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## **The System of Education as a Key Element of the Modern Social Infrastructure in the Region**

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*The article describes the system of education as a key element of the regional infrastructure. The condition of the educational system is a good indicator of the level of general and economic life of the population. The educational system is a part of the social infrastructure and is one of its fundamental elements, performing not only social but also economic functions.*

*Keywords: system of education, infrastructure of region, social infrastructure.*

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### **Introduction**

The viability of the social and economic environment of the region largely depends on the level of infrastructure development and reliability. Therefore, infrastructural arrangement of the region is paramount, encompassing the diversity of the parts of not only human life, but also the production and livelihood of the region as a whole. In this regard, the attention of economists to this field of the economy is due to, at least two reasons: first, its importance for the functioning of the national economy and, second, increase of its scale in the modern world.

The process of formation of the infrastructure is rather long. It is closely associated with certain resources, tightly bound to the territory and is largely dependent on the territorial organization of the production and circulation areas in each region.

The emergence of the infrastructure is the result of the development of the society productive forces, and its content is determined by domestic economic unity of its constituent sectors and specific functionality.

The infrastructure is a complex of national economy branches, providing general conditions of the economy functioning: roads, communications, transportation, education, health, etc.

Depending on the scope and industry the regional infrastructure services, its types are distinguished as follows: production infrastructure, social infrastructure, market infrastructure.

### **The main part**

Production, social and market infrastructures are essential elements of the regional economy, without which it can not function in the region.

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The production infrastructure is a combination of national economic unit, the primary purpose of which is to ensure the normal functioning of the production process. For example, transport, communications, electricity, gas and water supply, storage, etc.

The production infrastructure has the following specific features:

- income of the production sector is included in calculation of the national income;
- production infrastructure transforms the product into a new qualitative form;
- production infrastructure today has an equal value to all other sectors of the economy.

For effective functioning and development of the production infrastructure it is necessary to take into account constant changes of material and technical conditions of production and life associated with the complication of the production and expansion of the flow of scientific and technical information.

The scientific and technical progress implies three main elements of the manufacturing process: labor, money and objects of labor. The qualitative changes they are undergoing affect not only the emergence of new production methods and quality of new materials, but also the rapidly growing demands for the quality of the labor force that is the main factor in the production process.

The development of production has its own requirements to education human resources. These requirements are added depending on the technical and organizational level of production, its size and complexity, speed and nature of changes resulting from the technological progress. Changes in the technical and organizational base of material production determines the change in the composition and functions of workers until new professions, disciplines and services appear.

Modern production requires not only technical equipment of workers, but also “arming”

them with the necessary knowledge to increase the general fund of the country’s education. The concept of the “education fund” in its economic meaning is comparable to fixed assets. Just as the funds invested in manufacturing are materialized in equipment and buildings, social costs of the labor factor “materialize” in the qualification level of the total labor force, which is active in the process of production for a long time and plays as important role as investment in new equipment and other items of fixed assets.

To sell the modern industry products a sufficiently developed and prepared consumer is needed. Education is involved in the preparation of such consumers, in shaping people’s needs and, thus, makes the continuous expansion of the market possible, acts as a stimulant for the development and qualitative improvement of production.

Thus, the successful development of the production infrastructure is not possible without massive use of highly skilled labor workforce, i.e. education is a key motivating factor in the development of production. The market infrastructure is a combination of national economic units, the operation of which is aimed at ensuring market activity and development. It is represented by a set of various organizations and agencies that provide activities in different industries.

The market infrastructure consists of the following elements: trade organizations, stock trading, banking, non-bank institutions and the transportation system.

The market infrastructure is the link between production and consumption, and therefore it affects the economy to a large extent. A well-developed market infrastructure allows one to resolve a temporary shortage of goods for information, service, banking, insurance and other services, contributes to the effective investment environment and meeting the demand.

Today, elements of market infrastructure are constantly expanding the range of services. Trade organizations, banking and transportation systems have made enormous efforts to develop and introduce new technologies, especially in the field of information systems and networks. New approaches to customer service demonstrate the need to make changes in management practices and training.

These changes pose a problem to improve the quality of training the market infrastructure workers, which is one of the key elements of success in providing services. Today's realities require more skill, more professionalism and greater commercial aggressiveness. Employees must have the skill to communicate and promote ideas. Managers must be able to inspire their teams. In this regard, the issue of the staff general and special education becomes more acute.

The role of education in the development of the market infrastructure is still a priority. An example is the problem of the lack of staff in the transport sector in Russia, as well as insufficient amount of specialists able to assess the needs of the market and financial risks in banking and stock trading.

A special role in the formation and maintenance of the resources and, above all, the labor potential of the region belongs to the social infrastructure, a group of service industries and activities designed to meet the needs of the people, to guarantee the necessary level and quality of life, to ensure the reproduction of human resources, and professionally trained personnel for all areas of the national economy.

In general, the social infrastructure includes two components: social infrastructure (trade, catering, housing, utilities, household maintenance, passenger transport, communications, social security, etc.) and socio-cultural infrastructure (education, culture, art, health, environment, media, etc.).

The social infrastructure is an object of the state social policy and a part of the social sphere of the society. The solution of problems aimed at identifying the areas of the social sector development, in order to achieve the principles of the socially oriented state, is connected with redistribution of existing material and spiritual benefits by the state through the establishment of an effectively functioning system of taxes and the formation of social programs as a part of the state budget expenditures (see Table 1). (5)

Data analysis shows that over the past ten years Russia has had a positive tendency in the system of financing and managing the development of the social infrastructure. In particular, the present regulation of the social infrastructure sectors is based on the implementation of the priority national projects in the social sphere; the main ones are "Education", "Healthcare", "Affordable and Comfortable Housing – to Russian citizens".

The current economic development strategy for Russia and its regions is aimed at creating an innovative vector of development, which is primarily connected with the "knowledge economy". Therefore, priorities of the region infrastructure development change.

One of the key elements of the social infrastructure is the education system, which serves as preparation and inclusion of individuals in various spheres of the society, initiation of the society culture. It ensures successful development and implementation of education and educational needs of an individual and the society, employment, affordable housing, social, economic and demographic policy.

In the present circumstances, when the employment structure is changing, the proportion of the mental labor in the production increases, the need for unskilled labor in the society decreases, and the issue of finding additional sources of internal reserves for the country's economic growth raises acutely. One of such potentials is

Table 1. Federal expenditures on science and social needs

Industry	2007		2008		2009		2010		2010/2007
	billion rubles	% to the cost of FB bln.	billion rubles	% to the cost of FB bln.	billion rubles	% to the cost of FB bln.	billion rubles	% to the cost of FB bln.	distribution moves to the real growth of FB (with inflation) %
Housing	53,0	1	56,5	0,9	81,0	0,80	82,3	0,65	110,3
Education	277,9	5,1	309	4,7	410,4	4,04	448,5	3,54	101,5
Healthcare, Sport	206,4	3,8	218,3	3,3	349,9	3,44	365,9	2,89	109,4
Culture	67,8	1 2	82,7	1,3	114,1	1,12	114,1	0,90	82,5
Social Policy	215,6	3,9	273	4,2	310,3	3,05	338,6	2,68	162,3
Total:	820,7	15	9395	14,4	1062	14,2	1185	14,6	118,2

the level of education of the population. Research carried out by many economists allows to conclude that education generates indirect effects in the form of externalities, which may be cash or monetary value (Sinitskaya, 2004).

Non-monetary externalities can take many forms of the higher level of social tolerance and play a more active role in the process of democratization of the society, and solidarity at the national and international levels. Research results showed that “there is a clear link between higher education for citizens and their participation in the public life and socially important matters”, but social and cultural benefits of higher education help not only to improve social conditions, they also have a direct economic effect.

The study of the social role of higher education and its “contribution” to economic growth led to the conclusion that the latter is generated by “extension of the use of labor and capital resources, as well as improving their quality on the basis of progress in technology and education” (Filatkin and Botneva, 2010).

International experience shows that the pace of economic growth today is determined, to a great extent, by: the pace and scale of the development of priority directions of science and

technology, the level of training and qualification composition of employees at all levels and the degree of progressiveness of scientific and industrial work. An important area through which education impacts on economic growth is scientific research and development (R & D).

Therefore, the higher education system is training scientific staff, which is crucial for the emergence of a new generation of knowledge and innovation. Ultimately, this has an impact on the productivity growth, this relationship is widely studied and confirmed by numerous studies.

For example, the “contribution” of technological changes in the U.S. economic growth and other developed countries is estimated at 20-40% of the annual growth of the national output. This confirms that education, particularly higher education, is of great importance for the development of research and innovation, and determines the ability to master and adapt to them. Countries, which are ahead of others in terms of R & D, hold a long-term competitive advantage.

Conformity of the learning process and growth of employees qualification with modern requirements necessitates investments of the Science Foundation in the development of the

knowledge system, basic and applied research, growth and improved qualification of the research and teaching staff of educational institutions, strengthening their social protection in terms of the market formation, that is anything that allows scientific knowledge to become more accessible and helps to achieve higher efficiency of experts in the implementation of innovative projects.

In this research, scientists have come to the following conclusions:

1. The higher rate of the average number of years that citizens spend on education in the country, the more rapidly its economy grows.

2. In a country where higher education is developing at a faster rate, higher rates of economic growth are observed.

3. The importance of education as a factor of production is connected with its impact on performance.

4. Education has a positive effect on investments in physical capital, which also contributes to economic growth (Filatkin and Botneva, 2010).

### Summary

All of the above argues in favor that investing in education is a condition of development of all sectors of the economy, the increasing role of education in modernization of the economy is marked by the Government in the country's main directions of socio-economic policies:

“Modernization of the country is based on the modernization of education, its substantive and structural renewal. Russia has to choose education as a priority, as one of the “national points of growth” (1).

At the present stage of development of the state socio-economic system, one of the acute problems of the society is to improve the education system as a basic element of the infrastructure in the region, the status of which is a fairly good indicator of the overall economic and living standards.

Under the progressive development of the society requirements to the knowledge increase, the need to raise the educational level of the population expands. This is especially true for the current stage of development of productive forces, when a qualitatively new level of requirements to general and specialized training of professionals engaged in all sectors of national economy is observed. The level of education is necessary for well being of the region.

Thus, the education system is a part of the social infrastructure, but also represents one of its thematic elements carrying out not only social, but also economic functions. However, education is the backbone element of the complex infrastructure of the region that interacts with the other elements. The quality of these interactions is a key factor of the balanced socio-economic development.

### References

1. Guidelines from the socio-economic policy of the Russian Federation Government in the long term // Higher education today. 2001. № 1. – P. 5.
2. Sinifkaya. Education as a factor in the quality of the human potential of the region // Economics of Education. 2004. № 1. – P. 50.
3. Filatkin B.M., Botneva N.U. Education and its impact on economic growth // Collection of scientific articles St. Petersburg.: Institute of Business and Law, 2010. – P. 42.
4. Filatkin B.M., Botneva N.U. Education and its impact on economic growth // Collection of scientific articles St. Petersburg.: Institute of Business and Law, 2010. – P. 43.
5. Federal State Statistics Service. Statistical data base – Access mode: <http://www.gks.ru>

## **Система образования как ключевой элемент современной социальной инфраструктуры региона**

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*В статье рассмотрена система образования как основной элемент инфраструктуры региона. Состояние системы образования служит достоверным индикатором уровня общей и экономической жизни населения. Система образования является частью социальной инфраструктуры и представляет собой один из ее основообразующих элементов, выполняющих не только социальные, но и экономические функции.*

*Ключевые слова: система образования, инфраструктура региона, социальная инфраструктура.*

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