

7. Kuznetsova O.P., Kuznetsov V.V., Makarov V.V., Negoduiko A.V., Yumaev E.A. Regional'nye aspekty realizatsii federal'nogo zakona "O strategicheskom planirovanii v Rossiiskoi Federatsii" [Regional aspects of implementation of the Federal law "On strategic planning in the Russian Federation"]. *Izvestiya Irkutskoi gosudarstvennoi ekonomicheskoi akademii* [Bulletin of Bailkal State University], 2015, no. 5, volume 25, pp. 758–766. (In Russian)

8. Makarov V.L., Glazyrin M.V., Korolev V.E. Perekhod k innovatsionnoi samoorganizatsii munitsipal'nykh obrazovanii [New economic self-organization of municipalities]. *Politiya* [Political theories], 2003, no. 4, p. 113. (In Russian)

9. Nivorozhkina L.I. Gendernaya differentsiatsiya: vliyanie lokal'nykh rynkov truda [Gender differentiation: impact of local labor markets]. *Ekonomicheskii vestnik Rostovskogo gosudarstvennogo universiteta* [Terra Economicus], 2005, volume 3, no. 1, pp. 23–33. (In Russian)

10. Senchagov V.K., Ivanov E.A. Zakon o strategicheskom planirovanii i zadachi ego realizatsii [The strategic planning act and its implementation]. *Vestnik finansovogo universiteta* [Bulletin of the Financial University], 2015, no. 3 (87), pp. 38–50. (In Russian)

11. Suslov V.I., Romanova O.A., Grebenkin A.V., Akberdina V.V. Stsenarii dolgosrochnogo razvitiya staropromyshlennogo regiona [Long-term scenarios of development of old industrial regions]. *EKO*, 2011, no. 12, pp. 158–177. (In Russian)

12. Tatarkin A.I., Bochko V.S. Problemy i napravleniya dal'neishego sovershenstvovaniya mestnogo samoupravleniya [Issues and ways of further improvement of local administration]. *Ekonomika regiona* [Regional economy], 2008, no. 2, pp. 42–51. (In Russian)

13. Uskova T.V., Chekavinskii A.N. Zakon o strategicheskom planirovanii v Rossiiskoi Federatsii: dostoinstva i nereshennye voprosy (ekspertnaya otsenka) [Law on strategic planning in the Russian Federation: advantages and unresolved issues (expert evaluation)]. *Ekonomicheskie i sotsial'nye peremeny: fakty, tendentsii, prognoz* [Economic and social changes: facts, trends, forecast], 2014, no. 4, pp. 63–67. (In Russian)

14. Shvetsov A.N. Sistematizatsiya instrumentov perspektivnogo planirovaniya territorial'nogo razvitiya: Nastoyatel'naya neobkhodimost' i konkretnye predlozheniya [Systematization of long-term territory's development planning: urgent need and specific proposals]. *Rossiiskiĭ ekonomicheskiĭ zhurnal* [Russian journal of Economics], 2009, no. 5, pp. 12–47. (In Russian)

15. Building globally competitive cities: The key to Latin American growth. *McKinsey*. 60 p.

16. Florida R. *Cities and the Creative Class.* Routledge, 2005.

17. Glaeser E. *Triumph of the city*. New York: The penguin press, 2011. 338 p.

18. Higgs G., White S. Alternatives to Census-Based Indicators of Social Disadvantate in Rural Communities. *Progress in Planning*, 2000. 81 p.

19. Hoering H., Seasons M.L. Monitoring Indicators in Local and Regional Planning Practice: Concepts and Issues. *Planning, Practice and Research*, 2004, volume 19, no. 1.

20. Leautier F. *Cities in a Globalizing World: Governance, Performance, and Sustainability,* 2006. 576 p.

Information about the Authors

Yuliya Georgievna Lavrikova – Doctor of Economics, Interim Director, Head of the Department, Institute of Economics, The Ural Branch of Russian Academy of Sciences (29, Moskovskaya Street, Ekaterinburg, 620014, Sverdlovsk Oblast, Russian Federation, lavrikova_ug@mail.ru)

Ivan Aleksandrovich Antipin – Ph.D. in Economics, Ural State University of Economics (62, Vos'mogo Marta Street, Ekaterinburg, 620144, Sverdlovsk Oblast, Russian Federation, aia87@mail.ru)

Aleksei Anatol'evich Pryadein – Ph.D. in Economics, Ekaterinburg city administration, Head of the Department of Economics (24A, Lenin Street, Ekaterinburg, 620014, Sverdlovsk Oblast, Russian Federation, de@ekadm.ru)

Arina Valer'evna Suvorova – Ph.D. in Economics, Institute of Economics, The Ural Branch of Russian Academy of Sciences (29, Moskovskaya Street, Ekaterinburg, 620014, Sverdlovsk Oblast, Russian Federation, Gotika.bell@mail.ru)