

ECONOSCITECH INTEGRATION

ISSUE
5

INTERNATIONAL SCIENTIFIC
ELECTRONIC JOURNAL



TASHKENT STATE
UNIVERSITY OF ECONOMICS



American University
of Technology

Powered by Arizona State University®

ISSN: 3060-5075



Acceptance of articles

PUBLISHED EVERY MONTHLY



ARTICLE CONTRIBUTORS

**PROFESSORS-TEACHERS, SPECIALISTS
AND SCIENTIFIC RESEARCHERS.**



Google
Scholar

Academic
Resource
Index
ResearchBib

BASE

OpenAIRE

doi
Digital
Object
Identifier

OPEN ACCESS

CONTACT:



+998 94 3540880



<https://econoscitech-integration-journal.uz>



2026

**EDITOR-IN-CHIEF:**

Zufarova Nozima Gulamiddinovna
DSc., Dean of Tourism Faculty, TSUE

DEPUTY EDITOR-IN-CHIEF:

Makhmudov Nosir Makhmudovich
DSc., Prof., Academician

DEPUTY EDITOR-IN-CHIEF:

Suyunov Dilmurod Xolmurodovich
Doctor of Economics (DSc), Professor,

DEPUTY EDITOR-IN-CHIEF:

Allayarov Shamsiddin Amanullayevich
doctor of economics (DSC), professor

RESPONSIBLE SECRETARY:

Otaboyev Axmed Maxsudbek o'g'li
TSUE independent researcher

THE SCIENTIFIC-POPULAR
ELECTRONIC JOURNAL
"ECONOSCITECH-INTEGRATION"
HAS BEEN REGISTERED UNDER
THE NUMBER C-5669651 BY THE
AGENCY FOR INFORMATION AND
MASS COMMUNICATIONS (AOKA)
OF THE REPUBLIC OF UZBEKISTAN,
EFFECTIVE FROM OCTOBER 9, 2024.

In accordance with Resolution No. 384/6 dated April 10, 2026, issued by the Presidium of the Supreme Attestation Commission under the Ministry of Higher Education, Science and Innovation of the Republic of Uzbekistan, this journal is included in the list of recommended international scientific publications for publishing the primary research findings of doctoral dissertations in the field of Economic Sciences.

Partners: Tashkent State University of Economics / American University of Technology in Tashkent (AUT)

Electronic publication, Issue 5. 374 pages.
Approved for publication on May, 2026.

Editorial Board Members:

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



Teshabayev To'liqin Zakirovich,
Doctor of Economic Sciences (DSc), Professor



Said Irandoust,
Doctor of Chemical Engineering Sciences,
Professor



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



Khudoykulov Sadirdin Karimovich,
Doctor of Economics, (DSc), Professor



Tokunaga Masahiro,
professor, PhD of Economics of the Faculty of
Business and Commerce



Debasis Das,
professor Department of Computer Science



Nitin Goje,
professor and Program Lead - Computer Science



Nargizakhon Shamshieva
Doctor of Economic Sciences, Professor



Rakhmonov Norim Razzakovich,
Doctor of Economic Sciences (DSc), Professor

Bayxonov Bahodirjon Tursunbayevich
Doctor of Science (DSc), Professor



Shomurodov Ravshan Tursunkulovich,
PhD, Associate Professor



Boymuratov Abduraxmat Djumayevich
Doctor of Philosophy (PhD) in Economics



Sharopova Nafosat Radjabovna
DSc, Associate Professor



Sultanova Kamila Mukhtorali Kizi
Master of Science

CONTENTS

FOREIGN EXPERIENCE IN THE EFFECTIVE ORGANIZATION OF FREE ECONOMIC ZONES	51
Mamadiyev Elyor	
IMPROVING ORGANIZATIONAL AND ECONOMIC MECHANISMS FOR THE ESTABLISHMENT AND DEVELOPMENT OF FAMILY GUEST HOUSES	55
Boynazarov Ulugbek Egamberdievich	
IMPROVING METHODS OF ORGANIZING AND DEVELOPING DOMESTIC TOURISM MARKETS IN UZBEKISTAN	61
Daminov Mirvokhid Isroilovich	
THE IMPACT AND SIGNIFICANCE OF INFRASTRUCTURE IN THE DEVELOPMENT OF THE TOURISM SECTOR.....	67
Dilsora Ibodovna Ibodova	
IMPACT OF STUDENTS AGED OVER 40 ON ECONOMIC ACTIVITY AND BUDGETING BASED ON THE COMPETENCY ECOSYSTEM	74
Nigora Ikrom qizi Primova	
ОЦЕНКА ЭФФЕКТИВНОСТИ ПРОМЫШЛЕННЫХ ПРЕДПРИЯТИЙ ХОРЕЗМСКОЙ ОБЛАСТИ: ЭКОНОМЕТРИЧЕСКОЕ МОДЕЛИРОВАНИЕ И СЦЕНАРНОЕ ПРОГНОЗИРОВАНИЕ НА 2026–2030 ГОДЫ	80
Юсупов Шерзодбек Бахтиёр угли	
IMPROVING THE METHODOLOGY FOR ASSESSING THE PROCUREMENT MANAGEMENT SYSTEM IN COMMERCIAL ENTERPRISES	87
Ergashev Jahongir Bakhodirovich	
MULTIVARIATE ECONOMETRIC ANALYSIS OF FACTORS AFFECTING HOUSEHOLD INCOME IN SURXONDARYO REGION	93
Abdunazarova Shahnoza Norquchqor qizi	
СРАВНИТЕЛЬНЫЙ АНАЛИЗ ГОСУДАРСТВЕННЫХ ЦИФРОВЫХ УСЛУГ АЗЕРБАЙДЖАНА И УЗБЕКИСТАНА	99
Юсифов Магамед Исмаил оглу, Гасанли Расул Шахин оглу, Белалова Гузаль Анваровна	
SUSTAINABLE DEVELOPMENT OF THE MINING INDUSTRY IN THE CONTEXT OF THE GREEN ECONOMY.....	105
Xudayberdiyeva Kamila Sadillovna, Fozilova Zumrad Ahmadovna	
IMPROVING THE ECONOMIC EFFICIENCY OF CLOTHING MANUFACTURING ENTERPRISES IN UZBEKISTAN THROUGH DIGITAL TRANSFORMATION	111
Axmedova Gaziza Azim kizi	
КОМПЛЕКСНАЯ ОЦЕНКА ПОТЕНЦИАЛА РЕГИОНАЛЬНОГО АГРОПРОМЫШЛЕННОГО ИНТЕГРИРОВАНИЯ НА ОСНОВЕ МОДЕЛИ АНР-TOPSIS	115
Аликулов А.Б.	
APPLICATION OF CLUSTER METHODS IN THE DEVELOPMENT OF TOURISM INFRASTRUCTURE AND IMPROVEMENT OF ECONOMIC MECHANISMS IN SAMARKAND CITY	121
Tashov Mizrob Maxmudovich	
THE ROLE AND PROSPECTS OF THE GREEN ECONOMY IN THE SERVICE SECTOR.....	130
Musayeva Shoirazimovna, Usmonova Dilfuza Ilkhomovna	
FACTORS AFFECTING THE EFFICIENCY OF REGIONAL ENTERPRISES	135
Nigora Zokirjon qizi Toxirova	
CURRENT STATE OF ATTRACTING INVESTMENTS IN THE DEVELOPMENT OF TOURISM IN THE REGIONS OF UZBEKISTAN AND THE METHODOLOGY OF ECONOMIC EFFICIENCY INDICATORS	142
Temurbek Olimovich Mamayunusov	
PRESUPPOSITION SHIFTS IN CROSS-LINGUISTIC RENDERING OF ANECDOTAL NARRATIVES:	

A COMPARATIVE INQUIRY INTO TRIGGER RETENTION AND TRANSFORMATION	148
Umaraliyeva Dildora Taxirjanovna	
DIGITAL TECHNOLOGIES AND RURAL PUBLIC SERVICE QUALITY: AN EMPIRICAL ECONOMETRIC ANALYSIS	156
Bek Hunsia, Feruza Mansurovna Ollokulova	
COMPREHENSIVE ANALYSIS OF THE IMPACT OF WOMEN'S LABOR ACTIVITY ON THE EFFICIENCY OF THE ECONOMIC SYSTEM	164
Ahrorova Asila Abduaziz qizi	
IMPROVING TAX ADMINISTRATION IN THE ENTREPRENEURIAL ENVIRONMENT	170
Azizbek Khurramov	
FORMATION OF FINANCIAL RESULTS AT MOTOR TRANSPORT ENTERPRISES	180
Shanazarova Nilufar Baratovna	
ARIMA-BASED ANALYSIS OF SMALL BUSINESS ACTIVITY IN THE AGRICULTURAL SECTOR OF SURKHANDARYA REGION	185
Fayziyeva Aziza Azamat qizi	
ASSESSMENT OF AGRARIAN SECTOR EFFICIENCY THROUGH THE SFA MODEL	192
Utanov Bunyod Kuvandikovich	
АКТУАЛЬНЫЕ ВОПРОСЫ УПРАВЛЕНИЯ ГОСУДАРСТВЕННЫМ ВНЕШНИМ ДОЛГОМ	196
Шомуродов Равшан Турсункулович, Жуманазаров Шахобиддин Дилмурод угли	
MODERN METHODOLOGICAL APPROACHES TO MANAGING EDUCATIONAL SERVICES MARKETING IN HIGHER EDUCATION INSTITUTIONS	201
Shamshieva Nargizakhon Nosirkhuja kizi	
FINANCIAL MANAGEMENT OF FOREIGN AND DOMESTIC COTTON GINNING ENTERPRISES: COMPARATIVE ANALYSIS, DIAGNOSTICS, AND IMPROVEMENT DIRECTIONS	208
Orif Jumayevich Murodov	
ANALYSIS OF THE INSTITUTIONAL FOUNDATIONS OF STATE INTERVENTION IN THE PRODUCT QUALITY MANAGEMENT PROCESS IN UZBEKISTAN	219
Atakulov Askad Raimkulovich	
ИНТЕГРИРОВАННАЯ МОДЕЛЬ ФОРМАЛИЗАЦИИ НЕФОРМАЛЬНОЙ ЗАНЯТОСТИ И РАСШИРЕНИЯ СОЦИАЛЬНОЙ ЗАЩИТЫ В АГРАРНЫХ РЕГИОНАХ (НА ПРИМЕРЕ КАШКАДАРЬИНСКОЙ ОБЛАСТИ)	224
Бобоназарова Юлдуз Ботировна	
THE ECONOMIC ESSENCE OF RESOURCE USE EFFICIENCY AND ITS ROLE IN INDUSTRIAL ECONOMICS	229
Baymanova Mavlyuda Djurayevna, Aipova Iroda Ikramovna	
THE ROLE OF ARTIFICIAL INTELLIGENCE IN ECONOMIC DEVELOPMENT: EVIDENCE FROM DEVELOPING COUNTRIES	234
Ismatova Diyora Sirojiddin qizi, Ubaydullayeva Gulchexra Erkabayevna	
ЭКОЛОГИЧЕСКАЯ УСТОЙЧИВОСТЬ И РЕСУРСНАЯ АДАПТИВНОСТЬ ОТРАСЛИ МАШИНОСТРОЕНИЯ В РОССИИ, КИТАЕ, ИНДИИ	239
Викторова Наталья Геннадьевна, Абрамчикова Наталья Викторовна, Ван Байянь	
ENSURING ORGANIZATIONAL AND ECONOMIC MECHANISMS FOR HOUSING STOCK MANAGEMENT	249
Aminova Naima Umar qizi	
STRATEGIC MANAGEMENT FOR ECONOMIC GROWTH: PRACTICAL APPROACHES AND IMPROVEMENTS	253
Baymuradov Shokhrukh Makhmudovich, Dilmurodov Komiljon Ahmad o'g'li	
IMPROVING THE EFFICIENCY OF SMALL ENTERPRISES IN THE SERVICE SECTOR (A CASE STUDY OF TASHKENT REGION)	259

Ashirov Alisher

IMPROVING THE ORGANIZATIONAL AND ECONOMIC MECHANISMS FOR THE TRANSFORMATION OF SERVICE ENTERPRISES IN UZBEKISTAN	264
--	-----

Kurbanova Rahima Jamshedovna

INNOVATIVE IDEAS OF YOUNG ENTREPRENEURS AND INFRASTRUCTURE FACTORS IN THE DEVELOPMENT OF SMALL INNOVATIVE BUSINESSES	270
--	-----

Ergashev Oybek Khaydaralievich

MARKETING CHARACTERISTICS OF POSITIONING ORGANIC DRIED FRUIT PRODUCTS IN INTERNATIONAL MARKETS	274
--	-----

Khidirov Shokhrukh

TYPOLOGIZATION OF THE ECONOMIC POTENTIAL AND DEVELOPMENT CHARACTERISTICS OF THE DISTRICTS OF SURKHANDARYA REGION BASED ON STATISTICAL AND NEURAL NETWORK APPROACHES.....	280
--	-----

Normurodov Asliddin Alijon ugli

THE ROLE OF FOREIGN EXPERIENCE IN ANALYSING THE THEORETICAL FOUNDATIONS OF THE AUDIT OF FINANCIAL LIABILITIES	291
---	-----

Palvanov Xusniddin Bekimmatovich

DIGITAL SKILLS AND LABOUR PRODUCTIVITY: A SCENARIO ANALYSIS BASED ON AN INTEGRATED STATISTICAL MODEL	297
--	-----

Madraimov Xabibulla Madaminovich

АКТУАЛЬНЫЕ ВОПРОСЫ ФОРМИРОВАНИЯ СТРУКТУРЫ АКТИВОВ И ПАССИВОВ ГОСУДАРСТВЕННЫХ БАНКОВ УЗБЕКИСТАНА	303
---	-----

Т.И. Бобакулов

АКТУАЛЬНЫЕ ВОПРОСЫ ФИНАНСИРОВАНИЯ ВНЕШНЕТОРГОВУЮ ДЕЯТЕЛЬНОСТЬ КОМПАНИЙ С ДОКУМЕНТАРНЫМИ АККРЕДИТИВАМИ	308
---	-----

М.Т. Ибодуллаева

ФОРМИРОВАНИЕ ИНТЕГРИРОВАННОГО МЕХАНИЗМА УПРАВЛЕНИЯ ОСНОВНЫМИ СРЕДСТВАМИ В УСЛОВИЯХ ИННОВАЦИОННОЙ ЭКОНОМИКИ	312
--	-----

Мусаева Жамила Кароматовна

ПРОБЛЕМНЫЕ ВОПРОСЫ ОБЕСПЕЧЕНИЯ КОНКУРЕНТОСПОСОБНОСТИ КОММЕРЧЕСКИХ БАНКОВ УЗБЕКИСТАНА	320
--	-----

Ш.Т. Ибодуллаев

THE IMPORTANCE OF STATE SUPPORT AND INVESTMENT POLICY IN ENSURING THE FINANCIAL STABILITY OF MASS MEDIA ENTERPRISES.....	325
--	-----

Sharipova Shahlo Istamovna

CURRENT STATUS AND DEVELOPMENT TRENDS OF MOTOR TRANSPORT SERVICES	329
---	-----

Rakhimov Azamat Hamrakulovich

ПРИМЕНЕНИЕ ЭКСТРЕМАЛЬНЫХ МОДЕЛЕЙ В ОЦЕНКЕ ЭКОНОМИЧЕСКОГО ПОТЕНЦИАЛА ПРЕДПРИЯТИЯ.....	333
--	-----

Мусаева Шоира Азимовна

MULTI-FACTOR ECONOMETRIC MODELS OF WATER RESOURCE USE IN ENSURING REGIONAL ECONOMIC STABILITY	341
---	-----

Xaitbaev Jasurbek Otaxanovich

СОВЕРШЕНСТВОВАНИЕ ПРАКТИКИ ИСПОЛЬЗОВАНИЯ ИНСТРУМЕНТОВ ЭЛЕКТРОННОГО ДОКУМЕНТООБОРОТА В КОММЕРЧЕСКИХ БАНКАХ.....	345
--	-----

Шомуродов Равшан Турсункулович

THE WAYS OF IMPROVING COMPETITIVENESS IN COMPANIES OF THE CONSTRUCTION INDUSTRY	350
---	-----

Buriev Khakim Toshimovich, Usmanov Ilxom Achilovich, Tolibov Abduazim Zoxid ugli

MACROECONOMIC MODELS AND PROSPECTS OF TRANSITION TO A GREEN ECONOMY IN UZBEKISTAN	357
---	-----

Sharipboyev Hasanboy Marks ugli, Sharipov Kuvondik Baxtiyorovich

THE IMPACT OF HRM PRACTICES ON ACADEMIC STAFF WORK EFFICIENCY IN HIGHER EDUCATION INSTITUTIONS.....	366
---	-----

Sultonboyeva Munira Bahodirovna, Sultanova Kamila Muktorali Kizi

THE ECONOMIC ROLE OF RENEWABLE ENERGY SOURCES IN THE DEVELOPMENT OF THE GREEN ECONOMY IN UZBEKISTAN	374
Inatullayeva Intizor Jamshid qizi	
ОЦЕНКА ФИЗИОЛОГИЧЕСКИХ ПОКАЗАТЕЛЕЙ КРУПНОГО РОГАТОГО СКОТА, ЗАВЕЗЁННОГО В РЕСПУБЛИКУ КАРАКАЛПАКСТАН ИЗ-ЗА РУБЕЖА, С ИСПОЛЬЗОВАНИЕМ ЦИФРОВЫХ ТЕХНОЛОГИЙ	378
Аскарова Нилуфар Бахтияровна	
COOPERATIVE MECHANISMS FOR REGIONAL DEVELOPMENT: A FRAMEWORK ANALYSIS OF CULTURAL TOURISM ENTERPRISE PARTNERSHIPS.....	382
Shohruzbek Ruziyev	
IMPROVING THE ECONOMIC EFFICIENCY OF RESOURCE UTILIZATION IN METALLURGICAL ENTERPRISES: INTERNATIONAL EXPERIENCE AND MODERN DEVELOPMENT TRENDS	393
Matkuliev Akbar Karimovich	
TAX INCENTIVES GRANTED TO ENTERPRISES LOCATED IN SPECIAL ECONOMIC ZONES	397
Torayeva Nafisa Odiljonovna	
REQUIREMENTS FOR TRANSITIONING TO ELECTRONIC BUSINESS AND CONDITIONS FOR DIGITALIZATION.....	402
Ismoilov Diyorbek Ismoiljon ugli	
DEVELOPMENT OF ALTERNATIVE ENERGY AS AN IMPORTANT FACTOR IN ENSURING A SUSTAINABLE ECONOMY AND ENERGY SECURITY	407
Ergash Bobobekov	
ANALYSIS OF WAGE DYNAMICS IN THE EXAMPLE OF SURKHANDARYA REGION BASED ON PANEL DATA.....	412
Abdunazarova Shahnoza Norquchqor kizi	
THE ROLE OF MARKETING STRATEGIES IN IMPROVING THE MARKET COMPETITIVENESS OF CARPET INDUSTRY ENTERPRISES	420
Arzieva Sevinch Shomurot kizi	
CONSUMER PROPERTIES OF FOOD PRODUCTS IN UZBEKISTAN: TRADITIONS, TRANSFORMATION AND NEW QUALITY STANDARDS.....	425
Gayrat Pardaev	
DIRECTIONS FOR STIMULATING ECONOMIC GROWTH THROUGH THE IMPROVEMENT OF THE TAX SYSTEM.....	431
Yakhshimuratova Khasiyat Khudaybergenovna	
THE ROLE OF E-COMMERCE IN THE ECONOMY OF UZBEKISTAN AND ITS DEVELOPMENT PROSPECTS	435
Kambaraliyeva Intizor Suxrobovna	
Aliyarov Olim Abdug'aparovich	
ISSUES OF IMPROVING PRE-TRIAL TAX DISPUTE RESOLUTION MECHANISMS BASED ON INTERNATIONAL EXPERIENCE	439
Solihova Xumora Xasan kizi	
INCREASING THE ATTRACTIVENESS OF DIVIDEND POLICY IN UZBEKISTAN COMPANIES.....	446
Akmal Komiljonovich Shermukhamedov	
COMMUNITY-BASED HERITAGE TOURISM MODELS AS A TOOL FOR ENHANCING HANDICRAFT DEVELOPMENT IN UZBEKISTAN	451
Olimjonova Farog'at Dilmurod qizi	
Amiriddinova Muslima Zayniddin qizi	
ИНСТИТУЦИОНАЛЬНЫЕ МЕХАНИЗМЫ СОЦИАЛЬНОЙ ЗАЩИТЫ НАСЕЛЕНИЯ В УСЛОВИЯХ ПЕРЕХОДНОЙ ЭКОНОМИКИ: ОПЫТ РЕСПУБЛИКИ УЗБЕКИСТАН	458
Шоахмедов Шохрух Шорахимович	

OF EFFECTIVE USE OF AGRICULTURAL LAND	464
Umarov Muzaffar Yusupbayevich	
ECONOMIC CONTENT OF INTANGIBLE ASSETS IN THE FIELD OF INFORMATION AND COMMUNICATION TECHNOLOGIES AND SPECIFIC CHARACTERISTICS OF THEIR RECOGNITION	469
Ishankulov Izzatilla Nurillaevich	
DETERMINANTS OF NON-PERFORMING LOANS IN SERVICE SECTOR LENDING AND CREDIT RISK MITIGATION MECHANISMS	473
Nurmukhammedov Abdijabbar Yunusovich	
ESG INTEGRATION PRACTICES INTO CORPORATE CULTURE SYSTEM IN THE JOINTSTOCK SECTOR OF UZBEKISTAN: A CASE STUDY OF “DORI-DARMON” JSC	479
Sadikova Muslima Alisher kizi	
DEVELOPMENT OF THE METAL MARKET IN THE TASHKENT REGION AND WAYS TO IMPROVE IT	485
Musayeva Shoira Azimovna	
SMALL BUSINESS AS A CATALYST FOR REGIONAL ECONOMIC DEVELOPMENT: AN EMPIRICAL ANALYSIS WITH EVIDENCE FROM UZBEKISTAN	491
Jo‘rayev Ilhomjon Kamolidinovich	
ISSUES OF DEVELOPING DEPOSIT OPERATIONS IN COMMERCIAL BANKS	497
Rahimov Akmal Matyaqubovich	
IMPROVING TEXTILE LOGISTICS AND SUPPLY CHAIN MANAGEMENT IN UZBEKISTAN	503
Isroilov Madaminjon Mukhsinovich	
FEATURES OF SUMMARIZING AND EVALUATING THE RESULTS OF FINANCIAL STATEMENT AUDITING IN UZBEKISTAN PRACTICE	509
Isroil Ismoilovich Meliev	
ГОСУДАРСТВЕННОЕ УПРАВЛЕНИЕ ФИНАНСАМИ И СОЦИАЛЬНОЕ РАВЕНСТВО В УЗБЕКИСТАНЕ: ИНТЕГРАЦИЯ МЕТОДОЛОГИИ РЕФА С ДИСТРИБУТИВНЫМ АНАЛИЗОМ НА ОСНОВЕ ПОДХОДА SEQ	516
Зокиржонов Мухаммадсодик Равшанбек угли	
FACTORS AFFECTING DAIRY PRODUCTION EFFICIENCY: CORRELATION AND REGRESSION ANALYSIS	530
Ergashev M.Y.	
Tairova Z.M.	
METHODOLOGICAL FOUNDATIONS OF COST ACCOUNTING AND ANALYSIS IN AQUACULTURE CLUSTERS: IFRS INTEGRATION, ECONOMETRIC MODELING, AND ESG PERSPECTIVES	537
Shodiev Aslam Rahmatilloevich	
APPLICATION OF ARTIFICIAL NEURAL NETWORKS FOR PREDICTING CUSTOMER LOYALTY IN COMMERCIAL BANKS	544
Jumaniyozova Mukaddas	
SUSTAINABLE REGIONAL SPECIALIZATION UNDER WATER SCARCITY: GLOBAL EXPERIENCE AND PROSPECTS FOR UZBEKISTAN	550
Sodiqova Nigora Turayevna	
CURRENT STATE AND STRUCTURAL ANALYSIS OF EXPORT ACTIVITIES OF BUSINESS ENTITIES IN THE BUKHARA REGION	555
Djurayeva Munira Sadiilloyevna	
EVALUATION OF THE EFFICIENCY OF STRATEGIC MANAGEMENT OF EDUCATIONAL SERVICES EXPORTS IN THE BUKHARA REGION	560
Alimova Shamsiya Abidovna	

ADVANCING AN INTEGRATED STATISTICAL ASSESSMENT METHODOLOGY FOR COMMERCIAL BANKS' DIGITAL ACTIVITIES AND CREDIT PORTFOLIO QUALITY	565
Rakhmataliev Muzaffar Eshdavlatovich	
EFFECTIVENESS OF USING BIOLOGICAL METHODS IN PLANT PROTECTION: STATISTICAL ANALYSIS OF DISTRIBUTION STRATEGY AND PRACTICAL IMPLEMENTATION DENSITY	570
Suyundikova Dilafruz Mamarajabovna	
МЕТОДОЛОГИЯ ФОРМИРОВАНИЯ «КАРТЫ ПРОЗРАЧНОСТИ ПО МСФО» НА ОСНОВЕ КЛАСТЕРИЗАЦИИ АКЦИОНЕРНЫХ ОБЩЕСТВ ПО УРОВНЮ КАЧЕСТВА.....	577
Лутфуллаев Сардорбек Уткур угли	
INDICATOR-BASED IMPROVED METHODOLOGY FOR DETERMINING INTERNAL AUDIT SIGNIFICANCE LIMITS IN THE PUBLIC SECTOR.....	586
Ismatillayev Baypolat Khushvaqtovich	
METHODOLOGY FOR IDENTIFYING CASHGENERATING UNITS AND ADJUSTING THE DISCOUNT RATE TO NATIONAL CAPITAL MARKET CONDITIONS IN THE IMPAIRMENT ASSESSMENT OF LONG-TERM ASSETS	593
Fayzullayev Begzod Bakhtiyor o'g'li	
IMPROVING THE SCIENTIFIC AND METHODOLOGICAL APPROACHES TO THE FUNCTIONAL CLASSIFICATION OF INVENTORIES IN COMMUNICATION ENTERPRISES	599
Jamilov Jushkin Jonon o'g'li	

IMPROVING THE SCIENTIFIC AND METHODOLOGICAL APPROACHES TO THE FUNCTIONAL CLASSIFICATION OF INVENTORIES IN COMMUNICATION ENTERPRISES

Jamilov Jushkin Jonon o'g'li
Researcher, Tashkent State University of Economics

Abstract. The article examines the improvement of scientific and methodological approaches to the classification of inventories specific to telecommunications enterprises. The views of economists on inventory classification, as well as the classifications provided in National Accounting Standard No. 4 and IAS 2, are critically analyzed. It is substantiated that these approaches are mainly based on the industrial production paradigm and do not fully correspond to the service-infrastructure nature of the telecommunications industry.

As a result of the research, a scientific and methodological approach is proposed for classifying telecommunications inventories into five groups based on their functional role in the network and economic substance: network infrastructure inventories, subscriber sales inventories, installation materials, repair spare parts, and auxiliary consumables. Based on empirical data from Uzbektelecom JSC for 2022–2025, the practical significance of the proposed classification for organizing accounting, inventory valuation, stocktaking, and identifying audit risks is revealed.

Keywords: inventories, classification, functional groups, telecommunications enterprises, network infrastructure, subscriber sales inventories, accounting, stocktaking, audit risks.

Аннотация. В статье исследованы вопросы совершенствования научно-методических подходов к классификации запасов, характерных для предприятий телекоммуникационной отрасли. Проведён критический анализ взглядов отечественных и зарубежных экономистов на классификацию запасов, а также классификационных подходов, закреплённых в Национальном стандарте бухгалтерского учёта № 4 и МСФО (IAS) 2. Обосновано, что существующие подходы преимущественно основаны на промышленно-производственной парадигме и не в полной мере учитывают сервисно-инфраструктурный характер деятельности предприятий телекоммуникационной отрасли.

По результатам исследования предложен научно-методический подход к классификации запасов телекоммуникационных предприятий по пяти функциональным группам в зависимости от их роли в сети и экономического содержания: запасы сетевой инфраструктуры, абонентско-сбытовые запасы, монтажные материалы, запасные части для ремонта и вспомогательные расходные материалы. На основе эмпирических данных АО «Узбектелеком» за 2022–2025 годы раскрыто практическое значение предложенной классификации для организации бухгалтерского учёта, оценки запасов, проведения инвентаризации и выявления аудиторских рисков.

Ключевые слова: запасы, классификация, функциональные группы, предприятия телекоммуникационной отрасли, сетевая инфраструктура, абонентско-сбытовые запасы, бухгалтерский учёт, инвентаризация, аудиторские риски.

INTRODUCTION

The issue of proper inventory classification in the communications sector is particularly relevant due to several objective factors. First, the rapid transition of equipment from one generation to another, such as 3G → 4G → 5G, creates a high risk of obsolescence for certain groups of resources, and this risk differs significantly across inventory categories.

Second, the heterogeneous storage of similar types of equipment supplied by different vendors, including Huawei, Ericsson, Nokia, ZTE, and others, as well as their distribution across thousands of geographical locations, complicates inventory and control processes.

Third, the very high turnover of SIM cards and scratch cards, amounting to 12–14 million units per year, requires their separation from other resources and accounting under a distinct control regime (ITU & UNITAR, 2024; BCG, 2023).

Under these conditions, classification goes beyond theoretical discussion and becomes a directly practical issue affecting accounting, valuation, inventory management, and audit effectiveness.

LITERATURE REVIEW

The classification of inventories is one of the classical issues in accounting theory, and various approaches to this matter have been developed in the literature.

Hendriksen and Van Breda interpreted inventory classification as a primary condition for selecting an appropriate valuation method (Hendriksen and Van Breda, 2000).

Needles, Anderson, and Caldwell proposed classifying inventories according to the type of enterprise activity and developed separate classification schemes for trading and manufacturing enterprises (Needles, Anderson, and Caldwell, 2004).

Gates classified inventories in an industrial enterprise into three groups: production inventories, work in progress, and finished goods (Gates, 2018).

Levkovich and Burtseva defined inventories as production elements used as objects of labor, intended for processing or production in order to create new use value, and linked their classification specifically to the stages of the production cycle (Levkovich and Burtseva, 2019).

Schreibfeder proposed grouping inventories from the perspective of management objectives, particularly according to the nature of demand and turnover rate (Schreibfeder, 2016).

RESEARCH METHODOLOGY

The research employed scientific abstraction, induction and deduction, grouping and comparison, systematic and comparative analysis, economic-statistical analysis, and objective observation methods.

A functional approach was applied to justify the classification criteria. Each type of inventory was evaluated according to its role in network operations, turnover cycle, location characteristics, and risk of impairment.

ANALYSIS AND RESULTS

To justify the need for classifying inventories specific to communications enterprises, it is first necessary to assess the development dynamics of the sector. The main indicators of Uzbekistan's communications sector for 2022–2025 are presented in Table 1.

Table 1
Dynamics of key indicators of the communications sector of Uzbekistan (2022–2025)¹

Index	2022.	2023.	2024.	2025.
Number of Internet users, million people	27.2	29.8	31.5	33.1
Number of active mobile connections, mln	31.2	32.4	33.6	33.9
Number of base stations, thousand units	31.7	35.8	41.2	46.5
Volume of telecommunication services, trillion soums	13.2	18.1	21.0	24.8
Income of JSC «Uzbektelecom», trillion soums	6.1	7.6	9.0	10.2
Industry growth rate, % (annual)	10.1	12.8	16.0	14.6

This table shows that the number of base stations increased by 46.7%, from 31.7 thousand to 46.5 thousand units in 2022–2025. Considering that, on average, 50–80 types of equipment and spare parts are required for the installation of each new base station, at least 750 thousand items of equipment and spare parts were recorded in accounting for the 14.8 thousand base stations added during this period alone.

Managing such a large inventory nomenclature within the framework of the traditional four-category classification is practically difficult. Therefore, a deeper grouping of inventories based on functional characteristics becomes an objective necessity.

¹ It was compiled by the author based on the information of the National Statistics Committee and «Uzbektelecom» JSC

At the next stage, the existing classification approaches presented in economic literature and regulatory documents were systematized, and their applicability to the communications sector was assessed. The results of the analysis are summarized in Table 2.

Table 2

Existing approaches to the classification of inventories and their relevance to the field of communication²

Author / source	Classification approach	Suitability for the field of communication
I.V. Geitz	Three types: production stocks, work-in-progress, finished goods	Limited — there is almost no work-in-progress and finished goods in the communications service
O.A. Levkovich, I.N. Burtseva	Grouping by production cycle stages	Limited — does not reflect the continuity of the service cycle
J. Schreiberfeder	By nature of demand and turnover rate (management approach)	Partially compatible - not linked to the accounting system
4th edition of the BHS	Four categories: raw materials and supplies; work in progress; finished product; goods	Limited — SIM card, terminal equipment, and network spare parts are combined into one category
BHS 2	Three categories: for sale; in the production process; consumed in production/service	Partially compatible - covers service domain but does not provide network analytics
The author's approach	Five functional groups: by network function, turnover cycle, location and impairment risk	Fully compatible — integrates accounting, valuation, inventory, and audit needs

This table shows that existing classifications are based either on the stages of the production cycle or on generalized areas of consumption. In a communications enterprise, the “product” is a continuous network service, and the role of inventories is not to be transformed into a final product, but to create, maintain, expand, and deliver the network service to subscribers.

Therefore, the classification criterion should be shifted from the production cycle to the functional role of inventories within the network. Based on this logic, a scientific and methodological approach has been developed for classifying inventories specific to communications enterprises into five functional groups, as presented in Table 3.

Table 3

Comparative characteristics of functional groups of inventories specific to communication enterprises³

No.	Group name	Examples of basic content	Rotation cycle	Location	Impairment risk
1	Network-infrastructure reserves	Base station modules, optical cables, switches, routers, antennas	Long (3–7 years)	Base stations	High (3G→5G)
2	Subscription-sale stocks	SIM cards, scratch cards, subscriber terminal equipment (router, IPTV)	Short (1–6 months)	Sales points, warehouses	Low
3	Installation materials	Cable couplings, connectors, sockets, protection devices	Disposable	Construction and assembly brigades	Average
4	Spare parts	Circuit boards, capacitors, power supply units	On demand	Regional branches	Average
5	Consumables	Generator fuel, work clothes, stationery, cleaning products	Permanent expense	All divisions	Low

The methodology for dividing inventories into five groups is based on the following logic. The first group, network infrastructure inventories, forms the physical basis of the network and has a long turnover cycle, usually ranging from 3 to 7 years. This group is most exposed to the risk of functional obsolescence caused by changes in technological generations, which requires regular monitoring in accordance with the requirements of IAS 36.

² Prepared by the author

³ Author development

The second group, subscriber sales inventories, consists of products sold or distributed directly to subscribers. Their turnover cycle is relatively short, ranging from several weeks to six months, while the volume of turnover is very large. For example, SIM cards alone account for 12–14 million units per year.

The third group, assembly and installation materials, includes one-time-use materials consumed during network expansion or reconstruction, and their movement is directly related to capital construction projects. The fourth group, spare parts, is kept in reserve to ensure the uninterrupted operation of existing equipment, and demand for these items is stochastic. The fifth group, auxiliary consumables, does not directly perform the main network function but supports auxiliary business processes.

All five groups share four common features: subordination to the network function, geographical dispersion, exposure to rapid technological obsolescence, and vendor dependence. At the same time, they differ significantly in terms of turnover cycle, location characteristics, and risk level. These differences require differentiated accounting, valuation, and control decisions for each group.

The linkage of the proposed classification with the accounting and analytical infrastructure is presented in Table 4, where the recommended valuation method, accounts, inventory regime, and priority audit risks are identified for each group (Table 4).

Table 4

Application of the five-group classification to accounting, valuation, inventory and audit processes⁴

Group	Evaluation method	Accounts receivable	Inventory mode	Priority audit risks
Network infrastructure	Identification (private cost)	1010, 1040; returned - 2818	Annual full; with RFID/barcode	Concealment of functional impairment; physical presence
Subscriber sales	Average cost (AVECO)	1018, 1019, 2910	On a quarterly basis	SIM reuse; scratch abuse
Assembly and installation	FIFO	1010, 1090	At the end of the project	Excess write-off
Maintenance	Identification	1040	Semi-annual	Cable and parts theft
Assistant-consumer	Average price	1050, 1090	Annual	Personal use

The adaptation matrix presented in this table demonstrates the practical value of the proposed classification. In particular, linking the valuation method to group characteristics has a significant impact on financial reporting indicators. A practical calculation for SIM cards showed that the difference between the FIFO method and the weighted average cost method for a batch of 600 thousand units may amount to UZS 51–66 million. Applying the specific identification method to high-value network infrastructure equipment, where the cost of a single base station module exceeds UZS 130 million, enables individual tracking of each device by serial number and IMEI, making it possible to identify impairment at the device level.

The empirical testing of the proposed classification was carried out using data from Uzbektelecom JSC. When the company's inventories were regrouped according to the five-group classification, it was found that by the end of 2025, out of total inventories of UZS 1,363 billion, UZS 614 billion or 45.0% were attributed to network infrastructure inventories; UZS 298 billion or 21.9% to subscriber sales inventories; UZS 205 billion or 15.0% to installation materials; UZS 164 billion or 12.0% to spare parts; and UZS 82 billion or 6.1% to auxiliary consumables.

An important point is that monitoring the dynamics for 2022–2025 by functional groups became possible precisely due to the introduction of the proposed classification. Under the traditional classification, for example, network infrastructure inventories with a high risk of obsolescence would be combined into a single indicator with low-risk auxiliary materials, making the risk profile invisible to users of financial statements.

International practice also confirms the relevance of functional grouping. In the financial statements of Vodafone, Orange, and Deutsche Telekom, notes on inventories are disclosed separately for network equipment, subscriber devices, and other materials, while accounting is carried out through network-specific ERP systems such as SAP for Telecommunications and Oracle Communications (Kuzovkova, Volodina, and Kukharensko, 2017). In such systems, functional groups form the basis of the data architecture. Thus, the proposed five-

⁴ Author development

group classification also serves as a bridge that brings national accounting practice closer to international standards and the requirements of digital accounting systems.

Another important practical direction of the classification is the enrichment of notes to the financial statements. While the world's largest telecommunications operators present inventory notes divided into 8–10 sections, Uzbektelecom JSC currently limits disclosure to standard categories. Restructuring the notes based on the five-group classification provides users of financial statements with qualitatively new information about the liquidity level, obsolescence risk, and turnover rate of inventories. It also serves as a positive factor in the process of obtaining international credit ratings for the company.

CONCLUSIONS AND RECOMMENDATIONS

Based on the research results, the following conclusions and recommendations were formulated.

First, approaches to classifying inventories in economic literature and regulatory documents are mainly based on the industrial production paradigm and do not fully correspond to the service-infrastructure nature of the communications sector. In a communications enterprise, the role of inventories is not to be transformed into tangible products, but to ensure the creation, uninterrupted operation, expansion, and delivery of network services to subscribers. Therefore, the classification criterion should be shifted from the production cycle to the functional role of inventories within the network.

Second, the scientific and methodological approach to classifying inventories specific to communications enterprises has been improved by grouping them into five categories according to their functional role in the network and economic substance: network infrastructure inventories, subscriber sales inventories, assembly and installation materials, spare parts, and auxiliary consumables. Each group is clearly identified by its turnover cycle, location characteristics, and impairment risk, which makes it possible to differentiate accounting decisions across inventory groups.

Third, the application of the proposed classification within the accounting and analytical infrastructure has been substantiated. For each group, the appropriate valuation method has been determined: specific identification for network infrastructure inventories and spare parts, weighted average cost for subscriber sales inventories and auxiliary consumables, and FIFO for assembly and installation materials. In addition, relevant accounts, inventory procedures, and priority audit risks have been identified. Empirical testing using the example of Uzbektelecom JSC confirmed that group-based analysis makes the composition of inventories and their risk profile more transparent for users of financial statements.

Fourth, it is recommended to include this classification in the accounting policies of Uzbektelecom JSC and other communications operators, expand the notes to the financial statements on its basis, and develop methodological recommendations at the level of the sectoral ministry.

REFERENCES

1. O'zbekiston Respublikasining 13.04.2016-yildagi "Buxgalteriya hisobi to'g'risida"gi O'zbekiston Respublikasi Qonuniga o'zgartish va qo'shimchalar kiritish haqidagi O'RQ-404-sonli Qonuni <https://lex.uz/docs/-2931253>
2. Law of the Republic of Uzbekistan "On Telecommunications", No. ZRU-1015. National Database of Legislation. Available at: www.lex.uz.
3. National Accounting Standard No. 4 "Inventories". National Database of Legislation. Available at: www.lex.uz.
4. National Accounting Standard No. 21 "Chart of Accounts for Financial and Economic Activities of Business Entities and Instructions for Its Application". National Database of Legislation. Available at: www.lex.uz.
5. IFRS Foundation. (2023). *IAS 2: Inventories*. London: IFRS Foundation.
6. IFRS Foundation. (2023). *IAS 36: Impairment of Assets*. London: IFRS Foundation.
7. Gates, I.V. (2018). *Accounting for Inventories*. Moscow: Delo i Servis. 320 p.
8. Hendriksen, E.S., & Van Breda, M.F. (2000). *Accounting Theory*. Moscow: Finance and Statistics. 576 p.
9. Needles, B., Anderson, H., & Caldwell, D. (2004). *Principles of Accounting*. Moscow: Finance and Statistics. 496 p.
10. Schreibfeder, J. (2016). *Effective Inventory Management*. Moscow: Alpina Publisher. 304 p.