

INNOVATION SCIENCE AND TECHNOLOGY



Scopus || Electronic journal specializing in Scopus

ISSUE 12



Acceptance of papers **December, 2025**



**Acceptance of
papers**

Published monthly



Topics

economics,
technology, social
sciences



ISSN 3060-5229

**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.

Electronic publication, Issue 12. 527 pages.
Approved for publication on December, 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

CONTENTS

THE THEORETICAL FOUNDATIONS OF APPLYING TAX INCENTIVES FOR INVESTMENTS DIRECTED TOWARD HUMAN CAPITAL	14
Quliyev Begimqul Melikovich	
ECONOMETRIC MODELS OF CASHLESS SETTLEMENTS AMONG ECONOMIC ENTITIES.....	21
Ruzimuradov Shukhrat Khusanovich	
PROSPECTS FOR THE DEVELOPMENT OF TOURISM BRAND MARKETING IN MODERN CONDITIONS (UAE: DUBAI ON THE EXAMPLE OF A CITY).....	26
Ibodova Dilsora Ibodovna	
CREDIT DEFAULT SWAPS AS A WAY TO HEDGE AGAINST FORTHCOMING FUTURE UNCERTAINTIES IN THE DEBT MARKET OF UZBEKISTAN	31
Abduganiev Abdulaziz Alisher o'g'li	
SHOULD THE REGULATION OF THE E-COMMERCE MARKET IN THE REPUBLIC OF UZBEKISTAN BE CARRIED OUT BY THE NATIONAL AGENCY FOR PERSPECTIVE PROJECTS OR THE CENTRAL BANK?	39
Sadikov Aziz Mirsharapovich	
MECHANISM FOR IMPLEMENTING ARTIFICIAL INTELLIGENCE TECHNOLOGIES IN THE OPERATIONS OF COMMERCIAL BANKS IN UZBEKISTAN.....	46
Bakhriddin Berdiyarov	
INNOVATIVE APPROACHES OF SMALL BUSINESSES IN THE INDUSTRY AND CONSTRUCTION SECTORS AND THEIR IMPACT ON EMPLOYMENT.....	53
Ergasheva Nigora Abdigapparovna	
AI-BASED NORMALIZATION METHODOLOGY FOR COLLECTING AND PROCESSING KPI INDICATORS.....	56
Shuhratov Mamurjon Shuhrat o'g'li	
REFORMS AND PROSPECTS FOR THE DEVELOPMENT OF THE PARTICIPATORY BUDGETING INITIATIVE IN UZBEKISTAN	63
Khamidov Khabibullo Hikmatulla ugli	
PROBLEMS OF THE INWARD PROCESSING CUSTOMS REGIME AND WAYS TO ELIMINATE THEM.....	70
Abdullaev Shakhzodbek	
FINANCIAL ANALYSIS OF SMALL BUSINESS AND PRIVATE ENTREPRENEURSHIP IN CONSTRUCTION	74
Musayeva Shoirazimovna	
MEASURES TO ENHANCE THE ROLE AND EFFECTIVENESS OF SMALL BUSINESS IN REGIONAL ECONOMIC DEVELOPMENT.....	80
Ergashev Jamshid Jamoliddinovich	
THEORETICAL AND METHODOLOGICAL FOUNDATIONS FOR IMPLEMENTING INNOVATIVE TECHNOLOGIES IN EDUCATION	84
Alijonova Marjonabonu Jaxongir qizi	
INDIA'S EXPERIENCE IN ENHANCING PUBLIC WELFARE THROUGH THE DEVELOPMENT OF ENTREPRENEURIAL ACTIVITY	88
Aripov Oybek Abdullayevich	
GREEN STRUCTURAL TRANSFORMATION IN UZBEKISTAN: GREEN FINANCE AND ECO-INNOVATION FOR SUSTAINABLE INDUSTRIAL AND AGRICULTURAL DEVELOPMENT.....	93
Egamberdiev Khumoyun	
AGRICULTURAL MANAGEMENT BASED ON INNOVATIVE TECHNOLOGIES AT THE INTERNATIONAL LEVEL: THE EXAMPLE OF UZBEKISTAN.....	101
Bustonov Komiljon Kumakovich	
ANALYSIS OF THE FINANCIAL CONDITION OF ENTERPRISES: ASSESSMENT OF EQUITY EFFICIENCY	110
Umurkul Shukhratovich Fayziev	

IMPROVING THE QUALITY OF ECONOMIC GROWTH THROUGH THE TRANSITION TO THE DIGITAL ECONOMY.....	118
Mamadaliev Akmaljon	
МЕТОДЫ И МЕХАНИЗМЫ ИССЛЕДОВАНИЯ ПОТРЕБИТЕЛЬСКОГО ПОВЕДЕНИЯ НА ТУРИСТСКОМ РЫНКЕ	124
Нурматова Ситора Шавкатовна	
ANALYSIS OF INNOVATION ACTIVITIES	133
Alieva Elnara Ametovna	
METHODS AND MECHANISMS FOR STUDYING CONSUMER BEHAVIOR IN THE TOURISM MARKET.....	139
Nurmatova Sitora Shavkatovna	
ALGORITHMS AND METHODS FOR CALCULATING THE AREA OF A GASTRIC ULCER DEFECT USING MODERN MATHEMATICAL TECHNIQUES.....	145
Yusupov Ibrohimbek XXX, Abdusamatova Munira Sultonbek qizi	
UTILIZATION OF ARTIFICIAL INTELLIGENCE TECHNOLOGIES IN ENTERPRISE MARKETING ACTIVITIES	151
Sadikov Shohrux Shukhratovich	
ENSURING THE FINANCIAL SUSTAINABILITY OF HIGHER EDUCATION INSTITUTIONS: STRATEGIC DIRECTIONS, GLOBAL TRENDS, AND POLICY IMPLICATIONS.....	156
Inomiddin Imomov	
THEORETICAL FOUNDATIONS OF THE STRUCTURE OF THE NATIONAL ECONOMY	161
Bustonov Mansurjon Mardonakulovich	
IMPORTANT CHARACTERISTICS OF THE DEVELOPMENT OF E-COMMERCE SERVICES.....	169
Jurakulov Shohruh Bahtiyorovich	
AGRICULTURE PROMOTION AND DEVELOPMENT IN MOUNTAIN AND MOUNTAIN REGIONS.....	173
Abdulxayeva Gulshan Maxmudovna	
IMPROVING MECHANISMS FOR ENHANCING ECONOMIC EFFICIENCY IN SERVICE ENTERPRISES.....	178
Seytimbetov Kabul Serimbetovich	
INTEGRATION OF INTELLIGENT CONTROL IN DRYING SYSTEMS: PROCESS OPTIMIZATION THROUGH SENSORS, ARTIFICIAL INTELLIGENCE, AND MODULAR DRYING.....	184
Yangiboyeva Raxbaroy Mashrabboy qizi	
THEORETICAL MODELS AND CONCEPTS OF ECONOMIC DEVELOPMENT IN THE ENERGY SECTOR.....	190
Nigmatullaeva Gulchekhra Nurullaevna	
STATISTICAL ANALYSIS OF REGIONAL ECONOMIC POTENTIAL (A CASE STUDY OF NAMANGAN REGION).....	196
Tursinbayev Azizbek Nabijon o'g'li, Sirojiddinov Kamoliddin Ikromiddinovich	
DIRECTIONS FOR DEVELOPING INVESTMENT AND EXPORT IN REMOTE SERVICE ENTERPRISES.....	203
Uzakov Ortik Shaymardanovich	
SPECIFIC FEATURES OF ENTREPRENEURSHIP IN INCREASING THE INCOME OF THE POPULATION IN THE REGION	207
Kuldasheva Maftuna Musurmon kizi	
KEY FACTORS OF ATTRACTING INVESTMENT THROUGH SUBSIDIES AND INVESTMENTS TO INCREASE AGRICULTURAL CROP PRODUCTION IN UZBEKISTAN	211
Mamatkulova Nadira Makkamovna	
RAQAMLI MARKETING VA INNOVATSION TEXNOLOGIYALAR ASOSIDA EKOTIZIM SAMARADORLIGINI OSHIRISH USULLARI	216
Sobirov Azizbek Avazbekovich	
WAYS TO IMPROVE THE STATISTICAL ASSESSMENT OF FRUIT AND VEGETABLE PRODUCTION PROCESSES AND EXPORT POTENTIAL IN THE REPUBLIC OF UZBEKISTAN.....	223
Anorboeva Bakhtijamol Daniyar kizi	

THE IMPACT OF DEGRADATION ON THE OPERATIONAL CHARACTERISTICS OF PHOTOVOLTAIC MODULES UNDER SHARPLY CONTINENTAL CLIMATIC CONDITIONS	229
Qurbanov Yunus Murtaza o'g'li	
INTEGRATED NEW MEDIA OPERATION MODEL FOR INTELLIGENT TALENT ASSESSMENT PLATFORMS: THE PATH OF QR CODE ACTIVATION AND CONTENT-DRIVEN ENGAGEMENT.....	235
Wang Biao	
METHODOLOGICAL FOUNDATIONS FOR SHAPING THE CREATIVE ACTIVITY OF YOUNGER PUPILS IN SOLVING MATHEMATICAL PROBLEMS	239
Dzhurakulova Adolat Khalmuratovna	
SOLIDWORKS-BASED MODELING OF AN AIR-BLOWING SYSTEM TO ENSURE HIGH-QUALITY FIBER REMOVAL FROM SAW TEETH	247
Mirzakarimov Mirsharoffiddin Mirzaabdurahimovich	
THEORETICAL STUDY OF TEMPERATURE AND THERMAL PHENOMENA IN MECHANICAL CUTTING OF WHITE CAST IRON.....	256
Allanazarov Akmal Abdulxaqovich	
THEORETICAL AND METHODOLOGICAL FOUNDATIONS OF SUSTAINABLE DEVELOPMENT OF THE REGIONAL ECONOMY	262
Turdiyev Ulug'bek Qayumovich	
THE INTERRELATIONSHIP BETWEEN MIGRATION AND THE INDUSTRIAL ECONOMY	266
Khusanbek Begmatov	
THE IMPACT OF ESG PRINCIPLES ON THE HOTEL INDUSTRY	271
Khusenova Mekhrangiz	
CURRENT STATUS OF INDUSTRIAL PRODUCTION AND SERVICES MARKET IN KASHKADARYA REGION.....	276
Norov Murodjon Makhmudovich	
DEVELOPMENT OF AN ARTIFICIAL INTELLIGENCE-BASED CYBERSECURITY SYSTEM FOR THE AUTOMATIC DETECTION OF FAKE FINANCIAL RECEIPTS, PHISHING URLS, AND MALICIOUS APK FILES.....	284
Shermatov Axlidin Sharobiddin o'g'li	
WAYS TO INCREASE REVENUES IN COMMERCIAL BANK OPERATIONS	287
Ostonaqulova Gulchehraxon Muhammadyoqub qizi	
РОЛЬ СВОБОДНЫХ ЭКОНОМИЧЕСКИХ ЗОН В РЕГИОНАЛЬНОМ РАЗВИТИИ И ЗАРУБЕЖНЫЙ ОПЫТ	301
Файзиева Ширин Шодмоновна	
RAQAMLI IQTISODIYOTGA O'TISH SHAROITIDA IQTISODIY O'SISH OMILLARINING TA'SIRINI BAHOLASH METODOLOGIYASI.....	307
Bustonov Mansurjon Mardonakulovich	
FINTECH TRENDS: NEW TOOLS FOR ATTRACTING FINANCING IN THE CONTEXT OF DIGITAL TRANSFORMATION	313
Madjitova Lolakhon Lazizovna	
CHALLENGES AND PROSPECTS FOR THE DEVELOPMENT OF E-COMMERCE IN UZBEKISTAN.....	317
Toshpulatov Akhror Tukhtamurod ugli	
STRATEGIC DETERMINANTS OF FOREIGN DIRECT INVESTMENT IN UZBEKISTAN	326
Rustamov Foziljon	
TYPES AND MEANS OF ADVERTISING IN THE FIELD OF TOURISM	335
Bahriyeva Zarina Nasimovna	
INTELLECTUALIZATION OF TECHNICAL MEANS FOR CONTROLLING TECHNOLOGICAL REFINING PROCESSES.....	340
Ruziyev Umidjon Abdimajitovich	
NECESSITY OF ENSURING AND INCREASING THE COMPETITIVENESS OF PLACEMENT MEANS	349
Sherkulov Dilshod Jurakulovich	
YASHIL IQTISODIYOT VA MOLIYAVIY INKLYUZIYANING O'ZARO BOG'LIQLIK NAZARIYALARI.....	354
Adashaliyev Baxtiyorjon Valisher o'g'li	

THE IMPORTANCE OF THE AUDIT OF LEASING OPERATIONS ON FARMS OF THE REPUBLIC OF UZBEKISTAN	359
Tursunov Ulugbek Sativoldievich	
METHODOLOGY DEVELOPMENT RETAIL MARKETING AND TRADING SYSTEM.....	365
Makhmatkulov Golibjon Kholmuminovich	
NECESSITY OF ENSURING AND INCREASING THE COMPETITIVENESS OF PLACEMENT MEANS	369
Sherkulov Dilshod Jurakulovich	
ENVIRONMENTAL FISCAL POLICY AS A DRIVER OF GREEN GROWTH AND EMPLOYMENT IN CENTRAL ASIA: EMPIRICAL EVIDENCE	374
Rakhmatova Zilola Yurevna	
ON THE ISSUE OF CALCULATING THE POWER REQUIRED TO HEAT THE EDGES OF THE PIPE BILLET TO THE WELDING TEMPERATURE.....	379
Zairkulov Elyor Yoqubjon o'g'li	
STATISTICAL ASSESSMENT OF REGIONAL ELECTRICITY GENERATION VOLUMES	385
Doliev Shokhabbos Kulmurat ugli	
ANALYSIS OF ICT APPLICATION IN UZBEKISTAN'S TOURISM BASED ON EMPIRICAL RESEARCH	389
Nazarov Khusanbek Avazbek ogli	
METHODOLOGY FOR FORECASTING AND ANALYZING MANAGEMENT ACCOUNTING INDICATORS AT AN ENTERPRISE	395
Minutdinova Liliya Tagirovna	
WELLNESS TOURISM AS AN ESSENTIAL COMPONENT OF HEALTH TOURISM	402
Tashtayeva Saida Kahharovna	
THE EXPERIENCE OF GERMANY IN DEVELOPING SMALL AND MEDIUM ENTERPRISES.....	409
Annaklichev Saxi Saparmuxamedovich	
ANALYSIS OF THE APPLICATION OF THE INTERNATIONAL STANDARD ON AUDITING "ANALYTICAL PROCEDURES" IN NATIONAL AUDIT ACTIVITIES	416
Tajekeev Ziyatdin Kobeyzinovich	
ORGANIZATIONAL AND ECONOMIC FOUNDATIONS OF GREEN ENTERPRISE DEVELOPMENT IN ENSURING REGIONAL ENVIRONMENTAL SAFETY	421
Khamidillo Odilov	
A REALIST-POSITIVIST FRAMEWORK FOR ANALYSING MERGERS AND ACQUISITIONS UNDER ECONOMIC POLICY UNCERTAINTY	429
Zakhidov Azizbek Rustamovich	
DEVELOPING MATHEMATICAL MODELS TO SIMULATE THE DYNAMIC BEHAVIOR OF SEPARATION PROCESSES, CONSIDERING THE IMPACT OF EXTERNAL FACTORS	436
Abdulleva Kamola Rustamovna	
THEORETICAL FOUNDATIONS OF IMPLEMENTING DIGITAL TECHNOLOGIES IN THE TRANSFORMATION OF BANKS.....	445
Umarova Malika Baxtiyarovna	
ON THE ISSUE OF RESEARCH AND DEVELOPMENT OF A SLAG-FORMING BASE FOR ELECTRODE COATINGS FOR WEAR-RESISTANT SURFACING.....	451
Sadikov Jaxongir Nasidjanovich	
MODELING OF HEAT FLOWS IN GAS-FIRED CHAMBER FURNACES.....	456
Rajabov Azamat Toirovich	
DEVELOPMENT OF A MIMO MODEL OF AZEOTROPIC DISTILLATION	462
Shamsutdinova Vinera Khafizovna	
THEORETICAL FOUNDATIONS OF THE INTERACTION OF A COTTON TUFT WITH A SCREW CONVEYOR AND A MESH SURFACE.....	468
Matyaqubova Jumagul Bakhtiyarovna	
FORECASTING LIQUIDITY AND SOLVENCY INDICATORS BASED ON ARTIFICIAL INTELLIGENCE	473
Zaynutdinov Ismoil Samariddin o'g'li	
MODELS FOR PREDICTING THE MANAGEMENT OF COMPLEX TECHNOLOGICAL PROCESSES AND PRODUCTIONS	477
Gulyamov Shukhrat Mannapovich	

WAYS TO ADJUST LAND RESOURCE USE MECHANISMS FOR FARMERS BASED ON THE EXPERIENCE OF FOREIGN COUNTRIES.....	482
Akhmatov Abutolibkhon Ochilkhon oglu	
STATE SUPPORT MECHANISMS FOR THE DEVELOPMENT OF THE MACHINE-BUILDING INDUSTRY	487
Xursandov Komiljon Makhmatkulovich	
EMPIRICAL ANALYSIS OF TOURISM FLOW FORECASTING IN CENTRAL ASIA BASED REGRESSION MODELS	491
Suratova Mokhirakhon Shavkat Kizi	
THE ROLE OF LOANS IN THE DEVELOPMENT OF THE REGIONAL ECONOMY.....	498
Meylikov Fazliddin Abduhalim o'g'li, Valiev Oybek Shukhrat ugli	
PROPAGATION OF SMALL MOTIONS IN A TWO-LAYER DISPERSE MEDIA FLOW.....	503
D. S. Yakhshibaev	
FURTHER IMPROVEMENT OF THE AUTOMATION SYSTEM OF ELECTRONIC SERVICES AND TOURIST PERMITS.....	511
Najmiddinov Sultan Nurali ugli	
THE NECESSITY OF DISCLOSING INFORMATION ON SELLING EXPENSES IN ACCOUNTING REPORTS OF PHARMACEUTICAL ENTERPRISES	516
Xudaynazarova Dilnoza Gafurovna	
INVESTMENT FINANCIAL MECHANISMS AND THEIR ROLE IN THE NATIONAL ECONOMY	521
Karjavova Khurshida Abdumalikovna	

INVESTMENT FINANCIAL MECHANISMS AND THEIR ROLE IN THE NATIONAL ECONOMY

Karjavova Khurshida Abdumalikovna

Samarkand State University named after Sharof Rashidov

Associate Professor, PhD

E-mail: karjavova87@gmail.com

Abstract: This article comprehensively examines the theoretical foundations of investment financial mechanisms, their practical dimensions, and their role in the development of the national economy. The financial sources of investment activity—state budget funds, commercial bank loans, stock market instruments, resources of international financial institutions, and the role of private capital—are analyzed from a scientific perspective. In addition, the paper consistently reviews the formation of investment financial mechanisms in Uzbekistan, the reforms implemented in the post-independence period, and the legal and institutional framework aimed at improving the investment climate.

Key words: investment, financial mechanism, economic growth, capital investments, public–private partnership, sources of financing, bank credit, stock market, international financial institutions.

Annotatsiya: Ushbu maqolada investitsion moliya mexanizmlarining nazariy asoslari, ularning amaliy jihatlarini hamda milliy iqtisodiyot rivojlanishidagi o'rni atroflicha yoritilgan. Investitsiya faoliyatini moliyalashtirish manbalari — davlat byudjeti mablag'lari, tijorat banklari kreditlari, fond bozori instrumentlari, xalqaro moliya institutlari resurslari hamda xususiy kapitalning roli ilmiy jihatdan tahlil qilingan. Shuningdek, O'zbekiston sharoitida investitsion moliya mexanizmlarining shakllanish jarayoni, mustaqillikdan keyingi davrda amalga oshirilgan islohotlar, investitsion muhitni yaxshilashga qaratilgan huquqiy va institutsional asoslar izchil ko'rib chiqilgan.

Kalit so'zlar: investitsiya, moliya mexanizmi, iqtisodiy o'sish, kapital qo'yilmalar, davlat-xususiy sheriklik, moliyalashtirish manbalari, bank krediti, fond bozori, xalqaro moliya institutlari.

Аннотация: В статье всесторонне раскрываются теоретические основы инвестиционных финансовых механизмов, их практические аспекты и роль в развитии национальной экономики. Проведен научный анализ источников финансирования инвестиционной деятельности — средств государственного бюджета, кредитов коммерческих банков, инструментов фондового рынка, ресурсов международных финансовых институтов, а также роли частного капитала. Кроме того, последовательно рассмотрены процессы формирования инвестиционных финансовых механизмов в условиях Узбекистана, реформы, осуществленные в период независимости, а также правовые и институциональные основы, направленные на улучшение инвестиционного климата.

Ключевые слова: инвестиции, финансовый механизм, экономический рост, капитальные вложения, государственно-частное партнерство, источники финансирования, банковский кредит, фондовый рынок, международные финансовые институты.

INTRODUCTION

In the context of a market economy, investments are emerging as one of the main drivers of economic growth. The sustainable development of each country, the enhancement of its international competitiveness, and the effective resolution of socio-economic challenges are directly dependent on the proper organization of investment processes. In this regard, investment financial mechanisms serve as an essential instrument. These mechanisms ensure not only the financing of investment projects but also the efficient allocation of capital, the mobilization of financial resources, and the acceleration of innovative activities across economic sectors.

In recent years, the Republic of Uzbekistan has been implementing comprehensive reforms aimed at improving investment policy, attracting foreign investment, and developing the domestic capital market. In particular, the legal framework for public–private partnership mechanisms has been strengthened, the financial market infrastructure has been modernized, and cooperation with international financial institutions has been consistently expanded. Under these conditions, increasing the effectiveness of investment financial mechanisms is regarded as one of the priority tasks for the development of the national economy.

Moreover, global experience confirms that the effective organization of investment financial mechanisms has a significant impact on the modernization of production, the introduction of advanced technologies, the expansion of export potential, and the increase in employment levels. From this perspective, an in-depth study of the given topic, an analysis of existing opportunities and constraints, as well as the identification of future priority directions, are of considerable scientific and practical importance.

LITERATURE REVIEW

The issue of effectively organizing investment processes occupies a prominent place in the scientific research of many domestic and foreign scholars. Studies in this field reveal the role of investments in ensuring economic growth, stability, and competitiveness through various theoretical and practical approaches.

J. M. Keynes, in his well-known work *The General Theory*, regarded investments as one of the most important determinants of economic growth. According to his view, state-led stimulation of investments ensures economic stability and enhances economic activity by supporting aggregate demand [1].

P. Samuelson and R. Solow scientifically substantiated the direct impact of investments on capital accumulation and labor productivity through economic growth models. In their opinion, the effective organization of investment financial mechanisms is a key condition for long-term economic stability [2].

D. North and representatives of the new institutional economics emphasize the significance of the institutional environment and the efficiency of the financial system in investment processes. According to their views, when investment financing mechanisms are based on legal guarantees and principles of transparency, the pace of economic growth accelerates further [3].

Among Uzbek scholars, the works of A. Vohidov, Sh. Bekmurodov, and Q. Qobilov extensively examine financial support for investment activities, the development of public-private partnership mechanisms, and the importance of attracting foreign investment for the national economy. These studies highlight that the modernization of investment financial mechanisms contributes to technological renewal of production and the creation of new jobs [4].

In addition, foreign researchers such as M. Porter, J. Stiglitz, and H. Chenery have analyzed investment financial mechanisms from the perspectives of enhancing international competitiveness, promoting innovation, and ensuring social stability [5].

Overall, scholarly views recognize investment financial mechanisms as an important tool for stimulating economic growth, efficiently allocating financial resources, and integrating the national economy into the global market.

RESEARCH METHODOLOGY

In the course of the study, the necessity of developing investment financial mechanisms, their role in the national economy, and the main directions for enhancing their effectiveness were examined. In particular, the processes of shaping the investment environment in Uzbekistan, mechanisms for financing investments through the state budget and the banking and financial system, procedures for attracting foreign investment, and the practical outcomes of public-private partnership (PPP) initiatives were analyzed.

At the same time, internal and external factors influencing investment activity in the national economy, international experience, and assessments provided by international financial institutions were thoroughly studied. The research employed dialectical and systemic approaches, comparative and benchmarking analysis, statistical and dynamic analysis, as well as grouping and modeling methods. Through these methods, the strengths of investment financial mechanisms, existing opportunities, and factors contributing to the strengthening of national economic stability were identified.

ANALYSIS AND RESULTS

Investments are considered one of the key factors of modern economic development. Under conditions of globalization and digital transformation, the importance of investments is steadily increasing in ensuring sustainable national economic growth, creating new jobs, and modernizing production capacities. Therefore, the effective organization of investment financial mechanisms not only stimulates economic growth but also enhances a country's international competitiveness.

In Uzbekistan's experience, investment activity has emerged as a crucial factor in structural transformations of the national economy, modernization of industrial sectors, development of transport and communication infrastructure, and financing of social sectors. In the post-independence period, consistent reforms have been implemented to liberalize investment policy, attract foreign investment, and finance large-scale projects based on public-private partnerships.

From the early years of independence, special attention has been paid to investment policy as a means of restoring and modernizing the national economy. During the 1990s, state investments were predominantly prioritized; however, starting from the 2000s, as a result of economic liberalization and private sector development policies, the share of domestic and foreign investments steadily increased. The large-scale reforms implemented after 2017 further improved the investment climate and created new opportunities for foreign investors.

One of the most significant changes in investment policy has been the balanced development of the ratio between public and private investments. In particular, by the late 2010s, most large investment projects in industrial sectors began to be financed not from state funds but through commercial bank loans, resources of international financial institutions, and private capital. This process led to the diversification of investment financial mechanisms and the expansion of financing sources.

In recent years, public–private partnership (PPP) mechanisms have also been widely introduced in Uzbekistan. Large investment projects involving international companies are being implemented in the energy, transport, healthcare, and education sectors. In particular, agreements concluded with foreign investors for the construction of solar and wind power plants play an important role in strengthening the country's energy security.

Overall, the formation of investment financial mechanisms in Uzbekistan has proceeded through three main stages:

1. 1991–2000 — a stage characterized by the implementation of major investment projects financed primarily through state funds.
2. 2001–2016 — a stage focused on increasing the share of the private sector and foreign investors in the economy and expanding sources of financing.
3. From 2017 to the present — a stage marked by the liberalization of the investment environment, the introduction of PPP mechanisms, and deeper integration into capital markets.

These stages reflect the evolutionary development path of investment financial mechanisms and demonstrate their direct impact on the stability of the national economy.

During 2020–2024, investment financial flows directed to Uzbekistan's national economy exhibited a steady growth trend. In particular, the volume of investments financed through the state budget increased from UZS 45.2 trillion to UZS 60.7 trillion, representing a 34% growth. This increase was mainly driven by the development of social infrastructure and the implementation of state projects in the transport and energy sectors (Table 1).

Table 1. Dynamics of Investment Financial Flows in Uzbekistan (2020–2024, billion UZS)

Years	State Budget Financing	Bank System Loans	International Financial Institutions	Domestic Private Investments	Foreign Investments	Total Investments
2020	45,200	37,800	12,500	56,400	29,700	181,600
2021	48,300	42,900	14,800	62,700	32,400	201,100
2022	52,600	47,500	16,200	69,800	35,600	221,700
2023	56,400	53,200	18,100	74,300	40,500	242,500
2024	60,700	59,600	20,400	82,900	45,200	268,800

The volume of loans allocated through the banking system also increased significantly, rising from UZS 37.8 trillion to UZS 59.6 trillion. This expansion broadened enterprises' access to financial resources and served as an important factor in the development of the private sector of the economy.

Funds attracted from international financial institutions grew from UZS 12.5 trillion in 2020 to UZS 20.4 trillion in 2024. These resources were mainly directed toward the energy sector, environmental projects, transport and communication infrastructure, and social sectors, making a substantial contribution to ensuring sustainable economic growth and the introduction of new technologies in the national economy.

Domestic private investments increased from UZS 56.4 trillion to UZS 82.9 trillion during 2020–2024, indicating a steady rise in the investment activity of national business entities. Foreign capital inflows expanded from UZS 29.7 trillion to UZS 45.2 trillion, demonstrating a strengthening of investor confidence in Uzbekistan.

Overall investment volumes rose from UZS 181.6 trillion to UZS 268.8 trillion, representing an increase of nearly 48%. This growth played a significant role in ensuring sustainable economic development, modernizing industry, creating new jobs, and enhancing regional economic activity in the country (Table 2).

Table 2. Impact of Investments on the National Economy (Conditional Indicators for 2020–2024)

Years	GDP Growth (%)	Newly Created Jobs (thousand)	Industrial Output Growth (%)	Export Volume Growth (%)
2020	1.6	220	2.1	0.8
2021	7.4	310	6.8	2.9
2022	5.7	360	7.3	3.4
2023	6.0	410	8.0	4.1
2024	6.3	470	8.7	4.9

During 2020–2024, the growth of investment financial flows had a significant impact on national economic indicators. First, the dynamics of gross domestic product (GDP) followed a positive trajectory. Although the economic growth rate was limited to 1.6% in 2020 due to the consequences of the pandemic, the subsequent recovery of investment activity resulted in GDP growth reaching 7.4% in 2021 and 6.3% in 2024. These indicators clearly demonstrate the decisive role of investments in ensuring economic stability.

Investments also generated substantial positive outcomes in the employment sector. In particular, while 220 thousand new jobs were created in 2020, this figure increased to 470 thousand by 2024. This trend contributed to strengthening labor market stability, increasing household incomes, and improving overall social welfare.

The growth of industrial output likewise indicates the effective allocation of investments. Whereas industrial production growth amounted to 2.1% in 2020, this indicator rose to 8.7% by 2024. Such results were achieved through the introduction of new technologies at industrial enterprises, modernization of production capacities, and diversification of product lines.

In addition, export volume growth also exhibited a positive trend. While the export growth rate stood at 0.8% in 2020, it increased to 4.9% by 2024. This highlights the important role of investments in expanding export-oriented production and enhancing the supply of competitive goods in foreign markets.

Overall, investment financial flows emerged as a key driver across various dimensions of the national economy—GDP growth, employment generation, industrial development, and export expansion. This confirms that investments play an indispensable role not only in ensuring economic growth but also in maintaining social stability (Table 3).

Table 3. Structural Share of Domestic and Foreign Investments in Uzbekistan (2020–2024, %)

Years	Share of Domestic Investments (%)	Share of Foreign Investments (%)	Total (%)
2020	71.4	28.6	100
2021	71.9	28.1	100
2022	72.5	27.5	100
2023	71.7	28.3	100
2024	72.6	27.4	100

During 2020–2024, the main share of investments in Uzbekistan was formed by domestic sources. In particular, domestic investments accounted for 71.4% of the total volume in 2020, increasing to 72.6% by 2024. This trend indicates a steady rise in the activity of national business entities, the state budget, and the banking system in investment processes.

The share of foreign investments remained relatively stable, fluctuating around 27–28%. Although the proportion of foreign capital in total investments remained stable, its absolute volume increased year by year. This reflects the growing attractiveness of the country's investment climate and the strengthening confidence of foreign investors.

Overall, the high share of domestic investments suggests that economic development is largely driven by internal sources. At the same time, foreign investments play an important role in attracting new technologies, expanding the production of export-oriented goods, and strengthening international economic integration.

CONCLUSIONS AND RECOMMENDATIONS

During 2020–2024, investment financial flows in Uzbekistan increased steadily and emerged as a key factor in ensuring the sustainable growth of the national economy. The expansion of funds mobilized through

the state budget, the banking system, and international financial institutions contributed to the modernization of strategic sectors of the economy and the development of social sectors.

Domestic investments accounted for nearly two-thirds of total investment volumes and served as the main pillar of economic stability. Capital investments made by national business entities played an important role in expanding production capacities, creating new jobs, and promoting regional development. Although the share of foreign investments remained relatively stable, their increasing volume directly contributed to attracting advanced technologies, expanding export potential, and strengthening international economic cooperation.

The growth of investments led to a steady increase in GDP indicators, the modernization of industrial production, the expansion of export volumes, and the creation of thousands of new jobs in the labor market. These processes also played a significant role in improving social welfare and reducing economic disparities between regions.

Overall, the effective management of investment financial flows is strengthening the foundation of Uzbekistan's economic development and is emerging as a decisive factor in enhancing the country's competitiveness and accelerating its integration into the global economy.

REFERENCES

1. Keynes, J. M. *The General Theory of Employment, Interest and Money*. London: Macmillan, 1936.
2. Solow, R. M. "A Contribution to the Theory of Economic Growth." *The Quarterly Journal of Economics*, 1956.
3. North, D. C. *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press, 1990.
4. Vohidov, A., Bekmurodov, Sh., Qobilov, Q. *Modern Mechanisms of Financial Support for Investment Processes*. Tashkent: Iqtisodiyot, 2019.
5. Stiglitz, J. E., Porter, M. E., Chenery, H. B. *Globalization and Development Strategies*. Oxford: Oxford University Press, 2003.

Proofreader: Zokir ALIBEKOV

Layout and Designer: Oloviddin Sobir ugli

2025. № 12

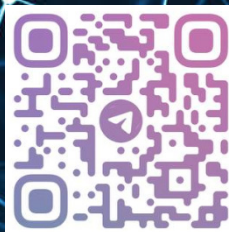
© When materials are reproduced, the INNOVATION SCIENCE AND TECHNOLOGY journal must be cited as the source. Authors are responsible for the accuracy of the information in materials and advertisements published in the journal. Editorial opinions may not always align with those of the authors. Submitted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