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HUMAN CAPITAL MANAGEMENT IN HIGHER EDUCATION INSTITUTIONS

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Introduction. The specifics of the formation and evaluation of the effectiveness of human capital in national research universities of technical profile is aimed at creating conditions that meet the interests of the development of the innovation economy of Ukraine. Institutions of higher education, which can be classified as national research technical universities, have a significant role in the formation of human capital, the development of the national innovation system and innovation culture, thus contributing to the development of the innovation economy of Ukraine.

The research hypothesis. The human capital management of the university on the basis of application of three-level model of human capital management will provide increase of efficiency of formation of human capital by means of expansion of possibilities, increase of competitiveness and improvement of image of national research university of technical profile.

The purpose of this article is to improve the human capital management system in higher education institutions.

The methodology of the study: comparative, scenario analysis; analysis of empirical data using grouping, generalization methods.

Results. The proposed model of human capital formation in national technical universities can be used to assess the comparative efficiency of Ukrainian and foreign research universities, to determine their impact on the innovative development of the economy, the performance of an important social and economic function of human capital formation, ensuring its use in their own scientific and business activities.

Conclusions. It is proposed to improve the mechanism of human capital management on the basis of the principles of partnership, which ensure the effectiveness of higher education by increasing its capacity in the context of national research universities, it is justified to increase the profitability of research universities while reducing the amount of public funding.

Keywords: public-private partnerships; national research universities; human capital.

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УПРАВЛІННЯ ЛЮДСЬКИМ КАПІТАЛОМ В ЗАКЛАДАХ ВИЩОЇ ОСВІТИ

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Вступ. Специфіка формування і оцінка ефективності використання людського капіталу в національних дослідницьких університетах технічного профілю спрямована на створення умов, які відповідають інтересам розвитку інноваційної економіки України. Установи вищої освіти, які можна віднести до категорії національних дослідницьких технічних університетів, покликані зіграти значну роль у формуванні людського капіталу, розвитку національної інноваційної системи та інноваційної культури, тим самим сприяючи розвитку інноваційної економіки України.

Гіпотеза дослідження. Управління людським капіталом університету на основі застосування трирівневої моделі управління людським капіталом забезпечить підвищення ефективності формування людського капіталу за рахунок розширення можливостей, підвищення конкурентоспроможності та поліпшення іміджу національного дослідницького університету технічного профілю.

Метою даної статті є удосконалення системи управління людським капіталом в закладах вищої освіти.

Методи дослідження: використані порівняльний, сценарний аналіз;

аналіз емпіричних даних за допомогою методів угруповання, узагальнення.

Результати. Запропонована модель формування людського капіталу в національних технічних університетах може бути використана для оцінки порівняльної ефективності українських і зарубіжних дослідницьких університетів, для визначення їх впливу на інноваційний розвиток економіки, виконання важливої соціальної та економічної функції по формуванню людського капіталу, що забезпечує його використання при здійсненні їх власної наукової і підприємницької діяльності.

Висновки. Запропоновано вдосконалення механізму управління людським капіталом на основі принципів партнерських відносин, що забезпечують підвищення ефективності діяльності вищої школи за рахунок розширення її можливостей в умовах національних дослідницьких університетів, обґрунтовано підвищення прибутковості дослідницьких університетів при скороченні обсягів державного фінансування.

Ключові слова: державно-приватне партнерство; національні дослідницькі університети; людський капітал.

Formulation of the problem. Transition to innovative economy requires from all subjects of economic activity complex organizational and economic work on development of national economy with application of the most advanced technologies and methods, creating conditions for realization of high-tech manufactures, provided with professional personnel capable of embodiment and commercialization of innovations. Orientation on innovative principles of development of economy is an argument in favour of creation of single strategy of management of formation of human capital (physical conditions and creative abilities, scientific knowledge and specialized unique skills).

Human capital is one of the most complex objects of management in the economy; its formation occurs in different directions and goes through different stages of human life cycle. However, traditionally, the system of higher education is recognized as the main sphere of public life directly affecting the formation of human capital.

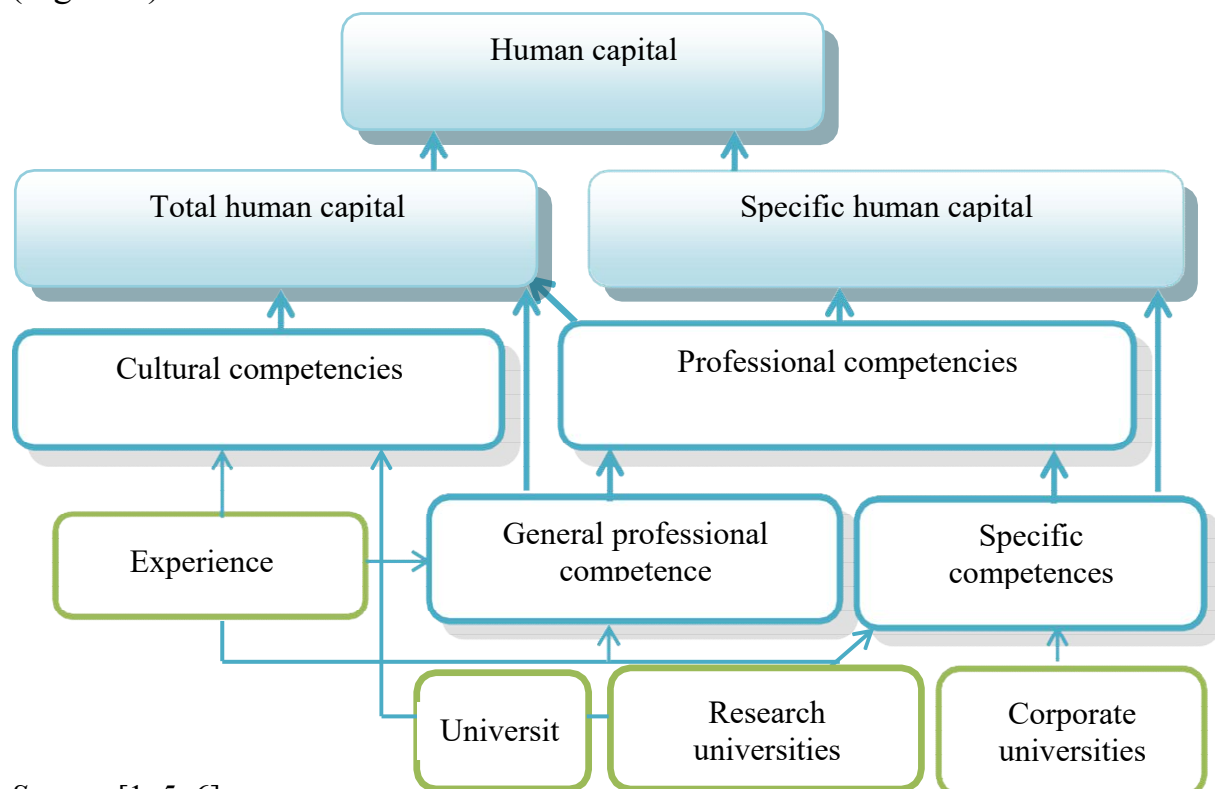
An analysis of recent research and an unresolved part of the problem. Such famous foreign scientists as G. Becker [3], E. Denison, J. Kendrick, J. Clark, D. Minzer, J. Stiglitz, L. Thoreau, J.R. Walsh, L. Hansen, B. Chiswick, T. Schultz, and others made significant contributions to the development of the theory of human capital in different periods. Among Ukrainian scientists, the most prominent representatives are: O. Giselo [1], A. Grishnova [2], T. Oksenyuk [4], O. Bilichenko [5], A. Bazilyuk [6], A. Antonov [7], V. Cherednik [8], O. Kubatko, J. Pronikova [9], V. Shcherbak [10] and others. Mainly human capital is considered as an object of investment, while insufficient attention is paid to human capital as an object of this process. Therefore, there is a need for further research into the essence of human capital and its difference from other types of capital, and for research into the efficiency of human capital development in universities.

The aim of the article is the development of theoretical and methodological provisions on the formation of the human capital management system in national technical universities for their integration into the national innovation system and the world innovation process.

Research results. In this study, human capital is considered by the author on the basis of fundamental approaches as a factor of economic development of the country and increase in public productivity, a source of increasing income of the employee and a separate economic entity. Human capital in the broad sense should be regarded as a qualitative characteristic of the used human potential, i.e. stock of physical and mental health (physical potential), professional training and other acquired abilities (acquired potential) of qualified labor resources. Namely, as a set of acquired physical conditions, creative abilities, accumulated knowledge, skills, experience and skills of people (or a person), obtained in the process of training and professional activity, which the labor resources of the country (or individual workers) possess and which make them valuable for the

economy (or economic entity). Taking into account that at the present stage of society's development the main source of human capital increase is the system of higher education, it is proposed to consider human capital, in the narrow sense, as a set of acquired knowledge, skills, and creative abilities of qualified labor resources, which are productively used by business for profit making.

In the current social and economic conditions, the opportunities to realize the potential inherent in human capital largely depend not only on the intellectual capital of the employee, but also on the availability of abilities and willingness to use it to create intellectual property objects. In this connection, an important element of human capital, capable of increasing the intellectual capital of a business entity, is organizational and entrepreneurial capital. The study of modern approaches to the formation of human capital (continuous education and competence approach) allows to determine the structure of human capital in terms of the purpose of competencies acquired in the process of training, as well as to determine the role of higher education in the process of its formation (Figure 1).



Source: [1; 5; 6].

Figure 1. Competencies that form human capital in higher vocational education

With regard to the issue of human capital formation in the higher education system, the total human capital is a set of general cultural and part of the professional competencies of the educated part of the labor force (person), acquired as a result of general professional training and experience. Specific

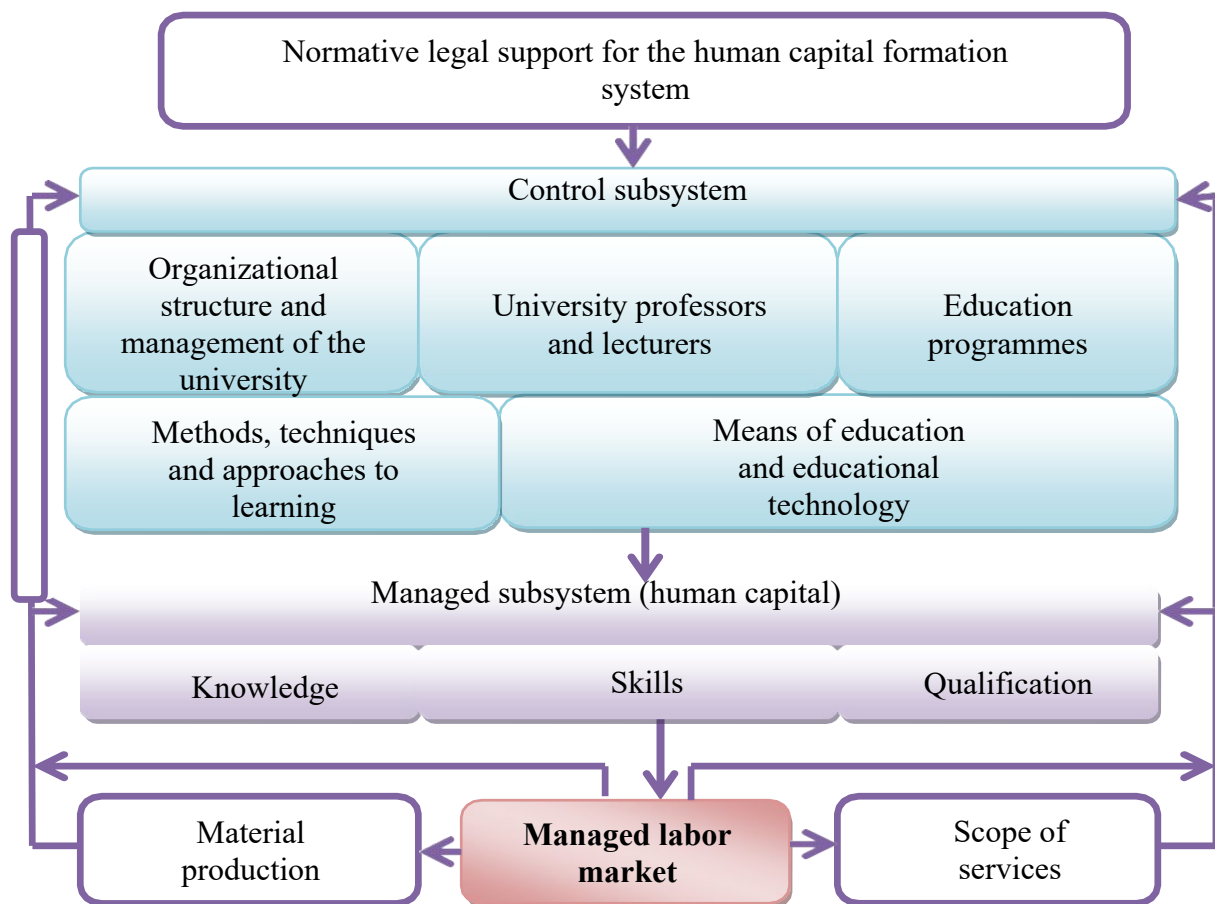
human capital, in the author's opinion, should be considered as a set of professional competencies acquired by a person and yielding the maximum result from their use not only within a single organization, but also within a certain type of professional activity, such as scientific activity.

The process of formation and accumulation of specific human capital comes to the fore and is realized mainly on the basis of world-class research universities, which actively attract business to participate in its formation and are active subjects of innovative activity. In accordance with the role assigned to research universities in the development of innovative economy, the main components of human capital formation in a research university can be identified: educational, intellectual, organizational-entrepreneurial and social capital.

In order to develop the innovation economy of Ukraine, it is necessary to close the gap that has arisen over the past two decades between higher education, science and innovation, given the significant potential contained in human capital. As a theoretical basis for improving the system of human capital formation in higher education it is proposed to use a model that includes subsystems of formation, development, accumulation and evaluation of the effectiveness of investment in human capital at different levels of the economy: 1 macro level – national, 2 meso level – regional (sectoral), 3 micro level – higher education institutions and enterprises.

In modern conditions, changes in approaches to education affect the nature and types of interaction of all elements of the human capital formation system. Principles of the organization, methods of education in higher education and, accordingly, the whole system of formation of the human capital change. At formation of the human capital in higher education institutions managing influence is carried out by management (administrative and administrative personnel) and the faculty (scientific-teaching) structure of higher education institution. The main objects of influence are the knowledge, skills and abilities of the student (Figure 2).

The management subsystem influences the managed subsystem by means of development and implementation of educational programs, application of special methods, techniques and technologies of training, as well as various forms of education (full-time, part-time and part-time (distance) education). The development of the management measures system is based on the concept of human capital formation, which determines the final requirements to the system of knowledge, skills and abilities acquired in the learning process. Together with a set of other elements of the management subsystem it is regulated on the basis of the existing regulatory framework, according to the needs of the development of tangible and intangible spheres of social production and other factors of the external environment to create a managed labor market.



Source: [2; 8; 9; 10].

Figure 2. Human capital formation management system in the university

Taking into account the global mission of national technical universities, the problem of evaluating the effectiveness of human capital formation in national technical universities is the difference in criteria and indicators (indicators) of evaluation of universities at the national and international level. On the basis of analysis and systematization of methods to assess the effectiveness of technical universities, established in the global and Ukrainian practice, the author has developed a system of criteria and indicators to assess the effectiveness of human capital formation management.

The issue of improving the quality of human capital is closely related to the ability of national technical universities to accumulate the necessary resources for its formation, as well as their ability to use these resources for their own accelerated development and increase of intellectual capital under conditions of active changes in the external and internal environment. The author identified and classified the main tools to improve the quality of human capital: changing the organizational and legal form of the university, restructuring, improving the marketing strategy and tactics of the university, improving the system of motivation for work and training, the development of entrepreneurial activity

and much more. To improve the efficiency of management of human capital formation, national technical universities need to focus on priority areas of development, as well as to bring the organizational structure of management of a classical university in line with the requirements and objectives of national technical universities.

Conclusions and suggestions. The correlation between the notions "human capital" and "intellectual capital" has been revealed, their role in increasing the competitiveness of a business entity has been schematically reflected, and the correlation between the quality of human capital formation and the stages of national economy development has been established. The competences forming general and specific human capital in the system of higher professional education, as well as the structure of human capital in research universities, have been defined. The main characteristics of national technical universities have been defined and their key goal has been to transform them into world-class research universities by actively stimulating the educational, scientific, business, innovation and marketing activities of the university. It is recommended that all the proposed mechanisms and tools be used to improve approaches to human capital management in national technical universities and to improve the efficiency of university management by using available resources, taking into account the experience of world-class research universities for the innovative development of Ukraine.

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