# “Performance management at Ukrainian university: A case of the KPIs use”


| | |
|---|---|
| **AUTHORS** | Larysa Shaulska<br>Oleksandra Laktionova<br>Tetyana Nagornyak<br><br>Hanna Sereda |



| | |
|---|---|
| **ARTICLE INFO** | Larysa Shaulska, Oleksandra Laktionova, Tetyana Nagornyak and Hanna Sereda (2021). Performance management at Ukrainian university: A case of the KPIs use. *Problems and Perspectives in Management*, *19*(1), 78-89. doi:10.21511/ppm.19(1).2021.07 |
| **DOI** | http://dx.doi.org/10.21511/ppm.19(1).2021.07 |
| **RELEASED ON** | Monday, 01 February 2021 |
| **RECEIVED ON** | Thursday, 19 November 2020 |
| **ACCEPTED ON** | Monday, 25 January 2021 |





| | |
|---|---|
| **JOURNAL** | "Problems and Perspectives in Management" |
| **ISSN PRINT** | 1727-7051 |
| **ISSN ONLINE** | 1810-5467 |
| **PUBLISHER** | LLC “Consulting Publishing Company “Business Perspectives” |
| **FOUNDER** | LLC “Consulting Publishing Company “Business Perspectives” |

| NUMBER OF REFERENCES | NUMBER OF FIGURES | NUMBER OF TABLES |
|---|---|---|
| 20 | 1 | 1 |

BUSINESS PERSPECTIVES

LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10,
Sumy, 40022, Ukraine

www.businessperspectives.org

**Larysa Shaulska** (Ukraine), **Oleksandra Laktionova** (Ukraine),
**Tetyana Nagornyak** (Ukraine), **Hanna Sereda** (Ukraine)

# PERFORMANCE MANAGEMENT AT A UKRAINIAN UNIVERSITY: A CASE OF THE KPIS USE

## Abstract

Implementing performance management systems, including the KPI (Key Performance Indicators) system, at the university level faces many difficulties. The study aims to determine the problems of formation and implementation of the system of KPIs at the HEIs (higher education institutions) level based on the case study. Methodologically the study is based on the analysis of the case of the KPI system implementation at Vasyl' Stus Donetsk National University (Ukraine) using a 3-year project survey of managers and employees of structural units about self-analysis of deviations and perception of each performance indicator. The essential subjective factor – irrational participants' behavior – is demonstrated, reflected in their resistance, fear, and lack of acceptance of innovations in assessment processes, which needs to delineate tools for effective KPI system implementation (reduction of its negative influence and growth of the personnel loyalty). The main organizational obstacles that reduce such a measurement system's efficiency are incomprehensibility, difficulty of evaluation, non-influence or independency of indicators from the efforts of respondents, poor communication, and motivation to achieve them. The analysis results allowed providing the recommendations that could contribute to the formation of reflexive and active management culture in the strategic management system and a culture of productive dialogue through vertically and horizontally management interaction.

**Keywords** measurement, indicators, strategic planning, innovation resistance, public management

**JEL Classification** I23, L30, M12

**Received on:** 19th of November, 2020
**Accepted on:** 25th of January, 2021
**Published on:** 1st of February, 2021



Larysa Shaulska, Doctor of Economics, Professor, Taras Shevchenko National University of Kyiv, Ukraine. (Corresponding author)

Oleksandra Laktionova, Doctor of Economics, Associate Professor, Vasyl' Stus Donetsk National University, Ukraine.

Tetyana Nagornyak, Doctor of Political Science, Professor, Vasyl' Stus Donetsk National University, Ukraine.

Hanna Sereda, Ph.D., Associate Professor, Vasyl' Stus Donetsk National University, Ukraine.



**Conflict of interest statement:**
Author(s) reported no conflict of interest

## INTRODUCTION

Improving management systems at the level of higher education institutions (HEI) to improve their efficiency, quality of educational services, employee motivation is a contemporary trend. In countries with developed educational systems and underdeveloped countries, there is a demand to increase the level of competitiveness of HEIs in markets of educational services through "marketization" of this area, vision of students as "consumers", the introduction of "entrepreneurial" model of higher education. In light of increasing competition for public and private funding, the incentive to increase the effectiveness of universities' activities is the dissemination of the New Public Management paradigm using its key tools – contracting with teaching staff and administrative staff, results-based budgeting, strengthening the professionalization of quality assessment systems. Even in countries with such experience, there is a need to improve the management of universities in the directions: shift the focus from the evaluation of HEI processes to the results of its activities, consider the economic and non-economic impacts and effects; broaden a focus on stakeholders that include a local community and business.

Implementation of performance management systems, including the KPI system, faces many difficulties inherent to any innovation process



http://dx.doi.org/10.21511/ppm.19(1).2021.07

at the level of educational institutions. Some of these difficulties are caused by participants' traditionally irrational behavior, which is reflected in their resistance, fear, and lack of acceptance of the new realm. Any system of personal assessment, especially in such an unusual environment like the educational audience, is, in general, negatively perceived by its participants. This can be especially acute on the middle level of management of HEI in its structural units, where educators perform both academic and managerial functions and administrative and support units do not see themselves as active implementators of strategic goals of HEI.

Simultaneously, a crucial role in such processes plays the objective factors – the organization of the development and implementation of tools for performance management. The experience of implementing similar tools in business, namely Balanced Scorecard (BSC) or evaluation of Key Performance Indicators (KPI), is useful but limited from the point of view of its appropriateness for HEI. The difference in motives and incentives, potential, clarity of understanding, and goal setting in HEI is an obvious barrier to simply copying and replicating business models in higher education.

Ukrainian universities have a very short history of using performance management tools. Adoption of the Law on Higher Education in 2014, which provides greater academic and financial autonomy for HEIs, formula funding in 2020, contract systems for rectors, a new accreditation mechanism, create capacity and simultaneously identify the need for institutional and personal efficiency evaluation system as a tool of strategic and performance management of universities. The experience of implementing such systems in Ukraine at the institutional level in Taras Shevchenko National University of Kyiv, V.N. Karazin Kharkiv National University, Khmelnytskyi National University, Vasyl' Stus Donetsk National University requires research of the patterns and features of such innovations, benchmarking the experience of universities both inside and outside the country. It will be the basis for increasing employees' responsibility for the implementation of the university strategy.

## 1. LITERATURE REVIEW

The concept of performance management in the public sector has been the subject of deep research since the mid-1970s. Several approaches have been developed to both the content and the evaluation tools to date. The preconditions for modernization of such approaches are the following trends: first, shifting the focus and horizon of targets from operational to strategic priorities of organizations (McAdam & Bailie, 2002); secondly, the need to take into account their potential for flexibility for change – improvements and innovations (Kaplan & Norton, 1992); thirdly, considering the interests of a wider audience of stakeholders under the greater responsibility of public institutions to society and the environment (Sureshchandar & Leisten, 2005; McDevitt et al., 2008; Ndoda & Nyamazana, 2014). It should be noted that shifting the emphasis from financial indicators to the customers' and other stakeholders' satisfaction is a key difference between valuation techniques in the public sector and nonprofits compared to business, which determines their multilayered and heterogeneity (Niven, 2002). A contextual prerequisite for the modernization of efficiency management is introducing the concept of decent work (Kolot, Kozmenko, Herasymenko, & Štreimikienė, 2020), which raises issues of fairness of remuneration, which is ensured by the use of objective measures of performance such as KPI.

The methodology of performance measurement itself is based on several approaches originally developed for business: performance pyramid (Lynch & Cross, 1991); models of results and determinants (Fitzgerald et al., 1991), balanced scorecard (Kaplan & Norton, 1992, 2005), prism of performance (Neely, 2005). A significant impetus for the use of this tool was the spread of the ideas of the New Public Management or, in German terminology – Results-Oriented Public Management, which involved a fundamental shift of focus in the field of public services from procedures or rules to outcomes.

The most common, methodologically sound, and holistic model from the standpoint of components

of the potential of functioning and development of organizations is the balanced system proposed in the late '90s by R. Kaplan and D. Norton. Such components of potential are financial capacity; perspectives from the position of stakeholders (external efficiency); efficiency and prospects of internal processes; ability to create and improve. Its advantage over others is its instrumentality from the standpoint of strategic management. It directly links the mission of the organization, key values, and vision of the future with the strategy, goals, and initiatives, modeled in such a way as to inform and motivate efforts towards continuous improvement (Beard, 2009). On the other hand, cascading these tasks at all levels of HEI ensures the unification and integration of employees' personal goals with the university's strategic prospects.

However, despite its popularity in business, BSC has very limited experience in educational organizations. According to Ballentine and Eckles (2009), at the beginning of 21 century, the BSC was introduced only in a small number of mostly private small colleges in the United States. At the end of 2014, BSC was used in at least 30 US universities. Among the reasons for the low success of BSC implementation are the lack of management understanding of this toolkit and insufficient commitment of management staff (Ionescu, 2012), unwillingness to devote 2 to 3 years to the institutionalization of this tool (Rohm et al., 2013), and invest financial resources (Taylor & Baines, 2012). However, the willingness to get results from this system, in the long run, is one of the key criteria for success. Otherwise, according to experts, this activity is becoming a measurement industry (Taylor & Baines, 2012). Experts also note the complexity of this system, which is associated with information overload for users, because even with 25 indicators, such a number is quite difficult for individual perception (Wynder et al., 2013). Besides, the BSC implementation process is usually required professional or expert knowledge on the selection and setting of goals, formulation of indicators, use of methods of adaptation of the organization that meet the methodology of change management (Rohm et al., 2013, p. 48). Among the important prerequisites for the successful implementation of such a system is the need for its significant modification and adaptation to the needs and specifics of each individual HEI (Yu et al., 2009).

In contrast to the BSC, easier performance measurement models have become more common, including the Key Performance Indicators (KPI) method. At the end of 2004, according to the Committee of University Chairmen (2013), 56% of UK HEIs used KPIs to assess their effectiveness. As for HEI performance indicators, they link strategic objectives to relevant indicators, but their decomposition is often limited to three types: resources, processes, and products or results. Accordingly, there is a threat of their imbalance – disregard for certain stakeholders' interests, focus only on internal interests and performance, indifference to human capital development, neglection of economic factors of success of HEI.

## 2. AIMS AND HYPOTHESIS

The research aims to analyze the case of KPI implementation at Vasyl' Stus Donetsk National University, generalize typical problems, and substantiate recommendations for implementing such systems in the practice of managing the effectiveness of higher education institutions.

The main hypothesis (H) of the study is the assumption about the decisive influence of communication problems: resistance and rejection of KPI by managers and middle managers in the early stages of their implementation, cascading and scaling.

## 3. METHODS

The research is based on statistical methods of deviation analysis, sociological survey, and facilitation in focus groups, structured interview, and reflexive self-analysis of the reasons of achievements (failure, overfulfillment) of the target result. The choice of methods is justified by the need to address the following tasks: systematization of achieved KPIs; study of the scale, nature and causes of deviations; evaluation of indicators in terms of adequacy of their target values; the possibility of the employer to influence; compliance with strategic objectives (generalized assessment of the correctness of the KPI planning stage). The scientific results of the implementation of this methodology are the formation of a system of KPI planning and


http://dx.doi.org/10.21511/ppm.19(1).2021.07

KPI evaluation, relevant to the environment of the university with ambitious strategic plans; systematization of experience of typical advantages, features, and gaps of the mechanism of implementation of performance management systems based on system testing and experience gained; substantiation of conditions and risks of realization of KPI approach in university, in particular, recognition of the essential subjective factor, which needs for delineation of tools of its correct use (reduction of its negative influence and growth of loyalty of the personnel). The scope of the survey is 282 employees or 35% of the university staff, of which 48.9% – research and academic staff, 22.3% – support staff, 22.3% – administrative staff, and 6.4% were teaching staff. The number of respondents of a survey of the effectiveness of KPI is 19 or 79% of management staff.

One of the results of approbation and analysis of the experience of the pilot stage of the KPI system implementation is its scaling by covering an additional contingent of university leaders and relevant structural units – faculties and departments. Taking into account the experience of testing the system, it is the basis for adjusting the methodology of attracting new managers (deans of faculties and heads of departments), who are offered a survey on the perception of cascading indicators on the relevant strategic priorities for their content, relevance, and reality. This survey is also a productive tool for communication with KPI executors. The form of communication is a focus group, the composition of which is formed in compliance with two criteria: participants are heads of departments/deans based on election by competition; the departments/faculties managed by the participants are the leaders of the general university ranking. Such an approach to the focus group formation ensures motivated participation based on their responsibility and effectiveness. The focus group, which consists of 12 heads of units, includes deans of faculties, which is due to the need to compare the views of the leaders of the two levels. According to the focus group survey results, KPI is rated, and 3 groups of KPI (top, outsiders, others) are identified to pre-determine the subjective perception of the tasks set by managers. Based on the methodology of performance evaluation in HEI (Balanced Scorecard and KPI), among KPIs have identified lead-indicators, which are prerequisites for achieving goals and Lag-indicators – the goals (results). Besides, they are divided into groups according to the managerial influence of university leaders' activity on the effectiveness of such areas: competitiveness, accreditation of programs, finance, and social processes at the university. The implementation of the chosen methodology determines the patterns of preliminary perception of the KPE system by academic leaders; identification of the level of resistance and its correction by demonstrating the positive consequences of the system implementation; improving the KPI system and focusing on managerial influence.

Vasyl' Stus Donetsk National University (Ukraine), the subject of the case study, is a classical public university with 9 faculties, 4,300 students, and 750 employees, 335 of them being the scientific and teaching staff.

## 4. RESULTS

KPI system in university was chosen to address the following tasks: to strengthen the strategic capacity of university management (administrative component); to concentrate management resources on the achievement of strategic priorities (component of economic rationality); to focus on the activities of heads of departments and employees on implementing the development strategy of the university (socio-psychological component). These tasks were due to a set of circumstances of external and internal influences on the development of the university, a new stage of which began in 2014 due to the occupation of part of Ukraine. Fundamental changes in a stable, strong university ecosystem, formed by years, traditions, scientific schools, had the following signs of negative and positive content: complete unexpected loss of the material base, rupture of productive integration ties at the regional level, uncertainty of status and prospects of "displaced university", new unfair highly competitive environment, loss of human resources, massive and significant reduction in the level and quality of life of university staff.

This project has been implemented at the university since the beginning of 2016, when the general strategic vectors of development were identified, and, based on this, a set of functional strategies was de-

veloped. In 2018, the idea of planning and evaluation based on the KPI methodology was launched. The formation of a system of such indicators at the HEI level usually takes place around the priorities of their main activities – educational and scientific – and the achievement of certain financial results that provide opportunities for its operation. Following the priorities set by the university strategy (pragmatism of educational activities, formation of scientific and innovative space for the realization of opportunities, and creation of university worldview space), a two-level system has been developed for planning and measurement, which includes 151 indicators with their functional differentiation: 43 KPIs of the level I (rector, vice-rectors) – and 108 indicators of the level II (heads of administrative university structural divisions) (Figure 1).

The methodologically sound solution is the principle of consistent decomposition of goals and indicators of their achievement in the direction of "top-down" based on strategic sessions. In the early stages of system development, they solved all three groups and transformed managerial consciousness. The stage of developing a two-level system of indicators lasted a year, which is a sufficient period for forming a team of managers of all management units of the university, which were to become carriers of KPI ideas and drivers of the implementation process. Since 2019, the KPI pilot version was tested with further analysis of the pilot evaluation results, adjustment of indicators, scaling of the planning and evaluation process according to the KPI methodology.

The analysis of the first-year implementation of the KPI system at the highest level of management of the university and its administrative units shows that the planned level of indicators was

Source: Developed by the authors.

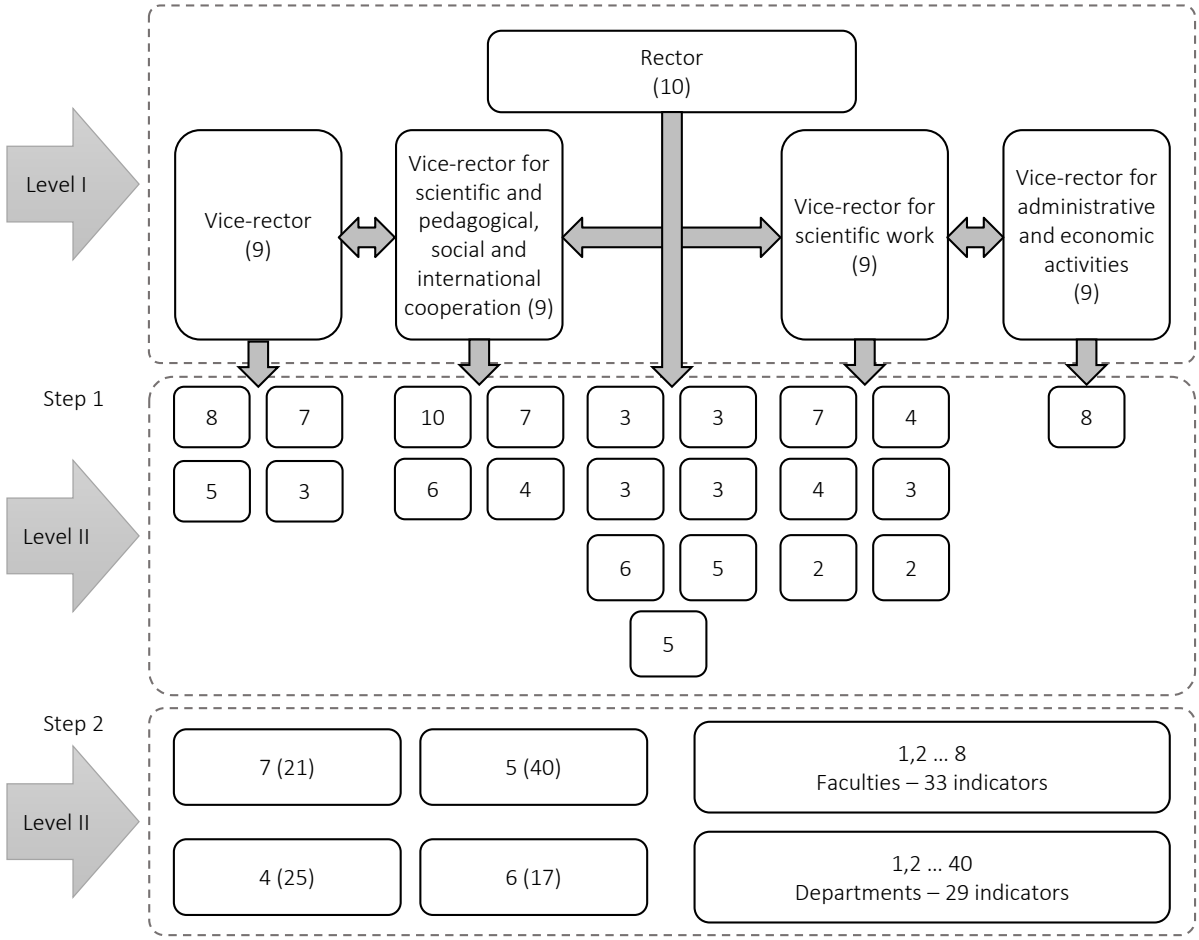


**Figure 1.** KPI of the university by two steps of their implementation (the number of KPIs of each administrative subdivision is indicated in the blocks of stage 1; the number of subdivisions and in parentheses – the number of KPIs are indicated on stage 2)



http://dx.doi.org/10.21511/ppm.19(1).2021.07

not achieved among the top management by an average of 65% among structural units – by 43%. Among the 108 installed indicators, 62 indicators were fully achieved (57.4%). University management and KPI system developers consider the results acceptable; the degree of implementation/non-implementation is not perceived as critical, because at the planning stage at the first level (rector, vice-rectors) deliberately selected sufficiently ambitious values of indicators that act as vectors and direct activities in the desired direction. Besides, the analysis by each participant of the degree of achievement of their own indicators should form a realistic perception of the lag of the current performance of departments and the university as a whole relative to the desired parameters and stimulate the search for additional sources of efficiency.

The analysis of the pilot phase results showed other reasons that determined the achieved level of implementation. Among the working hypotheses about the causes of deviations are the following:

- insufficient level of awareness and acceptance by managers of the KPI approach in general and/or specific indicators;
- errors at the planning stage of indicators;
- lack of systematic control of achievement;
- high level of staff turnover in some departments;
- incompetence;
- desire to demonstrate the inefficiency of the system (sabotage);
- ineffective communication at the stage of planning and implementation of KPI.

It should be noted that significant management problems and organizational gaps in the management of the university, the degree of its immaturity may indicate a situation with a negative deviation from the target value, and, in some cases, with a positive one. Thus, among the established 108 KPIs of level II, 16 indicators (15%) were planned to assess the level of satisfaction of the "internal client" – university employees who are consumers of services of university-wide divisions. Most of them – 14 indicators (87.5%) – were met with a significant deviation in the positive direction. This result could indicate two factors:

- underdeveloped culture of providing objective feedback to colleagues in the organizational culture at the HEI level;
- low targets of indicators (more than 50%).

Based on this, it could be assumed that the implementation of indicators such as "the level of satisfaction with the work of the structural unit of internal consumers" in the early stages of the use of performance evaluation systems due to their low informativeness may not be appropriate. Gradually, gaining relevant experience in the usage of such systems by employees, provided that there is effective feedback in the form of introspection, horizontal and vertical communication, which is the basis for self-learning system and its rationalization, will allow implementing the evaluation parameters such as "satisfaction". Analysis of the level of performance indicators in 2019 became the basis for a working hypothesis on the main reason for the low results – insufficient awareness and acceptance of KPI by managers as a whole and in parts. To test the hypothesis and identify a set of reasons that led to the achieved level of implementation, an anonymous survey was conducted with 19 respondents from 24 managers (79%).

The crucial issue in such a survey is the conditions for establishing or planning KPIs, as they directly affect the subjective perception of the heads that form the level of their readiness to actively participate in the planning of a relevant set of indicators and motivation to achieve. Besides, the head of the unit's perception directly determines the unit's effectiveness as a whole. The establishment of the KPI for heads of departments is the area of responsibility of vice-rectors. The survey showed that 15 out of 19 managers (79%) participated in the establishment of the KPI (this is a right approach), of which 9 – independently proposed indicators to the head, 4 – by agreeing on the indicators proposed by the head (both options are acceptable). Simultaneously, 4 respondents (21%) reported that

the KPIs were "moved from the top down" without coordination with performers, which is a gross violation of the implementation methodology.

The reason for this may be a lack of understanding of the nature and purpose of the KPI performance appraisal system. Thus, out of 19 surveyed managers, 6 (31.5%) were forced to study the KPI system independently, which could lead to complete rejection. So, in response to the question "Do you want to know more about the features of the KPI system and ways to improve the efficiency of your unit", 6 answers were received that demonstrate complete rejection of the evaluation system.

Only half of the respondents (50%) said they fully understood the KPIs. Almost the same number indicated that their KPIs were generally clear with some exceptions, but two of the respondents (10%) indicated that most of the indicators were unclear/difficult to perceive, one respondent (5%) said that for some structural units, indicators are clear, and for some – no.

For KPI implementation, it is important to ensure the initiative formulation of the first version of the list of indicators (bottom-up approach) by cascading the KPI of the upper level to the lower initiative with a proposal to lower-level managers to offer a detailed list of their own KPIs. As a result of management interactions at this stage, the indicators are adjusted, which may occur in several iterations of vertical communications, and, as experience has shown, there will be new constructive requests from the lower level for conceptual, methodological, and more often – organizational, resource assistance, which is transformed into real organizational, technological, personnel innovations.

Regarding the quality of the indicators themselves (their relevance and measurability), only 8 (25% of the total number of responses) positive responses were received; 7 answers (37%) indicate the presence of indicators that cannot be influenced by the structural unit, the same number of answers indicates the presence of unmeasured indicators (37%), 5 answers – the presence of irrelevant indicators (26%).

The quality of the established indicators and their achievement directly correlates with performance monitoring periodicity. In response to the question "How often did you apply to your KPIs during the year during the planning of work of the unit, reporting to the rector / vice-rector, self-assessment of activities" received only 8 answers (42%), indicating systematic work with indicators: 5 managers indicated that they analyzed them quarterly; 3 managers – monthly. The negative fact is the presence of 5 answers (26%), demonstrating the non-perception of KPI as an effective tool for managing the activities of the unit: 1 of the respondents indicated that he did not apply to KPI at all; 4 managers (21%) admitted that they mentioned KPI only when compiling the final report. Thus, the role of KPI in planning, organizing, motivating and controlling the activities of subordinates to achieve certain strategic goals is wiped out.

At all levels of determining performance indicators, it is important to adhere to the university development strategy's priorities and indicators. Ignoring or misunderstanding this principle puts the whole system of indicators away from strategic guidelines and causes the organization to fall into the "trap of activity", which in the long run threatens to lose competitiveness, contributes to inflating the staff of the organization.

In response to the question "Did you achieve your KPIs?" 14 surveyed managers (74% of responses) indicated that they achieved the established values of performance indicators, which does not fully correlate with the results of objective evaluation of the implementation of level II indicators. However, considering the limited sample, the result is obtained $0.74 \cdot 79\% = 58.4\%,$ , which indicates that the survey did not involve units that mostly did not fulfill their KPIs.

The next question "What prevented you from achieving the unit's KPIs?" with the ability to choose several answer options, reveals the main reasons for non-performance indicators. The most common reasons were:

10 – presence of indicators that the unit does not affect according to the functional competencies (52%);

9 – significant amount of work not related to the implementation of the unit's KPIs (47%);


http://dx.doi.org/10.21511/ppm.19(1).2021.07

6 – lack of staff or understaffing of the unit (32%);

5 – unattainability of target values of some indicators (26%);

5 – the presence of irrelevant indicators;

3 – lack of facility of collecting/accounting systems for calculating indicators (16%);

3 – unclear method of calculating indicators (16%);

3 – presence of insignificant (non-indicative) indicators (16%);

3 – lack of motivation system to achieve KPIs (16%).

To the question "Your suggestions for improving the system of evaluating the effectiveness of units of the university" with the possibility of an open answer, which demonstrates both the attitude of managers to the KPI evaluation system and willingness to work further to improve the system, of the 18 answers:

4 answers show either full agreement or overwhelming indifference to the KPI system – "everything is well", "no suggestions" (21%);

9 answers contain constructive proposals aimed at improving and further implementing the system (up to the level of performers) (47%);

4 answers have the nature of remarks – "the need to take into account not only quantitative but also qualitative indicators", "some indicators cannot be performed, and some (including the level of satisfaction) is not typical for the unit", "do not burden the unit with work related to "other units", "make the results of unit evaluation more transparent";

Among the proposals for improving the evaluation system, the most common proposal is to conduct in-house training on the KPI evaluation system and the implementation of stimulating remuneration for achieving KPI. Suggestions for updating, ensuring quantitative measurability and relevance of indicators with the units' functional tasks are appropriate.

Forms of personalized formalized self-analysis could be an additional source of information on the reasons for the results of KPI achievement (non-achievement). Heads of divisions filled in forms of self-analysis of the reasons for non-fulfillment of indicators, which provided the need to analyze each KPI. Of the 46 outstanding indicators, the main reasons for non-compliance are as follows:

"Not able to influence the indicator" – 10 indicators (22%).

"Implementation is required a large-scale management actions/decision" (development of a system of remuneration, increase in the area of classes, etc.) – 8 (17%).

"Excessive target value of the indicator" – 7 (15%).

"External causes" – 6 (13%).

"In progress" (i.e., requires more than a year for execution) – 6 (13%).

"Non-departmental indicator" – 3 (6.5%).

"Not relevant indicator" – 3 (6.5%).

"The activities of academic departments influenced the non-achievement of indicators" – 3 (6.5%).

The analysis of proposals for improvement of indicators shows the following: remove the indicator – 9 indicators; it is proposed to change the calculation method – 6; replace the indicator completely – 2. Unfortunately, among the indicators proposed for removal, there are no indicators "the level of employee satisfaction with the work of the department". On the contrary, most of the proposed indicators for removal – quantitative, measurable, and effective. This situation confirms the problem of lack of communication between senior management and heads of departments, limited awareness of the philosophy of the KPI, and motivation to adhere to strategic guidelines.

To prevent similar problems during the scaling of the KPI system at the level of heads of university academic departments, the latter are involved in the discussion of the relevant KPIs. The purpose of the focus group discussion is to test and refine the list of KPIs of department heads by solving the following tasks: to determine the nature of the

**Table 1.** The average rating for the KPI groups connected with accreditation, competitiveness, financial support, and social security

| Type of KPIs | Average | Standard deviation | Number (share) of KPIs in the group: | | |
|---|---|---|---|---|---|
| | | | top-ranked | outsiders by rating | indicators with an average rating |
| KPIs that reflect the influence on social space | 3,80 | 0,87 | 2 (20%) | 0 (0%) | 2 (22%) |
| KPIs that reflect the influence on accreditation | 4,01 | 0,72 | 8 (80%) | 2 (20%) | 3 (33%) |
| KPIs that reflect the influence on finance | 2,55 | 1,05 | 0 (0%) | 4 (40%) | 1 (12%) |
| KPIs that reflect the influence on competitiveness | 2,60 | 1,01 | 0 (0%) | 4 (40%) | 3 (33%) |

participants' perception of the KPI planning and evaluation methodology; preparation of participants for conscious use in the work of KPI; participants' assessment of the quality of indicators (measurability, relevance, accessibility, relevance), significance (ranking based on subjective perception) and improvement needs.

Focus group participants were asked to survey the score in points from 1 to 5 of the relevance of 29 KPIs (1 – the lowest, 5 – the highest), during which the following average results of their relevance from the position of the focus group (Table 1). At the same time, all KPIs are divided into four groups: indicators that affect or directly indicate the competitiveness of the university (the contingent of graduate students who have a bachelor's degree from another university; the share of graduates who are employed within six months after graduation; the level of satisfaction of higher education students with the quality of education, increase in the number of disciplines taught in English, etc. – 27.5% of the total number of KPI); indicators that affect the implementation of accreditation requirements (ensuring timely training of staff of the department; the share of teachers conducting research; ensuring compliance with licensing conditions in terms of compliance with staffing requirements; the number of participants in the educational process who published articles in journal that included in Scopus and Web of Science, etc.); indicators that affect the amount of funding and income of the university (participation of the department in the implementation of fundraising projects; the contingent of full-time masters, income from tuition for contract students, etc.); KPIs that affect the social space (the share of students who are actively involved in community service, the number of implemented social fundraising projects, etc.).

The maximum values of KPI are obtained for the group of indicators that affect accreditation – 4.01, the minimum – for university finances (2.55). The least consolidated answers are obtained on indicators that indicate competitiveness and finance – fluctuations ranged from 1.05 to 1.01 points. The focus group has the maximum consensus on indicators that reflect traditional activities in teaching and science.

According to the obtained rating, three groups are also identified: top, outsiders, indicators with an average level of relevance. Besides, among the KPIs are defined the indicators that determine the prerequisites for achieving the goals – Lead, and indicators of the goal or result – Lag.

The conducted survey and independent analysis of the focus group participants of the list of indicators are the basis for the following conclusions:

- performance indicators (Lag) – 5 out of 7 (70%) fell into the group of outsiders;
- the top 10 KPI did not include any indicator of competitiveness or one that directly affects finances, and 80% of them are indicators that affect accreditation;
- indicators of the contingent, the use of English in teaching, employment of graduates, fundraising activities were included in the indicators – outsiders.

This perception of indicators by the heads of departments indicates a desire to choose and measure the effectiveness using traditional clear indicators, which is expected and logical.


http://dx.doi.org/10.21511/ppm.19(1).2021.07

## CONCLUSION

Case study of first stages usage of KPI system in university stresses the crucial role of the organization of KPI implementation process on all levels of management that influences the effectiveness of this tool and the achievement of strategic goals and tactical objectives of the university. The novelty of this study consists in the elaboration and adaptation of performance management practice in universities as public institutes, which faces serious specific obstacles, unlike business organizations according to distinctions in motives and incentives, potential, clarity of understanding, and goal setting. One of the main identified problems of performance management is the non-perception of KPI by university staff, its unwillingness to evaluate, identify the impact on strategic indicators, overt resistance and sabotage, and use of defense behavior for discreditation of the system. Such behavior should be the focus of proactive university management and communication activity.

The survey identified that the results of achievement the planned indicators by employees directly depend on the loyal perception of their relevance, significance by the head of the structural unit, which mainly depends on the top manager (rector, vice-rectors), so the role, example, influence of university management are the priority. In this context, the conscious desires of the top management of HEI to search for and systematically implement current management models and develop their own management competence are decisive.

A key factor of the success and effectiveness of the performance management system implementation is the creation of communications based on strategic meetings, discussion of the draft KPI lists at all management levels; organization of discussions at the level of focus groups, training, and self-study; conducting surveys, interviews, and consultations with vertical and horizontal interaction; justification of management decisions using objective criteria, stimulation of critical analysis, collection and open discussion of proposals, reasoned consideration or rejection, justification of management decisions using objective criteria. Coaching effectively systematizes the expectations of a negative nature and adjusts perceptions by demonstrating new opportunities and prospects for the growth of managerial competence and effectiveness of everyone who consciously implements KPI tools.

Unlike the implementation of KPI in business, it has essential specifics for universities – at the stage of formulating the methodology of the KPI system in HEI, it is an effective practice to form a working group of experts from among university staff, heterogeneous in status, but comply with the principles: provision of management authority of different levels of government, functional authority, professional competencies, a representative of the labor community. At the stage of scaling the KPI indicators to the level of departments, it will be expedient to involve representatives of stakeholders in the focus groups: deans and heads of departments who demonstrate the high performance of subordinate units, high level of intra-corporate involvement, and loyalty. This allows ensuring high efficiency of the group and forming a team of supporters and drivers of the implementation and improvement of the KPI system in HEI.

To increase employees' loyalty to KPI, it is relevant in the first stages not to tie the wages and financial incentives to valuations, to use the mandatory and variable indicators. At the same time, no options of penalties are used in the first cycles of KPI evaluation, no negative impact on the level of wages is provided, and discussion of the results of the achievement should not be made public but carried out at the level of individual communication between manager and subordinate.

The emotional component of management plays a significant role in its effectiveness and efficiency. It is recommended to include tools for assessing the emotional state of employers, to formulate anonymous writing identify attitudes to the KPI system and methods of its implementation in individual departments and management units, as well as use local methodological and educational interventions of the working group in the implementation of KPI assessment.

The use of such a mechanism for implementing the KPI will contribute to the formation of reflexive and active management culture in the strategic management system and a culture of productive dialogue through vertically and horizontally management interaction.

## AUTHOR CONTRIBUTIONS

Conceptualization: Larysa Shaulska, Tetyana Nagornyak.
Formal analysis: Larysa Shaulska, Oleksandra Laktionova, Hanna Sereda.
Investigation: Larysa Shaulska, Oleksandra Laktionova, Hanna Sereda.
Methodology: Larysa Shaulska, Oleksandra Laktionova, Tetyana Nagornyak, Hanna Sereda.
Project administration: Larysa Shaulska, Tetyana Nagornyak.
Supervision: Tetyana Nagornyak.
Validation: Tetyana Nagornyak.
Visualization: Larysa Shaulska, Oleksandra Laktionova, Hanna Sereda.
Writing – original draft: Larysa Shaulska, Oleksandra Laktionova, Tetyana Nagornyak, Hanna Sereda.
Writing – review & editing: Larysa Shaulska, Oleksandra Laktionova, Hanna Sereda.

## REFERENCES


1. Ballentine, H., & Eckles, J. (2009). Dueling scorecards: How two colleges utilize the popular planning method. *Planning for Higher Education, 37*(3), 27-35. Retrieved from https://eric.ed.gov/?id=EJ840454
2. Beard, D. F. (2009). Successful applications of the balanced scorecard in higher education. *Journal of Education for Business, 84*(5), 275-282. https://doi.org/10.3200/JOEB.84.5.275-282
3. Committee of University Chairmen. (2004). *A final report to the CUC on: Good practice in six areas of the governance of higher education institutions*. Retrieved from https://ucurhulgov.files.wordpress.com/2013/01/cuc-chems-final-report.pdf
4. Fitzgerald, L., Johnson, R. Brignall, T. J., & Sivelstro, R. (1991). *Performance Measurement in Service Business*. The Chartered Institute of Management Accountants, London. Retrieved from https://www.researchgate.net/publication/283694495_Performance_Measurement_in_Service_Businesses
5. Ionescu, M. (2012). *The balanced scorecard (BSC): Framework, implementation methodology and recommended application*. Balanced Scorecard Romania.
6. Kaplan, R. S., & Norton, D. P. (2005). The balanced scorecard: Measures that drive performance. *Harvard Business Review, 83*(7), 172. Retrieved from https://hbr.org/2005/07/the-balanced-scorecard-measures-that-drive-performance
7. Kaplan, R. S., & Norton, D. P. (1992). The Balanced Scorecard – measures that drive performance. *Harvard Business Review, 70*(1), 71-79. Retrieved from https://hbr.org/1992/01/the-balanced-scorecard-measures-that-drive-performance-2
8. Kolot, A., Kozmenko, S., Herasymenko, O., & Štreimikienė, D. (2020). Development of a decent work institute as a social quality imperative: Lessons for Ukraine. *Economics and Sociology, 13*(2), 70-85. https://doi.org/10.14254/2071-789X.2020/13-2/5
9. Lynch, R. L., & Cross, K. F. (1991). *Measure up! The essential guide to measuring business performance*. Mandarin. London. Retrieved from https://books.google.com.ua/books/about/Measure_Up.html?id=6v79OAAACAAJ&redir_esc=y
10. McAdam, R., & Bailie, B. (2002). Business performance measures and alignment impact on strategy: The role of business improvement models. *International Journal of Operations and Production Management, 9,* 972-996. Retrieved from https://www.researchgate.net/publication/235318678_Business_performance_measures_and_alignment_impact_on_strategy_The_role_of_business_improvement_models
11. McDevitt, R., Giapponi, C., & Solomon, N. (2008). Strategy revitalization in academe: A balanced scorecard approach. *International Journal of Educational Management, 22*(1), 32-47. https://doi.org/10.1108/09513540810844549
12. Ndoda, G. R., & Sikwila, M. N. (2014). Ubuntu-praxis: Remodelling the balanced scorecard model at a university, an Afrocentric perspective. *Research in Higher Education Journal, 25,* 1-27. Retrieved from https://files.eric.ed.gov/fulltext/EJ1055316.pdf
13. Neely, A. (2005). The evolution of performance measurement research: developments in the last decade and a research agenda for the next. *International Journal of Operations and Production Management, 25*(12), 1264-1277. https://doi.org/10.1108/01443570510633648
14. Niven, P. R. (2002). *Balanced Scorecard Step-by-Step. Maximiz-*



http://dx.doi.org/10.21511/ppm.19(1).2021.07

*ing Performance and Maintaining Results*. New York: Wiley.

15. Rohm, H., Wilsey, D., Perry, G. S., & Montgomery, D. (2013). *The institute way: Simplify strategic planning & management with the balanced scorecard* (1st ed.). Cary, NC: InstitutePress. Retrieved from https://www.amazon.com/Institute-Way-Strategic-Management-Scorecard-ebook/dp/B00H8ZKDQQ

16. Sereda, H. V. (2018). Dosvid universytetiv v oblasti vprovadzhennia KRI-pokaznykiv dosiahnennia stratehichnykh tsilei [Experience of universities in the field of the implementation of KPI-indicators to achieving strategic goals]. *Ekonomika i orhanizatsiia upravlinnia – Economics and organization of management, 4,* 87-99. (In Ukrainian). Retrieved from http://nbuv.gov.ua/UJRN/eiou_2018_4_11

17. Sureshchandar, G. S., & Leisten, R. (2005). Holistic scorecard, strategic performance measurement and management in the software industry. *Measuring Business Excellence, 9*(2), 12-29. https://doi.org/10.1108/13683040510602849

18. Taylor, J., & Baines, C. (2012). Performance management in UK universities: Implementing the balanced scorecard. *Journal of Higher Education Policy and Management, 34*(2), 111-124. https://doi.org/10.1080/1360080X.2012.662737

19. Wynder, M., Wellner, K., & Reinhard, K. (2013). Rhetoric or reality? Do accounting education and experience increase weighting on environmental performance in a balanced scorecard? *Accounting Education: An International Journal, 22*(4), 366-381. https://doi.org/10.1080/09639284.2013.817802

20. Yu, M. L., Hamid, S., Ijab, M. T., & Soo, P. H. (2009). The e-balanced scorecard (e-BSC) for measuring academic staff performance excellence. *Higher Education, 57,* 813-828. https://doi.org/10.1007/s10734-009-9197-x