The use of consulting to increase the sustainability of the higher education institutions in times of crisis

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Abstract

The relevance of this research is studying the impact of consulting projects on the sustainability of higher education institutions (HEIS) in times of crisis, adaptability, environmental quality, and well-being. *The aim* is to identify the main factors that affect the sustainability of HEIs in times of crisis, as well as to analyse the impact of consulting services on ensuring this resilience. The study employed the methods of consulting activity analysis, a crisis sustainability survey, and the Workplace Wellbeing Questionnaire. Spearman's rank correlation coefficient and structural equation modelling were used for statistical analysis. The reliability of the research methods was tested using the Cronbach's alpha. *The results* of the study revealed that 55% of the success of consulting projects is directly related to satisfaction with the work environment. Team experience showed an impact coefficient of 42%, and company resources – 38%. All obtained p-values were lower than 0.05, which indicates the statistical significance of the found relationships.

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The study confirmed that the sustainability of HEIs in times of crises depends on the success of consulting projects, which, in turn, correlates with satisfaction with the work environment. The experience of the team and the resources also have a significant impact on success. The results indicate the need to develop consulting services to increase the sustainability of educational institutions. The research prospects include the impact of consulting services on innovation and the quality of the educational process, as well as the role of technological innovations in sustainability in times of crisis.
Keywords
educational environment, consulting programme, educational innovations, crisis conditions, sustainability

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Introduction

The sustainability of higher education institutions (HEIs) during crises is crucial amid global uncertainty, political instability, and technological shifts (Brandon, Lombardi & Shen, 2024). HEIs play a dual role in training skilled professionals and maintaining socio-economic stability, necessitating systemic strategies for resilience (Stein, 2024). Crises, such as the COVID-19 pandemic and the Russian-Ukrainian war (Symochko et al., 2024), highlight vulnerabilities and the need for adaptive measures. The 2022 Russian invasion severely disrupted Ukrainian HEIs, causing infrastructure damage, population displacement, and financial strain (Tsybuliak et al., 2024).

Economic instability, inflation, and reduced funding further challenge HEIs, forcing them to seek alternative income sources and optimize resources (Lelyk et al., 2022; Ganguli & Waldinger, 2024). Technological advancements and increasing competition also demand curriculum updates and infrastructure investments (Palyvoda et al., 2024). Consulting services are vital in addressing these challenges, offering strategies for resource optimization, innovation, and crisis management (Block, 2024). This study explores how consulting enhances HEIs' resilience, drawing on crisis leadership and organizational resilience research (Purvis et al., 2024; Stein, 2024). By focusing on consulting as a strategic tool, it aims to improve HEIs' adaptability and sustainability in turbulent times.

Despite existing research, the role of consulting in crisis management for HEIs remains underexplored. Further study is needed on how consulting can optimize management, mitigate economic and social shocks, and integrate new technologies to maintain educational quality during crises.

The aim of the study is to identify key factors that affect the sustainability of HEIs in times of crisis and analyse the role of consulting services in ensuring this resilience. The aim involved the fulfilment of the following research objectives:

1. Analyze the effectiveness and identify the main directions of consulting projects in Higher Education Institutions (HEIs), as well as determine their strengths and weaknesses.
2. Examine the satisfaction level of teaching and academic staff with the HEI educational environment and their well-being in the workplace.
3. Determine the relationship between the successful implementation of consulting programs and the overall well-being of the HEI work environment.

Methods

1. Design

The study employed a mixed-methods approach, combining quantitative and qualitative data collection techniques. The research design was applied, aiming to address specific practical challenges faced by higher education institutions (HEIs) in Ukraine during times of crisis. The study was conducted in several stages, as outlined in Figure 1.

Figure 1 - Research stages

Research stages	
	Preparatory stage (September-December 2023)
	Determining the subject area, aim, and objectives of the study.
	Forming the sample, selecting the necessary tools and methods.
	Preparing data for analysis.
	Research phase (January - September 2024)
	Assessment of directions, effectiveness and problems of consulting projects in HEIs.
	Research on the level of satisfaction of teaching and academic staff with the educational environment in universities.
	Analysis of the teachers' well-being in their workplaces.
	Identification of the relationship between the successful implementation of consulting programmes and the well-being of the working environment in HEIs.
	Final stage (September - October 2024)
	Analysis of the obtained results.
	Drawing conclusions.

Source: created by the authors of the research

Figure 1 illustrates the sequential stages of the research process, including data collection, analysis, and interpretation. The design was chosen to ensure a comprehensive understanding of the impact of consulting projects on HEI sustainability.

2. Participants

A total of 100 participants from five Ukrainian universities were included in the study. The sample consisted of 67 teaching staff and 33 academic staff, with ages ranging from 26 to 72 years. The universities were selected based on their regional diversity, institutional profiles (e.g., technical, humanitarian, economic), and active engagement in consulting activities. The inclusion criteria ensured representation from different regions of Ukraine and a variety of institutional contexts. The universities included in the sample are presented in Table 1.

Table 1 – HEIs whose consulting activities were analysed during the study

University name	Website	Region
Taras Shevchenko National University of Kyiv	https://knu.ua/en/	Kyiv
Lviv Polytechnic National University	https://lpnu.ua/	Lviv
Odesa Polytechnic National University	https://op.edu.ua/international/activity	Odesa
National University of Kyiv-Mohyla Academy	https://www.ukma.edu.ua/eng/	Kyiv
National Technical University Kharkiv Polytechnic Institute	https://kpi.kharkov.ua/	Kharkiv

Source: created by the authors of the research

The choice of these universities is determined by the objectives of the study and the availability of materials for analysis in the open access. They represent HEIs of various specializations and sizes that are actively engaged in consulting activities. The sample also consisted of teaching and academic staff of the above-mentioned HEIs. The sample included 71 women and 29 men, with 61 participants holding advanced degrees (PhD, Candidate of Sciences, or Doctor of Sciences). Each university was represented by 20 respondents, ensuring a balanced distribution across institutions. Each HEI is represented by 20 respondents.

3. Data collection

Data were collected using three primary instruments:

1. *Analysis of Consulting Activities*. This method involved a comprehensive review of consulting projects conducted by the selected universities. Data were extracted from official university websites and internal reports. The

analysis focused on the effectiveness, achievements, and shortcomings of these projects.

2. *Survey on HEI Sustainability*. A 25-item survey was developed to assess the perceptions of teaching and academic staff regarding the sustainability of their institutions during crises. The survey used a 5-point Likert scale (1 = completely disagree, 5 = completely agree) and was divided into five blocks: academic sphere, financial sphere, social sphere, institutional sphere, and crisis resilience. The survey was administered via Google Forms.

Workplace Wellbeing Questionnaire (WWQ). The WWQ was used to measure employee satisfaction and well-being in the workplace. This instrument was chosen for its validated reliability and relevance to assessing the work environment in HEIs.

The use of these instruments was justified by their alignment with the study's objectives and their established validity in previous research. Cronbach's alpha was calculated to assess the internal consistency of the survey and WWQ, with values exceeding 0.7, indicating acceptable reliability.

4. Analysis of data

Data analysis was conducted using R Studio, with the lavaan package for structural equation modeling (SEM). The following statistical techniques were employed:

1. *Descriptive Statistics.* Mean scores and standard deviations were calculated for survey responses. However, given the limitations of presenting mean scores in bar charts, the results were visualized using ggplot2 to provide more meaningful insights.
2. *Spearman's Rank Correlation.* Spearman's correlation was used to assess the relationships between ordinal variables (e.g., Likert-scale responses). This non-parametric test was chosen due to the non-normal distribution of the data and the ordinal nature of the variables.
3. *Structural Equation Modeling (SEM).* A covariance-based SEM approach was used to examine the relationships between exogenous variables (project success, team experience, company resources) and endogenous variables (satisfaction with the work environment, employee motivation, stress levels). Model fit indices, including CFI, TLI, RMSEA, and SRMR, were calculated to assess the model's adequacy. Additionally, discriminant validity and heteroscedasticity checks were performed to ensure the robustness of the results.

The SEM results were presented using a path diagram, which provides a clearer visualization of the relationships between variables compared to

tabular presentation. The path diagram was generated using the semPlot package in R.

5. Instruments

The study used validated and reliable instruments. The Workplace Wellbeing Questionnaire (WWQ), with Cronbach's alpha above 0.8, ensured high reliability. A pilot survey with university staff achieved a Cronbach's alpha of 0.78, confirming internal consistency. Data analysis used R Studio with peer-reviewed packages: *lavaan* for SEM, *ggplot2* for visualization, and *psych* for reliability analysis.

Results

The study's first stage analyzed university consulting projects, examining their focus areas, effectiveness, and limitations using official HEI websites. This data was synthesized into Table 2, showcasing the current state of consulting initiatives across Ukrainian universities.

Table 2 – Status of implementation of consulting projects in some Ukrainian HEIs

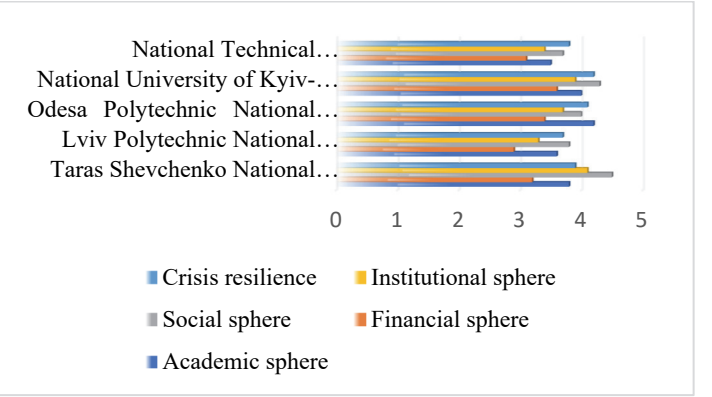
University	Focus Areas	Strengths	Weaknesses	Future Plans
Taras Shevchenko National University	Economics, Management, Law	Corporate partnerships, international internships	Few specializations, limited practical focus	New specializations, career center
Lviv Polytechnic	Tech, Innovation	Industry ties, startup ecosystem	Few MBA programs, few foreign faculty	New MBA programs, international partnerships
Odesa Polytechnic	Energy, Ecology, IT	Technical expertise, location	Limited international opportunities, digital skills gap	Global partnerships, digital integration
Kyiv-Mohyla Academy	Social Sciences, Humanities	Academic reputation, critical thinking	Lacks tech consulting, little hands-on training	More practical training, IT partnerships
Kharkiv Polytechnic	Engineering, Energy	Industry connections, research staff	Weak soft skills training, traditional methods	Curriculum updates, startup support

Source: created by the authors of the research

Ukraine's leading universities offer diverse consulting programs, with key strengths including industry partnerships, experienced faculty,

engineering expertise, and international opportunities. Common limitations are narrow specializations and inadequate practical training. To assess student satisfaction with these programs, we conducted a survey (results in Figure 2).

Figure 2 – Results of a survey of teaching and academic staff on the university's sustainability in times of crisis



Source: created by the authors of the research

The histogram shows that the highest scores for all blocks are given to Odesa Polytechnic National University and National University of Kyiv-Mohyla Academy, in particular for crisis sustainability and the social sphere. Taras Shevchenko National University of Kyiv also has strong positions in the social sphere and crisis resilience. Spearman correlation coefficient was performed for statistical analysis of the data (Table 3).

Table 3 - Spearman rank correlation coefficients for different blocks

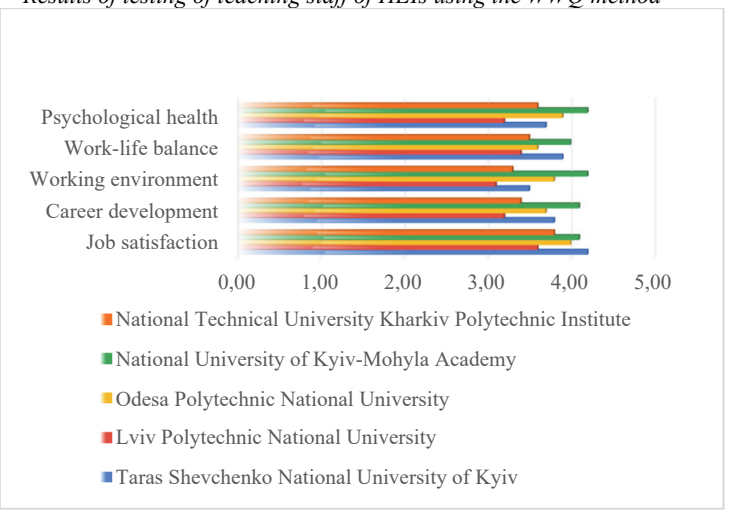
	Academic sphere	Financial sphere	Social sphere	Institutional sphere	Crisis resilience
Academic sphere	1.0	0.8	0.7	0.8	0.8
Financial sphere	0.8	1.0	0.8	1.0	1.0
Social sphere	0.7	0.8	1.0	0.8	0.8
Institutional sphere	0.8	1.0	0.8	1.0	1.0
Crisis resilience	0.8	1.0	0.8	1.0	1.0

Source: created by the authors of the research

The Spearman analysis reveals strong correlations (coefficients ≈1.0) between universities' financial health, institutional management, and crisis

resilience, indicating their interdependence. Financial stability particularly impacts crisis adaptation and resource management. Subsequently, we assessed staff well-being using the WWQ method (results in Figure 3).

Figure 3 – Results of testing of teaching staff of HEIs using the WWQ method



Source: created by the authors of the research

Kyiv-Mohyla Academy leads in staff satisfaction across career development, work environment, and job satisfaction metrics, followed closely by Taras Shevchenko University in job satisfaction alone. Lviv and Kharkiv Polytechnics trail overall, particularly in work-life balance (see Diagram). Endogenous variables are represented by satisfaction with the work environment, employee motivation, and stress level. The results of the analysis are presented in Table 4.

Table 4 - Structural equation modelling of the relationship between the successful implementation of consulting projects and satisfaction with the work environment of HEIs during the crisis

Variable 1	Variable 2	Path coefficient	Standard error	p-value
Project Success	Satisfaction with the working environment	0.55	0.12	0.001
Team Experience	Project success	0.42	0.15	0.025
Company Resources	Project success	0.38	0.13	0.01

Source: created by the authors of the research

Table 4 shows the relationship between successful implementation of consulting projects and satisfaction with the working environment of HEIs during the crisis. Project success and satisfaction with the working environment have a positive path coefficient of 0.55, indicating a significant relationship. The higher the success of projects, the higher the satisfaction with the working environment. The standard error (0.12) and the low p-value (0.001) confirm the statistical significance of this relationship. The obtained results indicate the importance of successful implementation of consulting projects for increasing satisfaction with the working environment.

Discussion

This study highlights the role of consulting in enhancing HEI sustainability during crises, particularly in Ukraine. It identifies key factors like work environment satisfaction (path coefficient = 0.55, $p < 0.001$), team experience (0.42), and company resources (0.38) as critical to project success, aligning with prior research on organizational resilience (Tsiligiris & Bowyer, 2021; El-Sabagh, 2021). Consulting has been vital for Ukrainian HEIs, enabling online learning transitions and international partnerships amid war-related challenges.

The findings emphasize the importance of supportive work environments, consistent with Malinka et al. (2023) and Schofer, Ramirez, & Meyer (2021). Team experience and resource optimization, as noted by Fia, Ghasemzadeh & Paletta (2023), are also crucial, especially in resource-scarce contexts like Ukraine. However, limitations include narrow specializations and insufficient practical focus in consulting projects, echoing concerns by Zawacki-Richter (2021) and Ying & Wright (2023).

The Workplace Wellbeing Questionnaire (WWQ) revealed higher job satisfaction and resilience at institutions like Kyiv-Mohyla Academy, supporting the link between positive work environments and project success (Parker & Hyett, 2011). The study contributes to crisis management literature and offers practical recommendations for HEIs and consultants.

Limitations

There are several limitations of this study. First, the sample of participants may not be representative enough, which limits the generalizability of the results to other HEIs. Second, the study may be influenced by the subjective assessments of the respondents, which may distort the data on satisfaction and success of consulting projects.

Recommendations

To enhance the sustainability of higher education institutions, we recommend actively leveraging international cooperation in consulting. By engaging global partners to develop and implement modern consulting models, universities can integrate cutting-edge management approaches. This strategy will help institutions maintain competitiveness while promoting sustainable development.

Specifically, HEIs should prioritize adopting international best practices in consulting, incorporating findings from foreign research to improve educational quality, and fostering multilingual learning environments to facilitate joint projects with overseas partners. These measures will create a more dynamic, globally connected academic ecosystem while strengthening institutional resilience.

Conclusion

Understanding the key factors of sustainability and the role of consulting services helps managers to make strategic decisions. The results form the basis for further research in the field of management of educational institutions, increasing their adaptability and sustainability in the future. The study found that the sustainability of HEIs in times of crisis largely depends on the success of consulting projects.

The obtained data can be useful for HEI administrations when developing crisis management strategies. They can also be used by consulting companies to adapt their services to the needs of educational institutions. Research prospects include studying the impact of consulting services on other aspects of the activities of HEIs, such as innovation and the quality of the educational process.

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