

СЕКЦІЯ 2. МОДЕЛЮВАННЯ ТА АНАЛІЗ ДАНИХ В ЕКОНОМІЦІ

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COMPREHENSIVE ASSESSMENT OF THE QUALITY LEVEL OF EDUCATIONAL SERVICES PROVIDED IN THE REGIONS OF UKRAINE

A comprehensive statistical analysis of the educational services market in Ukraine involves the use of statistical methods at the regional level, in particular the identification of groups of regions with similar characteristics and their rating assessment according to the quality level of educational services provided.

Research Objective. From the standpoint of a statistical approach, to determine the quality level of educational services provided in homogeneous regional zones and their place-rating regarding the development of the education market, using the cluster method and rating assessment.

Main Content of the Research. There are many different methods of cluster analysis that can be classified according to various criteria. In this study, the clustering of regions based on key indicators of the educational services market was carried out using Ward's method. To determine the similarity between the objects-regions, Chebyshev metrics were used. The identification of regional zones based on the main indicators of the educational services market was carried out on the basis of 27 indicators using cluster analysis.

The obtained results showed that two clusters were identified in Ukraine: A and B. Each of the clusters is further divided into two sub-clusters: A (A.1 and A.2) and B (B.1 and B.2).

Cluster A includes 15 regions of Ukraine, which are characterized by lower indicators of educational sphere development compared to Cluster B. Sub-cluster A.1 includes regions where active hostilities are taking place, which negatively affects educational institutions and the learning process. A catastrophic situation is observed in Donetsk and Luhansk regions, a significant part of whose territory is occupied, and the infrastructure has suffered significant destruction.

Cluster B is characterized by more favorable conditions for the functioning and development of education and includes 10 regions of Ukraine. Sub-cluster B.1 includes Dnipropetrovsk region and the city of Kyiv, which are characterized by the most favorable conditions for the development of education. The capital of Ukraine and one of the most developed industrial regions of the country have a well-developed education system and are characterized by rather modern infrastructure, which contributes to the high-quality training of students at various educational levels. Evidence of significant educational development is the leading position of Kyiv in the number of higher education institutions — 83 institutions, which constitutes 26.4% of the total number of HEIs in Ukraine.

Sub-cluster B.2 unites 8 regions of Ukraine that have fairly developed systems of educational institutions in accordance with the existing economic potential and the sex-age structure of the population. It is worth paying attention to Kharkiv region, which, despite constant shelling and the

occupation of northern districts, has not lost its educational potential and enables students to receive knowledge at a decent level.

Along with cluster analysis, an important stage of the comprehensive study is the rating assessment of economic regions according to the state and development of the educational services market. Determining a region's place included calculating an integral assessment based on the proposed system of educational services market indicators (stimulators and destimulators). The rating assessment was calculated based on standardized statistical indicators. To determine the integral assessment, the educational services market indicators were standardized based on the principle that all individual values of the attribute in the population were correlated with the best values (increased if the attribute is "direct" and decreased if the attribute is "reverse"). The calculations performed made it possible to obtain rating assessments and ranks of regions according to the main indicators of the educational services market in 2025.

In nine regions of Ukraine in 2025, the value of the integral assessment is above the national average level. The leading positions of 8 regions and the city of Kyiv in the educational services market are explained by a complex of socio-economic factors and the demographic situation. The presence of developed infrastructure and a higher level of security in wartime conditions stimulates the population to concentrate in these regions. A significant number of applicants from the eastern regions decided to enter higher education institutions in Kyiv and safer regions of Ukraine, which occupy high positions according to the integral assessment in the field of education.

In 15 regions in 2025, the value of the integral assessment is below the average level in Ukraine, meaning that the development of the educational sphere in these regions is at a lower level compared to the national average. Luhansk region lags significantly behind the outsiders of the educational services market — Donetsk and Mykolaiv regions. Significant improvement in the situation is possible only in the post-war recovery period through the construction of new infrastructure, including for educational institutions, and the return of internally displaced persons.

Conclusions. Using the system of statistical indicators of the educational services market, a cluster analysis was carried out, which made it possible to identify homogeneous territorial zones (regions) of the country with similar characteristics and levels of quality of educational services provided. Along with cluster analysis, a rating assessment of economic regions was conducted based on the main indicators of the educational services market. To assess the level of disproportions in regional development according to integral rating assessments, the differences in the values of the calculated indicator were analyzed.

The obtained results have important practical significance not only for understanding the mechanisms of the functioning of the educational services market in crisis conditions, but also for developing effective management strategies and adapting the educational sector to new challenges caused by the war and its consequences in the country. The statistical approach used in the study of the educational services market contributed to the substantiation of theoretical and methodological foundations and the corresponding tools for the comprehensive assessment of the educational services market at both the national and regional levels.

References

1. Official website of the Ministry of Education and Science of Ukraine. Retrieved from: <http://www.mon.gov.ua>
2. Ukraine-2030. Strategy for Changing the Future. National Institute for Strategic Studies. Retrieved from: <https://niss.gov.ua/sites/default/files/2020-12/ukraine-2030-1.pdf>
3. State Service for Education Quality of Ukraine (SSEQU). Institutional Audit. Retrieved from: <https://sqe.gov.ua/diyalnist/instituciyniy-audit/>
4. Skydan, M. I. (2024). Improving the quality of educational services as the main strategic direction of development of higher and professional pre-higher education. *Economy and Society*, (59).