ABSTRACT

The modern role of the regional social infrastructure is to integrate the interests of economic entities and interests of government agencies. Regions use social infrastructure as a factor of improvement of quality of life and realization of the national development purposes, and at the same time it is the perspective business sphere and the effective space of diffusing the innovations. The development vector of the social infrastructure is directed towards the modern and innovative changes associated with ecologization and humanization of scientific and technological progress. This is implemented in the application of the investment market and non-market forms, concretized formation of public-private partnerships.

KEY WORDS: Social infrastructure, Region, Investment, Public-private Partnership

Integrated infrastructure is the result of social development. At this stage scientific and technological progress provides a qualitatively new level of existence of society and the domination of certain sectors of the economy. Its content is determined by the internal economic unity of its industries and specific functional purpose. The emergence of infrastructure is determined by the development of production, which stimulates the emergence of new types of production, servicing, and integrating them with branches, forms of activity. And the formation of post-industrial paradigm promotes the release of a significant part of economic resources for the provision and consumption of services to the community, the process of integration of material and non-material production. Integrated infrastructure in general has a significant impact to the socio-economic development of the country, but it is specific for each technological stage, the industries develop under the influence of economic laws at a certain stage of economic system’s modernization.

There is a relevant type of integrated infrastructure’s development depending on the dominance of production factor at a certain stage of economic development. Industrial paradigm stipulates the importance of technical and technological factors, indicating development and modernization of production infrastructure. The social infrastructure dominates in the postindustrial society, i.e. the human factor is becoming a priority under the new conditions, therefore, there are social investments, enhancing of ecological and humanistic development of the economy.

The essence of social infrastructure is forming the conditions for the reproduction of human capital, meeting existing material and spiritual needs of society and creating the new one necessary for human development. Public accumulation’s type radically changes in the postindustrial society, which forms are knowledge, information, intangible wealth (investment in cul-
tural development, education, recreation, health, improvement of living conditions). The holistic nature of social infrastructure expresses in consolidation of its social and innovative development.

On the stage of industrial society social infrastructure is built around the sites of production, but to post-industrial - there are processes of its development as an independent element in the form of co-evolutionary movement of industrial and social infrastructure. This is confirmed by the words of Daniel Bell of the relationship between companies in a post-industrial, industrial and pre-industrial stage of development of society. New (creative) companies do not eliminate any of adaptive or even traditional companies in the same extent that the post-industrial society can not replace industrial and even agricultural society. They only determine trends that strengthen the systematic of society and develop the very nature of the social structure (Abalkin L.I., 2006).

The study of the genesis of ideas about the nature of social infrastructure suggests that it was paid attention long before the designation of the phenomenon. Premises of functioning of the national economy have been investigated in the writings of Adam Smith on the study of material conditions for rational organization of production; utopians Saint-Simon , Charles Fourier on creation of conditions for the life of society; R. Owen, who tried to translate into reality the idea of providing culturally domestic needs of society. Scientists have attempted to understand the nature and role of social infrastructure in the social development. Experts of different scientific fields have taken part in this task – demographers, sociologists, economists, architects, who tried to respond to topical issues of social development.

The logic of social development determines the problem of conditions for efficient production activities. Entrepreneurs had to do with the organization of the infrastructure within the national economy as the complexity of economic relations. Close intertwining patterns and economic interests have been expressed in the formation of infrastructure’s elements, ensuring the reproduction of human capital, i.e. perform some social functions.

New stage of development of infrastructure is associated with a growing need to create the necessary conditions for the life of society. Living environment becomes as an objective factor in the existence and activity of people, and a resource of manufacturing process during social development, complicating the relationship between human and nature, the humanization of production, improvement of intellectual and professional requirements for people. Moreover there is a situation when during the effective use of working time the organization of leisure time, meet the material and spiritual needs also required.

Throughout social development social orientation of traditional elements of production infrastructure is enhancing (transport, communications, etc.), adapting them to meet the material and spiritual needs of society. The object of this study is such infrastructure elements that do not directly relate to the production but create favorable conditions for social development. Housing, healthcare, education, tourism are studied as an integral part of the prerequisites for the quality of life, human capital reproduction. Social infrastructure is aimed at meeting the specific needs of society and its development can not be considered in isolation from their level of culture, cultural patterns, representing an important regulatory mechanism to improve it.

Thus, social infrastructure characterizes the interaction of the material and the real environment and social entity (individual, group, society), which is aimed at improving the efficiency of social development, the realization of all that contributes to the formation of human capital and its reproduction, enhancing quality of life . Social infrastructure is a stable set of material elements that create the general conditions for the efficient organization of human activity – labor activity, social activity, political activity and other – developing in the public interest, removing social conflicts. Such an understanding of the social infrastructure allows us to treat it as a separate element of the integrated infrastructure that has a significant impact on the economy and society.

The need for a relatively independent development of social infrastructure is determined by the necessity to move to a new cultural pattern, which must keep pace with technological stage. Post-industrial society with the sixth technological stage dominated is characterized by the following features:
1. The humanization of technological progress, its structure. Orientation of intellectual and technological innovations on the social consumption of environmentally friendly goods, improving quality of recreational and educational services, preservation and enrichment of the cultural heritage.

2. The greening of technological progress, development and dissemination of fundamentally new waste-free technologies, renewable energy sources, instruments of monitoring the environment.

3. The requirements of humanization and greening of technological progress is possible to perform due to balance of the interests of society, human and nature.

4. Globalization of scientific and technological progress, the spread (assimilation) of its achievements across regions and countries for elimination the large economic and technological gap between them.

Attention to the reproduction of human capital particularly true when there is a change of technological paradigms and technological stages. Social infrastructure provides effective conditions of human life, not only in production but also in all spheres of society. But it is impossible to replace infrastructure elements between each other - they are in the system, interacting and complementing each other.

Social infrastructure is a category of the regional economy, because there is a system servicing of economy and its industries at this level. This sphere functions at different levels facing sectoral and territorial interests of the property and business entities. Elements of social infrastructure have regional character, which goal of development is to create architectural and cultural image of cities and regions, meeting the needs of society.

Currently, attention to the science and practice of general and specific problems of regional social infrastructure is increased, due to the trends of its development as a priority element of social infrastructure:

- its place changes and its role increases in the reproductive process, it attracts a large part of the investment and labor
- investment and innovation capacity increase;
- social infrastructure development largely determines the competitiveness of the region.

Forming of new features and functions of social infrastructure is determined by evolutionary innovation path of society and its development is accompanied by the appearance and use of new forms and methods of social control (interregional planning, maps of cultural institutions, comprehensive regional development programs, etc.). It is designed to provide various social services to society, so defects in planning the development of social infrastructure elements seriously affect the efficient solution of this important regional problem.

Social infrastructure of territorial division is a necessary element of detailing common problems. The lower the level of social organization the more limited set of elements. The main criterion for the efficiency of the infrastructure elements is the ability to meet the needs of society through the provision of quality services. Social infrastructure interacting with other infrastructures in the region ensures the functioning and development of the regional economic system. Elements of social infrastructure have no substitutes in meeting the primary basic needs of individuals, as they are the basis of life of society.

Social infrastructure has to be divided on the territorial and sphere of productions basis. A feature of this division of the elements is their attachment to a specific territory. If social infrastructure is studied within the closed socio-economic system the level of major economic area is very important. There is a possibility of comparative analysis of indicators of social infrastructure with other economic units. This is the basis for the forming and adjustment of the concept of development of social infrastructure. At this level certain modifications to the coefficients of its development enter depending on the institutional specification of the region.
Territorial asymmetry infrastructure is clearly seen at the intraregional level, but only slightly seen at the interregional level. The modern concept of infrastructure should include the leveling of regional differences. If there are no differences at the level of development of production infrastructure between particular economic areas, but there are significant regional differences of the development of social infrastructure, and overcoming them is one of the most important tasks of the regional policy. The importance and depth of the problem becomes evident under transformation of social infrastructure in the sphere of life support.

Regional interest is to provide high quality environmental life support for society by forming regional social infrastructure. Topicality of regional interest is associated with the need to consider the territorial factor, providing independence for regional economies and development of property relations.

Thus, social infrastructure creates the necessary conditions for the full life of the society and increasing human potential. Social infrastructure is considered as an independent system of higher order, unifying the industry and agents having one common goal – to ensure the life of society and creating conditions for socio-economic development of the region, and interconnecting each other by relationships of varying complexity and degree of interference. In turn, each of the elements of social infrastructure is a complicated socio-economical system with immanent characteristics, properties and factors of its functioning and development.

Figure 1: Social infrastructure at various levels
Social infrastructure as a subsystem of the national economy should be considered based on the following principles of its construction (Figure 1):

- Vertical - management level (megaeconomic, macroeconomic, regional and nanoeconomic level);
- Horizontal - the set of elements belonging to the social infrastructure (health, housing, education, recreation, transport and household systems).

The inherent features of social infrastructure show its social importance and chance of using the competitive mechanism, as well as capital intensity and duration of the payback for investment entities. The peculiarity of the social infrastructure is in existing and interacting marketing (private) and non-marketing (public) forms of solving social problems in its branches.

Thus, the regional social infrastructure is a diversified system of elements with complicated connections and relationships, providing socio-cultural, economic and investment and innovation development of the region. Depending on the existing settlement system the territorial distribution of social infrastructure, composition, organization, technical and technological levels establish. This ensures actual services quality to society, the degree of satisfaction of its needs for goods, the formation of a required lifestyle. So, functioning elements of social infrastructure has specificity in the countryside compared with the same mark in urban areas defined by geographically dispersed rural settlements, remoteness from the regional center, the development of road infrastructure, climatic conditions.

Social infrastructure is formed depending on the regions factors – both geographic location and functioning of the economic entity. The causes of regional imbalances of social infrastructures are:

1. Geographical (spatial) integrity;
2. The level of development of intra-regional, inter-regional, industrial, economic, socio-cultural and other communications;
3. Economic integrity manifested in the structure of management, its specialization and systemic of development;
4. Investment and innovation potential of the region;
5. The capacity of the regional market, including the level of human capital.

Asymmetry of the socio-economic environment in the country has a significant impact on the functioning of the state, economic structure and efficiency, the strategy and tactic of institutional change and the socio-economic policy. To reduce this asymmetry the synchronization and consistency of economic policy at the state and regional levels, the strategic regional development program, the expansion of economic resources and increasing their effectiveness are advisable.

Asymmetry of development of regional social infrastructure is explained by integrity of its functions (Figure 2- Ulyanova O., Yaschenko S., 2007). Common functions are systemformation, integration, reproduction, regulation.

1. Systemformation function – the solution of optimization problem of social development, the diffusion of scientific and technical progress, and the efficient use of resources and opportunities of modern society depend on clearness of objectives formulation, chosen methods and opportunities to achieve it.

Objective functions of the regional social infrastructure are:

- providing housing conditions. Housing system is a priority of elements of the regional social infrastructure. According to the hierarchy of needs by A.Maslow housing conditions are the basic needs of the individual and society as a whole. Providing housing conditions is an important social goal, the achievement of which determines the stability of society.
- providing medical services. The nation's health is an important component of economic welfare. The average life expectancy is one of the most important health indicators. It had increased in developing countries more than ever in history of these peoples for the period from 1950 to 1990. The importance of providing health care services increases with people income. According to the laws of E. Engel, increasing individuals income leads to greater flow of funds for medical, educational and recreational services. Medical system has such features as a high income elasticity of demand, the rapid scientific and technological progress and the growing consumer isolation of prices. Its role as a social system that prevents the degradation of the nation and a factor of economic development of the country is extremely high. Providing quality medical services may take place only at partnerships between the market and the state;

- forming cultural structure of society. The role of the cultural sector to the development of society increases, due to an increase of cultural needs, its impact on the quality of human capital and the expansion of cultural space. Each stage of social development forms a cultural way of life, preserving cultural values and heritage of the previous one;

- providing investment in human capital. Economic benefits of investment in education can be regarded as additional income for life of the individual. At each stage of economic development it is advisable to form a balance between investment in human and investment in equipment. According to F. Fukuyama, social status of individual is largely determined by the level of his education in developed countries. Social inequality is the result of unequal access to education;

- providing recreational services. The demand for recreational services increases as the quality of life. The structure of recreational services consists of tourism, hotel services, etc.

**Figure 2: Functions of Social Infrastructure**

Source: auth. comp.
2. Integration function includes processes of consolidation, interdependence and mutual responsibility of economic entities occurring under the influence of values and institutions. This feature allows the association of infrastructure sectors in a single complex in a particular area. Integration is accompanied by ordering system interactions, increasing the number and frequency of contacts and it promotes strengthening economic relations between the business units and industries, increasing their efficiency and investment and innovation activity. All this leads to stability and the integrity of the social infrastructure.

3. Reproductive function ensures the permanence of the reproductive process of production factors and the irreversibility of time. The role of material factors of production changes in post-industrial society. It is in achieving a new quality of economic growth of the country and its regions. Elements of social infrastructure become strategic "points" of innovative breakthrough. "Knowledge-intensive" industries of infrastructure (health, education, research sphere, housing industry, etc.) show a high rate of employment and gross domestic product growth. Implementation of reproductive function involves the preservation, restoration and the increment of production factors.

4. Regulation function. Regulation of relations between members of society and reducing number of social conflicts are determined by elements of infrastructure, which lead to the formation of a new structure. The subject of the conflict is its internal cause, the basic contradiction, that leads economic actors come into confrontation. The individuals immediately start to institutionalize the activity if it is not ordered or not settled. Dynamic society means that it is constantly changing and simultaneously creating conflicts and disagreements. Regulatory function is based on the cultural component, values and institution.

Along with common features that the social infrastructure performs as part of an integrated infrastructure, the authors identify its specific functions:

1. Competition between infrastructure elements. The infrastructure elements compete among themselves developing some of them and slowing others. There are priority infrastructure elements in the social infrastructure that have a multiplier effect and are able to provide investment and innovation development of the social infrastructure and the region as a whole.

2. Reducing social conflicts. Social infrastructure has to reduce social conflicts arising as a result of divergent interests of technological and social development of society. Conflict is a decisive or one of the decisive factors in social development emphasizing its positive functions. The basic idea of social infrastructure is not to eliminate conflict but to reduce its devastating effects and to use its positive features. Conflicts keep the social system of ossification requiring technical innovation and creativity. High level of social infrastructure provides social security in the region giving individual social choice and prospects;

3. Transmitting function (transmitting social experience). The society can not develop if it is not possible to transmit social experience. Social infrastructure needs continuous technological upgrading and the introduction of technical innovations at every stage of social development. Achievements of material culture transmit from generation to generation, creating and increasing cultural heritage of society;

4. Communication function. Produced in the social infrastructure information should be distributed within the infrastructure to manage and monitor its operation and development, and to other types of integrated infrastructure. Carriers of information are the individual and society of the region as a whole.

Functions of the regional social infrastructures are carried out by subjects - the state, the companies, society. The special role belongs to the state as it actively participates in production of public benefits, i.e. promotes emergence of positive effects.
The development of social infrastructure due to decrease public expenditures was the purpose of the Government of Russia since 1991. The level of public transfers in GNP was 8.1% in 2005, 7.7% in 2006, and 7.5% in 2007, however 12.2 % in 2008, 17.3% in 2009, 17.6% in 2010. Experience of many foreign countries has proven the need and efficiency of the public transfers in the development of social infrastructure.

The effective instruments of the modern social policy in Russia are prior national projects: “Health”, “Education”, and “Available and Comfortable Dwelling to Russian Citizens”. These large-scale and short-time projects have attempted to solve system problems in the social infrastructure in Russia.

Table 1: Basic Indicators of Social Infrastructure in Russia

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered unemployment, %</td>
<td>5.7</td>
<td>7.0</td>
<td>8.2</td>
<td>7.8</td>
<td>6.1</td>
</tr>
<tr>
<td>Children &lt;15 years not involved in education</td>
<td>21223</td>
<td>40852</td>
<td>38191</td>
<td>34833</td>
<td>29998</td>
</tr>
<tr>
<td>Housing estate square, sq. m per capita</td>
<td>21.5</td>
<td>22.0</td>
<td>22.4</td>
<td>22.6</td>
<td>23.0</td>
</tr>
<tr>
<td>Expenses on the organization of rest and cultural actions in consumer budgets, %</td>
<td>6.4</td>
<td>7.7</td>
<td>7.3</td>
<td>6.8</td>
<td>6.8</td>
</tr>
<tr>
<td>Level of income differentiation</td>
<td>7.5</td>
<td>7.5</td>
<td>7.5</td>
<td>7.4</td>
<td>7.3</td>
</tr>
<tr>
<td>Incidence of people on 1000 people population</td>
<td>771,0</td>
<td>767,7</td>
<td>797,5</td>
<td>780,0</td>
<td>796,9</td>
</tr>
</tbody>
</table>

Source: Russian Statistical Department.

Living conditions are characterized by the group of indicators. The share of apartment houses of the total area of premises as a whole across Russia was 68% of the total area of premises; this is not acceptable characteristic for many European countries. Living conditions in Russia are not good compared with Western countries. Housing provision in Russia was 21.5 sq. m per capita in 2007, 23.0 sq. m per capita in 2011. The purpose of the national project “Available and Comfortable Dwelling to Russian Citizens” was 22.5 sq. m.

The annual input of estate as a percentage to the available total housing area is the indicator of housing in the real estate market. For developed countries normal reproduction of available housing is not less than 1 sq. m per capita per year. Housing growth was caused not only growth by building, but also growth by population decrease. Since 1995 population in Russia has decreased.

Forming of social infrastructure not always assumes short-term economic effect. The capital in infrastructure companies is wrapped more slowly, and the profit can be less therefore business owners aren't interested to invest in development of infrastructure projects. And, as a rule, financing of infrastructure carries out the state at the expense of budgetary funds. Then public-private partnership is more economically effective for implementation of infrastructure projects.

The countries use social infrastructure as an anti-cyclic factor and the instrument of decreasing the sharpness of the social conflicts which are caused by modern economy, but the main thing is the social infrastructure became an object of active business and investment space for effective diffusion of innovations.

Thus, in the conditions of a modern technological stage and post-industrial society the social infrastructure creates huge investment-innovative space which promotes generation of knowledge, innovations and investments, and also improves life quality of society. The higher the
level of development of social infrastructure, the more investment and innovative activity of the economic subjects and competitiveness of the country.

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