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**ИССЛЕДОВАНИЕ НАУЧНОЙ ДЕЯТЕЛЬНОСТИ В ВЫСШИХ УЧЕБНЫХ ЗАВЕДЕНИЯХ: ПЛАНИРОВАНИЕ, ОРГАНИЗАЦИЯ, КОНТРОЛЬ, РЕГУЛИРОВАНИЕ**

Проведен анализ особенностей осуществления научной деятельности в высших учебных заведениях Украины, которые принадлежат к сфере управления Министерства образования и науки Украины, в контексте основных функций менеджмента – планирования, организации, контроля и регулирования. Сформулированы предложения для ее усовершенствования с целью обеспечения формирования и достижения основных целей высших учебных заведений.

**Ключевые слова:** высшие учебные заведения, научная деятельность, планирование, организация, контроль, регулирование.

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**Shysholin A. FUNCTIONING OF ENTREPRENEURIAL UNIVERSITIES AS SUBJECTS OF THE SYSTEM OF INTERNATIONAL KNOWLEDGE TRANSFER**

*Проаналізовано основи підходи до поняття «підприємницький університет», надано авторське визначення даного терміну. Досліджено міжнародний трансфер знань як систему. Визначено такі його складові: трансфер технологій, експорт освітніх послуг, інноваційна діяльність. За результатами дослідження визначено роль і місце підприємницького університету як суб'єкта системи міжнародного трансферу знань.*

**Ключові слова:** підприємницький університет, міжнародний трансфер знань, ринок освітніх послуг, зовнішньоекономічна діяльність.

**1. Introduction**

In the context of the current development of higher education sphere, its «economization» and the entry into international markets of educational services, technology transfer and innovation, the problem of identifying an entrepreneurial university as a subject of the international transfer of knowledge system arises. Recently, more and more research universities shift over to the next development stage of an entrepreneurial university. That is why the leaders and managers of these universities need to be clearly oriented in the field of international transfer of knowledge as a system consisting of educational services and technology transfer. Thus, it should be carefully em-

phasized on the main statutory type of activity for each university for each student, which is the provision of educational services. In addition, the chain beginning the term of educational service and its main characteristics to the term of the market of educational services as a system of economic relations with its inherent characteristics should be retraced.

**2. The object of research and its technological audit**

In the current conditions of reforming the higher education sphere in Ukraine and the gradual transition of national universities to the absolute autonomy, including a financial

one, the usage and transfer of knowledge as a commercial product is becoming increasingly relevant. Therefore, a modern university should gradually be transformed from a non-profit state institution of higher education into a full-fledged enterprise that operates in accordance with transparent economic rules of market conduct. This way it should become a university of entrepreneurial type.

Such transformation as the change of procedure of higher education institutions funding, the need to upgrade the material and technical and laboratory base of universities, as well as the current transformational challenges for the further development of higher education, require significant financial resources that are very limited inside the state and are virtually limitless beyond its borders.

### 3. The aim and objectives of research

*The aim of research* is to study an entrepreneurial university as a subject of the system of international transfer of knowledge, its features, and key activities.

In order to achieve the aim of research – the following scientific objectives are defined:

1. To analyze the main approaches to the definition of «entrepreneurial university», its features and to offer the author's definition of an entrepreneurial university.

2. To analyze the international transfer of knowledge as a system consisting of the educational services and technology transfer.

3. To explore approaches to the term of «educational service» and its main characteristics.

4. To analyze the market of educational services as a system of economic relations with its main characteristics.

### 4. Research of existing solutions to the problem

The scientific provisions concerning the definition of an entrepreneurial university, its features, rules of conduct on the world markets for educational and scientific services, as well as innovation activities, are highlighted in numerous works of national and foreign scientists and practitioners.

Here are some definitions most closely reflecting the essence of the idea of «entrepreneurial university», according to the author of the article.

Entrepreneurial university is a university which has a close partnership with business, where employees are responsible for the availability of external sources of funding, and which has the managerial ideal of institutional management, leadership and planning [1].

Entrepreneurial university is a university based both on commercialization (traditionally or historically developed courses of further education, advisory services and expansion of activities) and customization (patents distribution, licenses sale or start-ups establishment by students) [2].

Professor O. Romanovsky, rector of the Ukrainian-American Institute of Humanities «Wisconsin International University (USA) in Ukraine» [3] summarized the existing definitions and features of the. In particular, in his opinion, entrepreneurial universities have the following characteristics:

- making profit during conducting their statutory academic activities – educational work (training of specialists of different levels with the provision of various

degrees), scientific research (search and generation of new knowledge), research and development and scientific and production activities (scientific, technical and engineering developments, creation of the latest technologies, methods and techniques), achievement of the social effect in the process of public, social and educational work;

- professional academic capitalism, being a subject of the corporate entrepreneurial culture and successful operation under the conditions of academic capitalism;
- successful commercialization of their R&D results and effective use of their main and additional resources for commercial purposes;

- successful development and implementation of innovations (innovative technologies), spinoff (spinach) enterprises and launching starter (startup) companies (thus obtaining economic effect);

- finding and using additional (diversified) sources of funding for their statutory academic activities;

- entrepreneurial vision and entrepreneurial skills (traits of character), finding and effective usage of entrepreneurial opportunities, applying their entrepreneurial techniques to their educational and research activities, and setting entrepreneurs on their main positions – senior managers (heads of directors), department heads, structural units (divisions);

- teaching students of all the categories and course participants entrepreneurship and the sciences on business organization and management, the creation of business incubators, an invitation to the teaching staff and practical guidance of leading (successful) entrepreneurs;
- close links with industry and business, active contribution to local/regional innovation and economic growth of the nation;

- its graduates are effective entrepreneurs, businessmen, etc.

One more definition which is the subject of not the smaller number of discussion is the «transfer of knowledge». The simplest definition of the transfer of knowledge is provided by Oxford University: knowledge transfer is a term used to describe a wide range of activities to support mutually beneficial cooperation between universities, business and the public sector [4]. In another view, the transfer of knowledge is the movement of knowledge from one place to another [5].

In the research of the group of Finnish authors [6], the transfer of knowledge is defined as the process by which the experience of one unit (for example, a group, department or unit) affects others (units). This definition describes the transfer of knowledge, as the creation of new knowledge in a specific context through learning the parties and emphasizes the role of knowledge sharing between the parties. The definition also includes the assumption that knowledge is dynamic, rather than static, and created and transformed in transmission from one context to another.

International transfer of knowledge is the spatiotemporal movement of technology, high-tech goods, services, migration of scientists and highly skilled professionals, as a result of which the recipient countries of knowledge gain certain benefits in order to create such world economic order, which will allow ensuring the optimal growth of the world economy, to align the significant imbalances of the innovative landscape on mega- and meta-levels [7].

From the point of view of practical implementation, the transfer of knowledge is a set of measures for organizing a comprehensive interaction between entrepreneurial universities and the external environment.

Technology transfer is a component of the knowledge transfer process that provides the transfer of new technologies from creators to users. In English literature, often the transfer of knowledge and technology transfer are interchangeable. However, these terms should be distinguished according to the context of use. At the same time, the international transfer of knowledge from the national level differs only in the location and jurisdiction of the participants in the process.

Another component of the transfer of knowledge is the provision of educational services. According to the World Trade Organization, educational services are usually defined with reference to four categories: primary education services, secondary education services; higher education services and adult education services.

Modern scientific literature is characterized by significant differences in the definition of the term «educational service». A number of domestic scientists are working on the issue.

In particular, educational service is an organized learning process for obtaining the necessary knowledge, skills, and abilities [8]. A similar view: «Educational service is a complex of educational and scientific information given to a citizen in the form of a sum of knowledge of general and special character, as well as practical skills for the subsequent application» [9].

It should be noted that on the side of the consumer – an educational service is action aimed at obtaining systematized knowledge, skills, and abilities, and on the part of the provider of this service – the opposite – an action aimed at providing (transfer or transfer) of the above knowledge, skills and abilities.

There are many approaches to determining the place where «educational services are sold» – to the market of educational services. The easiest way to determine the market for educational services is the economic relationship between the provider and consumers regarding the purchase of a product, which is an educational service. Another view is that the educational services market is a market in which the demand for educational services by the main economic entities (individuals, enterprises and purchasing organizations, the state) and the supply of it by different educational institutions interact [10].

At the same time [11, 12] define the market of educational services as a system of economic relations, which consist of subjects of the educational process on the sale and purchase of educational services, as well as to achieve a certain level of education of the individual and the nation as a whole. In addition to well-known sellers and purchasers of educational services, intermediaries are included in the market of educational services – educational funds, employment services, labor exchanges, which allow educational services to move on the market. The main features that characterize the existence of the market of educational services are [13]:

- asymmetry of information, which provides for differences in the knowledge of some participants in comparison with others;
- unequal accessibility of all market participants to the corresponding resources;

- formation of market relations in the field of education takes place on the basis of market competition for the influence of state regulation;
- autonomy of higher educational establishments in the realization of their activities, including the possibility to choose the direction of specialists training and scientific research;
- high elasticity of demand for educational services, rapid reaction of the market to changes in demand;
- the structuring of the educational services market is carried out according to the economic and territorial location, according to market and segmental features;
- individuality and non-standard of the provided services and technologies, high differentiation of the product on the same specialty;
- development of the function of education adaptation and the person to new possibilities of studying, retraining, professional development;
- changes in public opinion regarding the perception of education as the most important precondition and the basis of material well-being;
- formation of non-state education at all levels;
- the orientation of young people in prestigious professions.

A separate aspect, which should be included in the meaningful interpretation of the concept of transfer of knowledge, is also the innovation activity carried out by entrepreneurial universities. In the financial and economic dictionary, the term «innovation activity» is interpreted as an activity aimed at seeking opportunities for intensifying production and meeting the social needs of competitive goods and services through the use of scientific, technical and intellectual potential [14].

There is a definition [15] that innovation activity is a process aimed at developing and implementing the results of completed research and development or other scientific and technological advances in a new or improved product implemented on the market in a new or improved technological process used in the practical activities, as well as related additional research and development.

## **5. Methods of research**

To solve the problems, the following methods are used: analysis and synthesis, logical generalization, analogies, comparative comparison.

## **6. Research results**

Despite the large number of studies, the problem of improving the functioning of the entrepreneurial university and its role as the subject of international knowledge transfer – as a combination of exports/imports of educational services and the results of scientific, technological and innovation activities can't yet be called studied at a sufficient system level of research.

The University, as a special educational and scientific institution, carries out the following main activities: providing educational services, activities in the field of science and technology, and conducting innovation activities. It is this combination of educational and scientific services and innovation that is inherent in the entrepreneurial university.

In modern scientific thought, there is no unity in the interpretation of the notion of «entrepreneurial university».

The polarity of the content varies from the definition of the university that prepares entrepreneurs, seeks innovation in its work to the higher education provider of the services in the field of knowledge.

Thus, by combining the existing definition in the scientific thought with the current trends in the functioning of universities and market requirements, the author of the article suggests, under *the entrepreneurial university*, to understand – a higher educational institution that through a combination of fundamental and practical knowledge generates market-oriented products (educational, scientific, innovative) that can be commercialized both on the domestic and foreign markets of educational, scientific and technical services and innovations.

In the definition of the notion of «educational service», the definition of domestic scientists is similar in content and the scientific community generally agrees that educational services are a certain social product with a clearly expressed consumer value. At the same time, there are certain problems with the assessment of the economic efficiency of this kind of public goods, since on the one hand, this product is expensive, but on the other hand, it is not subject to a clear quantitative calculation.

At the same time the university, including entrepreneurial, provides educational services to four categories of customers (educational service subjects), itself, the state, employers, and the individuals. Thus, the state, in this case, serves as the customer and regulator of the educational process in general, the employer is the recipient of skilled labor, the university itself – a team of creative personalities directly involved in the educational process, and persons who acquire education.

The characteristics of educational services that are determinable for all actors are:

1) elements of the educational service specification – the status of the issued document, the name of the specialty, the term and form of training, the possible area of knowledge implementation, the scope of this knowledge, the list of studied disciplines;

2) requirements to the conditions of the educational process – staffing, teaching and methodological support, informational and library support, laboratory base, used teaching technologies, certification system;

3) characteristics that determine the quality of provided educational services – the success of people consuming educational services, their employment, the level of psychophysiological parameters of the individual after studying at the entry level.

As for universities, the internal content of foreign economic activity for these educational institutions is a set of measures for the international transfer of knowledge (export and import of educational services and results of scientific and technical activities), oriented to the world market, taking into account the forms and methods of work in foreign markets, as well as existing trends. In fact, at the university level, foreign economic activity is a sphere of economic activity connected with the international production and scientific and technical cooperation, export and import of products and services, including – education, as well as technology transfer, the expansion of international scientific and technological cooperation in this area [16].

An international knowledge transfer for the purpose of training a specialist is the main function of any university. This function should be considered as an independent di-

rection of the foreign economic activity of the University, which unites and provides professional training, research, additional education and international cooperation.

One of the important trends in development of the modern educational services market is the actual unification of the two terms «export of educational services» and «transnational education». According to international documents, «transnational education» refers to all types of higher education programs, educational program complexes, or educational services (including distance education services) in which consumers study and stay in a country different from that in which educational institutions are based.

## 7. SWOT analysis of research results

*Strengths.* The strength of research is the conducted analyze of the approaches to the definition of the terms «entrepreneurial university», «educational service» and to identify the most vivid features and characteristics of these notions, in terms of modern Ukrainian realities, that are appropriate for usage when transforming the university from research to entrepreneurial and transferring educational services to the world market.

*Weaknesses.* The weak point is that most Ukrainian universities have not yet completed the transition even to the level of a research university, and their management does not understand the potential of the entrepreneurial university in providing financial stability and higher autonomy.

*Opportunities.* Opportunities for further research are the adaptation of the experience of foreign entrepreneurial universities – leaders in the formation of market-oriented educational services to national realities and the substantiation of their relevance and economic impact on the development of the educational and scientific sector as a whole.

*Threats.* Threats to the results of research are that the market for educational, science and technology services is constantly changing, there are new types of knowledge transfer, which need to be taken into account and change the methods of analysis. Impact on the market of educational services of external factors, such as instability of the country and the deepening of the educational crisis, degradation and aging of personnel, on which the decrease or increase of indicators depends.

## 8. Conclusions

1. The main scientific approaches to the definition of the notion of «entrepreneurial university» has been made, the results of which proposed the following authors' definition: entrepreneurial university – a higher educational institution, which, through a combination of fundamental and practical knowledge, generates marketable products (educational, scientific, innovative) that can be commercialized both on the domestic and foreign markets of educational, scientific and technical services and innovations.

2. Analysis of the international knowledge transfer by entrepreneurial universities has been made and it is defined that it includes two main components that are inextricably linked: the knowledge transfer for the purpose of training or retraining of a specialist (provision of educational services) and technology transfer (introduction of innovations or commercialization of science) and is

a solid system consisting of the educational services transfer and technology transfer.

3. Study of approaches to the concept of «educational service» and its main characteristics allowed to identify its main components as proper staffing, consumer success and status of the resulting document. Accordingly, educational services are a commodity with a consumer value. At the same time it is worth taking into account the problems with the assessment of the economic efficiency of this kind of public goods, which is not subject to a clear quantitative calculation.

4. Analysis of the educational services market as a system of economic relations with its characteristic characteristics allows to conclude that in modern conditions the university is a de facto enterprise (not in the understanding of the economic and civil legislation of Ukraine, but from the point of view of the market participant), which carries out their work in accordance with market conditions. The main function of the university, of course, is the provision of educational services. Depending on the level of demand, they can be realized both in Ukraine and abroad.

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### ФУНКЦИОНИРОВАНИЕ ПРЕДПРИНИМАТЕЛЬСКИХ УНИВЕРСИТЕТОВ КАК СУБЪЕКТОВ СИСТЕМЫ МЕЖДУНАРОДНОГО ТРАНСФЕРА ЗНАНИЙ

Проанализированы основные подходы к понятию «предпринимательский университет», предоставлено авторское определение данного термина. Исследован международный трансфер знаний как система. Определены следующие его составляющие: трансфер технологий, экспорт образовательных услуг, инновационная деятельность. По результатам исследования определены роль и место предпринимательского университета как субъекта системы международного трансфера знаний.

**Ключевые слова:** предпринимательский университет, международный трансфер знаний, рынок образовательных услуг, внешнеэкономическая деятельность.

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