

Top managers come to the conclusion that the main characteristics of successful and forward-looking company are not only its liquidity, profitability, profit (like it has been considered earlier), but also the increasing of business value (cost of the business). It means that the main task of competent manager is to increase the "price" of the business, which will be the subject for monitoring, strategic management and investment interest of the State and people [5].

So, using the express-method of assessment of business value, management of the enterprise quickly and without considerable expenses can define the "boundary" minimum rate of market cost of the business, and also choose factors, which have an impact on it.

The value of the business, defined by the express-method can be served as minimal cost of the business and used by professionally licensed appraisers for more through and detailed calculation of business price.

For administrative and financial managers it is recommended to pay attention to the business value as controlled indicator, which has a great influence on all results of company's work, such as increase of investment attraction, financial risks managing, forming of funding sources, social part of company's activity.

In conclusion of the present research it is significant to point out at results received by authors:

1. It was suggested to use the express-assessment of business value as the way to increase the effectiveness of company management.

2. It was reasoned that cost management is a process that considers interests of different parties, such as owners, investors, consumers, society, government of territorial entities of Russia.

3. The calculation formula of business value by the method of net assets was modified, coefficients, which have great impact on value of required indicator, were included.

4. The system of quadrants, which allows to discover management features of business value in different situations, was proposed.

5. It was concluded that the express-method of defining business value has to suit principle of system and guarantee mobilization of all solutions to achieve strategic and tactical goals.

6. It was pointed out, that during crisis situations the express-method of assessing the business value and accepted decisions based on it should be aligned on the preservation of index of value, not on its increase.

The practical consequence of this research is that recommendations about using the express-method to calculate the business value give an opportunity to inform owners and managers of enterprise about business cost dynamics, that can allow to increase the effectiveness of managing companies.

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CONCEPTUAL MODEL OF THE INVESTMENT PRIORITIES ESTIMATION IN INFOCOMMUNICATIONS

We offer a new conceptual model for investment priorities estimation. It provides the analysis in a regional profile, industry profile and on a micro level. The model combines a number of economic-mathematical methods of modeling, including cluster and multivariate regression analyses. It is recommended to use theory and systematic tools of the real options concept for the priorities estimation on a micro level.

Keywords: an investment priority, a cluster, a rating, risks, a real option.

Nowadays the problem of investment priorities estimation has become topical. Its urgency is defined by the necessity of socioeconomic development of Russian regions and by the multichoice of capital investment spheres. Shortage of financial resources explains the necessity to stimulate investment mobilization into the infocommunication complex and their efficient use. Lack of reliable methods and approaches to identify investment

priorities, appropriate to socioeconomic changes, mechanisms and ways of investment management on a regional and industry level makes development of a reasonable strategy of investment activity for telecoms operators rather complicated.

Russian economic system transformation and its integration into the world information and economic community require studying of the world experience and

its use in accordance with special features of our country. In spite of the importance of the problem stated above, issues of investment priorities substantiation and choice are still at the formation stage. There are discussions among analysts concerning criteria, principles and methods of performing appropriate estimations. Taking into consideration that the term of investment priority has a wide interpretation in scientific literature, this work suggests the following definition:

Investment priority is an integral characteristic of a set of factors (social, economic, organizational, legal, political), determining investment expediency in this or that economic system.

This term has an intermediate position in the investment policy between purposes and their implementation tools and plays the role of a guideline in solving investment problems. Substantiation, choice and realization of investment priorities are one of the investment management functions, which implementation is realized in the process of developing, making and realization of management decisions. The systematic mechanism for determining investment priorities is being actively worked out. There are different variants of its classification.

From the practical point of view, the classification according to the level of the problems solved deserves the greatest attention. In accordance with the stated criterion, systematic tools are divided into three groups:

- methods of determining investment priorities on a macro level (national priorities);
- methods of determining investment priorities on a mezo level (regional and industry priorities);
- methods of determining objects for investment on a micro level.

As a rule investment priorities on a macro level are represented by means of rating estimations. The research of the world countries conducted by Harvard business school was one of the first in this direction. The ratings published by international economic journals “Euromoney”, “Fortune”, “The economist” are well known and are often given in economic literature. To make up practically all ratings expert judgments are used to a certain extent. The stated ratings are used as a criterion for making a decision concerning investment in this or that country.

Rating estimations have become widespread, but it should be noted, that there are some drawbacks in the approach. The rating calculation includes a number of factors which are weakly reasoned and as a rule are restricted by available content of statistical information and by the size of allocated financial resources. Russian and foreign researchers, working in the field of determining investment rating of Russian regions, execute operations with a large number of rates – from 30–70 to 200. It does not provide more profound study of the phenomenon considering multicollinearity of the rates inevitably arises in this case. A complicated interpretation of the results achieved during the estimation produces a certain portion of pessimism. The total integral value does not enable us to trace the cause-and-effect relations and

trends of the development of this or that investment complex sufficiently back. Finally, this drawback negatively influences the substantiation of the calculation results. In quite a number of cases the rating calculation procedure is “non-transparent” and does not give the opportunity for the investor to estimate to what extent all the factors taken into consideration when calculating the rating are relevant to the purposes of his investment.

Taking into account high regional differentiation of Russia, the approaches to investment priorities determination on a mezo level deserve special attention. The existing systematic approaches for investment priorities estimation in regional and industry profile borrowed the western traditions to conduct such kinds of research in many respects: indicators system, ways of their quantitative assessment, standardization procedure, total “weighing” and summation. “Expert region” consulting agency has a leading position among Russian rating agents. In compliance with the procedure of this agency, the rating is determined as interrelated estimation of two basic components: risk and potential. The way of using economic mathematical methods is less significant.

Development of the conceptual model and as a result a choice of a computing method must be performed through a number of the estimation objectives. This process influences a list of the factors, criteria and rates of the investment priorities estimation taken into consideration. In the context of the problem considered in this work the investment priorities estimation is performed for an effective strategy development of the investment activity management in the field of infocommunications. It allows to eliminate information inequality both between Russia and the most developed countries of the world community and particular regions of our country. In compliance with the set purpose we propose the conceptual model of investment priorities estimation shown in fig. 1.

According to one of the main paradigms of financial management, while taking a decision an investor estimates an acceptable for him correlation between expected investment profitability and a risk. Depending on reasons of occurrence and possibilities of elimination we should single out two components of investment risks: specific (commercial) and nonspecific (country, region, industry).

Specific, or commercial investment risk, is a variant of entrepreneurial risk connected with the investment activity and caused by peculiarities of commercial (market) activity specific for each investment project or particular enterprise (corporation). Risks spectrum connected with realization of infocommunication projects is wide enough. Let us consider the primary risks.

Risk of a technical development strategy. Any infocommunication network requires further development. In its turn it can be both quantitative and qualitative. Risk of a technical development strategy has two aspects respectively. First of all, it represents danger of advanced growth of the subscriber database in comparison with the new capacities entry rate, the network modernization and optimization. The reason of

such a situation can be both a wrong forecast and undue equipment delivery that can lead not only to the failure in the network operation, financial losses but also to the reputation loss. Project partners must be bound by strict contractual obligations which exclude the possibility of undue delivery. Quantitative development implicates numeral increase of network elements which is enough

for the incoming load servicing to comply with the stated quality ratings without failure. In addition, there is potential danger of the operator's inability to satisfy users' mounting needs on the basis of the available technology (standard). For example, at this conjuncture it is insufficient simply to provide a subscriber with qualitative and reliable telephony.

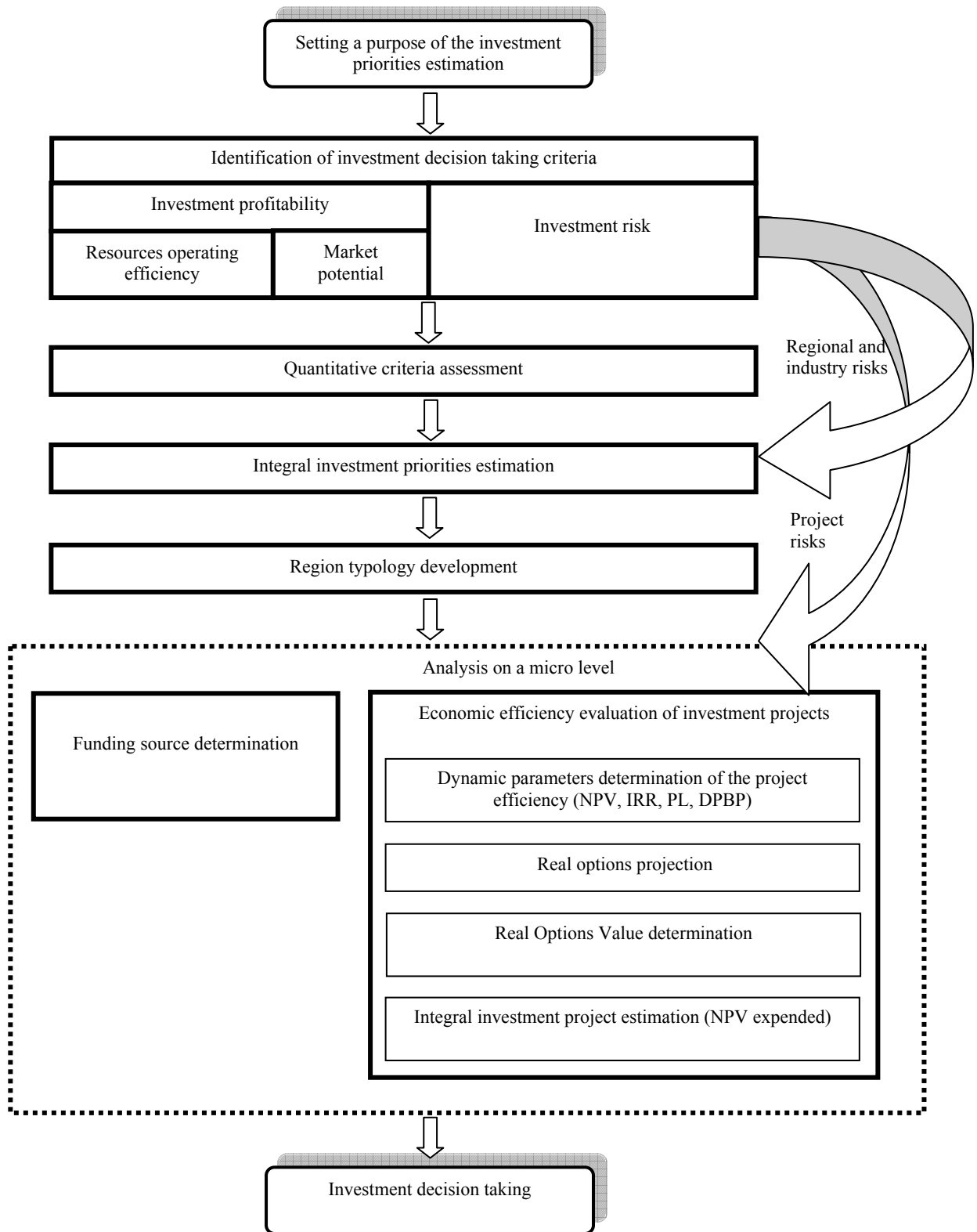


Fig. 1. Conceptual model of investment priorities estimation

New services are getting more and more demanded, for example the multimedia data transferring. In this connection, the problem of the innovation technology implementation on telecommunication networks is highly urgent nowadays.

Market risk is connected with the conditions when an investment project is being realized. It has a possibility of an unfavorable effect of external environment on the company financial performance and its ability to achieve aims. The example is reduction of people's paying capacity level. The further situation of the company in this situation will depend on the due reaction to the changes occurred. To reduce the risk the results of the marketing research are given in the corresponding section of the project business plan, including:

- general characteristic of target markets, their capacity evaluation, market development dynamic and the forecast of its future trends;
- consumers' basic requirements to services;
- competitors' power assessment and their basic services data (tariffs, quality level);
- technological and financial state of competitive organizations and the extent of their influence on this service market.

Marketing policy risk takes place as a result of strategic decisions acceptance or non-acceptance regarding the company marketing policy. The probability of taking inadequate decisions is growing when the competition on a particular market segment is increasing. Operators' growing competition can cause loss of a market share or the financial state deterioration.

Technical risk is a probability of equipment failure. To reduce this risk it is necessary to perform regular monitoring of the operated equipment and improve the service staff's qualification.

Risk of human resources has a few reasons. First of all, it is connected with possible mistakes in the quality assessment of human resources and infringement of conditions of their use. The object understaffing with sufficient quantity of qualified staff can lead to the increase of the required investment volume, because there is necessity to train it, increasing probability of equipment failures and its ineffective operation. The variant of this risk is danger of human resources loss connected with the possibility of new companies setting up which needs advanced and qualified staff. To control this kind of risk it is advisable to undertake measures to improve social policy, career prospect and staff training policy.

Financial risk is connected with the scarcity of financial resources to realize the company's tasks, inability to fulfill obligations and liquidate indebtedness.

Nonspecific or non-commercial risk is caused by external conditions of macroeconomic, regional and industry patterns in relation to the investor.

Macroeconomic (country) and industry investment risks influence equally the probable results of all investment projects implementation in a particular country and in a particular industry respectively. Thus they have no influence on the results of the comparative investment appeal estimation and therefore may be

excluded from consideration as the permanent impact factors. Regional risks and risks of a particular project must be taken into account while choosing the procedure of economic efficiency assessment. Specifically, it is suggested to use the optional approach in estimating high-risky and non-standard projects.

Investment profitability is defined, from our point of view, by the work efficiency of industry recourses and potential market capacity. It should be noted, that there is a specific time gap between the moment of the work efficiency of the industry recourses estimation (they can be determined only on the basis of statistic data) and the moment of the investment decision making. The obtained level of the industry recourses work efficiency is determined by its specific character, industry management state and potential market capacity. In its turn, the market capacity (especially infocommunication market capacity) has a constant tendency to its variation. Underestimation of its influence on the work efficiency of industry recourses and, as a result, underestimation of telecom operators' work efficiency may lead to a wrong strategic decision.

Market potential assessment enables us to correct existing work efficiency of the industry recourses taking into account a strategic outlook. In this case, market potential is considered as required capacity of the growing number of access points to the information networks which will give an opportunity to provide economically balanced development of Russian infocommunication complex.

To build the regions typology in this work we used a method of economic mathematical modeling which is based on combining the cluster analysis and the multiple regression. Parameters of infocommunication infrastructure development (stationary telephone density, mobile telephone density and personal computers density) were chosen as factor variables. In general, the model can be presented in the following way:

$$\text{GRP per capita} = a \cdot (FD)^{b_1} \cdot (MD)^{b_2} \cdot (DC)^{b_3}.$$

Parameters b_1, b_2, b_3 have precise economic interpretation. They are the elasticity coefficients and show how much the result (GRP per capita) will change in average with 1 % change of the corresponding factor when the other two factors are constant. The exponential model making was preceded by the procedure of parameters linearization which was done by taking logarithms. To solve this task the determinant method was used. As a result, we got the following multiple regression equation for the universal set (77 regions):

$$\text{GRP per capita} = 8409 \cdot FD^{0,812} \cdot MD^{(-0,241)} \cdot DC^{0,211}$$

The analysis of the obtained equation allows us to make a conclusion that the highest gain will be got when investing into development of stationary electrical communication. Taking into consideration high heterogeneity of the regional infocommunication infrastructure development it is advisable to complete the obtained results by making the corresponding multiple

regression equations for more homogeneous groups (clusters).

The highest value of entropy was obtained when performing the cluster analysis by Word method. Squared Euclidean distance was used as a measure of convergence. To define the number of clusters objectively existing in the universal set, *E*-criterion calculation was made. We can observe abrupt increase of *E*-criterion at step 71 of integration. Thus the number of clusters is 6. The made analysis of clusterization results showed that out of the regional universal set the Ingush Republic, Samara Region and the Chukchi Autonomous District stand especially out. They form clusters of one object. Moscow and Saint Petersburg are incorporated into a separate cluster. The multiple regression equations for filled clusters are given in table.

Multivariate regression models

Cluster rank	Multiple regression equations
1	$GRP \text{ per capita} = 2,889 \cdot FD^{1,172} \cdot MD^{1,005} \cdot DC^{0,333}$
2	$GRP \text{ per capita} = 252,03 \times FD^{1,562} \cdot MD^{(-0,023)} \cdot DC^{0,193}$
3	$GRP \text{ per capita} = 1\ 550 \cdot FD^{0,669} \cdot MD^{0,311} \cdot DC^{0,175}$

Analysing the multiple regression equation for the first rank cluster we can make a conclusion that the highest GRP per capita gain will be observed when the funds are invested in the stationary electrical communication development, that is when the stationary telephone density increases. When the funds are invested in the mobile communication development in the regions of the second rank cluster we will observe the GRP per capita decrease. This fact can be given the following explanation: as the regions of a particular cluster are characterized by a high level of mobile communication development, we can claim that further density increase will attract the “little speaking” telephone subscribers that

will negatively influence the financial results of the mobile companies activity. In the regions of the third rank cluster, the highest gain will be observed when the funds are invested in stationary electrical communication development, that is when stationary telephone density increases.

Fig. 2 shows elasticity coefficient values in the multiple regression equations according to clusters. It allows us to make an optimal decision about the funds investment in infocommunication development.

Except economic efficiency dynamic indicators calculating (NPV, IRR, PI, DPBP) the investment priorities analysis on a micro level assumes projection and calculation of the Real Options Value. In spite of the fact, that the Real Options Theory is a new direction in the field of investment analysis, there is quite a large number of sources of its theoretical and practical application in the world literature. The works by F. Black and M. Showl, A. Damodaran, R. Merton, D. Moon, A. Dixit and R. Pindyck, N. Kulatilaka, D. Ingersoll and S. Ross, L. Trigeorgis and the works written by a number of other foreign researchers can be referred to as classical works devoted to the option approach. This problem is less studied in our country. The emergence of the real options concept is explained by the drawbacks of the traditional approach to efficiency evaluation, which supposes passive project management and does not take synergistic effects into account. According to the traditional approach, all that a manager has to do is to follow the project in accordance with the plan developed beforehand. Thus, the managers’ ability to make appropriate decisions in future is excluded from the investment project estimation.

Contrary to the traditional method, the option approach takes the administrative flexibility into account because it considers the investment project to be a system of options. Flexibility is the possibility to change the made decision in the broad sense of the word has its advantage. The more such possibilities are there in the project, the more valuable the project is.

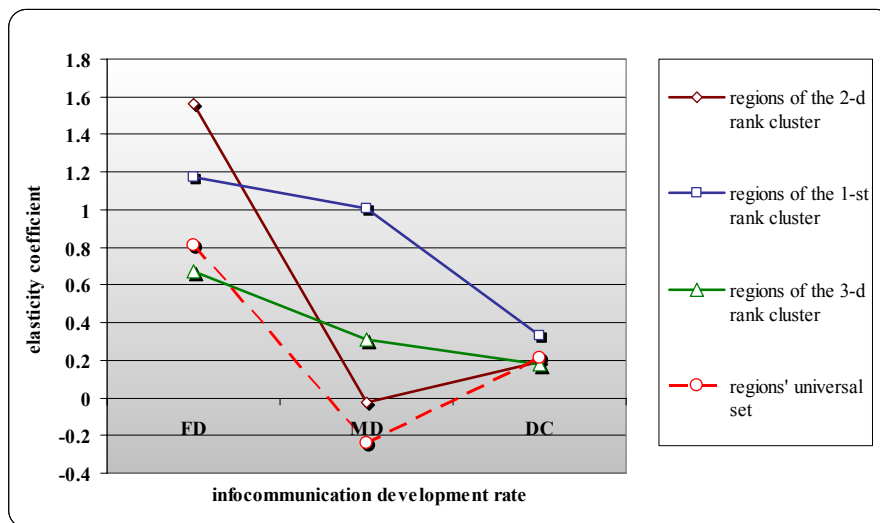


Fig. 2. Elasticity coefficient values by clusters

Conceptually the net present value of IP can be presented as a sum of NPV indicator, calculated according to the traditional procedure and a value of administrative options included in the project. It can be presented as the following formula:

$$NPV_{exp} = NPV_{tr} + ROV,$$

where NPV_{exp} (Expanded NPV) – expanded net present value of IP; NPV_{tr} (Traditional NPV) – net present value, calculated by traditional method; ROV (Real Options Value) – real options value.

There is a large number of methods and models of real options estimation, the most part of which supposes use of a rather complicated mathematical apparatus, in particular stochastic mathematics, which makes their practical use difficult. The most practicable, from our point of view, is the binomial method and Black-Scholes model which were considered in details in [1–3]. The real options concept allows us to estimate the project possibilities quantitatively and thereby include them in the project efficiency estimation. It should be noted, that quantitative estimation plays the key role in the investment decision making.

The conceptual model suggested in this work is assigned to estimate investment priorities and assumes the analysis realization on several levels. It is proposed to

study the development mechanism in the regional and industry profile by means of the multiple regression equation. It will give the opportunity to perform the regions positioning. It is recommended to analyze investment priorities on a micro level using the systematic mechanism of the real options concept. All this, from the authors' point of view must provide reasoned investment decision making and the choice of the optimal strategy of the regional infocommunication infrastructure development.

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TECHNIQUE TO ESTIMATE AND FORECAST LIFE QUALITY OF POPULATION

The article presents the expediency to apply life quality indicator of efficiency for activity of authorities and also the essence of the estimation technique developed by the author and forecasting of life quality of the population with regional features taken into account.

Keywords: life quality of population, estimation of life quality, forecasting of life quality.

Since late 80s the theory and sustainable development practice are in the centre of attention of scientists and politicians in our country and abroad. The tendency to design regional (and even municipal) sustainable development programs which began in the mid-nineties in Russia is still in trend. As a rule the goal sets of these programs have regional concretization and are directly focused on use of available preconditions to stabilize and improve the economic and social situation of the corresponding territories. The question of indicators and criteria of regional stability is in fact open.

Considering and analyzing various approaches to an estimation of stability of social and economic systems [1–3], the author comes to the conclusion that all the offered techniques focus attention on the process and development indicators, but do not answer the question “what for?”. After all, the given estimation is necessary not only to compare the level of social and economic

development of the separate countries and regions and to drawing up their ratings. Today high quality of life of the population should become the overall objective of sustainable development. The importance of life quality problem is increasing in Russia because the human resource in the conditions of progressive ageing and depopulation becomes the most scarce resource. Last version of the long-term demographic forecast of the United Nations shows that in the long term the population of Russia will be reduced, the middle age group will go up and the able-bodied population share will go down [4].

Thus, in the conditions of depopulation and ageing the problem of life quality maintenance is particularly urgent. Achieving and maintaining high quality of life will provide improvement of health and increase of life span of the population, rising of educational level, birth rate growth etc., and all these in their turn will contribute to