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ACADEMIC MANAGEMENT PRACTICES AND ORGANIZATIONAL EFFICIENCY: EVIDENCE FROM HIGHER EDUCATION INSTITUTIONS

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Abstract. The accelerating growth of the global higher education market and ongoing digital transformation have increased the importance of effective academic activity management in universities. Ensuring a balance between teaching workload, research productivity, and financial sustainability has become a key factor in improving institutional competitiveness and management efficiency. This study evaluates the current state of academic governance and measures management effectiveness using quantitative and system-based approaches. Using empirical data from Tashkent State University of Economics for 2019–2025, the research analyzes student enrollment, faculty workload, contract revenues, and research outputs indexed in Scopus. An elasticity coefficient is applied to assess the relationship between revenue growth and enrollment expansion, while correlation and balance analyses identify the optimal academic workload. The results show that management efficiency improves when financial growth corresponds proportionally to student increases. Excessive teaching loads reduce research productivity, whereas normalized workloads enhance publication performance. The optimal workload range of 526–540 hours per faculty member ensures both financial stability and scientific activity. The proposed framework offers practical guidance for improving academic governance and sustainable development in higher education institutions.

Keywords: higher education institutions, faculty member, management, market, scientific potential, optiomization.

1.Introduction

The global higher education services market has been facing changes and new demands in recent years. Global economic development, technological innovations and digital transformation processes require improving the quality and efficiency of higher education. “The global higher education services market is projected to reach $828.85 billion in 2024, $929.47 billion in 2026, and $2,557.93 billion by 2034. The average market growth rate from 2026 to

2034 is projected at 11.93 percent." These developments indicate the growth of higher education systems around the world and the creation of new opportunities in the global education market. The modernization of the education system, the diversification of curricula and new pedagogical approaches are increasing the demand for creating internationally competitive education systems. In such conditions, it is important for countries to increase economic efficiency and apply modern management methods in higher education systems based on the use of effective management practices.[1]

In the global competition taking place in the world, the issue of effective management of academic activities for the sustainable development of the higher education system and the training of competitive personnel in the international arena is gaining urgent importance on a global scale. Accordingly, higher education institutions are paying special attention to increasing efficiency through strategic planning of their activities, ensuring academic freedom, optimizing teaching workloads, and monitoring the quality of education. In particular, the experience of universities that occupy high places in the international rankings of QS and Times Higher Education shows that systematic management of academic activities is inextricably linked with the digitalization of the educational process, the scientific organization of student recruitment, financial stability, and improving the mechanisms for the effective use of resources.

In Uzbekistan, special attention is paid to expanding the activities of higher education institutions and increasing the efficiency of higher education services. One of the main goals of the strategy set out in the "Concept for the Development of Higher Education until 2030" is to "include 10 higher education institutions in the ranking of the world's 1,000 most prestigious higher education institutions, increase the efficiency of scientific research and increase the scientific potential in higher education institutions to 70%, conduct international accreditation of educational programs of 30 higher education institutions, improve the quality of training of specialists with higher education, and increase the level of coverage of young people with higher education to at least 50%" [2]. As is known, "from 2016 to 2024, the level of coverage of higher education in Uzbekistan increased from 9% to 47.7%," but to achieve this goal, effective management and development of strategic approaches are required to increase the competitiveness of higher education. At the same time, areas such as the introduction of innovative technologies in academic management, strengthening corporate cooperation, and supporting the integration of international students into the educational process are also emerging as important factors in improving the quality of education.

2.Literature review

The study of the theoretical aspects of the process of managing academic activities in higher education institutions and its importance in increasing competitiveness in the economy is reflected in the scientific views of scientists from far abroad, such as A. Fayol, F. Taylor, M. Weber, Ch. Barnard, P. Drucker, G. Mintzberg, D. McGregor, A. Maslow, F. Kotler, G. Armstrong. They created the foundations of modern management concepts by developing systematic approaches to the organization of management, division of labor, efficiency, human factor and leadership styles.

Among the scientists from the countries of the Commonwealth of Independent States, Anikeeva N.P., Baidenko V.I., Boguslavsky M.V., Moiseeva N.K., Konysheva M.V., Lapygin Y.N., Kharisov F.F., Kotlyarova M.Yu., Prokopenko E.S., Yamburg E.A., Piscoppel A.A. and others conducted scientific research on management strategies in higher education organizations and ensuring the competitiveness of modern higher education organizations.

Organizational management and theoretical and methodological aspects and organizational issues of management in the higher education system of Uzbekistan Sh.N. Zaynutdinov, D.S. Qosimova, D.T. Yusupova, M.P. Eshov, A.Sh. Bekmurodov, R.Kh. Karlibayeva, S.S. Gulyamov, M.A. Ikramov, N.K. Yo‘ldoshev, G.Q. Abdurakhmonova, Z.A. Khakimov, H.A. Hakimov, D.Kh. Nabiev, O.J. Djurabayev, D.N. Rakhimova, R.A. Rakhmanbayeva, M.Kh. Saidov, Z.A. Ashurov, Sh.J. Ergashkhodzhayeva, M.F. Khakimova, B.O. Tursunov, Q.Q. Kurolov, B.N. Urinov and others, who made proposals for the creation of existing organizational, legal and methodological mechanisms for the effective use of modern management and digital integration strategies. However, the research of these scientists did not focus on research aimed specifically at improving the efficiency of management of academic activities, the introduction of registrar offices and digital management mechanisms.

3.Analysis and results

As a result of fundamental reforms in the higher education system in Uzbekistan, not only the number and quality indicators of higher education institutions are increasing, but also the economic and organizational model of management is being updated. However, the most important aspect of this process is the modernization of the academic management system.

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Because the level of development of higher education institutions and the effectiveness of management directly depend on the mechanisms for planning, organizing, controlling and evaluating the academic process. Since the higher education system is being gradually modernized, the formation of academic management is being carried out in each educational institution based on its own direction and methodological approaches. Each university has formed a management model based on its specialized field, regional needs and national education policy. The academic management model in higher education institutions of Uzbekistan is being formed based on the specialization of each university, regional needs and state education policy. Centralized management, approach to practice, integration with scientific research, and education based on national characteristics are the main distinguishing features of universities in management. This comparison shows that the republic's higher education institutions are developing in their own directions. Academic management in universities is carried out through specially organized councils. These councils are important in determining the main directions of the university's educational and scientific activities. Their names and composition may differ in different countries, but in general, the university council, faculty councils, and scientific councils are the main academic management bodies.

The higher education system in our republic has been gradually reformed after independence and today has reached the stage of forming a system based on modern knowledge, competence, and innovation. In particular, the “Concept for the Development of the Republic of Uzbekistan until 2030”, approved by Presidential Decree No. PF-5847 of October 8, 2019, set out important directions and priority goals for a radical reform of the higher education system. It focuses on issues such as improving academic management, improving the quality of education, and ensuring harmony between science, innovation, and economic development. After the stable development of the teaching staff in the period 2019-2024, the high growth observed in 2024 can be assessed as a practical result of the policy of systematic institutional reforms and consolidation. This is of great importance in improving the quality of education, strengthening scientific potential, and ensuring the competitiveness of the higher education system.

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Table 1

Analysis of the teaching workload of professors and teachers of Tashkent State University of Economics

Study year	Total staff unit	Total loading hours	Normative load for 1 professor	Annual workload for 1 professor – teacher	Difference from total demand
2019-2020	483	349310	800	723,21	-76,8
2020-2021	550	396540	800	720,98	-79,0
2021-2022	780	407650	550	522,63	-27,4
2022-2023	920	493160	550	536,04	-14,0
2023-2024	1726,7	908470	550	526,12	-23,9
2024-2025	1757,5	973977	550	554,18	4,18

The growth rates in recent years indicate the financial stability of higher education institutions and the formation of diversified sources of income. The decrease in the average number of articles per professor indicates that scientific activity is moving from quantitative to qualitative assessment. International indexing requirements, strict anti-plagiarism criteria, and global standards emerging in the scientific publishing market play an important role in this process. At the same time, the annual increase in the ratio of defenses to academic titles indicates that the scientific personnel training system has become more active, and the efficiency of doctoral and intern research institutions is increasing. The steady growth in the number of articles indexed in the Scopus database confirms the active integration of the scientific community of Uzbekistan into the international scientific space. The sharp increase in this indicator from a very low level in 2019 to 2023 is explained by the increase in the number of scientific supervision systems, international cooperation, grants and scientific projects. The changes in the table indicate that the institutional foundations of scientific activity in the higher education system of Uzbekistan are being strengthened, mechanisms are being consistently formed to improve the scientific efficiency of professors and teachers, and a scientific ecosystem in line with international standards is gradually developing.

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Table 2

Analysis of the efficiency and elasticity indicators of academic management at Tashkent State University of Economics for the period 2019-2025

Study year	Total contract revenue (billion soums)	Student population growth rate (%)	Contract revenue growth rate (%)	Management efficiency is determined based on the elasticity coefficient
2019-2020	64,5			
2020-2021	99,6	61,28	54,35	0,89
2021-2022	163	54,51	63,65	1,17
2022-2023	220,1	21,07	35,28	1,67
2023-2024	244,2	10,73	10,73	1
2024-2025	560,3	94,82	129,48	1,3

The dynamics of the number of students, teacher workload and contract revenues at Tashkent State University of Economics for 2019-2025 were studied. These indicators serve as an important criterion for determining management efficiency, since changes in the flow of students directly affect not only financial revenues, but also the average workload of professors and teachers. The elasticity coefficient was used to assess the effectiveness of academic management. This indicator reveals the relationship between the growth of the number of students and the growth of contract revenues and allows us to determine how effective management decisions are. The elasticity coefficient determines the relationship between the growth of the number of students and the growth of contract revenues and allows us to measure the effectiveness of management decisions.

According to the results of the analysis, in the 2020-2021 academic year, the number of students increased by 61.28%, while contract revenues increased by a lower rate (54.35%). As a result, the elasticity coefficient was E=0.89, indicating a decrease in management efficiency. The increase in students during this period was not fully proportional to financial revenues, which indicates the need for coordination in contract policy and financial management.

Positive changes were observed in the following stages. In 2021-2022, the growth rate of revenues (63.65%) was higher than the growth rate of the number of students (54.51%), and the elasticity reached E=1.17. This indicates an increase in management efficiency. In 2022-2023, this trend intensified: revenue increased by 35.28%, and the number of students by 21.07%, reaching the level of elasticity E=1.67. This period can be considered the most effective stage for university management.

In 2023-2024, the number of students and revenue growth were the same - 10.73%, resulting in elasticity E=1.0. This indicator indicates a neutral stage of management efficiency, that is, the number of students and revenue growth were carried out in proportion. Finally, in 2024-2025, the number of students increased sharply by 94.82%, and revenue increased even more - by 129.48%, and elasticity E=1.3. During this period, management efficiency rose to a higher level.

The social impact of the academic governance system is manifested, first of all, in the quality of education and increased trust in it. Through a transparent, accountable, and student-centered governance model, educational institutions adapt to the social needs of citizens. This, in turn, contributes to the formation of social capital, increased civic engagement, and moral and intellectual development.

Table 3

Selected indicators to determine the "optimal academic workload"

Variables	Marking	Impact
L	Annual workload per teacher (hours)	Indicates the volume of work
R	Average workload per student (hours)	Indicates the student load
E	Elasticity coefficient	Administrative efficiency
S	Number of Scopus articles	Level of scientific activity
D	Income per teacher (million soums)	Financial incentives
C	Average contract amount (soums)	Source of income for the university

The main purpose of analytical tables and graphic materials is that the "Optimal Academic Load" is considered as a strategic indicator of university management, which is one of the main criteria for forming an integral index of academic efficiency and assessing the economic efficiency of resource use. It represents the most optimal ratio that provides a balance between the three basic indicators that determine the effectiveness of academic management in higher education institutions - financial stability, the volume of the academic load and the effectiveness of scientific activity. In other words, the optimal load is a management situation

that simultaneously supports the participation of professors and teachers in the educational process, the share of time allocated to scientific activity and the economic stability of the university.

The "balance analysis" method was used to find the "Optimal Academic Load", which is considered an empirical basis for forming an effective model of academic management:

$$Daromad_{universitet} = Xarajat_{akademik} + Ilmiy\ faoliyat_{o'qituvchi} = Barqaror\ darajada.$$

Using this equality, a point is found at which:

the university's income (contract, grant, state order, services) covers its academic and scientific expenses;

the teacher's scientific activity does not decrease, since the workload is within the norm;

the quality of student education is maintained, since the workload does not exceed the norm.

We determine the elasticity point of the teacher's workload:

In 2019-2025, there are values of L (decreased from 723 to 554 hours).

The elasticity coefficients are in the range E = 0.89 - 1.3.

For optimal conditions, E should be ≈1 - that is, the growth in income is proportional to the increase in the number of students. This situation was observed in 2023-2024. E = 1, workload 526 hours.

Therefore, the range of 550±25 hours is the optimal academic workload limit.

Based on Table 4, it is desirable that the workload be in the range of 520-540 hours for maximum scientific activity.

In 2023-2024, the contract revenue is 244 billion soums, E= 1 - the break-even point.

In 2024-2025, the revenue is 560 billion, and the workload is 554 hours - the income is maximum, but the workload is increasing.

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Table 4

Correlation trend between the average workload of professors and scientific activity at Tashkent State University of Economics for the period 2020-2024

Years	Average study load (hours)	Number of articles in Scopus database (average)	Correlations	Comments
2020-2021	720	0,14	Yuklama yuqori, maqolalalar soni past	Ilmiy faoliyat yuklama ortiqligi sabab susaygan
2021-2022	536	0,53	Yuklama kamaydi, maqolalalar soni oshdi	Me'yorlashtirilgan yuklama ilmiy faollikni oshirgan
2022-2023	526	0,84	Optimal yuklama, faoliyat eng yuqori	Eng samarali muvozanat holati
2023-2024	554	0,76	Yuklama oshganda, biroz pasayish	Yuklama oshishi natijasida ilmiy faoliyat pasaygan

Therefore, the range of 526–540 hours is considered a stable financial point not only for the teacher, but also for the university.

We derive the optimal workload in the following case:

$$L_{opt}=\frac{L_{min}+L_{max}}{2} \quad (2.2.)$$

here:

L_{min}= 520

L_{max}=540

$$L_{opt}=530 \quad (2.3)$$

We determine the optimal load (L_{opt}) by taking into account 3 more basic ratios.

Table 5

Basic ratio model used to calculate optimal load (L_{opt})

Factors	Marking	Meaning
T_s	Number of students	Main source of academic workload
F_s	Number of teachers (full-time)	Academic workload distribution resource
W_t	Total teaching load (hours)	Total volume of student services

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Average workload per teacher:

$$L = \frac{W_t}{F_s} \quad (2.4)$$

and the average workload per student:

$$R = \frac{W_t}{T_s} \quad (2.5)$$

Student workload R≈Standard module workload (25–30 hours/week) Teacher workload L≈ 520–540 hours/year

Elasticity coefficient E≈1

Here:

If the number of students increases and the number of teachers does not change - L increases - scientific efficiency decreases.

If the number of students decreases and the staff remains the same - L decreases - financial stability decreases.

Therefore, the change in L is controlled by the ratio T_s / F_s.

$$L_{opt} = \frac{W_t}{F_s} * \frac{E_{real}}{E_{opt}} \quad (2.6)$$

here:

E_{opt}=1 - ideal elastics;

E_{real} — the actual value found was more like 1.17 or 0.89.

If E_{real} >1 income is growing faster than the number of students, which means the workload can be reduced.

If E_{real}<1 growth is slow, which means that the load needs to be increased.

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Table 6

Dynamics of the number of students, elasticity coefficient and workload at Tashkent State University of Economics for 2021-2025

Years	Student population growth	Elasticity coefficient	Load (hours)	Comments
2021-2022	+54,5%	1,17	522	O‘sish boshlangan
2022-2023	+21,0%	1,67	536	O‘qituvchilar samarali ishlayapti
2023-2024	+10,7%	1,00	530	Ideal muvozanat
2024-2025	+94,8%	1,3	554	Yuklama oshgan, ammo foyda yuqori

Therefore, the situation in the 2023-2024 academic year (E≈1, L=526 hours) is closest to the optimal point.

Empirical analyses show that there must be a balance between the academic workload L, the number of students T_s, the number of teachers F_s, and the income indicators C, D. This balance point is considered the “Break-even point”.

At this point:

$$R_{tatal} = A_{academic} + S_{research} \quad (2.7.)$$

that is, profit = 0, but stability is maximum. In this case, the average workload of teachers (L_{opt} ≈ 530 hours) and the scientific efficiency indicator (S ≈ 0.8–0.9) are formed in harmony with each other.

The formula for the break-even point:

$$R_{tatal} = C \times T_s = D \times F_s \quad (2.8.)$$

here:

C - average contract amount per 1 student;

T_s - number of students;

D - income per 1 teacher;

F_s - number of teachers.

Based on this:

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$$C \times T_s = D \times F_s \rightarrow \frac{T_s}{F_s} = \frac{C}{D} \qquad (2.9.)$$

From this equality, the optimal value of the student-teacher ratio for the break-even point was determined.

For example, for the 2023-2024 academic year:

C = 12 million soums, D = 630 million soums,

$$\frac{T_s}{F_s} = 52{,}5 \qquad (2.10.)$$

that is, on average, 50-55 students per teacher at the university level. This figure does not indicate the number of students in the group, but the strategic ratio that distributes the total workload. In this case, the teacher's workload

L ≈ 530 hours, and scientific activity continues without a decrease.

As a result of determining the break-even point, the following scientific conclusions were obtained:

When the teacher's workload is L_{opt} = 530 ±10 hours, scientific activity (S) has the highest indicator.

Academic stability is ensured at the point where the growth rate of university income is E=1.

The triad "optimal workload - break-even point - scientific efficiency" forms an equilibrium model of academic management.

As a result of the analysis conducted on the example of Tashkent State University of Economics, it was determined that the academic and financial indicators of the university approached the equilibrium state in 2023-2024. In this year, the elasticity coefficient E=1, and the average workload was 530 hours. This indicates that there is a stable academic workload range of 520-540 hours corresponding to the break-even point. On this basis, the value L_{opt} = 530 hours was determined, which was accepted as an empirical basis for ensuring the effectiveness of academic management. The analysis scientifically substantiated the possibility of maintaining a balance between not only the labor productivity of teachers, but also the financial stability and scientific potential of the university.

4.Conclusions

This study examined the current state of academic activity management and evaluated management efficiency in higher education institutions under conditions of rapid market

expansion, digital transformation, and increasing global competition. The findings confirm that the effectiveness of academic governance is no longer determined solely by organizational structure or administrative control, but by the ability to strategically balance teaching workloads, research productivity, and financial sustainability within an integrated management framework. In modern universities, academic management has evolved into a multidimensional system that simultaneously influences educational quality, scientific output, and institutional competitiveness.

Empirical evidence obtained from Tashkent State University of Economics demonstrates that systematic reforms in enrollment planning, workload distribution, and financial policy significantly improve institutional performance indicators. The analysis of student numbers, faculty workloads, contract-based revenues, and research publications shows that quantitative growth alone does not guarantee efficiency. Instead, proportional and well-coordinated development across these indicators is essential. In particular, the elasticity coefficient proved to be an effective analytical tool for assessing management performance, as it captures the relationship between enrollment expansion and revenue growth. Periods when elasticity approached or exceeded one were associated with higher managerial effectiveness and more sustainable financial outcomes.

The study also revealed a strong inverse relationship between excessive teaching loads and research productivity. When faculty members were overloaded with instructional hours, the number and quality of scientific publications declined. Conversely, when workloads were normalized, research activity increased significantly, including a rise in publications indexed in Scopus, indicating deeper integration into the international academic community. These findings confirm that optimizing workload allocation is not only a pedagogical issue but also a strategic instrument for improving scientific competitiveness and institutional reputation.

A key contribution of this research is the identification of an empirically grounded optimal academic workload range. The results indicate that an annual load of approximately 526–540 hours per faculty member represents a balanced point at which educational responsibilities, research engagement, and financial performance are simultaneously maintained. At this level, universities achieve stable revenues, preserve teaching quality, and maximize scientific output. This “optimal academic load” concept can serve as a practical benchmark for planning staffing policies, budgeting, and performance evaluation systems.

From a policy perspective, the findings emphasize the importance of modernizing academic governance through digital management systems, registrar offices, data-driven

decision-making tools, and performance-based incentives. The integration of these mechanisms enhances transparency, accountability, and resource efficiency while supporting strategic planning and quality assurance. Such reforms are particularly relevant for emerging higher education systems seeking to strengthen international competitiveness and align with global standards.

Overall, the study demonstrates that effective academic activity management requires a systemic and evidence-based approach. By combining financial analysis, workload optimization, and research performance metrics, universities can achieve sustainable development and long-term institutional success. The proposed framework offers methodological and practical guidance for administrators and policymakers aiming to enhance management efficiency and ensure balanced growth in higher education institutions.

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