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METHODOLOGY AND TOOLS FOR IMPROVING THE QUALITY OF HIGHER EDUCATION SERVICES

Modern universities are open-ended organizational systems. They play a huge role in the life of society in terms of concepts such as efficiency, productivity, economic efficiency and the need for organized management decisions based on modern management and marketing methods.

It is expedient to use complex indicators of efficiency and competitiveness of Higher Education Institutions (HEI's) in determining the effectiveness of innovative processes of reforming the Higher Education System (HES). This approach intended is to improve the motivation of HEI's in raising the prestige and attractiveness of Ukrainian students in national universities, motivate graduates of schools to enter HEI's in our country and increase the competitiveness of the Ukrainian HES in the global knowledge and labor market.

The best way to effectively overcome the crisis phenomena of the HES in Ukraine is to study and apply in practice the proven methodological foundations and tools for increasing the efficiency of HEI's functioning on the basis of measuring the Academic Value Added (AVA) or value added of the university.

In the United States, since 1998, the American Research Center (RAND Corporation) and the Graduate School of Business and Public Policy have worked together to develop a common methodology for measuring the AVA of HES with an assessment of the indicators of its model for thirty state universities in Texas [1].

This methodology emphasizes the importance of choosing measures to increase the academic value of HEI's, both for public reporting and stimulating the behavior of their governing bodies in order to increase the efficiency of functioning and ensure the possibility of financial support from the state. Researchers are following the contingent of students at state-run educational institutions since the application for entry to the moment of integration of specialists into the labor market. At the same time, scientists combine information from various administrative sources. The main indicators are the persistence and success of training, the timeliness and qualitative indicators of the institution's completion, the prestige of the received professional position and the level of wages.

The authors of the work [2] cite a quote from the "A Test of Leadership," the 2006 Report of the Spellings Commission on Higher Education: "Student achievement, which is inextricably connected to institutional success, must be measured by institutions on a 'value-added' basis that takes into account students' academic baseline when assessing their results. This information should be made available to students, and

reported publicly in aggregate form to provide consumers and policymakers an accessible, understandable way to measure the relative effectiveness of different colleges and universities.”

Be should note, that not only in the US but also in many countries of the world there is a steady tendency towards radical changes in the system of higher education based on the introduction of the methodology, models, methods and algorithms for measuring and evaluating AVA. The most implemented and interesting, from a practical point of view, are the following approaches:

1. Using standardized test results for cognitive skills for individual student groups (USA).

2. Assessment of the degree of AVA based on the difference between successful graduates and students who for various reasons did not graduate from HEI's (UK).

3. A direct link between added AVA and graduate wage levels (USA, Canada).

4. Methodology based on the control of the difference between government orders and the actual set of students of HEI's on a free and paid basis (USA, UK).

5. Identification of factors of regional components for the formation of the potential of AVA in the HES in the conditions of transformation of the education economy, both by reducing the contingent of students, and due to insufficient financial support to cover the necessary expenditures in the field of educational services (Russia).

6. Use of natural experiments that provide locally exogenous (dependent on the influence of external factors) rules for selecting students in college and university contrary to the results of state standardized tests (SAT Reasoning Test or AST, USA) with further research and assessment of AVA.

Any methodology and tools for determining AVA should ensure the interests and benefits of the following participants in the open educational environment:

- to students;
- to university institutions and their management and teaching staff;
- to external consumers: family, state and society;
- external and internal Stakeholders, individuals and legal entities that have a legitimate interest in the activities of HEI's, that is, to a degree dependent on it or may affect its activities (interest groups or groups of influence).

The main consumers of educational services are students of HEI's. Competitive, profitable HEI's should create a wide range of benefits for their students. First, universities called are upon to increase the individual value of learning for students, that is to provide knowledge, skills and competences that increase the economic productivity of students and, consequently, their wages. Finally, HEI's should contribute to the positive externalities that society and the state as a whole acquire. Such positive effects should be profitable and beneficial for students throughout their lives.

With all these factors taken into account, a full assessment of institutional efficiency and AVA probably requires a wide range of indicators, and this set of indicators is necessarily limited to the availability of experimental data from studies. The most developed methods should be to evaluate the AVA at the level of potential

results and future professional success of students [3]. Each of these methods has its advantages and disadvantages in terms of complexity, accuracy of evaluation and availability in shared administrative databases.

That the definition and assessment of is complex, multi-parameter and not trivial task. The complexity of the solution to this problem is due to latent quality indicators and classification characteristics of participants in the educational process.

The authors of the scientific paper [2] propose to measure the effectiveness of training students of a particular higher education institution on the basis of regression analysis models that are actively used by scientists in the tasks of recognition and identification of objects of different types and origin. According to this method, the academic added value of Y_i varies at the student level and is regressed by the set of indicators $\{E_1, E_2, \dots, E_n\}$ when entering the higher educational establishment $\{1, 2, \dots, n\}$:

$$Y_i = \beta_0 + \beta_1 E_1 + \beta_2 E_2 + \dots + \beta_n E_n + \varepsilon_i; \quad (1)$$

where β_0 —a constant component of regression as the average result for students studying in a HEI with an indicator number i ; $\{\beta_1, \beta_2, \dots, \beta_n\}$ — average results for students studying at universities $\{1, 2, \dots, n\}$; ε_i — the error, which records the deviation of individual student outcomes from the average educational institution outcomes. We can assume that all other non-accounted (latent) variables that determine the result of a student with an index i (Y_i) are included in the error value.

Based on the use of linear regression models and selected control variables of the effectiveness of HEI's, their entrants, students and graduates, it is possible to construct effective tools for determining AVA. This methodology for diagnosing the quality of educational services should be tested in practice, taking into account the critical views on this issue by the state, society and collectives of HEI's.

Such models can be adapted to the conditions of Ukrainian society and the modern market of educational services. The possibility of such an adaptation is supported by the presence in Ukraine of standardized state testing tools in the structure of the secondary education system (external independent poll), as well as administrative sources of information on the number of university applicants and students in HEI's, their current and final success and their further employment.

References

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COOPERATION BETWEEN UKRAINIAN BUSINESS AND RESIDENTS OF THE FEZ GRODNOINVEST: ANALYSIS, PROSPECTS AND PROPOSALS

Free economic zone Grodnoinvest is a unique investment platform in the Republic of Belarus, located directly on the border of the European Union and the Eurasian Economic Union.

FEZ Grodnoinvest residents are leading companies with capital from 41 country in woodworking and furniture production spheres, mechanical engineering and metalworking, food and light industry, agriculture and logistics, which have invested over \$ 1.4 billion. Currently, 75 enterprises with 18 thousand employees operate in FEZ. Their produce is sold in 81 country.

Three companies with investments or partners from Ukraine are implementing their projects within FEZ Grodnoinvest. Among them:

1. TechnoChemReagent-Bel Ltd. - a manufacturer of reagents and water treatment and wastewater treatment technologies, registered as a FEZ Grodnoinvest resident in 2011.

2. Belagrofert Ltd. (chemical industry) - a manufacturer of granulated ammonium sulphate, registered as FEZ Grodnoinvest resident in 2016.

3. Conte Spa JLtd. - a manufacturer of clothes, underwear, hosiery, registered as a FEZ Grodnoinvest resident in 2008.

The total investment volume of three FEZ residents over the period of their activity in FEZ Grodnoinvest exceeded \$ 300 million. Foreign direct investment from Ukraine was attracted in the amount of \$ 1.9 million, 68% of which - in 2018.

Lately we observe Ukraine's growing influence in the development of free economic zone. Let's have a look at the dynamics of export, import and turnover between the residents of FEZ Grodnoinvest and Ukraine from 2014 to 2018.

For an objective assessment and leveling of the price factor, we take as a basis the share of Ukraine in the general indicators of FEZ, and not physical quantities. The period from 2014 was taken to assess the impact of the implementation of projects with Ukrainian capital on business relations between the two parties - in 2015, the project of TechnoChimReagent-Bel Ltd. was launched, in 2017 – Belagrofert Ltd.