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### **COSTING EDUCATIONAL SERVICES IN STATE UNIVERSITIES OF UZBEKISTAN: AN ACTIVITY-BASED AND SEGMENT ACCOUNTING APPROACH**

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#### **Abstract**

State universities in Uzbekistan record expenditure by funding source and economic classification, yet produce no information on what their activities and programmes cost. This thesis tests a three-stage activity-based costing (ABC) model on the 2025 tuition-funded expenditure of the Tashkent University of Information Technologies named after Muhammad al-Khwarizmi (TUIT). Of UZS 105.2 billion in tuition-funded costs, 75.5 per cent relates to education and 24.5 per cent to research. The educational service cost per student ranges from UZS 7.76 to 12.93 million depending on enrolment, so the base tuition fee of UZS 8.15 million covers cost only above roughly 19,000 students. The share of non-staff costs (12.8–16.1 per cent) is well above the 9.1 per cent embedded in the funding standard. A six-level coding scheme for segment accounting and an annual cost report are proposed.

**Keywords:** activity-based costing, cost of educational services, segment reporting, IPSAS 18, higher education finance, Uzbekistan.

#### **Introduction**

Since 2022, financially autonomous state universities in Uzbekistan have received budget funds through a per-student standard set by Cabinet of Ministers Resolution No. 419, while tuition fees have become their largest source of revenue (Cabinet of Ministers of the Republic of Uzbekistan, 2022). Both the standard and the fees are expressed per student, but neither is linked to a measured cost. The budget accounting system records expenditure in detail by economic classification code (salaries, social



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contributions, utilities, equipment), which shows the nature of spending and says nothing about its purpose. When a professor teaches and conducts research in the same month, the full salary appears as an education expense. The same gap affects the off-budget development fund. Cabinet of Ministers Resolution No. 325 defines the fund income from sales of services as the positive difference between receipts and the costs of producing those services (Cabinet of Ministers of the Republic of Uzbekistan, 2025), a rule that cannot be applied without a cost figure. This thesis therefore asks two questions: how should the cost of an educational service be measured in a state university, and how should expenditure be recorded so that the measurement can be repeated every year?

### Methods

The empirical base is the 2025 report on the movement of tuition-fee funds of the Tashkent University of Information Technologies named after Muhammad al-Khwarizmi (TUIT) (main personal treasury account) and its 2025 report on financial performance. Actual (accrual-based) expenses were used instead of cash expenses, because cash data exclude depreciation and unpaid accrued salaries and include transfers such as stipends; this distinction between budgetary and accrual measures follows Van Helden and Hodges (2015) and the author's earlier work on estimate-execution accounting (Norquchqorov, 2025). Stipends (UZS 1,719.8 million) and capital investment (UZS 950.0 million) were removed from the cost base, leaving UZS 105,226.1 million.

The ABC model follows the logic described by Cropper and Cook (2000) and later institutionalised in the UK Transparent Approach to Costing (Office for Students, 2026). Expenses are grouped into five resource pools, assigned to five activities by resource drivers, and then traced to cost objects by activity drivers. The ratio of academic to administrative staff costs was taken from Resolution No. 419 (100:20); time, floor-space and equipment-use shares were set as assumptions and are therefore illustrative. Because TUIT reports do not disclose average enrolment, per-student costs were computed for 12,000–20,000 students and compared with the base fee for information technology programmes in 2025/2026, UZS 8,150 thousand (Abt.uz, n.d.).

### Results

Figure 1 compares the cost structure implied by the funding standard with the actual tuition-funded expenses of TUIT. Under Resolution No. 419 administrative staff receive 20 per cent of the academic staff standard and other costs 10 per cent of the two combined, so staff costs make up 90.9 per cent of the total. At TUIT the non-staff share reached 16.1 per cent with depreciation and 12.8 per cent without it.

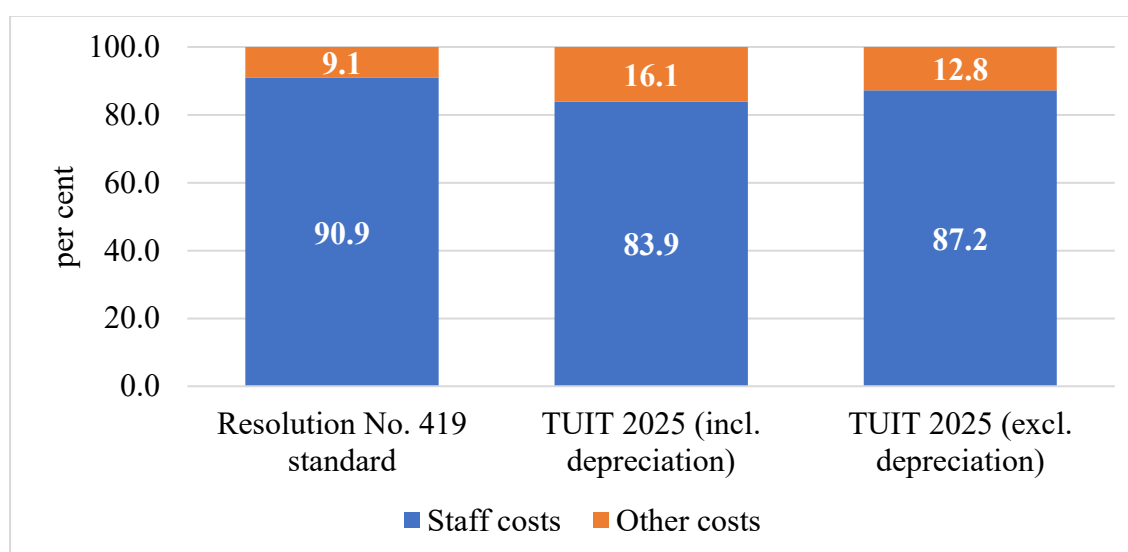


**Figure 1. Cost structure: funding standard versus TUIT actual tuition-funded expenses, 2025 (per cent)**

Source: author's calculations based on Cabinet of Ministers of the Republic of Uzbekistan (2022) and TUIT reports for 2025; stipends and capital investment excluded.

Two factors explain the difference. The standard ignores depreciation, which Budget Accounting Standard (BAS) No. 3 requires to be shown among actual expenses, and IT education consumes more laboratory equipment, software and energy than the average programme. A single structure for all fields of study cannot capture this. Table 1 shows how the ABC model distributes the same expenses across activities.

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**Table 1 Allocation of TUIT tuition-funded expenses to activities, 2025  
(UZS million)**

| Resource pool                            | Total            | Teaching delivery | Curriculum support | Research        | Student services | Admin. and infrastructure |
|------------------------------------------|------------------|-------------------|--------------------|-----------------|------------------|---------------------------|
| Academic staff                           | 72,871.3         | 43,722.8          | 10,930.7           | 18,217.8        | –                | –                         |
| Administrative staff                     | 14,574.2         | –                 | 1,457.4            | 728.7           | 5,101.0          | 7,287.1                   |
| Buildings and utilities                  | 4,639.5          | 2,551.7           | 232.0              | 695.9           | 464.0            | 695.9                     |
| Materials and equipment                  | 6,804.8          | 2,721.9           | 1,361.0            | 1,701.2         | 340.2            | 680.5                     |
| Other expenses                           | 6,336.3          | 1,267.3           | 633.6              | 1,900.9         | 950.4            | 1,584.1                   |
| <b>After reallocating administration</b> | <b>105,226.1</b> | <b>55,686.8</b>   | <b>16,191.5</b>    | <b>25,752.5</b> | <b>7,595.3</b>   | –                         |
| Share, %                                 | 100.0            | 52.9              | 15.4               | 24.5            | 7.2              | –                         |

Source: author's ABC model based on TUIT reports for 2025; administration and infrastructure reallocated in proportion to direct activity costs.

Education (teaching delivery, curriculum support and student services) absorbs 75.5 per cent of tuition-funded costs and research 24.5 per cent. Dividing total expenses by the number of students would thus overstate the cost of education by about one third and leave research costs invisible. Applying the 75.5 per cent share to total TUIT actual expenses from all sources (UZS 205,493.6 million) gives an educational service cost per student of UZS 12.93 million at 12,000 students, 10.35 million at 15,000, 8.62 million at 18,000 and 7.76 million at 20,000; the corresponding cost per credit (60 credits a year) falls from UZS 215.5 to 129.3 thousand. The base fee covers 63.0 per cent of cost at the lowest enrolment and 105.0 per cent at the highest. Solving  $205,493.6 \times 0.755 / 8.15$  gives the break-even enrolment of about 19,000 students; below it, fee-paying students are subsidised from budget and development-fund resources.

The model also separates levels of study. In an illustrative split where master's students make up 10 per cent of enrolment but take 18 per cent of contact hours, the cost index per student is 0.94 for bachelor's and 1.56 for master's programmes, so a master's student costs 1.66 times as much as a bachelor's student. Current fee and standard differentials are not derived from such calculations.



### iscussion and conclusion

The UK experience shows why the measurement matters: in 2024/25 publicly funded teaching recovered 89.7 per cent of its full economic cost, research 66.6 per cent, and teaching of international students 147.0 per cent, which cross-subsidised the other activities (Office for Students, 2026). Uzbek universities generate no comparable evidence, so fees and standards are set without reference to cost. In the Russian Federation the volume of state-assignment funding is determined through normative costs composed of a base standard and adjustment coefficients (Government of the Russian Federation, 2015), which offers a template for revising Resolution No. 419 by field of study.

To make costing routine, we propose to add segment and cost-centre analytics to the actual-expense sub-accounts 700 000, 730 000 and 740 000 defined in BAS No. 2 (Ministry of Finance of the Republic of Uzbekistan, 2018). The coding has six levels: funding source, economic classification, segment (state-funded teaching, fee-funded teaching, research, other services), cost centre, ABC activity and cost object. The first two already exist; the rest can be introduced through the accounting policy. Segments follow the logic of IPSAS 18 (IPSASB, 2024). Direct costs are coded when accrued, indirect costs are allocated monthly or quarterly, and academic time is distributed using individual workplans, HEMIS teaching-load data and an annual time-allocation survey.

An annual report on the cost of educational services, introduced first as an internal management report, would contain segment expenditure, cost per student and per credit by programme, cost recovery by segment and the result of development-fund services. Such a report would give a defensible lower bound for tuition fees, allow the Resolution No. 325 rule on sales income to be applied, and extend earlier national work on cost accounting in budgetary organisations (Ostonokulov, 2020) to the specific setting of higher education. The figures presented here rest on assumed drivers and enrolment, so they demonstrate the method rather than establish a definitive cost; the next step is a pilot with actual time-allocation data.

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