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## METHODOLOGICAL BASIS OF CONSTRUCTION OF THE SYSTEM OF MONITORING AND STRATIFICATION OF UNIVERSITIES

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**Abstract:** The role of monitoring in the formation of information-analytical and methodological base of research of the market of educational services is shown. A methodical approach to building a system of monitoring and stratification of universities (SMSU) is proposed. The first stage of construction of the SMSU is considered, namely the methodological basis in the form of hypotheses, provisions, principles of functioning of the monitoring system.

**Keywords:** monitoring system, university stratification, higher education institution, hypothesis, monitoring principles

Reforming the education system in general and higher vocational education, in particular, involves constant monitoring of the results of the evaluation of the positions of the country's higher education system and higher education institutions (HEI) in the national and global markets for educational services. This monitoring is especially important in the context of globalization of socio-economic processes, which allows not only to diagnose the demand for national HEI in the market of educational services, but also to assess the level of competitiveness of higher education and free economic education in the international market.

The monitoring system is the most effective information management system

and making informed decisions based on it in the information economy, when the effectiveness of management of any process depends on reliable, reliable, systematic and timely information about the state of the process, its dynamics, objective analysis of such information and forecasting further development.

The methodology of creating a monitoring system in any field of activity, including education, as an important functional subsystem of the HEI management process, should be based on its comprehensive definition, forming the place of the monitoring system in solving problems of competitiveness and innovation of national HEI, principles of creation and functioning of the monitoring system.

In the context of this problem, it is necessary to build an effective system of monitoring and stratification of universities (SMSU), the results of which are aimed at full disclosure of innovative potential of national HEI, formation or strengthening of their entrepreneurial, autonomous activities in the current stage of global higher education.

Based on the results of modern developments [1-11], this study proposes a methodological approach to building a system of monitoring and stratification of HEI of Ukraine according to the degree of their innovative activity, which consists of the following stages:

Stage 1. Formation of the methodological basis for the construction of the monitoring system, namely, the development of hypotheses, provisions, principles of the system.

Stage 2. Designing the structure of the monitoring and stratification system of the HEI of Ukraine.

Stage 3. Development of a sound indicator system for assessing the position of the higher education system of Ukraine and assessing the innovative activity of individual national HEI.

Stage 4. Calculating the innovative activity of HEI: clustering of HEI according to the level of innovative activity.

Stage 5. Interpretation of the obtained results.

Regarding the topic of this study, we will consider in more detail the first stage

of the methodological approach.

The construction of the system of monitoring and stratification of universities (SMSU) should be based on the following proposed system of hypotheses:

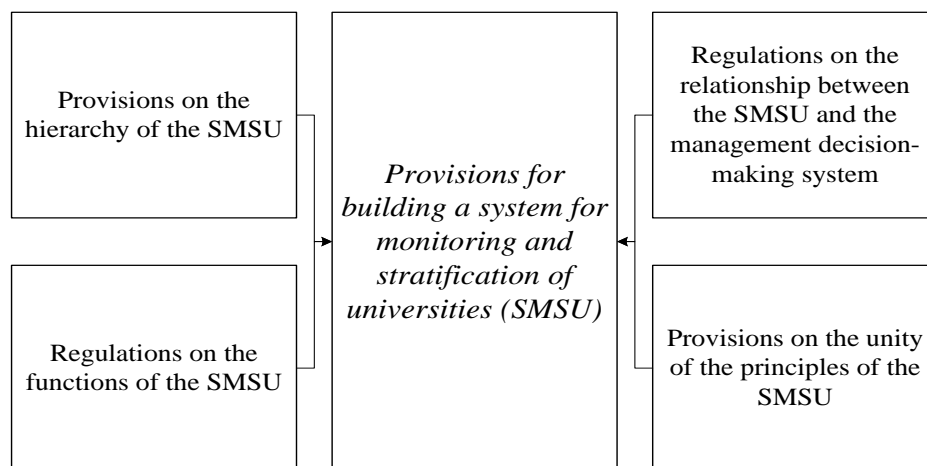
Hypothesis 1. Globalization processes in the market of educational services form a single educational space in which the interaction of national higher education systems is observed.

Hypothesis 2. Current trends in the transformation of a traditional university into a business-type university necessitate a revision of the system of indicators for assessing the innovative activity of HEI.

Hypothesis 3. An effective monitoring system should form the basis for management decisions on the development of an innovative university, including indicators of a complex external environment.

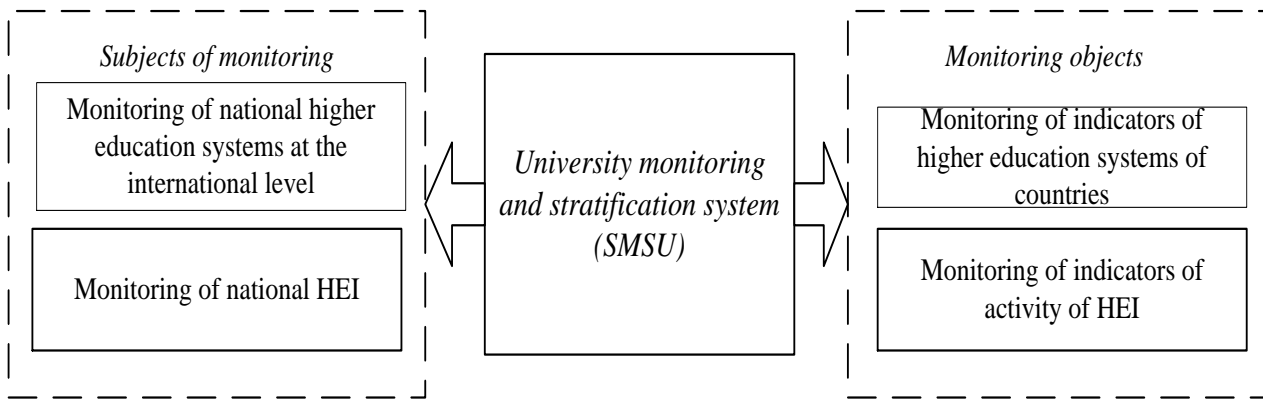
Hypothesis 4. Determination of innovation activity of national universities should be carried out on the basis of using the system of ratings of HEI.

To build an effective system of monitoring and stratification of universities (SMSU) in the study proposed a number of provisions, which are shown in Fig. 1.



**Fig. 1. Provisions for the development of a monitoring and stratification system of universities**

Regulation 1. Any monitoring system has a hierarchical two-level structure, which is determined by two directions: the direction associated with the objects of monitoring and the direction associated with the subjects of monitoring (Fig. 2).



**Fig. 2. Hierarchical structure of SMSU**

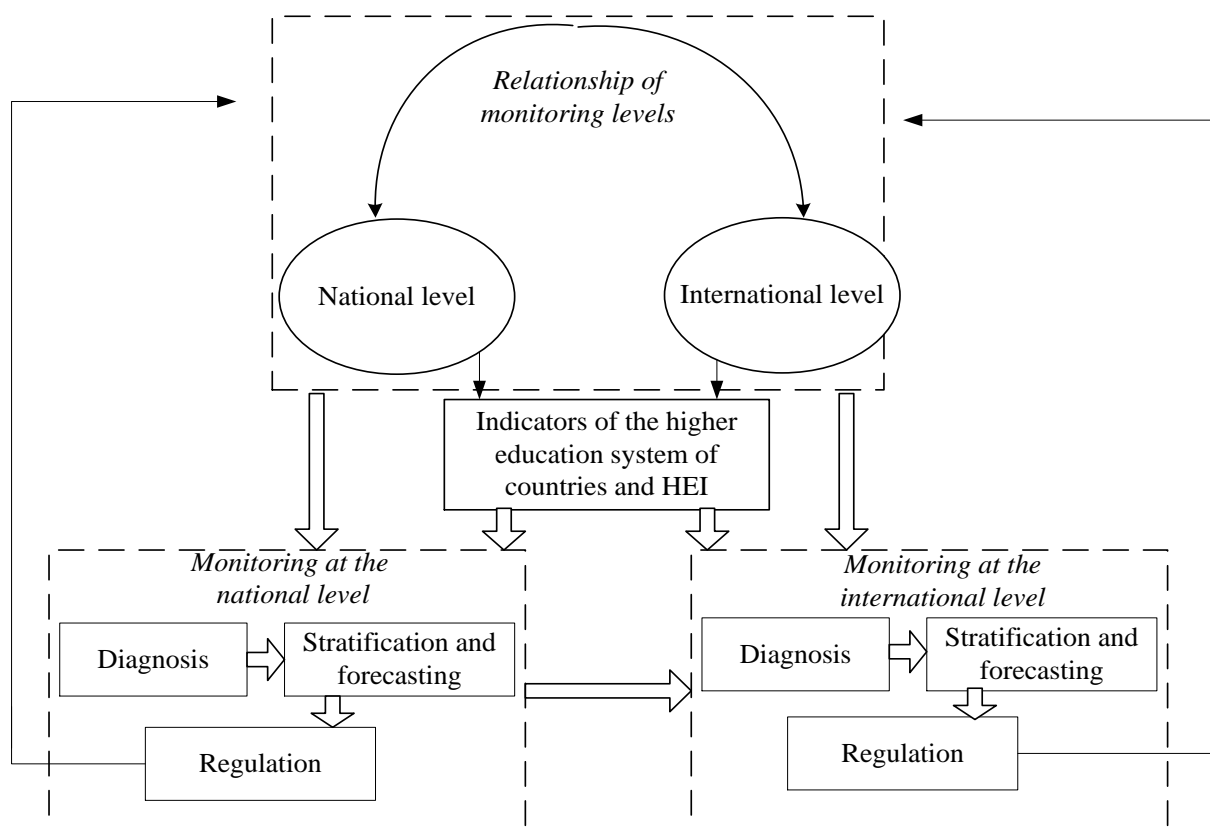
It is proposed to monitor and stratify the HEI of Ukraine in two areas:

1. Monitoring of the external, world environment. To assess and analyze the level of innovation of national universities, it is necessary to diagnose the prerequisites for the development and functioning of HEI, which have developed in the higher education system of the country on the basis of international rankings. To this end, it is proposed to carry out a spatial and dynamic analysis of higher education systems in Europe and positioning the higher education system of Ukraine among them.

2. Monitoring of the external, national environment. The analysis and stratification of national HEI is proposed to be carried out on the basis of partial indicators of national rating indicators that reflect educational, scientific and technical, innovative and international activities.

This approach to building a system of SMSU allows to obtain a systematic, new knowledge about the level of innovation activity of the university on the basis of a combination of efforts of the state and a specific HEI.

The general connection of subjects and objects of monitoring and stratification of universities at the national and international levels is presented in fig. 3.



**Fig. 3. The relationship of subjects and objects in the SMSU at the national and international levels**

Regulation 2. Monitoring is considered in two senses, in the narrow sense - it is one of the management functions, in a broad sense, monitoring acts as an aggregate management function, which combines such functions as diagnostics, planning, forecasting and regulation. In the conditions of constantly changing external environment for increase of adaptation of SMSU to external influences it is expedient to consider monitoring not only as separate system, but also as the system which is directly connected with system of decision-making in HEI. That is, it should be implemented in the general management of the innovation-active university (IAU) and integrated into the corporate research and education system of the HEI.

Regulation 3. Defining the two-level structure of the monitoring system (national and international level) allows to determine the specifics of standard management functions for each of the monitoring systems.

The following functions are distinguished in the general monitoring system:

assessment, analysis, planning and forecasting, regulation.

The evaluation function allows on the basis of monitoring to carry out a reasonable and adequate assessment of the national and world educational environment, where the factors that determine the creation of innovative universities are formed.

The analysis function allows to identify trends and features of national and international higher education systems and HEI, to conduct a dynamic and comparative analysis of research indicators, to cluster countries and national HEI by indicators that form an innovative component of university development and increase their attractiveness in national and global educational services markets.

The function of planning and forecasting is to build forecasts and scenarios for the development of the national system of higher education in accordance with the principles of innovation-active universities.

The regulatory function is to develop effective actions to increase the innovation component in the activities of HEI by effectively managing their activities.

In addition to these functions, it should be noted that monitoring itself is a function of supporting management decisions and is an instrumental support mechanism for creating an IAU business type.

Regulation 4. The construction of the monitoring system is carried out according to the following general principles: target orientation and specificity; objectivity of monitoring data; continuity of monitoring; minimization of monitoring costs; targeting a specific object area; controllability of the monitoring system; ensuring the completeness and timeliness of information; clarity of information presentation; minimization of the risk of data error (reliability); maximum satisfaction of consumer information requests; maintenance of monitoring and control system.

The study allows us to formulate specific principles for the formation of the SMSU, which include:

openness - information obtained during the operation of the SMSU should be

open not only to system participants, but also to interested users - stakeholders. The results of these studies and observations in one form or another should be available to anyone wishing to obtain this information, with different user groups having different access rights to it, and therefore the form of presentation of information and the degree of detail should also vary;

purposefulness - provides for the orientation of the SMSU on the creation and development of information and analytical support for the management decision-making process for the formation of an innovative university;

continuity - provides for the organization of the SMSU, in which information about the state of the integrated system or its elements is constant, not interrupted in time, which allows you to track changes in the system and respond adequately to them;

reliability - following this principle is designed to ensure the «tuning» of the SMSU to collect statistically significant data that allow you to adequately assess the conditions, processes and results studied;

reliability - refers to both the initial information and the results of monitoring. The implementation of this principle is designed to ensure the confidence of consumers of the «product» of monitoring to the sources of information, methods of obtaining, processing, analysis;

efficiency - the proposed SMSU should promote the reasonable formation of factors that determine the creation of innovative universities;

structure - is to ensure the relationship of information on a system of indicators with the subjects of institutional support for the formation of innovative universities.

So, on the basis of the given principles of formation of SMSU we have that:

1) SMSU must fit organically into the corporate scientific and educational system of the university, the system of information support, control and regulation of the higher education system in Ukraine, contain the information necessary for public administration, reflecting the specifics of higher education system at both national and international level;

2) SMSU should contain meaningful information about the system of goals in

the formation of innovation-active universities, factors, indicators and indicators of development of innovation-active universities;

3) the basis for the formation of a system of goals and indicators that characterize them are legislation, regulations, programs of public administration in the field of higher education, as well as indicators of world and European organizations for the development of education and society;

4) aggregate indicators characterizing the level of development of universities should be clear, easy to interpret, available for analysis and use in management practice.

Therefore, based on current trends in the market of educational services at the international and national levels, for constant control and management of the educational process it is necessary to create a monitoring system based on which to diagnose the demand for HEI and their competitiveness in educational markets. To solve this problem, a methodological approach to the formation of a system of monitoring and stratification of universities (SMSU) is proposed, which aims to fully disclose the innovative potential of national HEI, formation or strengthening of entrepreneurial, autonomous and active activities in the current challenges of the world higher education system.

## REFERENCES

1. Галицин В.К. Системи моніторингу. Київ: КНЕУ, 2000. – 232 с.
2. Галицин В. К., Суслов О. П., Самченко Н. К. Концептуальні засади моніторингу // Бізнес Інформ, 2013. – №9. – С. 330-335.
3. Гринькевич О. С. Управління конкурентоспроможністю вищої освіти в Україні: інституційний аналіз і моніторинг. Львів: ЛНУ імені Івана Франка, 2018. URL: [https://www.lnu.edu.ua/wp-content/uploads/2018/08/dis\\_hrynkevych.pdf](https://www.lnu.edu.ua/wp-content/uploads/2018/08/dis_hrynkevych.pdf)
4. Доброскок І. Моніторинг якості вищої освіти: дефінітивний аналіз // Гуманітарний вісник ДВНЗ «Переяслав-Хмельницький державний педагогічний університет імені Григорія Сковороди»: наук.-теор. зб., 2008. – №16. – С. 50-57.

5. Концептуально-методичне та модельне забезпечення механізму управління державним замовленням у межах ВНЗ : монографія / За ред. В. С. Пономаренка, О. В. Раєвнєвої, В. Є. Єрмаченка. Харків : ФОРМ ЛІБуркіна Л.М., 2017. – 444 с.

6. Концептуально-методологічні основи проектування методів і засобів діагностики освітніх результатів у вищих навчальних закладах: монографія / За заг. ред. В. І. Лугового, О. Г. Ярошенко. Київ : «Педагогічна думка», 2014. – 234 с.

7. Моніторинг об'єктів в умовах апріорної невизначеності джерел інформації: монографія / Ю. Я. Бобало, Ю. Г. Даник, Л. О. Комарова, О. О. Лук'янов, В. М. Максимович, О. О. Писарчук, В. В. Ріппенбейн, Р. Т. Смуk, В. С. Стогній, Ю. Б. Сторонський, Б. М. Стрихалюк. Львів, 2015. – 360 с.

8. Регулювання потреби у фахівцях з вищою освітою для національної економіки: методологічне та інформаційно-модельне забезпечення / За ред. В. С. Пономаренка, О. В. Раєвнєвої. Харків : ФОРМ Александрова К.М., 2015. – 504 с.

9. Системи фінансового моніторингу. Методологія проектування: Монографія/ за ред.. О.В. Мозенкова. Х.: ВД «ІНЖЕК», 2005. – 152 с.

10. Шиндеровская И.Ю. Концептуальный подход к определению понятия «региональный социально-экономический мониторинг» // Вісник Хмельницького національного університету, 2009. – №3. – Т.1. – С. 194 – 198.

11. Шишкин А. Сущность, задачи и принципы мониторинга социально-экономических процессов в регионе // Экономика Северо-Запада: проблемы и перспективы развития, 2004. – №1(19). – С.16-30.