

INNOVATION SCIENCE AND TECHNOLOGY

ISSUE 9, PART I / SEPTEMBER 2026

 Acceptance of papers



**Acceptance of
papers**

Published monthly



Topics

economics,
technology, social
sciences



EDITOR-IN-CHIEF:

Mirzaliyev Sanjar Makhmatjon ugli

DEPUTY EDITOR-IN-CHIEF:

Makhmudov Nosir Makhmudovich
DSc., Prof., Academician

DEPUTY EDITOR-IN-CHIEF:

Ochilov Bobur Bakhtiyor ugli – Senior
lecturer at TSUI

THE SCIENTIFIC-POPULAR ELECTRONIC
JOURNAL **"INNOVATION SCIENCE AND
TECHNOLOGY"** HAS BEEN REGISTERED
UNDER THE NUMBER **C-5669633** BY THE
AGENCY FOR INFORMATION AND MASS
COMMUNICATIONS (AOKA) OF THE
REPUBLIC OF UZBEKISTAN, EFFECTIVE
FROM OCTOBER 9, 2024.

CONTACTS

Phone: **+998 50 737 87 88**

Website: <https://ist-journal.uz>

Email: innovationist2025@gmail.com

The scientific electronic journal "Innovation Science and Technology" has been included in the list of scientific publications recommended for the publication of main scientific results of dissertations for the award of PhD and DSc degrees in economics and technical sciences, in accordance with the Resolution No. 370 of the Presidium of the Higher Attestation Commission of the Republic of Uzbekistan, dated May 8, 2025.

Editorial board:



Sharipov Kongiratbay Avezimbetovich,
Doctor of Technical Sciences (DSc), Professor



Abdurakhmanova Gulnora Kalandarovna, Doctor of
Economic Sciences (DSc), Professor



Cham Tat Huei,
Doctor of Philosophy (PhD), Professor (Malaysia)



Muhammad Imran Sadiq
Doctor of Philosophy in Economics (PhD), Professor,
Malaysia



Ahmed Aziz Ismail
Doctor of Technical Sciences (DSc),
Professor (Egypt)



Lee Chin
Doctor of Philosophy in Economics (PhD), (Malaysia)



Asongu Simplice
Doctor of Philosophy in Economics (PhD), Cameroon



Rui Dang
Doctor of Chemistry (DSc), Professor, China



Zahoor Ahmed
Doctor of Philosophy in Economics (PhD), Turkey



Shujaat Abbas
Doctor of Philosophy in Economics (PhD), Russia



Tina A Coffelt
Doctor of Philosophy in Educational Sciences (PhD),
USA



Abdikarimova Dinara Rustamxanovna
Doctor of Economic Sciences (DSc), Professor

Kurbonbekova Mohichehra Turobjonovna
Doctor of Economic Sciences (DSc), Professor

Alimardonov Ilkhom Muzrabshokovich
Doctor of Economic Sciences (DSc), Professor



Razakova Barno Sayfieva
Doctor of Philosophy in Economics (PhD)



Khasanov Sarvar Ulugbek ugli
Doctor of Philosophy in Economics (PhD)



Kholikova Rukhsora Sanjarovna
Associate Professor (PhD)

CONTENTS

ECONOMIC ESSENCE AND CLASSIFICATION OF FINANCIAL ERRORS AND IRREGULARITIES IN BUDGET ORGANIZATIONS AND CRITERIA FOR THEIR INTERNAL AUDIT ASSESSMENT	8
Mulayev Farxod Alisherovich	

ECONOMIC ESSENCE AND CLASSIFICATION OF FINANCIAL ERRORS AND IRREGULARITIES IN BUDGET ORGANIZATIONS AND CRITERIA FOR THEIR INTERNAL AUDIT ASSESSMENT

Mulayev Farxod Alisherovich

PhD Candidate at Tashkent State University of Economics

E-mail: farhodmulaev@gmail.com

ORCID: 0009-0002-9268-6603

Abstract. The article examines the economic essence of financial errors and irregularities arising in budget organizations, their classification from the perspective of internal audit, and the criteria for their evaluation. International auditing standards (ISA 240, ISA 450, ISSAI 400 and 4000) and national legal acts are comparatively analysed, and the boundaries between the notions of “financial error”, “irregularity”, “material misstatement”, and “fraud” are clarified. As a result, an internal audit classification based on the criteria of intent, legality, unlawful benefit, financial impact, and legal consequences is developed, together with an algorithm for distinguishing these categories in practice.

Keywords: budget organization, internal audit, financial error, irregularity, material misstatement, fraud, materiality, classification criteria, budgetary discipline, audit evidence.

Annotatsiya. Maqolada budjet tashkilotlarida yuzaga keladigan moliyaviy xato va nomuvofiqliklarning iqtisodiy mohiyati, ularning ichki audit nuqtayi nazaridan tasnifi hamda baholash mezonlari tadqiq etilgan. Xalqaro audit standartlari (ISA 240, ISA 450, ISSAI 400 va 4000) hamda milliy normativ-huquqiy hujjatlar qiyosiy tahlil qilinib, “moliyaviy xato”, “nomuvofiqlik”, “jiddiy noto’g’ri ko’rsatish” va “firibgarlik” tushunchalari o’rtasidagi chegaralar aniqlashtirilgan. Tadqiqot natijasida mazkur toifalarni qasd (niyat), qonuniylik, noqonuniy manfaat olish, moliyaviy ta’sir va yuridik oqibat mezonlari bo’yicha farqlashga asoslangan ichki auditorlik tasnifi ishlab chiqilgan hamda toifalarni amaliyotda ajratish algoritmi taklif etilgan.

Kalit so’zlar: budjet tashkiloti, ichki audit, moliyaviy xato, nomuvofiqlik, jiddiy noto’g’ri ko’rsatish, firibgarlik, ahamiyatlilik, tasnif mezonlari, budjet intizomi, audit dalillari.

Аннотация. В статье исследованы экономическая сущность финансовых ошибок и несоответствий, возникающих в бюджетных организациях, их классификация с позиций внутреннего аудита и критерии оценки. На основе сравнительного анализа международных стандартов аудита (ISA 240, ISA 450, ISSAI 400 и 4000) и национальных нормативно-правовых актов уточнены границы между понятиями «финансовая ошибка», «несоответствие», «существенное искажение» и «мошенничество». Разработана классификация для целей внутреннего аудита, основанная на критериях умысла, законности, получения неправомерной выгоды, финансового воздействия и юридических последствий, а также предложен алгоритм их практического разграничения.

Ключевые слова: бюджетная организация, внутренний аудит, финансовая ошибка, несоответствие, существенное искажение, мошенничество, существенность, критерии классификации, бюджетная дисциплина, аудиторские доказательства.

INTRODUCTION

Financial errors and irregularities arising in the process of using budgetary funds are among the most important indicators determining the quality of public financial management. They directly affect not only the reliability of financial reporting data, but also budgetary discipline, the efficiency of service delivery, and, ultimately, public trust. Therefore, improving the internal audit system in budget organizations should begin, first of all, with a scientifically grounded definition and classification of the phenomena that constitute its audit objects — financial errors and irregularities.

In practice, these concepts are often used interchangeably. Internal audit reports frequently employ such terms as “error,” “deficiency,” “violation,” and “legal violation” without clearly defined criteria, which leads to inconsistencies in comparing and generalizing identified cases and in selecting appropriate corrective measures. When a similar case is classified as a simple accounting error in one organization and as a serious

legal violation in another, the comparability of audit results is undermined.

The consequences of terminological ambiguity are practical in nature. The measures applied depend on how an identified case is classified: an accounting error may be resolved through correction, whereas a legal violation may result in disciplinary or administrative liability. When the boundaries between categories are unclear, the decision is left to the auditor's professional judgment, which may lead, on the one hand, to unjustifiably severe measures and, on the other hand, to the understatement of serious cases.

The purpose of this study is to reveal the economic essence of financial errors and irregularities in budget organizations, classify them for internal audit purposes, and substantiate assessment criteria that distinguish these categories from one another. To achieve this objective, the following tasks were undertaken: interpretations of the concepts in international standards and national legislation were compared; a system of distinguishing criteria was developed; and an algorithm for applying the proposed classification in practice was suggested.

LITERATURE REVIEW

The most consistent approach to the nature of misstatements in financial statements has been developed in the International Standards on Auditing. ISA 240, *"The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements,"* classifies misstatements into two groups according to their cause: those resulting from error and those resulting from fraud. The principal distinguishing feature between them is whether the action was intentional or unintentional. ISA 450, *"Evaluation of Misstatements Identified during the Audit,"* establishes procedures for accumulating identified misstatements, separately accounting for corrected and uncorrected misstatements, and assessing whether their aggregate amount exceeds the materiality threshold.

For the public sector, this approach is expanded in INTOSAI documents. ISSAI 100, *"Fundamental Principles of Public-Sector Auditing,"* distinguishes financial, performance, and compliance audits and establishes a common framework for materiality, audit risk, and audit evidence. The compliance audit standards within the ISSAI 400 and ISSAI 4000 series identify "non-compliance" as an independent category. It refers to an activity or transaction that does not comply with established criteria, such as laws, regulations, contractual provisions, or budget estimates. Importantly, non-compliance may not necessarily result in a misstatement in the financial statements, but it nevertheless remains an object of audit.

The conceptual foundations of internal auditing are set out in the documents of The Institute of Internal Auditors (IIA), where internal auditing is defined as an independent and objective assurance and consulting activity aimed at creating value. The COSO *Internal Control — Integrated Framework* interprets errors and irregularities as possible consequences of weaknesses in the control environment, risk assessment, control activities, information and communication, and monitoring components. This approach requires the auditor to assess not only the identified case itself but also the control weakness that gave rise to it.

As a theoretical basis for assessing fraud risk, the three-factor concept developed in criminology and adapted to auditing practice is widely applied: opportunity, pressure, and rationalization. This concept is indirectly reflected in ISA 240, which requires auditors to separately assess fraud risk factors. In the public sector, the opportunity factor is often associated with weaknesses in control activities, while the pressure factor may be related to requirements to achieve predetermined performance indicators.

ISA 265 establishes the procedure for communicating deficiencies in internal control to management and distinguishes such deficiencies according to their significance. This approach makes it possible to consider not only the identified case itself but also the underlying control weakness as an independent object of assessment, thereby introducing an additional dimension into the classification.

In the national literature, issues of financial control and internal audit in budget organizations have mainly been studied from the perspective of identifying legal violations and strengthening budgetary discipline. Researchers regard internal audit as a tool for improving the efficiency of the use of budgetary funds. However, the classification of identified cases according to their intrinsic nature — particularly the distinction between an ordinary accounting error and an intentionally committed unlawful act, as well as the practical criteria by which an auditor should draw this distinction — has not been sufficiently developed. It is precisely this gap that determines the relevance of the present study.

RESEARCH METHODOLOGY

The study employed a set of qualitative analytical methods. Legal-dogmatic (content) analysis was used to examine international standards and national regulatory documents; comparative analysis and logical generalization were applied to distinguish between the relevant concepts; and a multi-criteria grouping method was used to develop the classification. The procedure for applying the classification in practice was formalized as a decision-making algorithm based on a sequence of questions (a deductive scheme). In addition, artificial

intelligence tools were used as an auxiliary instrument for systematizing the research materials and preparing the article text, accounting for no more than 10 percent of the overall work.

The sources analysed included the Budget Code of the Republic of Uzbekistan, Presidential decrees related to public financial control, the Model Regulation on the Internal Audit Service, as well as ISA 240, ISA 450, ISSAI 100, ISSAI 400, and ISSAI 4000.

Analysis and Results

A financial error is an unintentional deviation made in the recognition, measurement, classification, or reporting of a financial and economic transaction of a budget organization. Its economic essence is manifested in the distortion of information: as a result of an error, a management decision is based on inaccurate information, and resource allocation becomes suboptimal. The sources of an error may include insufficient knowledge, incorrect application of accounting policies, technical calculation errors, or incomplete primary documentation.

An irregularity is a situation in which an organization's activity or an individual transaction fails to comply with established criteria, such as legislation, the budget estimate, the staffing schedule, public procurement procedures, or contractual terms. The economic essence of an irregularity lies not in the distortion of information, but in the violation of prescribed conduct: funds may be correctly recorded in the accounts, but they may have been spent outside their designated purpose or in breach of established procedures. Therefore, an irregularity may not be reflected in the financial statements at all and can often be identified only by comparing the transaction with the applicable criteria.

A material misstatement is not an independent category, but rather an assessment of an error or irregularity in terms of its level of materiality. It arises when an identified deviation, individually or together with other deviations, may influence the economic decisions of users. Fraud, by contrast, is an intentional act of deception committed for the purpose of obtaining an unlawful or unjustified benefit and is distinguished from the other categories by the criteria of intent and benefit.

The relationship among these four categories can be illustrated as fields differentiated according to the criterion of intent (Figure 1). As the figure shows, a material misstatement does not occupy a separate field; rather, it represents a level of assessment that may cut across both unintentional and intentional cases.

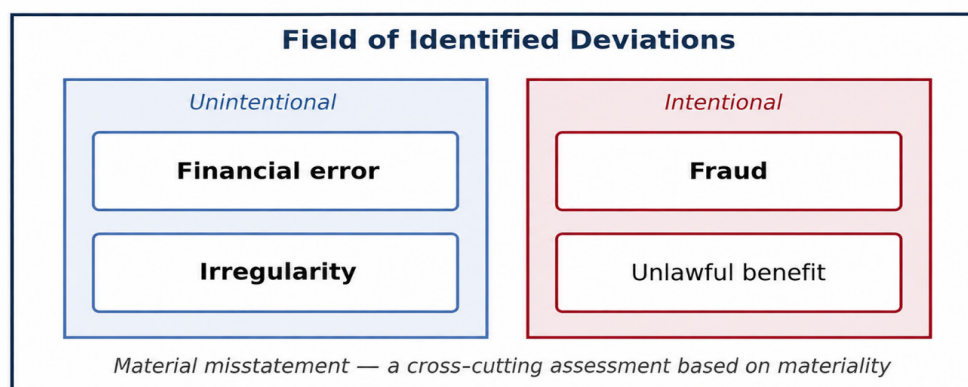


Figure 1. Boundaries Between Financial Error, Irregularity, and Fraud

Source: developed by the author.

The analysis substantiated the possibility of consistently distinguishing these categories according to five criteria (Table 1).

Table 1.

Internal Audit Classification of Financial Error, Irregularity, Material Misstatement, and Fraud

Criterion	Financial Error	Irregularity	Material Misstatement	Fraud
Intent	No, unintentional	May or may not be present	Not decisive; assessed based on the outcome	Present, committed intentionally

Criterion	Financial Error	Irregularity	Material Misstatement	Fraud
Legality	Violation of accounting rules	Violation of legal, budget estimate, or contractual requirements	Violation of financial reporting requirements	Open and intentional violation of the law
Unlawful benefit	None	Usually absent, but may sometimes be present	None	Present (for personal benefit or the benefit of a third party)
Financial impact	Small or moderate; subject to correction	Varies, often indirect	Exceeds the materiality threshold	Usually results in direct financial loss
Legal consequences	Correction and preventive measures	Disciplinary or administrative liability	Restatement of financial statements	Administrative or criminal liability
Audit response	Recommendation and correction	Remediation plan and strengthening of controls	Notification of management and correction of financial statements	Immediate notification of senior management

Source: developed by the author based on an analysis of international standards (ISA 240, ISA 450, and ISSAI 400).

As shown in the table, the boundaries between the categories are determined not by a single criterion but by a combination of criteria. In practice, the criterion of intent is of decisive importance to the auditor because it changes the nature of the audit response: an unintentional error requires correction and preventive measures, whereas an intentional act requires the issue to be immediately escalated to senior management.

However, directly proving intent does not fall within the authority of the internal auditor. Therefore, the study proposes a procedure for assessing intent through indirect indicators: recurrence of the identified case, the existence of actions aimed at concealing it, artificial preparation or manipulation of documents, circumvention of control procedures, and indications of a relationship with an interested party. If two or more of these indicators are identified, the auditor records the case as an indicator of fraud risk and, without independently making a legal qualification of the act, applies the established procedure for referring the matter to the competent authority.

To distinguish the categories in practice, an algorithm based on a sequence of questions is proposed. First, does the identified case contradict an established criterion (if not, it is treated as an accounting error)? Second, is the violated criterion an accounting rule or a legal norm (correspondingly, an error or an irregularity)? Third, does the amount or nature of the deviation exceed the materiality threshold (material misstatement)? Fourth, are there indications of intent and unlawful benefit (fraud risk)? This algorithm reduces the subjectivity of auditors' judgments and enables the comparison of cases identified across different organizations.

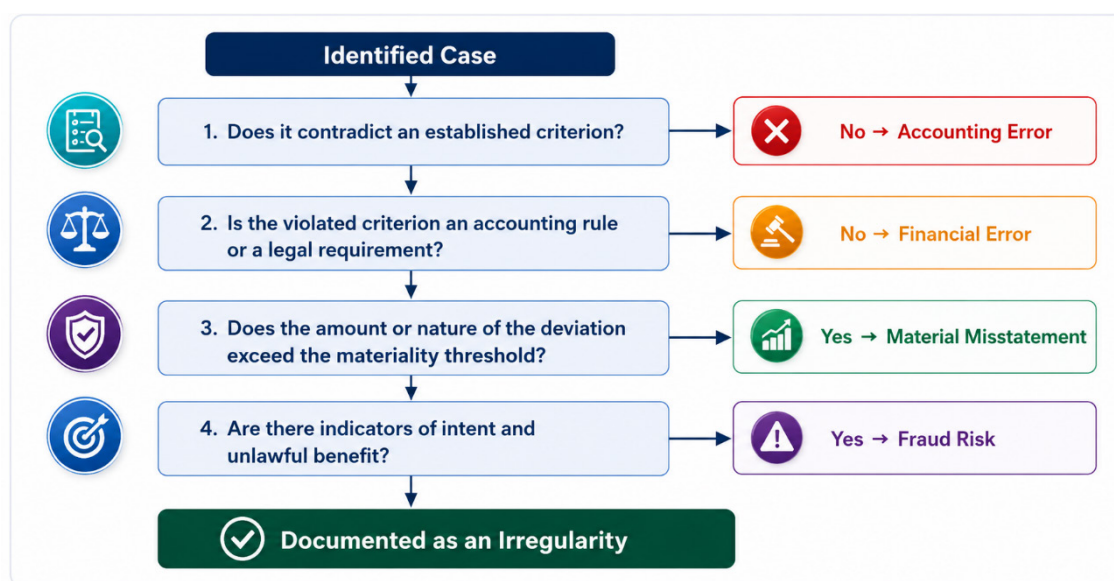


Figure 2. Algorithm for Classifying Financial Errors and Irregularities

Source: developed by the author.

At each stage of the algorithm, the auditor substantiates the response with supporting evidence in the working papers. This requirement is necessary to prevent the classification process from becoming merely formal: the reliability of the audit conclusion is ensured not by the category label itself, but by the grounds on which that category is selected.

To apply the assessment criteria in practice, a scale is required to measure the materiality and impact level of each category. The study substantiates the combined use of quantitative and qualitative criteria (Table 2).

Table 2.
Internal Audit Assessment Criteria for Financial Errors and Irregularities

Criterion Group	Indicator	Assessment Method
Quantitative	Share of the deviation amount in the budget estimate or expenditure item	Comparison with the established materiality threshold
Quantitative	Aggregate amount of identified cases	Aggregation of accumulated deviations (ISA 450 approach)
Qualitative	Legal force of the violated provision	Assessment according to the hierarchy: law — resolution — departmental regulation
Qualitative	Recurrence of the identified case	Comparison with previous audit results
Qualitative	Degree of weakness in the internal control system	Assessment by COSO components
Consequence	Impact on service delivery and achievement of objectives	Qualitative expert assessment
Consequence	Impact on reputation and public trust	Assessment using a high/medium/low scale

Source: developed by the author.

When determining the materiality threshold, a two-stage approach is recommended for budget organizations. The overall threshold is established as a percentage of the organization's annual budget estimate, while a reduced threshold is applied to certain expenditure items. The use of a lower threshold for remuneration, public procurement, and earmarked funds is explained by the stricter legality requirements applicable in these areas.

The advantage of the proposed system of criteria is that it does not rely solely on monetary measurement. Practice shows that cases involving relatively small amounts but recurring systematically, or indicating fundamental weaknesses in the internal control system, may represent a greater management risk than a large one-off deviation. The inclusion of qualitative and consequence-based criteria enables the auditor to identify such cases as priorities.

The research findings are significant for internal audit practice in several respects. First, a clear classification standardizes the structure of internal audit reports: each identified case is documented in a uniform manner according to its category, criterion, and consequences. This makes it possible to conduct consolidated analyses across agencies and sectors.

Second, the classification establishes a common language of communication between internal and external audit. Since external audits conducted by the Chamber of Accounts are based on ISSAI requirements, the use of the same categories in internal audit enhances the comparability of results and helps reduce duplication of audit procedures.

Third, clear boundaries between the categories help maintain a balanced approach to accountability. Treating every error as a legal violation may encourage defensive behaviour among employees and weaken the advisory function of internal audit. Conversely, reducing serious cases to the level of minor deficiencies may undermine the effectiveness of the control system.

Fourth, the classification creates a link between internal audit and the professional training system. Once the categories are clearly defined, auditor training programmes can be structured accordingly: typical cases for each category, procedures for their detection, and documentation requirements may be studied as separate modules.

A limitation of the study is that the proposed classification is based on theoretical and regulatory analysis. Assessing its practical effectiveness requires the collection of empirical data from internal audit reports of budget organizations and pilot testing of the classification. In addition, the criteria for indirectly assessing indicators of intent should be refined to reflect the specific characteristics of each sector.

CONCLUSION AND SUGGESTIONS

First, in budget organizations, a financial error has an economic meaning as a distortion of information, whereas an irregularity represents conduct that does not comply with established criteria. This distinction makes it possible to methodologically separate the two main areas of internal audit: assessing the reliability of financial reporting and verifying the legality of operations.

Second, an internal audit classification was developed to distinguish financial errors, irregularities, material misstatements, and fraud according to the criteria of intent, legality, unlawful benefit, financial impact, and legal consequences. The classification is supplemented by an algorithm based on a sequence of questions, which helps reduce subjectivity in auditors' judgments.

Third, quantitative measurement alone is insufficient for assessing identified cases; a system of criteria is required that also takes into account the legal force of the violated provision, recurrence of the case, the degree of control weakness, and the consequences. Future research should focus on integrating this classification into the system of internal audit working papers and testing it using empirical data.

REFERENCES

1. **Budget Code of the Republic of Uzbekistan**, approved by the Law of the Republic of Uzbekistan No. O'RB-360 of December 26, 2013 // National Database of Legislation of the Republic of Uzbekistan. — Tashkent, 2013. — Current edition [Electronic resource]. — Accessed: August 24, 2026. [Official LexUZ source](#)
2. **Decree of the President of the Republic of Uzbekistan No. PF-6300 of August 27, 2021, "On Measures to Further Improve the State Financial Control System"** // National Database of Legislation of the Republic of Uzbekistan. — Tashkent, 2021 [Electronic resource]. — Accessed: August 24, 2026. [Official LexUZ source — PF-6300](#)
3. **Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 416 of August 1, 2022, "On Approval of the Model Regulation on the Internal Audit Service of State Bodies and Organizations"** // National Database of Legislation of the Republic of Uzbekistan. — Tashkent, 2022. — Current edition [Electronic resource]. — Accessed: August 24, 2026. [Official LexUZ source — Resolution No. 416](#)
4. **International Auditing and Assurance Standards Board (IAASB). ISA 240: The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements** // *Handbook of International Quality Management, Auditing, Review, Other Assurance, and Related Services Pronouncements*. — Vol. 1. — New York: International Federation of Accountants (IFAC), 2025.
5. **International Auditing and Assurance Standards Board (IAASB). ISA 450: Evaluation of Misstatements Identified during the Audit** // *Handbook of International Quality Management, Auditing, Review, Other Assurance, and Related Services Pronouncements*. — Vol. 1. — New York: International Federation of Accountants (IFAC), 2025. [IAASB — 2025 Handbook](#)
6. **International Organization of Supreme Audit Institutions (INTOSAI). ISSAI 100: Fundamental Principles of Public-Sector Auditing**. — INTOSAI, 2019 [Electronic resource]. — Accessed: August 24, 2026. [INTOSAI — ISSAI 100](#)
7. **International Organization of Supreme Audit Institutions (INTOSAI). ISSAI 400: Compliance Audit Principles; ISSAI 4000: Compliance Audit Standard**. — INTOSAI, 2019 [Electronic resource]. — Accessed: August 24, 2026. [INTOSAI — ISSAI 400](#)
8. **Committee of Sponsoring Organizations of the Treadway Commission (COSO). Internal Control — Integrated Framework**. — Durham, NC: American Institute of Certified Public Accountants, 2013.
9. **The Institute of Internal Auditors (IIA). Global Internal Audit Standards**. — Lake Mary, FL: The Institute of Internal Auditors, 2024 [Electronic resource]. — Issued: January 9, 2024; effective: January 9, 2025. — Accessed: August 24, 2026. [IIA — Global Internal Audit Standards](#)
10. **Xamidova Z. U.** Improvement of Financial Control and Internal Audit Service Activities in Budget Organizations // *Iqtisod va moliya [Economics and Finance]*. — 2020. — No. 3 (135). — P. 78–84. — [In Uzbek].

Proofreader: Zokir ALIBEKOV

Layout and Designer: Oloviddin Sobir ugli

2026. № 9

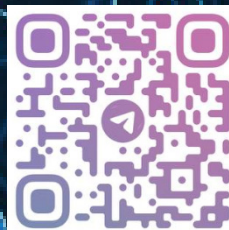
© When materials are reproduced, the INNOVATION SCIENCE AND TECHNOLOGY journal must be cited as the source. Authors are responsible for the accuracy of the information in materials and advertisements published in the journal. Editorial opinions may not always align with those of the authors. Submitted materials will not be returned to the editorial office.

To publish articles in this journal, you may submit articles, advertisements, stories, and other creative materials through the following links. Materials and advertisements are published on a paid basis.

You may subscribe to the journal at any time using the following details. Once subscribed, please send a screenshot or photo of your payment confirmation to our Telegram page @iqtisodiyot_77. Based on this, we will send the latest issue of the journal to your address each month.

“The journal “INNOVATION SCIENCE AND TECHNOLOGY” has been registered by the Agency for Information and Mass Communications under the Administration of the President of the Republic of Uzbekistan from 09.10.2024 under the registration number №390637. License number: C-5669633. PNFL: 30407832680027

Our address: Tashkent city, Yunusobod district, 19th block,
House 17.



Acceptance of articles

Published every
monthly



Directions

Social, economic, political,
technological, scientific



Scopus || Scientific electronic journal specializing in Scopus

CERTIFICATE NUMBER: №390637

**ORDER NUMBER ACCORDING TO
THE LICENSE REGISTER: C-5669633**

CONTACT:



Contact us
+998 50 737 87 88



Telegram channel
t.me/scopus_IST2100



Journal official website
<https://ist-journal.uz/index.php/IST>