MUHANDISLIK & IQTISODIYOT

ijtimoiy-iqtisodiy, innovatsion texnik, fan va ta'limga oid ilmiy-amaliy jurnal

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05.01.00 – Axborot texnologiyalari, boshqaruv va kompyuter grafikasi
05.01.01 – Muhandislik geometriyasi va kompyuter grafikasi. Audio va video texnologiyalari
05.01.02 – Tizimli tahlil, boshqaruv va axborotni qayta ishlash
05.01.03 – Informatikaning nazariy asoslari
05.01.04 – Hisoblash mashinalari, majmualari va kompyuter tarmoqlarining matematik va dasturiy ta'minoti
05.01.05 – Axborotlarni himoyalash usullari va tizimlari. Axborot xavfsizligi
05.01.06 – Hisoblash texnikasi va boshqaruv tizimlarining elementlari va qurilmalari
05.01.07 – Matematik modellashtirish
05.01.11 – Raqamli texnologiyalar va sun'iy intellekt
05.02.00 – Mashinasozlik va mashinashunoslik
05.02.08 – Yer usti majmualari va uchish apparatlari
05.03.02 – Metrologiya va metrologiya ta'minoti
05.04.01 – Telekommunikasiya va kompyuter tizimlari, telekommunikasiya tarmoqlari va qurilmalari. Axborotlarni taqsimlash
05.05.03 – Yorug'lik texnikasi. Maxsus yoritish texnologiyasi
05.05.05 – Issiqlik texnikasining nazariy asoslari
05.05.06 – Qayta tiklanadigan energiya turlari asosidagi energiya qurilmalari
05.06.01 – To'qimachilik va yengil sanoat ishlab chiqarishlari materialshunosligi
05.08.03 – Temir yo'l transportini ishlatish
05.08.06 – "G'ildirakli va gusenisali mashinalar va ularni ishlatish" (texnika fanlari)
05.09.01 – Qurilish konstruksiyalari, bino va inshootlar
05.09.04 – Suv ta'minoti. Kanalizatsiya. Suv havzalarini muhofazalovchi qurilish tizimlari
10.00.06 – Qiyosiy adabiyotshunoslik, chog'ishtirma tilshunoslik va tarjimashunoslik
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08.00.03 – Sanoat iqtisodiyoti
08.00.04 – Qishloq xo'jaligi iqtisodiyoti
08.00.05 – Xizmat ko'rsatish tarmoqlari iqtisodiyoti
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08.00.07 – Moliya, pul muomalasi va kredit
08.00.08 – Buxgalteriya hisobi, iqtisodiy tahlil va audit
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08.00.10 – Demografiya. Mehnat iqtisodiyoti
08.00.11 – Marketing
08.00.12 – Mintaqaviy iqtisodiyot
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08.00.15 – Tadbirkorlik va kichik biznes iqtisodiyoti
08.00.16 – Raqamli iqtisodiyot va xalqaro raqamli integratsiya
08.00.17 – Turizm va mehmonxona faoliyati

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THE ROLE OF HUMAN RESOURCE MANAGEMENT IN STRENGTHENING RESEARCH SUPPORT FOR PROFESSORS IN HIGHER EDUCATION INSTITUTIONS

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Abstract. The article examines the role of human resource management in strengthening research support for professors in higher education institutions. Official research and development statistics of Uzbekistan for 2023–2025 are analysed: the number of researchers increased from 33.0 to 43.1 thousand, the number of researchers with PhD and DSc degrees from 13.7 to 20.3 thousand, and the number of doctoral students from 8.4 to 9.6 thousand, while research and development expenditure of the higher education sector amounted to 234–282 billion soums per year. Drawing on models of faculty research productivity, the study identifies the individual, institutional and leadership factors that HR management can influence. A system of HR practices for research support covering recruitment, workload, development, resources, incentives, collaboration and mentoring is proposed, linked to the national normative framework, together with indicators for monitoring its effectiveness.

Keywords: human resource management, research support, faculty research productivity, higher education, research and development, doctoral training, incentives, Uzbekistan.

Annotatsiya. Maqolada oliy ta’lim muassasalarida professor-o‘qituvchilarning ilmiy faoliyatini qo‘llab-quvvatlashni kuchaytirishda inson resurslarini boshqarishning roli tadqiq etilgan. O‘zbekistonning 2023–2025-yillardagi ilmiy tadqiqot va tajriba-konstruktorlik ishlanmalari statistikasi tahlil qilingan: tadqiqotchilar soni 33,0 mingdan 43,1 ming nafarga, PhD va DSc darajasiga ega tadqiqotchilar soni 13,7 mingdan 20,3 ming nafarga, doktorantlar soni 8,4 mingdan 9,6 ming nafarga oshgan, oliy ta’lim sektorining ilmiy tadqiqot xarajatlari esa yiliga 234–282 mlrd so‘mni tashkil etgan. Professor-o‘qituvchilar ilmiy samaradorligi modellari asosida inson resurslarini boshqarish ta’sir ko‘rsata oladigan individual, institutsional va rahbariyat omillari aniqlangan. Ishga qabul qilish, yuklama, malaka oshirish, resurslar, rag‘batlantirish, hamkorlik va ustoz-shogirdlikni qamrab oluvchi, milliy me’yoriy baza bilan bog‘langan ilmiy faoliyatni qo‘llab-quvvatlash HR amaliyotlari tizimi va uning samaradorligini monitoring qilish ko‘rsatkichlari taklif etilgan.

Kalit so‘zlar: inson resurslarini boshqarish, ilmiy faoliyatni qo‘llab-quvvatlash, ilmiy samaradorlik, oliy ta’lim, ilmiy tadqiqot va ishlanmalar, doktorantura, rag‘batlantirish, O‘zbekiston.

Аннотация. В статье исследуется роль управления человеческими ресурсами в усилении поддержки научной деятельности профессорско-преподавательского состава высших учебных заведений. Проанализирована официальная статистика научных исследований и разработок Узбекистана за 2023–2025 годы: численность исследователей увеличилась с 33,0 до 43,1 тыс. человек, исследователей со степенями PhD и DSc — с 13,7 до 20,3 тыс., докторантов — с 8,4 до 9,6 тыс., а расходы сектора высшего образования на исследования и разработки составляли 234–282 млрд сумов в год. На основе моделей научной продуктивности преподавателей выявлены индивидуальные, институциональные и управленческие факторы, на которые может влиять управление персоналом. Предложена система HR-практик поддержки научной деятельности, охватывающая подбор, нагрузку, развитие, ресурсы, стимулирование, сотрудничество и наставничество и увязанная с национальной нормативной базой, а также показатели мониторинга её эффективности.

Ключевые слова: управление человеческими ресурсами, поддержка научной деятельности, научная продуктивность преподавателей, высшее образование, исследования и разработки, подготовка докторантов, стимулирование, Узбекистан.

INTRODUCTION

Research is one of the core missions of a modern university, and its results depend directly on the professors who carry it out. Unlike teaching, which is organised through timetables and curricula, research requires time that is not fixed in advance, access to resources and data, a supportive environment and long-term motivation. Whether these conditions are created depends to a large extent on human resource management: on whom a university recruits, how it distributes workload, how it develops and rewards its staff and how it organises collaboration. HR management therefore becomes a key instrument for strengthening research support.

In Uzbekistan the importance of this task is defined at the level of national strategy. The Concept for the Development of Science until 2030, approved by Decree No. PF-6097 of 29 October 2020, sets the goals of increasing the share of science funding in GDP six-fold by 2025 and ten-fold by 2030, reducing the average age of researchers from 51 to 39 years by 2030 and tripling the share of PhD and DSc holders among researchers under 39 [2]. The Law on Science and Scientific Activity gives researchers the right to material incentives depending on the level and quality of their work and to participate in competitions for research projects [1]. Decree No. PF-58 of 10 April 2026 provides that research orientation and the results of the national rating of universities will be among the factors determining university funding from 2027, that at least half of research funding is directed to projects in priority areas, and that funding of research projects continues only if agreed annual performance indicators are achieved [3].

The aim of this study is to determine the role of human resource management in strengthening research support for professors and to develop a system of HR practices for this purpose. The objectives are to analyse the dynamics of research personnel, expenditure and doctoral training in 2023–2025, to identify the factors of faculty research productivity that HR management can influence, and to propose a system of HR practices and monitoring indicators.

LITERATURE REVIEW

Research on faculty research productivity shows that it is determined by a combination of individual and institutional factors. C. Bland and co-authors developed a model in which research productivity depends on individual characteristics (socialisation, research skills, motivation, networks), institutional characteristics (clear research goals, a research-oriented culture, resources, sufficient research time, communication and recognition) and leadership characteristics; in their study of medical school faculty, these groups of factors together predicted productivity, and institutional and leadership features mattered in addition to individual ones [6]. M. Teodorescu, in a cross-national analysis of faculty in ten countries, found that membership in professional associations, attendance at conferences and time devoted to research were among the most consistent correlates of publication productivity [7]. V. Hesli and J. M. Lee showed that productivity is associated with research time, institutional resources and the presence of collaboration networks [8].

The relationship between research and other faculty duties is a central issue for HR management. M. F. Fox found that faculty who are highly productive in research tend to have a preference for research and spend more time on it, and that heavy involvement in teaching was associated with lower publication output [9]. This means that protected research time is not a privilege but a condition of productivity. Resources and incentives also matter. B. Jacob and L. Lefgren estimated that receiving a research grant from the US National Institutes of Health leads to a modest increase in subsequent publications [10]. P. Azoulay, J. Graff Zivin and G. Manso showed that incentive schemes which tolerate early failure and reward long-term success are more conducive to creative research than schemes based on short review cycles [11]. C. Franzoni, G. Scellato and P. Stephan documented that cash incentives for publications have spread in many countries and are associated with more submissions to leading journals, but not necessarily with a higher share of accepted papers [12].

Collaboration is another channel through which research support works. S. Lee and B. Bozeman found that the number of collaborators is strongly related to the number of publications of a researcher [13]. P. Stephan analysed how the economics of science — funding, labour markets for researchers and incentives — shapes the behaviour of scientists and the productivity of research systems [14]. The literature therefore indicates that research support requires a coherent set of measures: time, skills, resources, incentives and collaboration. Each of these is directly connected to HR management, but their integration into a single HR system in universities of Uzbekistan has not yet been studied systematically.

METHODOLOGY

The study combines content analysis of legal acts [1–5], statistical analysis of official research and development data of the National Statistics Committee for 2021–2025 [15; 16], calculation of relative indicators

and structural modelling. The statistics follow the international methodology of the OECD Frascati Manual [17][1]. To characterise research support in the higher education sector, the following indicators were calculated: the share of the higher education sector in total R&D expenditure; R&D expenditure of the higher education sector per teaching staff member and per research-performing higher education institution; the share of researchers with PhD and DSc degrees; R&D expenditure per researcher; and the number of doctoral students per 100 teaching staff members. The system of HR practices was designed on the basis of the model of C. Bland and co-authors [6], which distinguishes individual, institutional and leadership factors of research productivity.

RESULTS

Research personnel and expenditure

Table 1 presents the main indicators of research and development in Uzbekistan in 2023–2025.

Table 1

Main indicators of research and development in Uzbekistan, 2023–2025

Indicator	2023	2024	2025
Organisations performing R&D, total	289	264	279
of which higher education institutions	99	93	99
R&D expenditure, total, UZS billion	1,389.2	1,574.1	1,680.6
R&D expenditure of the higher education sector, UZS billion	243.9	282.0	233.7
Share of the higher education sector in R&D expenditure, %	17.6	17.9	13.9
R&D expenditure of the higher education sector per teaching staff member, UZS million	5.40	5.69	4.26
R&D expenditure per research-performing higher education institution, UZS billion	2.46	3.03	2.36
Researchers, thousand[2]	33.0	33.6	43.1
of which with PhD degree, thousand	10.7	14.1	15.5
of which with DSc degree, thousand	3.0	3.0	4.8
Share of researchers with PhD or DSc degree, %	41.5	50.9	47.1
R&D expenditure per researcher, UZS million	42.1	46.8	39.0

Source: calculated by the author from National Statistics Committee data [15; 16].

Total R&D expenditure increased from 1,389.2 billion soums in 2023 to 1,680.6 billion soums in 2025, or by 21.0 per cent [15]. The higher education sector, represented by 93–99 research-performing institutions, accounted for 14–18 per cent of total expenditure; in 2025 its expenditure amounted to 233.7 billion soums (Figure 1). The number of researchers rose to 43.1 thousand in 2025, partly because statistical observation was extended to university staff performing research. The number of researchers with a PhD degree increased by 45 per cent in two years, from 10.7 to 15.5 thousand, and with a DSc degree from 3.0 to 4.8 thousand [15]. These figures show a growing pool of qualified researchers, a substantial part of whom work in universities.

1 R&D statistics follow the sectoral classification of the OECD Frascati Manual (government, higher education, business enterprise and private non-profit sectors). Expenditure is shown in current prices. Ratios are calculated by the author.

2 According to the National Statistics Committee, from 2025 the number of researchers also includes scientific-pedagogical staff of higher education institutions who performed research and development; the increase in 2025 therefore partly reflects the extended coverage of statistical observation.

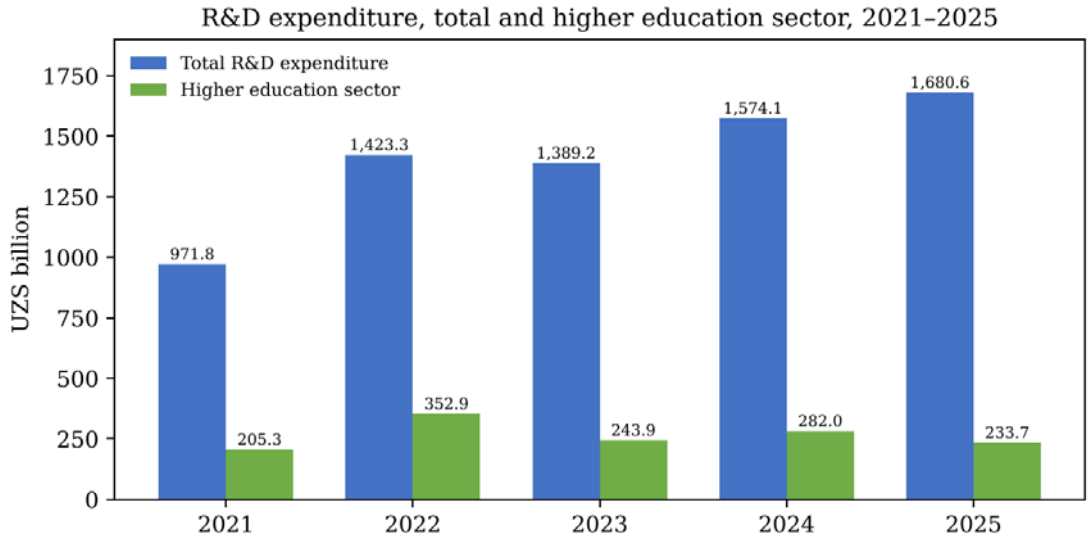

Figure 1. R&D expenditure, total and higher education sector, 2021–2025

Source: compiled by the author from National Statistics Committee data [15].

At the same time, R&D expenditure of the higher education sector per teaching staff member was 4.3–5.7 million soums per year, and expenditure per researcher 39–47 million soums. Since teaching staff grew from 45.2 to 54.9 thousand over the period [16], the resources available for research per professor depend not only on the volume of funding but also on how universities allocate it among staff. This is where HR management plays a decisive role: it determines whose research is supported, through which mechanisms and with what expected results.

Doctoral training as a source of research capacity

Doctoral training forms the future research workforce of universities (Table 2).

Table 2

Doctoral training in Uzbekistan, 2023–2025[3]

Indicator	2023	2024	2025
Basic doctoral studies (PhD): admitted	3,613	3,835	4,159
Basic doctoral studies (PhD): enrolled	7,323	7,992	8,326
Basic doctoral studies (PhD): graduates	1,424	2,234	2,256
Doctoral studies (DSc): admitted	573	490	604
Doctoral studies (DSc): enrolled	1,117	1,155	1,309
Doctoral studies (DSc): graduates	182	262	252
Doctoral students, total	8,440	9,147	9,635
Doctoral students per 100 teaching staff members	18.7	18.4	17.6

Source: calculated by the author from National Statistics Committee data [15; 16].

The number of doctoral students increased from 8,440 in 2023 to 9,635 in 2025, and annual PhD graduates from 1,424 to 2,256 [15]. There are about 18 doctoral students for every 100 teaching staff members. Each doctoral student requires a scientific supervisor; the rules for determining the teaching load set a norm of 100 hours per year for supervising a doctoral student [5]. Doctoral supervision therefore forms a significant part of the research workload of experienced professors, and its planning is an HR task in its own right.

System of HR practices for research support

On the basis of the factors identified in the literature [6–14] and the national normative framework [1–5], a system of HR practices for research support is proposed (Table 3).

3 Doctoral students are counted at the end of the year and include those in basic doctoral studies (PhD) and doctoral studies (DSc). Teaching staff are counted excluding part-time staff at the beginning of the academic year.

Table 3
System of HR practices for strengthening research support for professors

HR practice	Content	Productivity factor [6] and normative basis
Recruitment and selection	Assessment of research potential, publications and research plans of candidates; attraction of young PhD holders	Individual: research skills; PF-6097 goal of younger researchers [2]
Workload planning	Protected research time in the individual work plan; reduction of teaching load for active researchers	Institutional: research time; council's right to adjust the teaching load [5]
Professional development	Training in research methods, academic writing, grant writing and data analysis; research internships	Individual: skills; leave for internships of up to one year [1]
Research resources	Access to laboratories, databases and statistical software; support of a research office for grant applications	Institutional: resources; Higher Education Development Fund [3]
Incentives and recognition	Rewards for publications, grants and commercialised results; account of research in promotion	Institutional: recognition; material incentives (Art. 14) [1]
Collaboration	Research groups, joint projects with research institutes, enterprises and foreign universities	Individual: networks; priority-area projects [3]
Mentoring and supervision	Mentoring of early-career staff; planning of doctoral supervision load	Leadership: support; supervision norm of 100 hours [5]

Source: developed by the author.

The practices in the table address all three groups of factors in the model of C. Bland and co-authors [6]. Recruitment and professional development strengthen individual factors; workload planning, resources and incentives create institutional conditions; mentoring and the organisation of collaboration depend on the leadership of departments and faculties. Each practice is supported by existing legal provisions, so universities can introduce the system within the current normative framework.

For the system to be effective, its results must be measured. Table 4 proposes indicators for monitoring research support at the level of a university or department.

Table 4
Indicators for monitoring HR-based research support

Dimension	Indicator	Purpose
Time	Share of professors with protected research time in the work plan; average research hours per professor	Verifies that research is planned
Capacity	Share of staff with PhD or DSc; number of doctoral students per supervisor	Tracks qualification and supervision load
Resources	Research funding per professor; number of grant applications and awarded grants	Shows access to resources
Output	Publications in indexed journals per professor, normalised by field; patents and commercialised results	Measures results
Collaboration	Share of publications with external co-authors; joint projects with enterprises and foreign partners	Measures networks
Sustainability	Average age of researchers; retention of young PhD holders	Links to PF-6097 targets [2]

Source: developed by the author.

DISCUSSION

The results show that the research capacity of Uzbekistan is expanding: the number of researchers with academic degrees and the number of doctoral students are rising, and universities form a substantial part of the research sector. The effect of this growth on research output, however, depends on whether universities create the conditions in which qualified staff can conduct research. The literature consistently identifies research time as one of the strongest correlates of productivity [7–9], and the workload rules already allow university councils to adjust teaching loads to encourage research [5]. Systematic use of this instrument, combined with

transparent criteria for granting protected research time, is the most direct way in which HR management can strengthen research support.

The design of incentives requires particular care. The evidence that incentives tolerant of early failure stimulate creative research [11] and that cash rewards for publications increase submissions but not necessarily success [12] suggests that incentives should reward sustained, high-quality results and grant success rather than the number of publications alone. The provision of PF-58 linking continued research funding to the achievement of agreed annual indicators [3] makes it important for universities to agree realistic indicators with research teams in advance. Finally, the importance of collaboration [13] and of doctoral supervision indicates that HR management should evaluate not only individual output but also the contribution of professors to research groups and to the training of young researchers, which corresponds to the national goals of rejuvenating the research workforce [2].

CONCLUSION

The study leads to the following conclusions. First, in 2023–2025 the research capacity of Uzbekistan grew: the number of researchers increased to 43.1 thousand, of whom 20.3 thousand hold PhD or DSc degrees, the number of doctoral students rose to 9,635 and annual PhD graduates to 2,256; the higher education sector, with 93–99 research-performing institutions, accounted for 14–18 per cent of R&D expenditure. Second, research productivity of professors depends on individual, institutional and leadership factors, all of which can be influenced by HR management. Third, a system of seven HR practices — recruitment, workload planning, professional development, research resources, incentives, collaboration and mentoring — linked to the national normative framework, together with monitoring indicators, makes it possible to strengthen research support in a coordinated way.

It is recommended that universities: include protected research time in individual work plans on the basis of transparent criteria; take research potential into account in recruitment and attract young PhD holders; establish research support offices that help staff prepare grant applications; design incentives that reward sustained quality and grant success; plan doctoral supervision as part of the workload; and monitor research support with the proposed indicators. These measures will help universities to achieve the targets of the Concept for the Development of Science until 2030 and to improve their position in the national rating.

REFERENCES

1. Law of the Republic of Uzbekistan “On Science and Scientific Activity” No. ZRU-576 of 29 October 2019. URL: https://lex.uz/docs/-4571490

2. Decree of the President of the Republic of Uzbekistan No. PF-6097 of 29 October 2020 “On approval of the Concept for the Development of Science until 2030”. URL: https://lex.uz/uz/docs/-5073447

3. Decree of the President of the Republic of Uzbekistan No. PF-58 of 10 April 2026 “On additional measures to improve the system of higher education, science and innovation”. URL: https://lex.uz/uz/docs/-8129755

4. Decree of the President of the Republic of Uzbekistan No. PF-5847 of 8 October 2019 “On approval of the Concept for the Development of the Higher Education System of the Republic of Uzbekistan until 2030”. URL: https://lex.uz/docs/-4545884

5. Rules for determining the teaching load and the educational-methodological, research and mentoring work of the teaching staff of higher education institutions (registered by the Ministry of Justice on 8 October 2018, No. 3076, as amended on 20 January 2025). URL: https://lex.uz/docs/-3967278

6. Bland C. J., Center B. A., Finstad D. A., Risbey K. R., Staples J. G. A Theoretical, Practical, Predictive Model of Faculty and Department Research Productivity // Academic Medicine. — 2005. — Vol. 80, No. 3. — P. 225–237. DOI: https://doi.org/10.1097/00001888-200503000-00006

7. Teodorescu D. Correlates of faculty publication productivity: A cross-national analysis // Higher Education. — 2000. — Vol. 39, No. 2. — P. 201–222. DOI: https://doi.org/10.1023/A:1003901018634

8. Hesli V. L., Lee J. M. Faculty Research Productivity: Why Do Some of Our Colleagues Publish More than Others? // PS: Political Science & Politics. — 2011. — Vol. 44, No. 2. — P. 393–408. DOI: https://doi.org/10.1017/S1049096511000242

9. Fox M. F. Research, Teaching, and Publication Productivity: Mutuality Versus Competition in Academia // Sociology of Education. — 1992. — Vol. 65, No. 4. — P. 293–305. DOI: https://doi.org/10.2307/2112772

10. Jacob B. A., Lefgren L. The impact of research grant funding on scientific productivity // Journal of Public Economics. — 2011. — Vol. 95, No. 9–10. — P. 1168–1177. DOI: https://doi.org/10.1016/j.jpubeco.2011.05.005

11. Azoulay P., Graff Zivin J. S., Manso G. Incentives and creativity: evidence from the academic life sciences // The RAND Journal of Economics. — 2011. — Vol. 42, No. 3. — P. 527–554. DOI: https://doi.org/10.1111/j.1756-2171.2011.00140.x

12. Franzoni C., Scellato G., Stephan P. Changing Incentives to Publish // Science. — 2011. — Vol. 333, No. 6043. —

P. 702–703. DOI: https://doi.org/10.1126/science.1197286

13. Lee S., Bozeman B. The Impact of Research Collaboration on Scientific Productivity // Social Studies of Science. — 2005. — Vol. 35, No. 5. — P. 673–702. DOI: https://doi.org/10.1177/0306312705052359

14. Stephan P. How Economics Shapes Science. — Cambridge, MA: Harvard University Press, 2012. — 367 p.

15. National Statistics Committee of the Republic of Uzbekistan. Science and innovation in the Republic of Uzbekistan (2025). URL: https://stat.uz/img/press-relizlar/ilm-fan-lotign_p66530.pdf

16. National Statistics Committee of the Republic of Uzbekistan. Higher education in the Republic of Uzbekistan at the beginning of the 2025/2026 academic year. URL: https://stat.uz/img/news/olij-talim-kiril_p28106.pdf

17. OECD. Frascati Manual 2015: Guidelines for Collecting and Reporting Data on Research and Experimental Development. — Paris: OECD Publishing, 2015. DOI: https://doi.org/10.1787/9789264239012-en

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