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## THIRD GENERATION UNIVERSITY MISSION: CHALLENGES OF MODERN SOCIETY

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**Purpose.** *This article presents the concept of third generation universities being formed in new socio-cultural and economic conditions.*

**Methodology.** *The basis of the research are methods of theoretical generalizations, methods of classification, comparative and systemic methods.*

**Results.** *The article identifies the global challenges that oppose the world's system of higher education and classical universities as its basis. The article describes the processes of transformation of a university from a classical social institution into a subject of economy that provides scientific and educational services. The main approaches to definition of the concept of the "third mission of the university" and the underlying theories of entrepreneurial university are analyzed.*

**Practical implications.** *The results of the research can be applied in the field of socio-economic forecasting in the field of higher education.*

**Keywords:** *classical university; mission of the university; third generation university; entrepreneurial university; economy of knowledge.*

## МИССИЯ УНИВЕРСИТЕТА ТРЕТЬЕГО ПОКОЛЕНИЯ: ВЫЗОВЫ СОВРЕМЕННОГО ОБЩЕСТВА

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**Цель.** *Статья посвящена рассмотрению и анализу концепции университета третьего поколения, формирующегося в новых социокультурных и экономических условиях.*

**Метод или методология проведения работы.** *Основу исследования составляют методы теоретических обобщений, приемы классификации, компаративистский и системный методы.*

**Результаты.** *Обозначены глобальные вызовы, противостоящие мировой системе высшего образования и классическому университету как ее базису. Описаны процессы трансформации университета из классического социального института в субъект экономики, занимающийся производством научно-образовательных услуг. Проанализированы основные подходы к определению понятия «третья миссия университета» и лежащие в ее основе теории предпринимательского университета.*

**Область применения результатов.** *Результаты исследования могут быть применены в сфере социально-экономического прогнозирования в области высшего образования.*

**Ключевые слова:** *классический университет; миссия университета; университет третьего поколения; предпринимательский университет; экономика знаний.*

In modern society the role of knowledge is steadily increasing: emphasis is placed on its production; it acts as an independent economic entity. More and more theoretical insights are applied in real sectors of economy, national research systems are transformed into international and transnational. This causes serious changes in the academic environment. Social institutions responsible for “production of knowledge”, namely, universities become the cementing core of society.

The new paradigm of economic development, based on knowledge and innovation, requires the entire system of higher education to be transformed in such a way that it is able to reproduce human capital with regard to technological and institutional changes [4].

Modernization of the system of higher education implies not only structural and organizational changes, but also changes in goals and values, as well as the overall mission of the university.

In this light, the issue of preserving the identity of universities becomes very relevant. Will universities preserve their classical functions, and if so, will they take their rightful place in the economic and political development of the state? To ensure its viability, a modern university should become an “effective” participant in knowledge society. It

should actively interact with various social institutions, maintain a high level of scientific research and development, and deliver finished products and services.

Today, more than ever, the global system of higher education and the classical university as its basis are facing multiple global challenges of a changing world.

The dominating role is played by an innovative type of social development that is focused on constant innovational activity that produces high-tech and sought-after products. This type of social development favours practice-oriented knowledge over abstract and fundamental knowledge. Constant variability, risk, unpredictability, uncertainty and randomness are the flip side of constant innovations. This discredits the effectiveness of methods and forms of knowledge dissemination used by classical universities [10].

The economic nature of social relations, when production and sale of knowledge become the determining factor in the reproduction of public goods, transforms higher education into capital, and expenses on it into investment in human capital.

Knowledge acts as an economic entity and has economic value. It becomes a competitive advantage and acts as a capital to be reproduced.

In these conditions a university transforms from a classical social institution into a subject of economy that provides scientific and educational services. The contractual basis of education and the use of economic criteria for assessment of university's effectiveness become distinctive markers of this transformation.

Such changes are very painful for a traditional classical university that assesses its effectivity in terms of public good and selfless service to society [9].

The place and role of the state in the system of higher education has changed. For a long time, especially in Russia, the state has been the commissioner, investor and performer of educational activity. The changes force it to reconsider the nature of its relationship with universities.

Total centralized state management proves ineffective: universities are financed unevenly, and the state is unable to upgrade and maintain

material and technical equipment of universities on a high level. This causes stagnation in small regional universities.

Higher education gradually leaves the state's control. This becomes a leading trend.

Prospects for further state participation in activity of higher education institutions are now linked to public-private partnership that creates conditions for an influx of non-state funds to universities.

For centuries, Russian universities have been state institutions, and destatization is perceived as a challenge that threatens their existence [9].

Another challenge is informatization and virtualization of social relations: social communications are gradually transferred from the real world into virtual.

Modern highly developed information technologies, actively implemented in universities, give access to numerous educational resources in the Internet.

This is an opportunity for more extensive development of the so-called delocalized distance education. The creation of virtual Global University that will be able to replace traditional classical universities becomes a defining trend in the development of higher education.

The formation of consumer society and the processes of globalization will also radically alter the fundamentals of functioning of universities. Universal education is now a means of reproduction of public goods. It is focused on training and retraining of single-subject specialists.

In these conditions, large transnational companies become full and independent subjects of education policy of the state. They establish their own corporate educational institutions and participate in creation of national educational systems.

Consumer society reduces the relationship between university and students to "producer-consumer" format. "Focused on mass consumer, consumerism leads to unjustified simplification of content of educational programs. It imposes surrogates of dubious quality in order to minimize learning efforts. It promotes the entertaining element of educational activity. It deprives education of its super value nature, reducing it to consumer goods and services" [6, p. 110]. This consumer attitude comes

into collision with academic values that are cultivated by the classical university.

In the 1990s many researchers began saying that modernization of the classical university is inevitable. A third generation university had to emerge, combining traditional functions with new ones that meet the demands of information society.

According to the established view, university history consists of three generations, which differ in their mission. The mission of the first generation universities that emerged in the European Middle Ages was education of small number of people by relaying cultural experience. The formation of the second generation of universities commenced in the beginning of the XIX century: the second mission of universities, which was combined with the first one, was production of scientific knowledge through research. The unity of educational and research missions was the most complete in the project of V. Humboldt.

Universities of both generations were a sort of ivory towers, protected from external observation and intervention. High culture, personal standards of education and inherent value of knowledge justified the self-sufficiency of their existence [1, p. 49]. The university community regarded its activity as the production of public good, without linking it directly to practical needs of society.

However, since the 1960s the inherent value of knowledge has been giving way to its social utility and social relevance. These are now becoming the defining criteria for the university's activity.

The university is being transformed into a socially engaged institution that has to react quickly and effectively to society's requests for goods it produces, which are of interest to this society.

Social engagement became the main reason of changes in the purpose of the university. The university was empowered to become a significant subject of social change and participate in the affairs of society in accordance with the specific historical principles of social order [4, p. 110]. In this case, it is the economy of knowledge where the university can interact with society only in terms of commodity-money exchange. This interaction is very diverse and as a whole constitutes the new, so-

called third mission of the university. Together with the two traditional, educational and scientific missions, it is an integral part of third generation universities.

What characterizes the development of universities in modern conditions? The university's functions now include not only production and transfer of knowledge, but also creation and implementation of innovative technologies, practice-oriented studies, application of results of scientific research, creation of "human capital" for the economy of knowledge. After all, what do "third generation university" and "third mission of the university" mean?

Many interpretations of third generation university are built on the theory of entrepreneurial university by B. Clark and the triple helix model by G. Itskovich.

The model of entrepreneurial university created by Clark [12, 13] is based on mass commercialization of knowledge. The author develops a concept of a university that is transformed into an innovative and entrepreneurial social institution while preserving classical values and functions.

Using the example of the world's leading universities, the author demonstrates how universities initiate changes in accordance with the new demands of economy and society.

According to Clark, commercialization of knowledge and the need to diversify funding sources are the main features of an entrepreneurial university. The administrators, managers and professors of such a university do not see commercialization as a direct threat to quality of university education and its academic traditions. An important factor in the process of transformation of a traditional university into entrepreneurial one is flexible style of management and active interaction with external environment.

In order to transform a classical university into an entrepreneurial one, the following elements are necessary, "stimulated heartland departments, the linking of new outreach units to the departments, the importance of certain kinds of managerial mechanisms, and the accumulation of a supporting culture" [12, p. 23].

We will describe this structure in greater detail.

The heartland departments include management, faculties and university departments. They have a difficult task: to maintain balance between traditional academic and new entrepreneurial values.

The entrepreneurial approach of the university's management gains ground among the academic staff whose professionalism and experience complement the overall strategy. Therefore, the creation of a clear vertical power structure and levers of governance among university units will ensure that the necessary balance is maintained.

In addition to management, the heartland departments also perform the important task of diversification and searching for additional sources of funding for the university. This, in turn, gives an opportunity to create additional innovative units in the university structure. These units perform more commercial functions. At that, the balance between the educational process, research and entrepreneurial activities can only be achieved if the correct administrative strategy is used [12].

Creation of new outreach units implies the organization of new contacts with various external structures. Such mutually beneficial cooperation is manifested in different forms: providing educational services to individuals and organizations; consulting; signing of contracts for scientific research; receiving various grants, including the ones with the participation of commercial and industrial enterprises; obtaining patents for intellectual property; maintaining close contacts with alumni, etc.

According to Clark, the diversified financial base of the entrepreneurial university should include government sources (funding from the state); private organized sources (funds received from private entities through commercialization of research results, contracts and patents) and charity support from professional associations, foundations and alumni donations.

Receiving sufficient funds, the university can independently determine the ways of further development, which can include attracting the best academic staff, expansion of scientific and technological base, creation of innovative infrastructure.

Adherence to the new entrepreneurial policy and acceptance of new values by academic staff (which constitutes the backbone of the univer-

sity) is a very important part of transformation of the classical university. Without the support of the academic staff that combines both traditional and new knowledge and values, the concept of an entrepreneurial university will have no sense. This academic backbone will gradually accept entrepreneurial culture of the central management core, and will prevent the university from becoming a purely economic entity. The university will retain its value and culture-forming functions.

According to Clark, properly formed entrepreneurial culture plays an important role in transformation of the university. Initially this culture emerges among individual employees of the university. Then it gradually permeates structural units and subsequently engulfs the whole institution.

Thus, the theory of entrepreneurial university by B. Clark is aimed primarily at development of the economic functions of the university, enhancement of its economic and financial capabilities, fusion with business community through joint research and development.

Another model of entrepreneurial university is created by Henry Itskovich. According to his concept, the university creates innovative products by means of active interaction with the state and business. This model is called the “triple helix” because the way of cooperation between the university, the state and business resembles the spiral structure of DNA [14].

According to the theory of Itskovich, the state and private business, on the one hand, function independently and are autonomous; on the other hand, in the new conditions of economy of knowledge their functions are largely the same. Thus, universities develop small innovation incubators within the institutional framework and therefore act as private business community. Private business, in its turn, organizes education of employees and conducts research on the basis of private or university laboratories, therefore performing the functions of the university. And the government finances new projects, acting as a business community.

The triple helix concept is based on the following key conditions:

1. Social institutions responsible for production and dissemination of knowledge in the new economy of knowledge, universities in particular, play a leading role in creation and development of innovations.



2. Transformation of a large industrial sector of economy: creation of small organizations and enterprises that are more mobile and able to respond quickly to changing conditions.
3. Transition to the model of entrepreneurial university, which would absorb both classical traditional educational values and entrepreneurial culture [13].

Despite the fact that the three elements of the helix – the state, the university and private business – cooperate closely on both the macro and micro levels, it is the university that plays the leading role and performs the generating function.

Possessing significant research potential, the entrepreneurial university is responsible for development of innovative products and their further commercialization. Also, the university can adequately assess the prospects for development of these new inventions or technologies.

Commercialization of research results and obtaining additional funding opens new opportunities for university staff, and this changes their attitude towards the results of their research. In the triple helix, the university develops a new entrepreneurial personality. Interaction of entrepreneurial universities with business community comes in different forms: providing educational services for employees, consulting, creating university business incubators, and providing high-tech equipment for research.

Thus, the academic ethos of the entrepreneurial university will combine educational, scientific and commercial functions aimed at further innovative development of society [10, p. 54].

Another important aspect of the entrepreneurial university is its openness and interaction with the external environment. Reduction of barriers between the state, the university and private business offers opportunities not only for highly specialized disciplinary studies, but also for joint projects of relevance and importance.

In an entrepreneurial university education, entrepreneurship and research, oriented toward social and innovative economic development, should complement each other.

Application and implementation of scientific commercialized products is one of the important features of an entrepreneurial university.

These organizational mechanisms are implemented in different ways around the world: patents for invention can be divided between their creator and the university; in other cases, the inventor has the exclusive rights to an invention.

A new effective form of commercialization of research results includes creation of small university enterprises and university incubators who receive all rights to inventions and are engaged in market promotion of said inventions.

Thus, the main business activities of the third generation university should be: training innovators, manufacture and transfer of innovative products to interested public entities on a fee-for-service basis, commercialization of educational products, attracting outside resources for university's development, creating objects of innovation infrastructure, formation of entrepreneurial culture of employees and students, etc.

The concept of third generation universities is the concept of scientific and educational centers open to the community and attuned to its needs. The most demanded of these centers will be those that are directly oriented on the values of economy of knowledge.

Will this concept be implemented? Is the system of higher education capable of undergoing such a large-scale transformation? Will higher education become nothing more than a market product? Are modern universities able to preserve their cultural functions? Will they preserve their role of the social institution that is responsible for the existence of creative and intellectual people? Perhaps, only time will tell.

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