



# IQTISODIYOT & TARAQQIYOT

*Ijtimoiy, iqtisodiy, texnologik, ilmiy, ommabop jurnal*

**№7**



ISSN: 2992-8982

<https://yashil-iqtisodiyot-taraqqiyot.uz/>

**2025**



## IQTISODIYOT & TARAQQIYOT

*Ijtimoiy, iqtisodiy, texnologik, ilmiy, ommabop jurnal*

### **Bosh muharrir:**

**Sharipov Kongiratbay Avezimbetovich**

### **Bosh muharrir o'rinbosari:**

**Karimov Norboy G'aniyevich**

### **Muharrir:**

**Qurbonov Sherzod Ismatillayevich**

*Elektron nashr. 240 sahifa.*

*E'lon qilishga 2025-yil 1-iyulda ruxsat etildi.*

### **Tahrir hay'ati:**

**Salimov Oqil Umrzoqovich**, O'zbekiston Fanlar akademiyasi akademigi  
**Abduraxmanov Kalandar Xodjayevich**, O'zbekiston Fanlar akademiyasi akademigi  
**Sharipov Kongiratbay Avezimbetovich**, texnika fanlari doktori (DSc), professor  
**Rae Kvon Chung**, Janubiy Koreya, TDIU faxriy professori, "Nobel" mukofoti laureati  
**Osman Mesten**, Turkiya parlamenti a'zosi, Turkiya – O'zbekiston do'stlik jamiyati rahbari  
**Axmedov Durbek Kudratillayevich**, iqtisodiyot fanlari doktori (DSc), professor  
**Axmedov Sayfullo Normatovich**, iqtisodiyot fanlari doktori (DSc), professor  
**Abduraxmanova Gulnora Kalandarovna**, iqtisodiyot fanlari doktori (DSc), professor  
**Kalonov Muxiddin Baxritdinovich**, iqtisodiyot fanlari doktori (DSc), professor  
**Siddiqova Sadoqat G'afforovna**, pedagogika fanlari bo'yicha falsafa doktori (PhD)  
**Xudoyqulov Sadirdin Karimovich**, iqtisodiyot fanlari doktori (DSc), professor  
**Maxmudov Nosir**, iqtisodiyot fanlari doktori (DSc), professor  
**Yuldashev Mutallib Ibragimovich**, iqtisodiyot fanlari doktori (DSc), professor  
**Samadov Asqarjon Nishonovich**, iqtisodiyot fanlari nomzodi, professor  
**Slizovskiy Dimitriy Yegorovich**, texnika fanlari doktori (DSc), professor  
**Mustafakulov Sherzod Igamberdiyevich**, iqtisodiyot fanlari doktori (DSc), professor  
**Axmedov Ikrom Akramovich**, iqtisodiyot fanlari doktori (DSc), professor  
**Eshtayev Alisher Abdug'aniyevich**, iqtisodiyot fanlari doktori (DSc), professor  
**Xajiyev Baxtiyor Dushaboyevich**, iqtisodiyot fanlari doktori (DSc), professor  
**Hakimov Nazar Hakimovich**, falsafa fanlari doktori (DSc), professor  
**Musayeva Shoirazimovna**, iqtisodiyot fanlari bo'yicha falsafa doktori (PhD), professor  
**Ali Konak (Ali Ko'nak)**, iqtisodiyot fanlari doktori (DSc), professor (Turkiya)  
**Cham Tat Huei**, falsafa fanlari doktori (PhD), professor (Malayziya)  
**Foziljonov Ibrohimjon Sotvoldix'o'ja o'g'li**, iqtisodiyot fanlari bo'yicha falsafa doktori (PhD), dots.  
**Utayev Uktam Choriyevich**, O'z.Respub. Bosh prokuraturasi boshqarma boshlig'i o'rinbosari  
**Ochilov Farkhod**, O'zbekiston Respublikasi Bosh prokuraturasi IJQKD boshlig'i  
**Buzrukxonov Sarvarxon Munavvarxonovich**, iqtisodiyot fanlari nomzodi, dotsent  
**Axmedov Javohir Jamolovich**, iqtisodiyot fanlari bo'yicha falsafa doktori (PhD)  
**Toxirov Jaloliddin Ochil o'g'li**, texnika fanlari bo'yicha falsafa doktori (PhD), katta o'qituvchi  
**Bobobekov Ergash Abdumalikovich**, iqtisodiyot fanlari bo'yicha falsafa doktori (PhD), v.b. dots.  
**Djudi Smetana**, pedagogika fanlari nomzodi, dotsent (AQSH)  
**Krissi Lyuis**, pedagogika fanlari nomzodi, dotsent (AQSH)  
**Glazova Marina Viktorovna**, Iqtisodiyot fanlari doktori (Moskva)  
**Nosirova Nargiza Jamoliddin qizi**, iqtisodiyot fanlari bo'yicha falsafa doktori (PhD), dotsent  
**Sevil Piriyeva Karaman**, falsafa fanlari doktori (PhD) (Turkiya)  
**Mirzaliyev Sanjar Makhamatjon o'g'li**, TDIU ITI departamenti rahbari  
**Ochilov Bobur Baxtiyor o'g'li**, TDIU katta o'qituvchisi  
**Golisheva Yelena Vyacheslavovna**, Iqtisodiyot fanlari nomzodi, dotsent.



## IQTISODIYOT & TARAQQIYOT

*Ijtimoiy, iqtisodiy, texnologik, ilmiy, ommabop jurnal*

### Editorial board:

- Salimov Okil Umrzokovich**, Academician of the Academy of Sciences of Uzbekistan  
**Abdurakhmanov Kalandar Khodjavevich**, Academician of the Academy of Sciences of Uzbekistan  
**Sharipov Kongiratbay Avezimbetovich**, Doctor of Technical Sciences (DSc), Professor  
**Rae Kwon Chung**, South Korea, Honorary Professor at TSUE, Nobel Prize Laureate  
**Osman Mesten**, Member of the Turkish Parliament, Head of the Turkey–Uzbekistan Friendship Society  
**Akhmedov Durbek Kudratillayevich**, Doctor of Economic Sciences (DSc), Professor  
**Akhmedov Sayfullo Normatovich**, Doctor of Economic Sciences (DSc), Professor  
**Abdurakhmanova Gulnora Kalandarovna**, Doctor of Economic Sciences (DSc), Professor  
**Kalonov Mukhiddin Bakhridinovich**, Doctor of Economic Sciences (DSc), Professor  
**Siddikova Sadokat Gafforovna**, Doctor of Philosophy (PhD) in Pedagogical Sciences  
**Khudoykulov Sadirdin Karimovich**, Doctor of Economic Sciences (DSc), Professor  
**Makhmudov Nosir**, Doctor of Economic Sciences (DSc), Professor  
**Yuldashev Mutallib Ibragimovich**, Doctor of Economic Sciences (DSc), Professor  
**Samadov Askarjon Nishonovich**, Candidate of Economic Sciences, Professor  
**Slizovskiy Dmitriy Yegorovich**, Doctor of Technical Sciences (DSc), Professor  
**Mustafakulov Sherzod Igamberdiyevich**, Doctor of Economic Sciences (DSc), Professor  
**Akhmedov Ikrom Akramovich**, Doctor of Economic Sciences (DSc), Professor  
**Eshtayev Alisher Abduganiyevich**, Doctor of Economic Sciences (DSc), Professor  
**Khajiyev Bakhtiyor Dushaboyevich**, Doctor of Economic Sciences (DSc), Professor  
**Khakimov Nazar Khakimovich**, Doctor of Philosophy (DSc), Professor  
**Musayeva Shoira Azimovna**, Doctor of Philosophy (PhD) in Economic Sciences, Professor  
**Ali Konak**, Doctor of Economic Sciences (DSc), Professor (Turkey)  
**Cham Tat Huei**, Doctor of Philosophy (PhD), Professor (Malaysia)  
**Foziljonov Ibrokhimjon Sotvoldikhoja ugli**, Doctor of Philosophy (PhD) in Economic Sciences, Associate Professor  
**Utayev Uktam Choriyevich**, Deputy Head of Department, Prosecutor General's Office of Uzbekistan  
**Ochilov Farkhod**, Head of DCEC, Prosecutor General's Office of Uzbekistan  
**Buzrukkhonov Sarvarkhon Munavvarkhonovich**, Candidate of Economic Sciences, Associate Professor  
**Akhmedov Javokhir Jamolovich**, Doctor of Philosophy (PhD) in Economic Sciences  
**Tokhirov Jaloliddin Ochil ugli**, Doctor of Philosophy (PhD) in Technical Sciences, Senior Lecturer  
**Bobobekov Ergash Abdumalikovich**, Doctor of Philosophy (PhD) in Economic Sciences, Acting Associate Professor  
**Judi Smetana**, Candidate of Pedagogical Sciences, Associate Professor (USA)  
**Chrissy Lewis**, Candidate of Pedagogical Sciences, Associate Professor (USA)  
**Glazova Marina Victorovna**, Doctor of Sciences in Economics (Moscow)  
**Nosirova Nargiza Jamoliddin kizi**, Doctor of Philosophy (PhD) in Economic Sciences, Associate Professor  
**Sevil Piriyeva Karaman**, Doctor of Philosophy (PhD) (Turkey)  
**Mirzaliyev Sanjar Makhmatjon ugli**, Head of the Department of Scientific Research and Innovations, TSUE  
**Ochilov Bobur Bakhtiyor ugli**, Senior lecturer at TSUI  
**Golisheva Yelena Vyacheslavovna**, Candidate of Economic Sciences, Associate Professor.

## Ekspertlar kengashi:

**Berkinov Bazarbay**, iqtisodiyot fanlari doktori (DSc), professor  
**Po'latov Baxtiyor Alimovich**, texnika fanlari doktori (DSc), professor  
**Aliyev Bekdavlal Aliyevich**, falsafa fanlari doktori (DSc), professor  
**Isakov Janabay Yakubbayevich**, iqtisodiyot fanlari doktori (DSc), professor  
**Xalikov Suyun Ravshanovich**, iqtisodiyot fanlari nomzodi, dotsent  
**Rustamov Ilhomiddin**, iqtisodiyot fanlari nomzodi, dotsent  
**Hakimov Ziyodulla Ahmadovich**, iqtisodiyot fanlari doktori, dotsent  
**Kamilova Iroda Xusniddinovna**, iqtisodiyot fanlari bo'yicha falsafa doktori (PhD)  
**G'afurov Doniyor Orifovich**, pedagogika fanlari bo'yicha falsafa doktori (PhD)  
**Fayziyev Oybek Raximovich**, iqtisodiyot fanlari bo'yicha falsafa doktori (PhD), dotsent  
**Tuxtabayev Jamshid Sharafetdinovich**, iqtisodiyot fanlari bo'yicha falsafa doktori (PhD), dotsent  
**Xamidova Faridaxon Abdulkarim qizi**, iqtisodiyot fanlari doktori, dotsent  
**Yaxshiboyeva Laylo Abdisattorovna**, katta o'qituvchi  
**Babayeva Zuhra Yuldashevna**, mustaqil tadqiqotchi

## Board of Experts:

**Berkinov Bazarbay**, Doctor of Economic Sciences (DSc), Professor  
**Pulatov Bakhtiyor Alimovich**, Doctor of Technical Sciences (DSc), Professor  
**Aliyev Bekdavlal Aliyevich**, Doctor of Philosophy (DSc), Professor  
**Isakov Janabay Yakubbayevich**, Doctor of Economic Sciences (DSc), Professor  
**Khalikov Suyun Ravshanovich**, Candidate of Economic Sciences, Associate Professor  
**Rustamov Ilkhomiddin**, Candidate of Economic Sciences, Associate Professor  
**Khakimov Ziyodulla Akhmadovich**, Doctor of Economic Sciences, Associate Professor  
**Kamilova Iroda Khusniddinovna**, Doctor of Philosophy (PhD) in Economics  
**Gafurov Doniyor Orifovich**, Doctor of Philosophy (PhD) in Pedagogy  
**Fayziyev Oybek Rakhimovich**, Doctor of Philosophy (PhD) in Economics, Associate Professor  
**Tukhtabayev Jamshid Sharafetdinovich**, Doctor of Philosophy (PhD) in Economics, Associate Professor  
**Khamidova Faridakhon Abdulkarimovna**, Doctor of Economic Sciences, Associate Professor  
**Yakhshiboyeva Laylo Abdisattorovna**, Senior Lecturer  
**Babayeva Zuhra Yuldashevna**, Independent Researcher

- 08.00.01 Iqtisodiyot nazariyasi
- 08.00.02 Makroiqtisodiyot
- 08.00.03 Sanoat iqtisodiyoti
- 08.00.04 Qishloq xo'jaligi iqtisodiyoti
- 08.00.05 Xizmat ko'rsatish tarmoqlari iqtisodiyoti
- 08.00.06 Ekonometrika va statistika
- 08.00.07 Moliya, pul muomalasi va kredit
- 08.00.08 Buxgalteriya hisobi, iqtisodiy tahlil va audit
- 08.00.09 Jahon iqtisodiyoti
- 08.00.10 Demografiya. Mehnat iqtisodiyoti
- 08.00.11 Marketing
- 08.00.12 Mintaqaviy iqtisodiyot
- 08.00.13 Menejment
- 08.00.14 Iqtisodiyotda axborot tizimlari va texnologiyalari
- 08.00.15 Tadbirkorlik va kichik biznes iqtisodiyoti
- 08.00.16 Raqamli iqtisodiyot va xalqaro raqamli integratsiya
- 08.00.17 Turizm va mehmonxona faoliyati

**Muassis:** "Ma'rifat-print-media" MChJ

**Hamkorlarimiz:** Toshkent davlat iqtisodiyot universiteti, O'zR Tabiat resurslari vazirligi, O'zR Bosh prokuraturasi huzuridagi IJQK departamenti.

## Jurnalning ilmiyligi:

“Yashil” iqtisodiyot va taraqqiyot” jurnali

O'zbekiston Respublikasi Oliy ta'lim, fan va innovatsiyalar vazirligi huzuridagi Oliy attestatsiya komissiyasi rayosatining 2023-yil 1-apreldagi 336/3-sonli qarori bilan ro'yxatdan o'tkazilgan.



# MUNDARIJA

Suv tarkibining wireless waterlight qurilmasi ishlashiga ta'siri va iqtisodiy samaradorligini matematik model asosida tahlil qilish.....	14
<b>Kungiratbay Sharipov, Ma'ruf Nurmanov</b>	
O'zbekistonda aholi ish bilan bandligini oshirishda davlatning roli .....	20
<b>Juraqulov Baxrimurod Ilxomovich</b>	
BIM texnologiyasi: zamonaviy qurilish sohasida samaradorlik va shaffoflik omili .....	26
<b>Usmonov F.B., Rajabova A.Sh.</b>	
Nodavlat oliy ta'lim muassasalarida marketing faoliyati samaradorligini oshirish metodologiyasini takomillashtirish .....	31
<b>Yuldashov Isomiddin Sidiqov</b>	
Korxonada iqtisodiy barqarorligini ta'minlashda diversifikatsiya strategiyasining roli.....	35
<b>Alimatova Shoxsanam Abdumalik qizi</b>	
Модели совместного развития человеческого капитала и искусственного интеллекта в цифровую эпоху .....	40
<b>Явкачев Шохзод Зайниддин углы</b>	
Navigating sustainable development: management challenges and solutions in the oil and gas sector .....	49
<b>Kudratkhodjaeva Ziyoda Kamol kizi</b>	
Banklarda moliyaviy barqarorlikning nazariy asoslari.....	56
<b>Djalilov G'ayrat Qaxramanovich</b>	
Mamlakat iqtisodiyotini rivojlantirishda turizm industriyasidan foydalanishda xorijiy mamlakatlar tajribalari .....	66
<b>Abdulxakimov Zuxrali Tursunaliyevich</b>	
O'zbekistonda barqaror davlat qarzi siyosatini shakllantirishning ustuvor yo'nalishlari .....	71
<b>Sayfutdinov Xasanboy Dilshodovich</b>	
Международный опыт сельскохозяйственного налогообложения и возможности его применения в узбекистане.....	76
<b>Salimov Sherzod Baxtiyorovich</b>	
Economic analysis and development strategy of the composites market in the regions of Uzbekistan .....	81
<b>S.S.Sidiqov, A.A.G'ulomov, B.R.Tillayeva</b>	
Oliy ta'lim muassasalarida moliyaviy mustaqillikning kutilayotgan istiqbollari va hozirgi natijalari.....	88
<b>Muxamedov Ravshan Zafarovich</b>	
Elektron tijoratni soliqqa tortish mexanizmini takomillashtirish yo'llari.....	93
<b>Homidov Baxtiyor Rahimberdievich</b>	
Investitsion jozibadorlik konsepsiyasi va uning strategik ahamiyati.....	99
<b>Otaboyev Axmed Maxsudbek o'g'li</b>	
Beomeditsina signallarini xaar veyvletlari va bo'lak veyvletlari yordamida raqamli ishlash .....	105
<b>Uraqov Shokir Ulashovich</b>	
Oliy ta'lim muassasalarini moliyalashtirishning ahamiyati, tartibi va takomillashtirish yo'llari.....	112
<b>Istamova Sojida Kaxarovna</b>	
The role of all kinds of transports (road, rail, air, and water) in the modern enhancement of tourism logistics in Uzbekistan .....	117
<b>Egamberdiyeva Yulduz, Turdiyeva Maftuna</b>	
Sanoat korxonalarida kapitalarini samaradorligini oshirishning baholashning zamonaviy usullarining xususiyatlarida nazariy va amaliy farovonlik sari .....	126
<b>Muradov Botir Xayat</b>	
Инструменты планирования урбанизации: методика анализа планового распределения средств в программе «обод махалля» на основе балльной оценки .....	136
<b>Салимова Юлдуз Исаковна</b>	
Socio-economic aspects and contemporary theories of higher education finance .....	141
<b>Karlibaeva Gulshat</b>	



Transformatsiya jarayonida innovatsion bank xizmatlarini rivojlantirish yo'llari.....	147
<b>Absamatov Anvar Ergashovich</b>	
Перспективы цифрового развития сектора материального производства.....	153
<b>С. И. Протасеня, Г. Ж. Аллаева</b>	
«Sustainable logistics practices. Minimizing carbon emissions in global supply chains» .....	161
<b>Suleymonova Ezoza, Alimova Bonu</b>	
Analyzing the need for Tourism logistics development in Uzbekistan .....	169
<b>Nigmatova Malika</b>	
Management strategies for sustainable tourism development in emerging destinations (a case study of Samarkand, Issyk-kul, and Khiva).....	177
<b>Sabina Uroкова</b>	
Qashqadaryo viloyatida turizm sohasini strategik rivojlantirishning tashkiliy-iqtisodiy asoslari va ularning qo'llanilishi.....	184
<b>Daminova Barno Esanovna</b>	
Опыт турции в управлении миграционными кризисами .....	189
<b>Бегматов Хусанбек</b>	
Bulutli texnologiyalar orqali korxonalar buxgalteriya tizimini raqamlashtirish va samaradorlikka erishish.....	193
<b>Soibov Nozimbek Faxriddin o'g'li</b>	
Barqaror rivojlanish doirasida jismoniy shaxslarni kreditlash tizimini isloh qilishning institutsonal asoslari.....	197
<b>Xalekeyeva Zoya Pirniyazovna, Akmal Abdurahmonov Nurmamatovich</b>	
Moliyaviy outsorsing xizmatlari bozori rivojlanishini takomillashtirishning swot tahliliga asoslangan innovatsion mexanizmlari .....	202
<b>San'atbek Komilovich Salayev, Umidbek Komiljanovich Babajanov</b>	
Transformatsiya jarayonlari sharoitida iqtisodiyot tizimi faoliyati va prognozlashning nazariy asoslari .....	214
<b>Alimov Fazliddin Xalimovich</b>	
Пути совершенствования подхода к финансированию проектов, реализуемых на принципах промышленной кооперации.....	220
<b>Котов В.А., Шадиева Д.Х.</b>	
Yuksalish salohiyatini yuksaltirishda boshqaruv xodimlari qobiliyatidan foydalanish masalalar .....	225
<b>Ayubxon Qutbiddinov Bosit o'g'li</b>	
Bank xizmatlari ommabopligini oshirish yo'llari.....	228
<b>Kasimova Muxlisa Anvar qizi</b>	
Chemical industry in Uzbekistan: challenges and development .....	235
<b>Kudaynazarova Dilnaz Koshkarbaevna</b>	



# CHEMICAL INDUSTRY IN UZBEKISTAN: CHALLENGES AND DEVELOPMENT

**Kudaynazarova Dilnaz Koshkarbaevna**

Associate Professor of the Department of "Economics in ICT"  
at Tashkent university of information technologies named after Muhammad al Khwarizmi

[dkudaynazarova@gmail.com](mailto:dkudaynazarova@gmail.com)

ORCID ID: 0009-0003-0483-3528

**Abstract:** The chemical industry in Uzbekistan represents a vital sector of the national economy, contributing significantly to industrial output, employment, and export revenues. In recent years, Uzbekistan has undertaken comprehensive reforms to modernize its chemical sector, attract foreign investments, and develop high value-added production. Despite these positive dynamics, the industry faces several challenges, including outdated production facilities, high energy consumption, limited innovation capacity, and environmental concerns. This paper analyzes the current state of Uzbekistan's chemical industry, identifies key structural and technological challenges, and proposes strategic directions for sustainable development. Special focus is placed on investment trends, modernization efforts, the development of industrial clusters, and alignment with international environmental and technological standards. The study aims to offer practical recommendations for policymakers and industry stakeholders to enhance the competitiveness and sustainability of Uzbekistan's chemical sector.

**Key words:** Uzbekistan, chemical industry, sustainable development, industrial modernization, energy efficiency, foreign investment, innovation, industrial clusters, environmental sustainability.

**Annotatsiya:** O'zbekistonda kimyo sanoati milliy iqtisodiyotning muhim tarmog'i bo'lib, sanoat ishlab chiqarishi, aholi bandligi va eksport daromadlariga salmoqli hissa qo'shadi. So'nggi yillarda O'zbekistonda kimyo tarmog'ini modernizatsiya qilish, xorijiy sarmoyalarni jalb etish, yuqori qo'shimcha qiymatli ishlab chiqarishni rivojlantirish borasida keng qamrovli islohotlar amalga oshirildi. Ushbu ijobiy dinamikaga qaramay, sanoat bir qator muammolarga duch kelmoqda, jumladan, eskirgan ishlab chiqarish quvvatlari, yuqori energiya iste'moli, cheklangan innovatsion imkoniyatlar va atrof-muhit muammolari. Ushbu maqolada O'zbekiston kimyo sanoatining hozirgi holati tahlil qilinadi, asosiy tarkibiy va texnologik muammolar aniqlanadi va barqaror rivojlanishning strategik yo'nalishlari taklif etiladi. Investitsiya tendentsiyalari, modernizatsiya ishlari, sanoat klasterlarini rivojlantirish, xalqaro ekologik va texnologik standartlarga moslashtirishga alohida e'tibor qaratilmoqda. Tadqiqot siyosatchilar va soha manfaatdor tomonlariga O'zbekiston kimyo sektorining raqobatbardoshligi va barqarorligini oshirish bo'yicha amaliy tavsiyalar berishdan iborat.

**Kalit so'zlar:** O'zbekiston, kimyo sanoati, barqaror rivojlanish, sanoatni modernizatsiya qilish, energiya samaradorligi, xorijiy investitsiyalar, innovatsiyalar, sanoat klasterlari, ekologik barqarorlik.

**Аннотация:** Химическая промышленность Узбекистана является важнейшим сектором национальной экономики, внося значительный вклад в промышленное производство, занятость и экспортную выручку. В последние годы в Узбекистане проводятся комплексные реформы, направленные на модернизацию химического сектора, привлечение иностранных инвестиций и развитие производства продукции с высокой добавленной стоимостью. Несмотря на эту позитивную динамику, отрасль сталкивается с рядом проблем, включая устаревшие производственные мощности, высокое энергопотребление, ограниченный инновационный потенциал и экологические проблемы. В данной работе анализируется текущее состояние химической промышленности Узбекистана, определяются ключевые структурные и технологические проблемы и предлагаются стратегические направления устойчивого развития. Особое внимание уделяется инвестиционным тенденциям, модернизации, развитию промышленных кластеров и соблюдению международных экологических и технологических стандартов. Целью исследования является предоставление практических рекомендаций для политиков и заинтересованных сторон в отрасли по повышению конкурентоспособности и устойчивости химического сектора Узбекистана.

**Ключевые слова:** Узбекистан, химическая промышленность, устойчивое развитие, модернизация промышленности, энергоэффективность, иностранные инвестиции, инновации, промышленные кластеры, экологическая устойчивость.



## INTRODUCTION

The chemical industry in Uzbekistan holds a strategically important position within the structure of the national economy, contributing a significant share to industrial output, employment, and export earnings. It serves as a critical driver of industrialization, supporting a wide range of downstream sectors, including agriculture, textiles, pharmaceuticals, construction, and energy. Recognizing its economic significance, the Government of Uzbekistan has implemented a series of ambitious industrial reforms in recent years aimed at revitalizing and modernizing the chemical sector.

The primary objectives of these reforms include increasing the production of high value-added and export-oriented chemical products, reducing the country's reliance on imported chemical goods, and stimulating the development of domestic raw material processing industries. Special attention has been given to attracting foreign direct investment, introducing advanced technologies, and creating specialized chemical-industrial clusters to improve efficiency and competitiveness.

Nevertheless, despite notable progress, the sector continues to face a range of systemic challenges that hinder its full potential. Among the most pressing issues are high energy consumption rates, a significant share of outdated and inefficient production facilities, a shortage of qualified technical personnel, and an overall underinvestment in research and development (R&D). Environmental sustainability also remains a concern, as many enterprises require modernization to meet international ecological standards.

## LITERATURE REVIEW

This study aims to provide a comprehensive assessment of the current state of Uzbekistan's chemical industry, analyze key structural and operational challenges, and develop practical recommendations for sustainable growth and modernization. The focus is on enhancing industrial competitiveness, promoting technological innovation, ensuring environmental responsibility, and aligning the sector's development with global market trends.

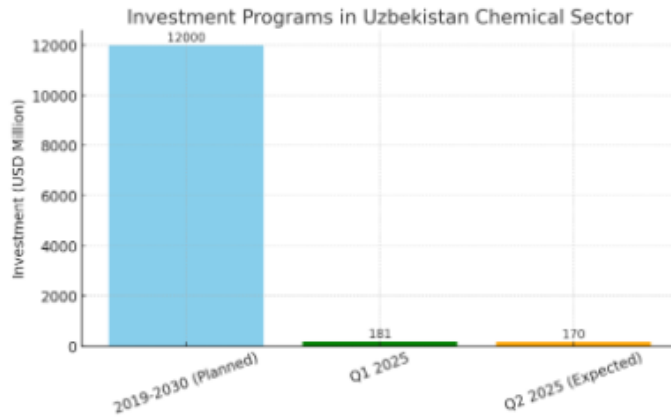
## RESEARCH METHODOLOGY

This research employs a mixed-methods approach, integrating both qualitative and quantitative data sources. Data were collected from government reports (Ministry of Economy and Industry of Uzbekistan), international trade databases (Trade.gov), academic journals, and industrial development programs (Invest Uzbekistan, Global Research Network). Statistical analyses focus on production volumes, export-import dynamics, investment flows, and employment figures from 2019 to 2024. Comparative analysis was also conducted to benchmark Uzbekistan's chemical industry against regional peers such as Kazakhstan.

## ANALYSIS AND RESULTS

### 3.1 Production and Export Dynamics

ë	Production (USD million)	Export (USD million)	Import (USD million)
2019	1,951	837	2,688
2020	2,082	821	2,881
2021	2,599	1,131	3,648
2022	3,000	1,200	3,900
2023	3,280	1,340	4,100



Here is a summary table and a bar chart illustrating investment programs in Uzbekistan's chemical sector:

Period	Investment (USD Million)
2019-2030 (Planned)	12,000
Q1 2025	181
Q2 2025 (Expected)	170

### 3.2 Investment Programs

According to national programs (2019-2030), Uzbekistan plans to invest over USD 12 billion into 31 major chemical projects, with active involvement of foreign investors. The first quarter of 2025 saw USD 181 million invested, with an additional USD 170 million expected in Q2.

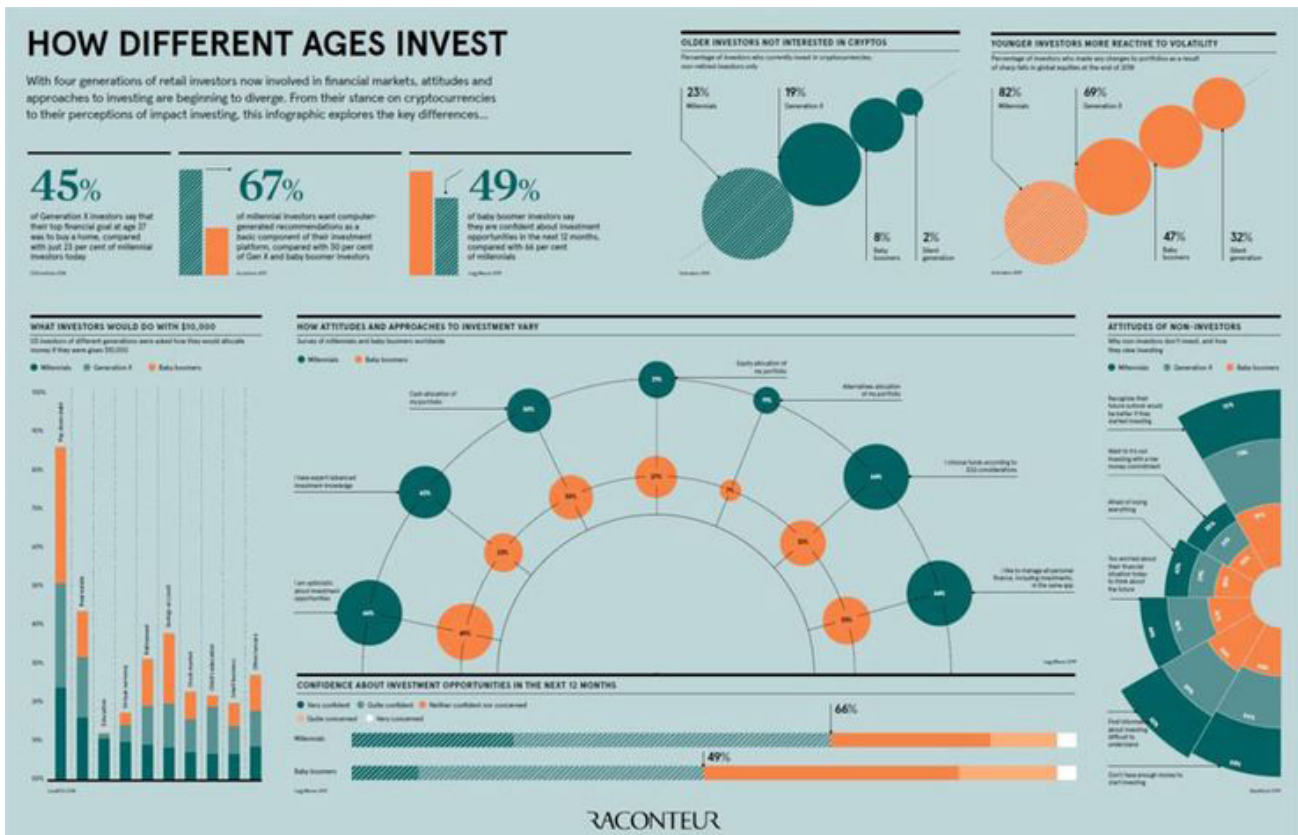


Table 1:How different ages invest



### 3.3 Cluster and Technopark Development

Chemical industry clusters have been established in Navoi, Fergana, Karakalpakstan, and Chirchik, with the objective of fostering technological innovation and increasing production capacity. 44 major projects have been scheduled between 2022 and 2027, creating over 4,000 new jobs and involving investments of approximately USD 9.9 billion.

### 3.4 Identified Challenges

High energy consumption, comprising up to 67% of production costs.

Obsolete production facilities, requiring urgent modernization.

Lack of skilled labor, leading to operational inefficiencies.

Weak R&D infrastructure and insufficient innovation centers.

Corruption risks and low transparency in public procurement.

Environmental concerns, particularly related to industrial pollution and non-compliance with green standards.

### 4.1 Strengths and Achievements

The chemical industry has demonstrated robust growth in both production and export volumes. Government initiatives, cluster development, and international partnerships have improved the sector's investment appeal.

### 4.2 Ongoing Barriers

Energy inefficiency, outdated equipment, and bureaucratic hurdles remain significant barriers to sustained growth. Corruption and lack of transparency hinder foreign investment, while environmental non-compliance poses sustainability risks.

### 4.3 Strategic Recommendations

Enhance energy efficiency and adopt renewable energy sources.

Privatize and reform state-owned enterprises to boost competitiveness.

Modernize production facilities with state-of-the-art technology.

Expand R&D funding and innovation hubs.

Implement anti-corruption measures and transparent governance.

Enforce green industry standards and invest in ecological modernization.

Sure! Here's a more detailed and expanded version of the conclusion in English:

## CONCLUSION AND SUGGESTIONS

Uzbekistan's chemical industry has achieved significant progress in recent years, characterized by steady growth in production volumes, increasing export potential, and the implementation of large-scale investment projects. The establishment of new industrial capacities and the development of chemical clusters have contributed to deeper raw material processing, enhanced value-added production, and stronger integration with other sectors of the national economy.

However, despite these achievements, the industry continues to face several critical challenges. Key issues include high energy intensity in production processes, technological obsolescence of certain facilities, and the need for improved corporate governance and management practices. Environmental concerns are becoming increasingly pressing, with growing demands for compliance with international environmental standards and the adoption of green technologies.

To ensure the sustainable and long-term development of Uzbekistan's chemical industry, a comprehensive modernization strategy is essential. Priority should be given to:

- Modernization of outdated production facilities and implementation of energy-efficient technologies;
- Diversification of product portfolios, moving towards high-value and innovative chemical products;
- Digitalization of industrial processes to enhance productivity, transparency, and operational efficiency;
- Acceleration of the ecological transition through environmentally friendly technologies and sustainable practices;
- Alignment with international best practices in industrial safety, environmental protection, and corporate governance.

By addressing these priorities, Uzbekistan can transform its chemical industry into a modern, competitive, and sustainable sector that contributes significantly to the country's economic growth and integration into global markets.

### References

1. Trade.gov. (2023). "Uzbekistan - Chemicals." Retrieved from <https://www.trade.gov/country-commercial-guides/uzbekistan-chemicals>
2. Global Research Network. (2023). "Chemical Industry Development in Uzbekistan." American Journal of Economics and Business Management, 6(3), 23-35.



3. President.uz. (2022). "Investment Programs in Industrial Development." Retrieved from <https://president.uz/en/lists/view/1386>
4. The Asia Today. (2024). "Chemical Industry of Uzbekistan: Growth and Challenges." Retrieved from <https://theasiatoday.org/news/central-asia/chemical-industry-of-uzbekistan>
5. Invest.miit.uz. (2023). "Investment Guide - Chemical Industry." Retrieved from <https://invest.miit.uz/en/investment-guide/chemicals>
6. Yuz.uz. (2024). "Development of Technoparks and Industrial Zones in Uzbekistan." Retrieved from <https://yuz.uz/en/news/ikkinchi-chorakda-yashil-vodorod-va-tsian-tuzlari-korxonalari-ishga-tushirilati>
7. Azernews.az. (2023). "Challenges of the Chemical Industry." Retrieved from <https://www.azernews.az/region/124814.html>
8. Trade.gov. (2023). "Uzbekistan - Chemicals." Retrieved from <https://www.trade.gov/country-commercial-guides/uzbekistan-chemicals>
9. Global Research Network. (2023). "Chemical Industry Development in Uzbekistan." American Journal of Economics and Business Managerial Sector in Central Asia." Retrieved from <https://www.azernews.az/region/124814.html>
10. Stat.uz. (2024). "Industry of Uzbekistan: Key Indicators." Retrieved from <https://stat.uz/en/official-statistics/industry>
11. World Bank. (2023). "Uzbekistan Economic Update." Retrieved from <https://www.worldbank.org/en/country/uzbekistan/publication/uzbekistan-economic-update>
12. UNCTAD. (2023). "Investment Policy Review: Uzbekistan." Retrieved from [https://unctad.org/system/files/official-document/diaepcb2023d1\\_en.pdf](https://unctad.org/system/files/official-document/diaepcb2023d1_en.pdf)
13. Asian Development Bank. (2023). "Uzbekistan: Economic Indicators and Outlook." Retrieved from <https://www.adb.org/countries/uzbekistan/economy>
14. IMF. (2023). "Republic of Uzbekistan: 2023 Article IV Consultation Press Release." Retrieved from <https://www.imf.org/en/Publications/CR/Issues/2023/07/07/Republic-of-Uzbekistan-2023-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-535109>
15. Central Asia Regional Economic Cooperation (CAREC). (2023). "Chemical Industry in Central Asia." Retrieved from <https://www.carecprogram.org/?publication=chemical-industry-in-central-asia>
16. OECD. (2023). "Sustainable Infrastructure in Uzbekistan." Retrieved from <https://www.oecd.org/eurasia/competitiveness-programme/central-asia/Uzbekistan>
17. Ministry of Economy and Finance of Uzbekistan. (2024). "Annual Report on Industrial Development."
18. Chemweek. (2023). "Uzbekistan's Petrochemical Prospects." Retrieved from <https://chemweek.com/>
19. ResearchGate. (2023). "Energy Efficiency in Uzbekistan's Chemical Sector."
20. Scopus. (2023). "Scientific Publications on Uzbekistan's Chemical Industry."
21. UzDaily.com. (2024). "New Trends in Uzbekistan's Industrial Policy." Retrieved from <https://www.uzdaily.uz/en/post/82618>
22. Energy Charter Secretariat. (2023). "Uzbekistan Energy Efficiency Review." Retrieved from <https://www.energycharter.org/>
23. Hydrogen Insight. (2024). "Uzbekistan's Green Hydrogen Potential." Retrieved from <https://www.hydrogeninsight.com/>
24. BP Statistical Review. (2023). "Energy Statistics of Central Asia."
25. FAO. (2023). "Agricultural Chemicals in Uzbekistan." Retrieved from <https://www.fao.org/>
26. ITC Trademap. (2023). "Uzbekistan Chemical Trade Statistics." Retrieved from <https://www.trademap.org/>
27. Uzbekistan National News Agency. (2024). "Industrial Modernization Initiatives."
28. International Journal of Industrial Organization. (2023). "Market Reforms in Uzbekistan's Chemical Sector."
29. Green Central Asia. (2023). "Environmental Challenges in Central Asia's Industry." Retrieved from <https://greencentralasia.org/>
30. European Bank for Reconstruction and Development. (2023). "Uzbekistan Country Strategy." Retrieved from <https://www.ebrd.com/>
31. Journal of Environmental Management. (2023). "Sustainable Chemical Industry Practices in Emerging Economies."
32. Eurasianet.org. (2024). "Privatization and Economic Reforms in Uzbekistan." Retrieved from <https://eurasianet.org/>



## IQTISODIYOT & TARAQQIYOT

*Ijtimoiy, iqtisodiy, texnologik, ilmiy, ommabop jurnal*

**Ingliz tili muharriri:** Feruz Hakimov

**Musahhih:** Zokir ALIBEKOV

**Sahifalovchi va dizayner:** Oloviddin Sobir o'g'li

---

**2025. № 7**

---

© Materiallar ko'chirib bosilganda "Yashil" iqtisodiyot va taraqqiyot" jurnali manba sifatida ko'rsatilishi shart. Jurnalda bosilgan material va reklamalardagi dalillarning aniqligiga mualliflar ma'sul. Tahririyat fikri har vaqt ham mualliflar fikriga mos kelmasligi mumkin. Tahririyatga yuborilgan materiallar qaytarilmaydi.

Mazkur jurnalda maqolalar chop etish uchun quyidagi havolalarga maqola, reklama, hikoya va boshqa ijodiy materiallar yuborishingiz mumkin. Materiallar va reklamalar pullik asosda chop etiladi.

EI.Pochta: sq143235@gmail.com

Bot: @iqtisodiyot\_77

Tel.: 93 718 40 07

Jurnalga istalgan payt quyidagi rekvizitlar orqali obuna bo'lishingiz mumkin. Obuna bo'lgach, @iqtisodiyot\_77 telegram sahifamizga to'lov haqidagi ma'lumotni skrinshot yoki foto shaklida jo'natishingizni so'raymiz. Shu asosda har oygi jurnal yangi sonini manzilingizga jo'natamiz.

"Yashil" iqtisodiyot va taraqqiyot" jurnali 03.11.2022-yildan O'zbekiston Respublikasi Prezidenti Adminstratsiyasi huzuridagi Axborot va ommaviy kommunikatsiyalar agentligi tomonidan №566955 reyestr raqami tartibi bo'yicha ro'yxatdan o'tkazilgan.

**Litsenziya raqami:** №046523. PNFL: 30407832680027

**Manzilimiz:** Toshkent shahar, Mirzo Ulug'bek tumani  
Kumushkon ko'chasi, 26-uy.



Jurnal sayti: <https://yashil-iqtisodiyot-taraqqiyot.uz>