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STRATEGIC ASSESSMENT OF GENDER EQUALITY ACHIEVEMENT IN UKRAINIAN HEIs: DEVELOPMENT TRAJECTORIES AND SUSTAINABILITY

Abstract. *The study evaluates the sustainability and development trajectories of gender equality achievement in Ukrainian higher education institutions based on THE Impact Rankings SDG 5 results for 2019–2025. The research is grounded on structural, level, and dynamic analysis of Ukrainian universities participating in the ranking. To ensure data comparability, rating intervals were converted to numerical values using their midpoint. A panel sample of 13 universities with at least four years of participation was formed. The study identifies progressive, stable, regressive, and turbulent trajectories of gender equality achievement. To assess sustainability, the coefficient of variation was used, and a positioning matrix was developed based on the average SDG 5 score and the median coefficient of variation. The findings reveal significant differences in universities' ability to achieve and maintain gender equality outcomes over time. Four groups of institutions were identified: leaders, unstable leaders, stable outsiders, and turbulent universities. The proposed approach expands the analytical capacity to assess SDG 5 achievement and supports evidence-based strategic management of gender equality in higher education.*

Keywords: *gender equality, higher education institutions, sustainable development goals, SDG 5, THE Impact Rankings, gender policy, sustainability assessment, development trajectories, coefficient of variation, strategic management.*

СТРАТЕГІЧНЕ ОЦІНЮВАННЯ ДОСЯГНЕННЯ ГЕНДЕРНОЇ РІВНОСТІ ЗВО УКРАЇНИ: ТРАЄКТОРІЇ ТА СТІЙКІСТЬ РОЗВИТКУ

Анотація. *Досягнення гендерної рівності є одним із пріоритетних напрямів реалізації Цілей сталого розвитку та важливим чинником підвищення ефективності функціонування закладів вищої освіти. Метою статті є оцінювання стійкості та траєкторій досягнення гендерної рівності закладами вищої освіти України на основі результатів міжнародного рейтингу THE Impact Rankings SDG 5 за 2019–2025 роки. Інформаційну базу дослідження становлять результати українських університетів, представлених у рейтингу за Ціллю сталого розвитку 5 «Гендерна рівність». Для досягнення*



поставленої мети використано структурний, рівневий та динамічний аналіз. З метою забезпечення порівнянності даних рейтингові інтервали було перетворено на умовні числові значення шляхом визначення середини відповідного інтервалу оцінювання. Досліджено динаміку участі українських закладів вищої освіти у THE Impact Rankings SDG 5 та встановлено, що кількість університетів, представлених у рейтингу, зростає з 4 у 2019 році до 40 у 2025 році. Для оцінювання довгострокових тенденцій сформовано панельну вибірку з 13 університетів, які були представлені у рейтингу не менше чотирьох років. На основі середніх значень показника SDG 5, коефіцієнтів варіації та зміни результатів у часі визначено основні типи траєкторій досягнення гендерної рівності: прогресуючу, стабільну, регресуючу та турбулентну. Для оцінювання стійкості результатів використано коефіцієнт варіації, що дозволило врахувати не лише рівень досягнутих результатів, а й стабільність їх збереження у довгостроковій перспективі. Запропоновано матрицю позиціонування закладів вищої освіти за рівнем результативності та стійкості досягнення гендерної рівності, побудовану на основі середнього значення показника SDG 5 та медіанного значення коефіцієнта варіації. У результаті дослідження виокремлено чотири групи університетів: лідери, нестійкі лідери, стабільні аутсайтери та турбулентні заклади вищої освіти. Встановлено, що високий рівень досягнення гендерної рівності не завжди супроводжується стійкістю результатів, що свідчить про різний рівень інституційної спроможності університетів реалізовувати гендерну політику. Практичне значення дослідження полягає у можливості використання запропонованого підходу для моніторингу досягнення Цілі сталого розвитку 5, проведення міжуніверситетських порівнянь та обґрунтування управлінських рішень щодо розвитку гендерної рівності в закладах вищої освіти.

Ключові слова: гендерна рівність, заклади вищої освіти, Цілі сталого розвитку, SDG 5, THE Impact Rankings, гендерна політика, стійкість розвитку, траєкторії розвитку, коефіцієнт варіації, стратегічне управління.

Formulation of the problem. Achieving gender equality is a key priority for sustainable development and an important condition for ensuring social justice, inclusiveness, and the effective functioning of organizations. These issues are particularly important in higher education, as universities serve not only as educational and scientific centers but also as centers for the formation of social values, managerial practices, and leadership models. In this regard, HEIs are actively implementing gender equality policies and monitoring mechanisms.

An important tool for assessing the contribution of universities to the achievement of Sustainable Development Goal 5 «Gender Equality», is the THE Impact Rankings SDG 5, which allows for international comparisons of university performance. At the same time, the issues of long-term dynamics, development trajectories, and the sustainability of universities' efforts to achieve gender equality remain insufficiently studied. This necessitates a comprehensive analysis of the results of Ukrainian higher education institutions in THE Impact Rankings SDG 5 and an assessment of the stability of the results achieved over time.

Analysis of recent research and publications. The problems of gender equality and the implementation of gender policy in higher education institutions are actively studied by domestic and foreign scientists. The theoretical foundations of gender equality in organizations and the features of its integration into management processes are revealed in the works of M. Alvesson and Y. Billing [1]. The issues of formation and implementation of gender policy in the field of higher education were studied by T. Verge [2], O. Igiebor [3], M. Bustelo and A. Mazur [4], D. Misra and M. Bhat [5], S. Abnory, E. Yin and C. Boatbil [6], N. Nakonechna [7], V. Conzon [8], N. Shofolova, O. Orzhel and K. Tryma [9]. Researchers emphasize the need to integrate a gender perspective into all stages of the university management cycle.

A separate area of research concerns the development of approaches to assessing gender equality. For this purpose, the international indices Gender Inequality Index, Global Gender Gap Index, and Gender Equality Index are used [12–14]. A significant contribution to the development of methods for assessing gender equality was made by J. Moreira, C. Sales Oliveira [10], and others. Practical recommendations for the formulation and evaluation of gender policy in universities are presented in [11], and methodological materials for assessing gender mainstreaming are presented in [16].

At the same time, the issues of long-term dynamics, development trajectories, and the sustainability of achieving gender equality by higher education institutions, based on international rankings, remain insufficiently studied. In particular, the possibility of using the results of THE Impact Rankings SDG 5 [15] to assess not only the level of achievement of gender equality but also the stability of universities' gender policy implementation over time is needed.

The purposes of the article is to assess the sustainability and trajectories toward achieving gender equality in Ukrainian universities, based on THE Impact Rankings SDG 5 results for 2019–2025. To achieve

this goal, we will explore the methodological foundations of gender equality assessment in higher education institutions and the features of using THE Impact Rankings SDG 5 indicators. We will conduct a structural, level, and dynamic analysis of the results of Ukrainian universities for the period under study. Based on the results, we identify development trajectories and assess the sustainability of achieving gender equality in higher education institutions in Ukraine.

The main material presentation. To assess the achievement of gender equality by higher education institutions, the results of the international THE Impact Rankings under SDG 5, "Gender Equality" [15], were used. Unlike international gender indices, which assess gender equality at the state or societal level, THE Impact Rankings allow assessments directly at the university level. The methodology for the ranking covers indicators of scientific activity in the field of gender equality, equal opportunities policies, women's representation in management and academia, support for women's career development, and mechanisms for monitoring and ensuring gender equality.

The study's information base is the results of Ukrainian higher education institutions in THE Impact Rankings SDG 5 for 2019–2025. The methodical approach is based on a combination of structural, level, and dynamic analysis. Since the rating results are presented as value intervals, the middle of each interval is used as a conditional indicator of performance to ensure data comparability.

To assess the dynamics, the trajectories toward gender equality are determined, and the coefficient of variation is used to assess the sustainability of the results. Based on the average value of the SDG 5 indicator and the median value of the coefficient of variation, a matrix was constructed to position universities according to the levels of effectiveness and sustainability in achieving gender equality.

The participation of Ukrainian universities in THE Impact Rankings SDG 5 during 2019–2025 was characterized by stable positive dynamics (Fig. 1).

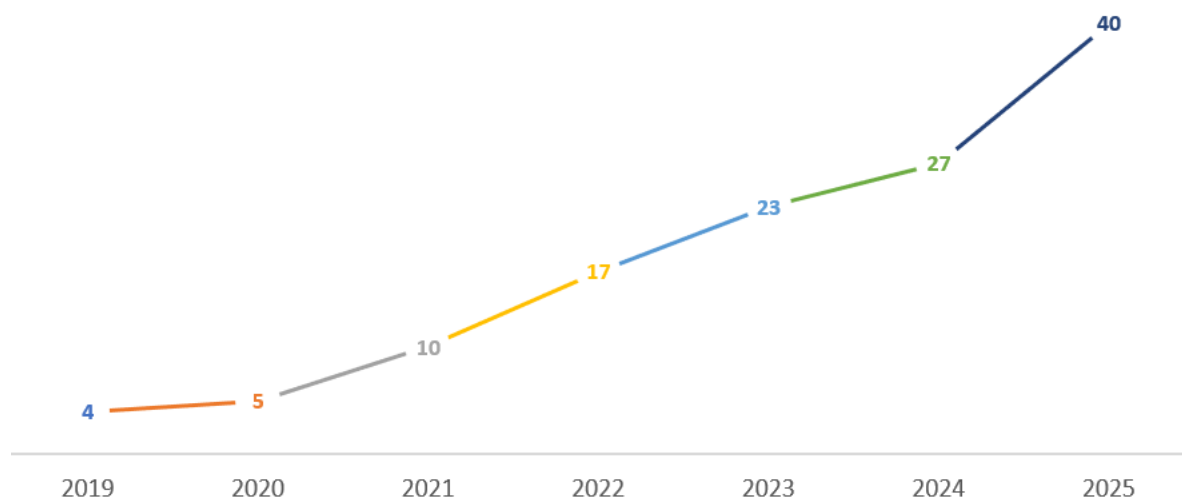


Fig. 1. Dynamics of the number of Ukrainian higher education institutions in THE Impact Rankings SDG 5 in 2019–2025

Source: compiled by the authors based on data from [15]

The number of Ukrainian universities represented in the ranking increased from 4 in 2019 to 40 in 2025, a tenfold increase. The most intensive growth was observed after 2021. The increase in the representation of Ukrainian universities in the ranking can be explained by greater attention to implementing the SDGs, the development of strategic management practices for sustainable development, and the integration of the Ukrainian higher education system into the European Higher Education Area. At the same time, the increase in the number of ranking participants makes it difficult to directly compare universities' ranking positions year to year. Therefore, for further analysis, the conditional values of SDG 5 indicators were used.

To investigate long-term trends in achieving gender equality, a panel sample of universities was formed that were represented in THE Impact Rankings SDG 5 for at least four years from 2019 to 2025. The panel sample included 13 universities, enabling assessment not only of the level of results achieved but also of their dynamics and sustainability over time.

Based on the data obtained, the average values of SDG 5 indicators, coefficients of variation, changes in results for the period under study were calculated, and the types of trajectories of university development were determined (Table 1).

Table 1

Indicators of effectiveness and sustainability of achieving gender equality by Ukrainian HEIs

University	Mean SDG5	Std.Dev	CV,%	Δ first- last	Trajectory	Stability
Chernihiv Polytechnic National University	24,1	6,6	27,5	9,3	Progressive	Low
Ivan Franko National University of Lviv	28,3	7,3	25,8	-7,3	Regressive	Low
Kharkiv National University of Radio Electronics	37,0	10,1	27,4	-8,1	Regressive	Low
Kherson State Maritime Academy	21,8	5,4	24,7	7,9	Progressive	High
Kyiv National Economic University	47,1	3,5	7,3	0,5	Stable	High
Lviv Polytechnic National University	32,7	9,3	28,6	19,6	Progressive	Low
National Technical University of Ukraine – Igor Sikorsky Kyiv Polytechnic Institute	21,8	5,4	24,7	7,9	Progressive	High
National Transport University	18,8	5,8	31,0	10,8	Progressive	Low
National University "Yuri Kondratyuk Poltava Polytechnic"	38,2	2,7	7,0	3,8	Stable	High
Ostrogradsky National University of Kremenchuk	40,8	2,5	6,1	-2,5	Stable	High
State University "Kyiv Aviation Institute"	34,7	5,6	16,1	-7,1	Regressive	High
Sumy State University	43,2	4,7	11,0	-2,5	Stable	High
The National University of Ostroh Academy	40,2	12,0	29,7	33,3	Progressive	Low

Source: compiled by the authors based on data from [15]

The analysis of the panel sample showed the absence of a single trajectory for achieving gender equality by Ukrainian higher education institutions. The value of SDG 5 and the extent of its variation differ significantly across universities, indicating different institutional capacities to ensure sustainable outcomes from gender policy implementation. The highest average values of the SDG 5 indicator are typical for Kyiv National Economic University and Sumy State University, while the highest positive dynamics are observed in the National University of Ostroh Academy.

To assess the stability of the results, the coefficient of variation was used:

$$CV = (\sigma / \bar{x}) \times 100, \quad (1)$$

where CV is the coefficient of variation;

%; σ is the standard deviation of the indicator;

$\bar{x}$ is the average value of the indicator.

Unlike traditional ranking analyses, this approach allows you to assess not only the level of gender equality achieved, but also the university's ability to maintain those results in the long term.

The matrix's boundaries were determined based on the panel sample's statistical characteristics. The mean value of SDG 5 (32.99 points) was chosen as the threshold value of performance, and the median value of the coefficient of variation (24.68%) was chosen as the threshold value of stability.

Based on the combination of performance and sustainability indicators, a matrix of the positioning of higher education institutions by the level of achievement of gender equality has been formed (Fig. 2).

	High resilience (CV $\leq$ 24.68%)	Low resilience (CV $>$ 24.68%)
High results (Mean $\geq$ 32.99)	Kyiv National Economic University National University "Yuri Kondratyuk Poltava Polytechnic" Ostrogradsky National University of Kremenchuk State University "Kyiv Aviation Institute" Sumy State University	Kharkiv National University of Radio Electronics The National University of Ostroh Academy
Low results (Mean $<$ 32.99)	Kherson State Maritime Academy National Technical University of Ukraine – Igor Sikorsky Kyiv Polytechnic Institute	Chernihiv Polytechnic National University Ivan Franko National University of Lviv Lviv Polytechnic National University National Transport University

Fig. 2. Matrix of positioning of higher education institutions of Ukraine by the level of effectiveness and sustainability of achieving gender equality

Source: compiled by the authors based on data from [15]

The group of leaders is composed of universities that combine high results in SDG 5 indicators with high sustainability of their achievements. This group includes Kyiv National Economic University, National University "Yuri Kondratyuk Poltava Polytechnic", Ostrogradsky National University of Kremenchuk, State University "Kyiv Aviation Institute" and Sumy State University.

The group of unstable leaders includes Kharkiv National University of Radio Electronics and the National University of Ostroh Academy. Stable outsiders are the Kherson State Maritime Academy and the National Technical University of Ukraine – Igor Sikorsky Kyiv Polytechnic Institute. The group of turbulent universities includes Chernihiv Polytechnic National University, Ivan Franko National University of Lviv, Lviv Polytechnic National University, and National Transport University.

The proposed matrix allows for moving from a descriptive analysis of rating results to a strategic assessment of the achievement of gender equality and the formation of differentiated approaches to the development of gender policy in higher education institutions.

Conclusions. As a result of the study, the peculiarities of achieving gender equality by Ukrainian higher education institutions were evaluated based on the results of THE Impact Rankings SDG 5 in 2019–2025. A steady trend towards an increase in the representation of Ukrainian universities in the international ranking has been established: their number has increased from 4 in 2019 to 40 in 2025, which indicates an intensification of the implementation of gender equality policies and an increase in attention to the international assessment of sustainable development results.

The analysis showed that Ukrainian higher education institutions are characterized by heterogeneous trajectories of achieving gender equality. Progressive, stable, regressive and turbulent development trajectories have been identified, which reflect different levels of institutional capacity to ensure the implementation of the principles of gender equality.

A methodological approach to assessing the achievement of gender equality by higher education institutions is proposed, combining structural, level, and dynamic analysis of the results of THE Impact Rankings SDG 5. Unlike traditional rating analysis, the approach allows you to assess not only the level of results achieved, but also their sustainability over the long term.

To assess the stability of the results, the coefficient of variation was used, enabling determination of the sustainability of achieving gender equality at individual universities. On this basis, a matrix of the positioning of higher education institutions by effectiveness and sustainability has been developed, allowing for the distinction between leaders, unstable leaders, stable outsiders, and turbulent universities.

The practical significance of the study lies in the possibility of using the proposed approach to monitor progress toward SDG 5, strategic management of gender equality, and conduct inter-university comparisons. The results of the study can be used to develop gender equality plans, formulate sustainable development strategies, and improve the internal quality assurance system in higher education.

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