

INTELLECTUAL CAPITAL OF THE UNIVERSITY COMPLEXES

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Key words: intellectual capital, innovations, innovation management, university complexes, knowledge, social capital, innovative activity, human capital, structural capital, intellectual property.

The article illustrates the notion and structure of university's intellectual capital. The conclusion is made that the social capital should be considered as a separate element of intellectual capital, because innovation making is the process of innovation process participant's collective interests achievement.

Nowadays the most perspective way is innovation development of economical system. In today's economy to create new products and services and sell or even export them is more profitable than to imitate the existed technologies or to mine mineral raw materials. Innovational production has a high additional cost and lets an enterprise (which launches it) take a monopole place at the market.

In the past, innovation was considered as a technical phenomenon without taking into account its social nature. It is one of the reasons that humanitarian scientists pay little attention to innovational process investigations.

Innovation creation demands knowledge and experience of different sciences representatives. In modern economy, based on various sciences, knowledge base enlarges in favour of outward resources.

Innovation is corporative activity result of innovational system participants: universities, state investigation offices (laboratories), industry enterprises. From this point of view innovation is a social process of constant open dialogue during which new ideas come out. New knowledge emerges on social practice of participants cooperation in innovational system. The process of innovation making is suggested to use and enlarge participants collective intellect. It is reached in favour of synergetic effect of joining people.

Innovation is a product of scientists, entrepreneurs, customers work. It is also a result of using intellectual capital. Nowadays it is impossible to put forward alone the process of developing, launching and realization. Appearing the concept 'intellectual capital' reflects knowledge evolution. Knowledge has recently been considered as a property of a personality but currently it is an important economical resource.

D.Klein and L.Prusak define intellectual capital as intellectual material which has been formalized,

separated, improved for industry asset, which in its turn has high additional cost. It is not absolutely clear what intellectual capital is, moreover, intellectual capital is not limited by formalized forms. To author's opinion, intellectual capital is materialized and unmaterialized knowledge used for additional cost in an organization.

In the concept of innovation systems universities are defined as their key players, capable to increase business innovation activity and innovation system effectiveness in general. The main way of universities influence on innovation is formation and development of social capital.

But social capital is not underlined as an independent element of university intellectual capital. Professor N.B.Kazakova subdivides intellectual capital into human capital, structural capital, intellectual property and capital of outward ties.

Human capital of university complex is a combination of abilities, possibilities, valuable and emotional characteristics of the staff. It allows to show innovative activity for profit and additional cost.

Structural capital includes organizational structure of university complex, electronic and documentary knowledge foundations, legislative documents, by-laws, university innovation infrastructure.

Intellectual property of university complex consists of patents, licenses, author's (inventor's) certificates, programme products, scientific and study materials.

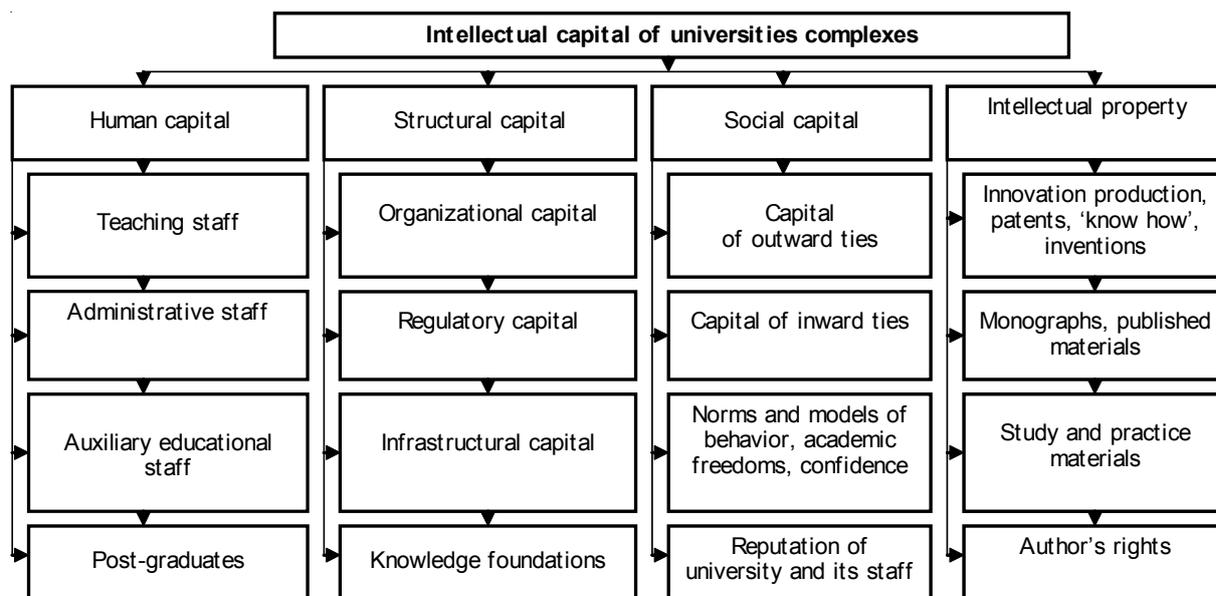
In author's opinion, social capital of university complex is a part of its intellectual capital and it is on the same level with human and structural capital, intellectual property. (see the chart).

Social capital is formed from the interpersonal relations to reach collective aims realizing group interests. The group interests are not limited by the interests of family, ethnic group, etc.

In 'economical man' model individual behaviour is always rational and is based on individual usefulness. In today's situation scientists and inno-

* Elena V. Polyakova, Candidate of Economics, Economics.

associate Professor of Samara State University of Economics.



Structure of Intellectual Capital of Universities Complexes

vators should exchange their knowledge for getting new ideas and technologies.

If the participants of innovation process follow 'economical man' model, collective aim will not be reached – innovation will not be created. Individual rationality has to give place to collective one.

Social capital of university complex is formed among people at working process, it is divided into structural and cognitive. Structural social capital of university is subdivided into outward and inward.

The most effective in innovation development interdisciplinary team activity which includes scientists in different spheres.

In university complexes there should be conveniences for creativity of representatives from different university departments, faculties, chairs, laboratories, etc. It is theory, in practice the representatives of different spheres do not communicate. Interaction takes place only with students in class. So intellectual capital of university complex is underused.

Outward social capital of university includes useful ties of university staff with other organizations representatives. It is very important when university administration interact with official state representatives, on whom university status and its financial activity depend. It happens because of absence of horizontal relations in society.

One way of enriching regional innovation system with social capital of university is cooperation of university scientists with local entrepreneurs.

The leading university scientists play an important role putting into practice science and business activity. They should have a possibility to work for industry enterprise and university.

Universities are channels of social capital and regional economy. Universities must help to contract graduates and representatives of economy real sector. According to sociological reports only 20% of graduates work by profession. Industrial practice is just formal. It is necessary to search enterprises which are interested in young specialists recruitment.

L. Myasnikov and A. Zuev suppose that confidence reflects inward organization ties and reputation expresses outward ones. To author's opinion, confidence and reputation are elements of cognitive social capital.

Cognitive social capital influences on innovation process effectiveness. Financing and realization of high-risked innovation projects demands confidence among their participants. The higher level of confidence, the more successful innovation projects will be realized.

To sum it up, intellectual capital of university complex consists of human, structural, social capitals and also intellectual property. They all together are embodied and implicit knowledge possessing synergetic effect.

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³ Kazakova N.V.. Universities and economy based on knowledge. Saratov: SSTU, 2001. P. 159.

⁴ Zuev A., Myasnikova L. Social capital and innovation activity // RISK. 2004. p. 2. P. 47-53.