



# JOURNAL OF ECONOMICS AND TOURISM RESEARCH

## IQTISODIYOT VA TURIZM TADQIQOTLARI JURNALI

### QABUL YO'NALISHLARI:

- Iqtisodiyot fanlari va iqtisodiy tahlil
- Makro va mikroiqtisodiy tadqiqotlar
- Turizm iqtisodiyoti va turizm industriyasi
- Xizmatlar sohasi va menejment
- Mintaqaviy rivojlanish va barqaror iqtisodiyot
- Innovatsiyalar, raqamli iqtisodiyot va marketing

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## VOLUME-1, ISSUE-1, 2026

### IQTISODIYOT VA TURIZM TADQIQOTLARI JURNALI - ilmiy-uslubiy jurnali VOLUME-1, ISSUE-1, 2026

Ushbu to'plamda “ **IQTISODIYOT VA TURIZM TADQIQOTLARI JURNALI** ” ilmiy-uslubiy jurnalining 2026-yil 1-soniga qabul qilingan maqolalar nashr etilgan.

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**Jurnal quyidagi sohalarda maqolalar qabul qiladi:** iqtisodiyot fanlari va iqtisodiy tahlil, makro va mikroiqisodiy tadqiqotlar, turizm iqtisodiyoti va turizm industriyasi, xizmatlar sohasi va menejment, mintaqaviy rivojlanish va barqaror iqtisodiyot innovatsiyalar, raqamli iqtisodiyot va marketing

Jurnal tarkibidagi barcha maqolalarga **DOI** unikal raqami biriktirilib, Google Scholar, Zenodo, Open Aire, Sindex xalqaro ilmiy bazalarida indekslandi.

Jurnal materiallaridan professor-o'qituvchilar, mustaqil izlanuvchilar, doktorantlar, magistrantlar, talabalar, litsey-kollej o'quvchilari, maktab o'qituvchilari, ilmiy xodimlar hamda barcha ilm-fanga qiziquvchilar foydalanishlari mumkin.

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**TRANSPORT VEHICLE BATTERY SYSTEMS OPERATING ON  
NEW ENERGY SOURCES**

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**Abstract.** This article analyzes the types, structure, and operating principles of modern battery systems used in transport vehicles powered by new energy sources. The technical and operational characteristics of lithium-ion, lithium-polymer, and solid-state batteries widely used in electric and hybrid vehicles are described. Issues such as energy density, charging speed, service life, and safety level of battery systems are considered. In addition, the environmental efficiency of these systems and their role in ensuring sustainable development in the transport sector are analyzed. The research results demonstrate the importance of battery technologies in the development of transport vehicles based on new energy sources.

**Keywords:** new energy sources, electric vehicles, battery systems, lithium-ion batteries, energy efficiency

**YANGI ENERGIYA MANBALARIDA ISHLAYDIGAN  
TRANSPORT VOSITALARI AKKUMULYATOR TIZIMLARI**

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**Annotatsiya.** Ushbu maqolada yangi energiya manbalarida ishlaydigan transport vositalarida qo‘llaniladigan zamonaviy akkumulyator tizimlarining turlari, tuzilishi va ishlash prinsiplari tahlil qilinadi. Elektr va gibrid transport vositalarida keng tarqalgan litiy-ion, litiy-polimer hamda qattiq elektrolitli akkumulyatorlarning texnik va ekspluatatsion xususiyatlari yoritib berilgan. Akkumulyator tizimlarining energiya zichligi, zaryadlash tezligi, xizmat muddati va xavfsizlik darajasi masalalari ko‘rib chiqilgan. Shuningdek, ushbu tizimlarning ekologik samaradorligi va transport sohasida barqaror rivojlanishni ta‘minlashdagi o‘rni tahlil etilgan. Tadqiqot natijalari yangi energiya manbalariga asoslangan transport vositalarini rivojlantirishda akkumulyator texnologiyalarining muhim ahamiyatga ega ekanini ko‘rsatadi.

**Kalit so‘zlar:** yangi energiya manbalari, elektr transport vositalari, akkumulyator tizimi, litiy-ion batareyalar, energiya samaradorligi

## **1. KIRISH**

Hozirgi kunda dunyo miqyosida energiya resurslarining cheklanganligi va ekologik muammolarning kuchayib borishi transport sohasida muqobil energiya manbalaridan foydalanishni taqozo etmoqda. An‘anaviy ichki yonuv dvigatellariga ega transport vositalari katta miqdorda yoqilg‘i sarflaydi va atmosferaga zararli gazlar chiqaradi. Bu esa global iqlim o‘zgarishiga salbiy ta‘sir ko‘rsatadi.

Shu sababli elektr, gibrid va boshqa yangi energiya manbalarida ishlaydigan transport vositalarini rivojlantirish muhim ahamiyat kasb etmoqda. Ushbu transport vositalarining samaradorligi, ishonchliligi va ekspluatatsion ko‘rsatkichlari asosan akkumulyator tizimlarining texnik darajasiga bog‘liq. Zamonaviy akkumulyatorlar yuqori energiya zichligi, tez zaryadlanish va uzoq xizmat muddati bilan ajralib turadi.





## **2. YANGI ENERGIYA MANBALARIDA ISHLAYDIGAN TRANSPORT VOSITALARI**

Yangi energiya manbalarida ishlaydigan transport vositalariga elektr avtomobillari, gibrid transport vositalari hamda vodorod yonilg'ı elementlariga asoslangan transportlar kiradi. Elektr avtomobillari to'liq elektr energiyasi yordamida harakatlanib, akkumulyatorlarda saqlangan energiyadan foydalanadi. Gibrid transport vositalarida esa elektr dvigateli ichki yonuv dvigateli bilan birgalikda ishlaydi.

Ushbu transport vositalari energiya tejamkorligi, shovqinsiz ishlashi va chiqindi gazlarning kamligi bilan ajralib turadi. Ayniqsa, shahar sharoitida elektr transport vositalarining qo'llanilishi ekologik holatni yaxshilashga xizmat qiladi. Shu bilan birga, yangi energiya manbalariga asoslangan transport vositalari yoqilg'ı importiga bo'lgan qaramlikni kamaytiradi.

## **3. AKKUMULYATOR TIZIMLARINING ASOSIY TURLARI**

### **3.1. Litiy-ion akkumulyatorlar**

Litiy-ion akkumulyatorlar bugungi kunda elektr va gibrid transport vositalarida eng keng tarqalgan energiya saqlash tizimlari hisoblanadi. Ularning asosiy afzalliklari yuqori energiya zichligi, yengil vazni va uzoq xizmat muddati bilan bog'liq. Ushbu turdagi akkumulyatorlar yuqori quvvat talab qilinadigan sharoitlarda barqaror ishlaydi.

### **3.2. Litiy-polimer akkumulyatorlar**

Litiy-polimer akkumulyatorlar konstruktiv jihatdan moslashuvchan bo'lib, transport vositalarining dizayn imkoniyatlarini kengaytiradi. Ular yuqori xavfsizlik darajasi va





mexanik barqarorligi bilan ajralib turadi. Biroq, ishlab chiqarish tannarxining nisbatan yuqoriligi ularning keng miqyosda joriy etilishini cheklab kelmoqda.

### **3.3. Qattiq elektrolitli akkumulyatorlar**

Qattiq elektrolitli akkumulyatorlar zamonaviy va istiqbolli texnologiyalar qatoriga kiradi. Ushbu akkumulyatorlar suyuq elektrolitlardan foydalanilmasligi sababli xavfsizlik darajasi yuqori bo'ladi. Ular kelajakda yuqori sig'im va uzoq xizmat muddati bilan ajralib turuvchi energiya saqlash tizimlari sifatida transport sohasida keng qo'llanilishi kutilmoqda.

## **4. AKKUMULYATOR TIZIMLARINING TEXNIK VA EKOLOGIK SAMARADORLIGI**

Akkumulyator tizimlarining texnik samaradorligi ularning energiya zichligi, zaryadlash tezligi va ekspluatatsion barqarorligi bilan belgilanadi. Zamonaviy akkumulyatorlar bir martalik zaryad bilan uzoq masofani bosib o'tish imkonini beradi. Bu esa transport vositalarining amaliy qiymatini oshiradi.

Ekologik jihatdan elektr transport vositalari atmosferaga zararli gazlar chiqarmaydi. Akkumulyatorlarni qayta ishlash texnologiyalarining rivojlanishi esa atrof-muhitni muhofaza qilishda muhim rol o'ynaydi. Qayta ishlangan materiallardan foydalanish tabiiy resurslarning tejalishiga olib keladi.

## **5. MUAMMOLAR VA RIVOJLANISH ISTIQBOLLARI**

Akkumulyator tizimlari bilan bog'liq asosiy muammolardan biri ularning yuqori narxi va zaryadlash infratuzilmasining yetarli darajada rivojlanmaganligidir. Bundan





tashqari, ishlatilgan akkumulyatorlarni utilizatsiya qilish masalalari ham dolzarb hisoblanadi.

Shu bilan birga, ilmiy-texnik taraqqiyot ushbu muammolarni bosqichma-bosqich hal etishga xizmat qilmoqda. Kelajakda yuqori sig‘imli, tez zaryadlanadigan va ekologik xavfsiz akkumulyator tizimlari transport sohasida yetakchi o‘rin egallashi kutilmoqda.

## **6. XULOSA**

Yangi energiya manbalarida ishlaydigan transport vositalari uchun akkumulyator tizimlari zamonaviy transport sanoatining muhim tarkibiy qismi hisoblanadi. Akkumulyator texnologiyalarini rivojlantirish energiya samaradorligini oshirish, ekologik muammolarni kamaytirish va transport tizimlarining ishonchliligini ta‘minlashga xizmat qiladi. Kelgusida innovatsion akkumulyator tizimlarining joriy etilishi transport sohasining barqaror rivojlanishiga ijobiy ta‘sir ko‘rsatadi.

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# JOURNAL OF ECONOMICS AND TOURISM RESEARCH

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**Sustainable Futures Through Innovation: Lessons from Global Models and Uzbekistan’s Green Transition.**

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**Abstract.** This paper explores the multifaceted dimensions of transitioning to a green economy, emphasizing the essential synergy among innovation, policy frameworks, and sustainable practices. It begins with a conceptual foundation, defining the green economy both globally and in the context of Uzbekistan. The study highlights technological innovations in renewable energy and waste management, backed by examples such as Tesla and biogas systems. It then examines international and local policies, including the Paris Agreement, the UN Sustainable Development Goals (SDGs), and Uzbekistan’s “Strategy for the Transition to a Green Economy (2019–2030).” Sector-specific sustainability practices in energy, agriculture, manufacturing, and transport are analyzed, with case studies from Kenya, China, and Brazil, as well as Uzbekistan’s renewable energy projects. The paper also delves into the challenges hindering green transitions—financial constraints, public resistance, and policy fragmentation—while offering actionable recommendations such as fostering innovation ecosystems, strengthening academic partnerships, and deepening international collaboration. It concludes by advocating for an integrated approach where innovation, policy, and sustainability coalesce to build resilient and inclusive green economies.

**Keywords:** Green Economy, Sustainable Development, Renewable Energy, Climate Policy, Environmental Innovation, Green Technologies, Circular Economy, Carbon Emission, Uzbekistan Green Strategy, Public Acceptance, Sustainable Agriculture, Electric Vehicles (EVs), Climate Finance, Sustainable Urban Mobility, Policy Integration

**1.Introduction.**

Explanation of green economy and its relevance globally.

The “green economy” is a new perception that has developed over the past twenty years.Its related with sustainable growth, simultaneously achievement of





economic, social and environmental goals. This concept is especially relevant in today's society as we face global challenges like climate change and resource depletion.

In the republic of Uzbekistan “green” economy perceived as an economy that drives improved living standards, strengthening social justice while minimizing environmental risks, efficient resource utilization as well as stimulating the conservation of the country’s natural ecosystem. 1.2 Its crucially importance that these sustainable practices such as *Transitioning To Green Economy, Countries Can Achieve Desirable outcomes* that ensues long-term ecological balance and human well-being.

Additionally, mitigate environmental problems such as global warming, pollution and resource depletion that are being suffered for many years many countries across the globe. These initiatives aim to meet the needs of the present without compromising the ability of future generations to meet their own need. 1.3 The Importance of Sustainable Development Initiatives:

**Long-Term Benefits:** Unlike short-term projects that provide immediate but temporary relief, sustainable development initiatives aim for long-term benefits. They create enduring solutions that continue to provide benefits well into the future. By focusing on the sustainable use of resources, these initiatives help conserve vital natural resources for future generations. This is crucial in a world facing climate change, deforestation, and other environmental challenges. **Community Resilience:** Sustainable development initiatives strengthen community resilience by addressing the root causes of poverty and inequality. This helps communities withstand economic, social, and environmental shocks. **Empowerment and Ownership:** These initiatives often involve the active participation of community members, fostering a sense of ownership and empowerment. When communities are involved in the planning and implementation of projects, they are more likely to be committed to their success and sustainability. **Holistic Approach:** Sustainable development initiatives take a holistic approach, addressing multiple interrelated issues simultaneously. This leads to more comprehensive and effective solutions that benefit the community as a whole.

Sustainability encompasses more than just environmental concerns; it also extends to governmental and social sustainability. Social sustainability ensures that all members of society have equitable access to resources, opportunities, and a high quality of life. It emphasizes human rights, inclusivity, social cohesion, and justice, aiming to create a diverse society where everyone’s well-being and dignity are upheld. In essence, social sustainability strives to build communities and organizations that are fair, supportive, and provide equal opportunities for individuals from diverse backgrounds, thus fostering a more inclusive and equitable world.





The relationship between **innovation**, **policy**, and **sustainability** is mutually dependent, forming three pillars where each element influences and shapes the others.

### 1. Innovation Drives Sustainability

Innovation plays a crucial role in creating sustainable solutions to environmental, social, and economic challenges. This can include: **Clean technologies** (e.g., renewable energy, carbon capture), **Circular economy models** (e.g., waste-to-resource systems), **Smart systems** (e.g., smart cities, IoT for resource efficiency). **Examples:** Electric vehicles (EVs) reduce emissions and dependence on fossil fuels. AI in agriculture can optimize resource use and reduce waste. But innovation alone isn't enough—it needs a supportive framework to scale and integrate into society effectively.

### 2. Policy Shapes Innovation

Policy can **enable or constrain** innovation. Through legislation, funding, incentives, and regulations, governments and international bodies can **Encourage R&D** through grants, subsidies, and tax breaks, **Set standards** (e.g., emission limits, energy efficiency codes), **Mandate sustainable practices** (e.g., banning single-use plastics). **For examples:** The EU Green Deal guides tech and industrial innovation toward climate neutrality, Carbon pricing schemes incentivize innovation in low-carbon technologies, Without progressive policies, even groundbreaking innovations may fail to take root or scale effectively.

### 3. Policy & Innovation Enable Sustainability

Together, innovation and policy are essential tools to achieve sustainability goals. Sustainability focuses on **meeting present needs without compromising future generations**, and requires: **Environmental protection**, **Social equity**, **Economic viability**, **Sustainability initiatives** often depend on technological breakthroughs (like green hydrogen), Forward-thinking policies (like net-zero targets). Finally, a **synergistic relationship** between innovation, policy, and sustainability is essential to solve complex global challenges—like climate change, inequality, and resource scarcity. When aligned, they can lead to transformative change. When disconnected, progress is slow and fragmented.

### 2. The Role of Innovation in the Green Economy





By lowering waste and emissions and fostering a more sustainable economy, innovation can result in more effective and efficient use of resources. Green technologies is expected to drive efficiency gains, adopting cleaner technologies and renewable energy aims to mitigate environmental damage. Promoting green growth also requires boosting renewable energy sources. In addition to meeting the need for electricity and enhancing global energy security, investing in renewable energy sources like solar, wind, and hydropower can help lessen reliance on fossil fuels. Furthermore, because it encourages the effective use of natural resources and ecologically friendly technologies, it is consistent with the tenets of green innovation. Waste management has become a crucial area for improvement as farming methods change to reduce their negative effects on the environment. Burning or just dumping waste are common conventional methods of treating agricultural waste, which can lead to contamination and the loss of vital organic ingredients. Modern environmentally friendly waste management methods, on the other hand, are transforming the environment by allowing farms to recycle and turn waste into useful products. This change increases operating efficiency in addition to sustainability. *A Biogas System can be prime example of this.* One of the most popular eco-friendly waste management solutions in agriculture today is the biogas system. Biogas systems utilize anaerobic digestion a process where microorganisms break down organic materials in the absence of oxygen to convert agricultural waste, like manure and crop residues, into biogas and bio-slurry. Another example is Water Recycling Technologies: Closing the Loop on Water Use. Water is a precious resource in agriculture, and water recycling technologies are helping farms manage their water more efficiently. These systems are designed to treat wastewater from various farming processes, allowing it to be reused for irrigation, cleaning, and even certain types of animal husbandry. By recycling water, farms can significantly reduce their water footprint and decrease dependency on external water sources. The role of startup and research in driving sustainable in driving sustainable practices are significantly important since this strategy or practices requires huge finance for research like finding the optimal place for implementing those technologies and sourcing these technologies, implementing them. Furthermore, sustainability-focused startups are leading the way in addressing social and environmental issues by utilizing cutting-edge technologies and innovative business strategies. These firms frequently provide ground-breaking solutions that raise industry standards, such as inventing cutting-edge renewable energy technology, producing new sustainable materials, or utilizing digital platforms to promote circular economies, whereas established enterprises expand gradually. Their inventiveness is





essential to finding solutions for urgent global problems including social inequity, resource depletion, and climate change.

### **Case studies of effective green technology implementation.**

#### **Tesla.**

Tesla has revolutionised the automotive industry by popularising electric vehicles (EVs) as a sustainable alternative to traditional fossil fuel-powered cars. The company also develops solar energy systems and energy storage solutions. Tesla's Model 3 became the world's best-selling EV, proving that electric vehicles can be both efficient and desirable and Tesla Powerwall and Powerpack allow homes and businesses to store renewable energy, further reducing carbon footprints, Tesla's Gigafactories are powered by renewable energy, focusing on reducing manufacturing emissions.

Tesla has helped prevent millions of tonnes of CO<sub>2</sub> emissions annually and encouraged other automakers to accelerate EV production.

### **3. Policies and Strategies for a Sustainable Green Economy**

An emissions tax is a government tax on the pollution emissions of a manufacturer. On the other hand, green subsidies are government subsidies for manufacturers to invest in green technologies that help reduce pollution. They both are common in practice. For example, The Chinese government began implementing a sewage charging system on July 1, 2003. Furthermore, in December 2016, it announced the Law of the People's Republic of China on Environmental Protection Tax, deciding that from January 1, 2018, its change from an emission fee to an emission tax, the taxable objects include air pollutants, water pollutants, solid waste, and noise. Carbon taxes are prevalent in Asia, including Japan and India (Bian et al., 2020), and in various European nations, including Germany, Italy, Sweden, Switzerland, and the United Kingdom (Harju et al., 2022). It seeks to lower fossil fuel-derived carbon dioxide emissions. Italy is a prime example. Energy consumption was responsible for 84% of Italy's carbon dioxide emissions in 2014, while the country's environmental taxes made up 3.57% of GDP (OECD, 2018).

Climate change presents the single biggest threat to sustainable development everywhere and its widespread, unprecedented impacts disproportionately burden the poorest and most vulnerable. Urgent action to halt climate change and deal with its





impacts is integral to successfully achieving all Sustainable Development Goals (SDGs). The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties at the UN Climate Change Conference (COP21) in Paris, France, on 12 December 2015. It entered into force on 4 November 2016. Its overarching goal is to hold “the increase in the global average temperature to well below 2°C above pre-industrial levels” and pursue efforts “to limit the temperature increase to 1.5°C above pre-industrial levels.” The Paris Agreement, which for the first time also encourages voluntary contributions from other Parties, reiterates that wealthier nations should lead the charge in giving financial aid to less wealthy and more vulnerable nations. Since substantial investments are needed to drastically cut emissions, climate finance is necessary for mitigation. Since substantial financial resources are required to adapt to the negative effects and lessen the repercussions of a changing climate, climate finance is equally vital for adaptation.

In alignment with international commitments such as the Paris Agreement and the United Nations Sustainable Development Goals (SDGs), Uzbek government has set ambitious targets to diversify the energy mix, reduce greenhouse gas emissions, and promote green economic growth. The country has accelerated its transition to renewable energy through series of regulatory measures and strategic policies. The "Strategy for the Transition to a Green Economy" (2019–2030) outlines Uzbekistan’s goal of increasing the share of renewable energy to 25% of total electricity generation by 2030. Key initiatives include large-scale investments in solar and wind power, such as Bukhara region's wind farms and the solar power facilities in Samarkand and Navoi. Furthermore, international organizations like the World Bank, Asian Development Bank (ADB) and European Bank for Reconstruction and Development (EBRD) have played a crucial role in providing financial and technical assistance to support Uzbekistan’s renewable energy expansion.

Despite these efforts, public acceptability and behavioral readiness to adopt new energy solutions are critical to the successful implementation of renewable energy schemes. The widespread adoption of renewable energy technology is mostly determined by public attitudes, risk perceptions, and behavioral intents, even as legislative actions and financial investments set the foundation. Designing successful policies that promote adoption requires an understanding of public concerns, including perceived costs, confidence in governmental programs, and the impact of social norms.

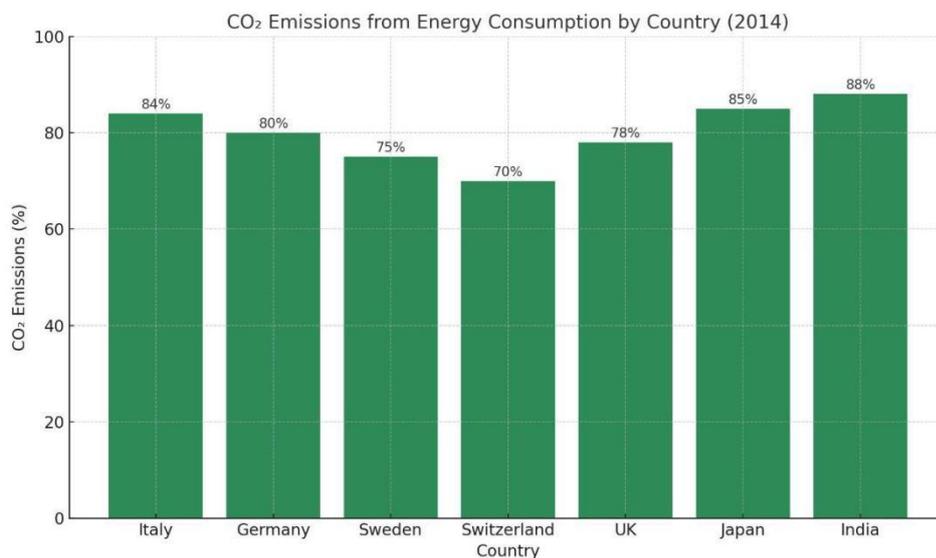




"Italy is a prime example. Energy consumption was responsible for 84% of Italy's carbon dioxide emissions in 2014, while the country's environmental taxes made up 3.57% of GDP (OECD, 2018).

**Figure 1: CO<sub>2</sub> Emissions from Energy Consumption by Country (2014)**

The following chart compares the percentage of carbon dioxide emissions from energy consumption among selected countries. This comparison illustrates how energy policies and carbon taxation are especially important in countries with high emission rates.



**4. Sustainable Practices in Key Sectors.**

Approximately 75% of greenhouse gas emissions are caused by the current energy system, making it a significant contributor to climate change worldwide. As temperatures continue to rise, it is imperative that we change the way we generate and use energy. Countries have agreed to drastically, quickly, and sustainably cut their greenhouse gas emissions in order to keep global warming far below 2° Celsius over pre-industrial levels, ideally to 1.5° Celsius, under the Paris Agreement, a legally binding international pact on climate change. The energy sector's ability to achieve net-zero emissions by 2050 will determine whether the world can achieve this





goal. There has never been a more compelling argument for action. Adopted at COP28 in Dubai in 2023, the historic ruling from the first Global Stocktake lays forth revolutionary energy-related strategies and avenues that nations must follow, such as: By 2030, triple the world's capacity for renewable energy and double the average yearly pace of energy efficiency gains worldwide; shifting energy systems away from fossil fuels in a fair, fair, and just way; eliminating wasteful fossil fuel subsidies that don't help with transitions or energy poverty. The decision highlights the urgency to accelerate global efforts towards a net-zero emission energy system, one that produces little or no carbon emissions from fossil fuels and industrial processes, before 2050. Agriculture is the world's largest industry. Intensive agriculture as it has been practised since the 1960s has very high yields, but depletes the soil and pollutes the environment: greenhouse gas emissions, biodiversity loss, ocean acidification, etc. The recent awareness of the limits of natural resources and pollution of soil, air and water, is pushing for sustainable farming. The Solar Impulse Label is granted to innovative sustainable agriculture solutions that meet high standards of sustainability and profitability. Each solution goes through a strict assessment process performed by independent experts. Irrigation Nets offers a solution for farmers dealing with salinized groundwater problems or who wish to use sea water to provide freshwater to their fields.

### Green manufacturing practices

Utilizing renewable energy sources, obtaining sustainable materials, utilizing technology to optimize operational efficiency, and safeguarding ecosystems and natural places are all examples of green manufacturing methods. Renewable energy Choosing renewable energy sources to power production reduces emissions throughout production processes. Energy from renewable sources, such as wind, solar, geothermal or hydropower, power green manufacturing plants. Lean manufacturing and green technology or lean manufacturing. Lean manufacturing is a method of production that emphasizes efficiency and waste reduction. Green technologies, which are technologies that reduce an industry's impact on the environment, can support lean manufacturing. For instance, smart factories are equipped with data-collecting sensors and analytics software that can provide key insights on preventing equipment breakdowns, inventory management and general ways to streamline production. One of the main causes of greenhouse gas emissions is transportation. Developing cities with rapidly growing populations and emissions will need to address climate change challenges and help mitigate it if global GHG emissions are to be effectively reduced. The all-encompassing strategy provided by sustainable urban transport policy offers a





path ahead for addressing mobility and transportation demands in a way that is socially, environmentally, and economically viable. To combat those environmental issues, electronic vehicles are introduced by American car manufacturer companies.

## **5. Case Studies and Global Examples**

Success Stories.

These are successful examples of green economy transition in different countries. Renewable Energy in China , Feed-in tariffs in Kenya ,Organic Agriculture in Uganda ,Sustainable Urban Planning in Brazil, Rural Ecological Infrastructure in India Forest Management in Nepal, Ecosystem Services in Ecuador ,Solar Energy in Tunisia.

A case of Kenya.

Kenya's energy profile is defined by a high reliance on imported petroleum to meet the demands of the modern economy and a preponderance of traditional biomass energy to supply the energy needs of rural families. The nation is consequently confronted with issues pertaining to the unsustainable utilization of conventional biomass sources and susceptibility to exorbitant and volatile oil import costs. The realization that "Renewable Energy Sources (RES), including solar, wind, small hydro, biogas, and municipal waste energy, have potential for income and employment generation, over and beyond contributing to the supply and diversification of electricity generation sources" led Kenya's Ministry of Energy to adopt a feed-in tariff in March 2008.

### **Kenya's Feed-in Tariff (FIT) Policy**

A **Feed-in Tariff (FIT)** is a policy that requires utilities to **buy electricity from renewable energy sources** (like solar, wind, and biogas) at a **fixed, attractive price**. It ensures producers have a **guaranteed market** and encourages investment in clean energy. **Key Features of Kenya's FIT Policy's are:** **Grid access** for renewable energy producers, **Long-term power purchase agreements** (extended from 15 to 20 years), **Fixed price per kilowatt-hour (kWh)** for electricity from renewable sources. Kenya's Feed-in Tariff (FiT) policy has been a cornerstone in the nation's renewable energy development, leading to significant advancements in clean energy generation. **Key Successes of Kenya's FiT Policy:** **Renewable Energy Capacity:** The FiT policy attracted substantial investments, resulting in the commissioning of various renewable energy projects, including wind, solar, and geothermal plants. **Enhanced**

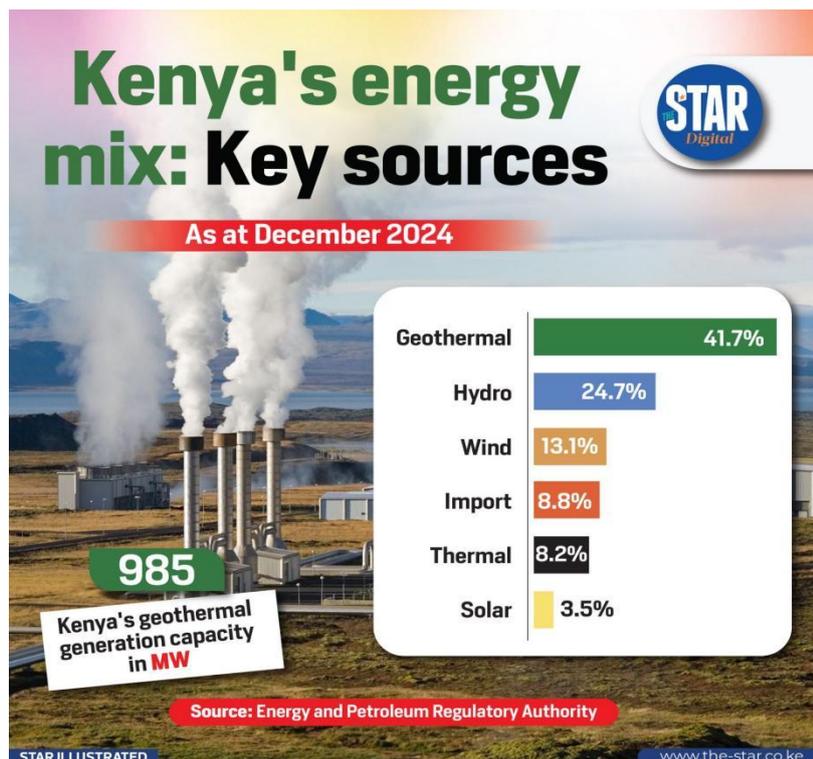




**Energy Access:** By promoting decentralized renewable energy projects, the FiT policy contributed to improved electricity access in rural and underserved areas. **Economic Growth and Job .**

employment opportunities and stimulated local economies. **Environmental Benefits:** The shift towards renewable energy sources under the FiT policy led to a reduction in greenhouse gas emissions, aligning with global climate change mitigation efforts. Overall, Kenya's FiT policy serves as a successful model for integrating renewable energy into the national grid, demonstrating the potential of policy instruments in driving sustainable energy transitions.

Kenya's commitment to renewable energy is evident in its diverse energy mix. The following chart provides a visual representation of the country's renewable energy sources as of 2023.



Uzbekistan is making strides in its green transition, but achieving greater progress will depend on enhanced cooperation between the government, state-owned financial institutions (SOFIs), state-owned enterprises (SOEs), and the private sector. In recent years, **Uzbekistan has embraced a green economy transition**, focusing on reducing greenhouse gas emissions, expanding renewable energy, improving resource





efficiency, and increasing urban green spaces. These efforts are not just environmental—they also support the country's broader economic reform and growth agenda. State-owned financial institutions (SOFIs) and enterprises (SOEs) play a **central role in advancing green investments: SOFIs provide about 70% of loans** in the economy, State investment funds, like the **Uzbekistan Fund for Reconstruction and Development (UFRD)**, will invest in strategic sectors equivalent to **10% of GDP in 2024**, SOEs dominate critical sectors including energy, agriculture, industry, and transport. Despite their importance, these state-owned entities remain a largely **underutilized source of green finance**.

### 6. Challenges to the Green Economy Transition.

The country has accelerated its transition to renewable energy through series of regulatory measures and strategic policies. The "Strategy for the Transition to a Green Economy" (2019–2030) outlines Uzbekistan's goal of increasing the share of renewable energy to 25% of total electricity generation by 2030. Key initiatives include large-scale investments in solar and wind power, such as Bukhara region's wind farms and the solar power facilities in Samarkand and Navoi. Furthermore, international organizations like the World Bank, Asian Development Bank (ADB) and European Bank for Reconstruction and Development (EBRD) have played a crucial role in providing financial and technical assistance to support Uzbekistan's renewable energy expansion.

Despite these efforts, the successful implementation of renewable energy initiatives depends significantly on public acceptance and behavioral willingness to adopt new energy solutions. While policy interventions and financial investments lay the groundwork, societal attitudes, risk perceptions, and behavioral intentions are key determinants of whether renewable energy technologies will be widely embraced. Understanding public concerns, such as perceived costs, trust in government policies, and the influence of social norms, is essential for designing effective policies that encourage adoption.

### 7. Recommendations for Uzbekistan and Beyond.

The government has started to place increased focus on fostering innovation and technological entrepreneurship. While the tech startup ecosystem is beginning to take shape, additional measures are necessary to ensure its full development and sustainability. The following recommendations are proposed to strengthen and support this progress.





Strategy and Coordination. Create and implement a coordinated strategy. Several ministries and agencies are involved in supporting innovative entrepreneurship and startups. These include the Ministry of Higher Education, Science and Innovation; the Ministry for Digital Technologies; the Youth Union of Uzbekistan; the Chamber of Commerce and Industry of Uzbekistan; the IT Park; and others. Their activities are currently running in parallel with little coordination. Therefore, a coordination strategy could be developed and implemented by a new joint body (steering committee, working group, commission, etc.). Support a life-cycle or development-stage approach to startup support. Incubators and accelerators, as well as support agencies, should take a stage approach in their programs. This means that startups have different needs and face different challenges depending on whether they are in the ideation, pre-seed, seed, growth, scaling, or other stage of their development. The transition from incubation to acceleration is an important step, and startups should be able to move cleanly from one stage to the next. Early-stage support can prepare startups to reach a state that makes them attractive to venture capital. **Foster Academic and Research**

**Partnerships.** Collaborating with international universities, research centers, and think tanks can boost local knowledge and innovation in green technologies, climate science, and environmental management. Joint research programs, academic exchanges, and international conferences can support this goal. **Deepen Engagement with Multilateral and Bilateral Partners.** Collaborating with development partners like the **World Bank, Asian Development Bank (ADB), UN agencies, and the European Union** can provide vital technical assistance, policy guidance, and infrastructure investment. Bilateral cooperation with countries experienced in green technology (e.g., Germany, South Korea, Japan) can accelerate technology transfer and capacity building.

## **8. Conclusion**

Navigating the green economy is no longer a visionary aspiration but a global necessity. As the climate crisis intensifies and economic models evolve, the integration of **innovation, policy, and strategic sustainable practices** becomes the cornerstone of transformative change. Innovation drives efficient, scalable solutions; policy provides the necessary frameworks and incentives; and sustainable strategies ensure that progress respects ecological limits while promoting inclusivity and prosperity. Countries like Uzbekistan stand at a critical juncture, with unique opportunities to leapfrog into a sustainable future by embracing green technologies, international collaboration, and citizen-driven approaches. The path forward demands





bold commitments, multi-sector cooperation, and an unwavering focus on long-term impact. By synergizing technological advancement, sound policy, and sustainability-focused planning, the global community can transition not just to a green economy—but to a resilient, equitable, and thriving planet for generations to come.

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**The Recovery of the Tourism and Hospitality Industry in the Post-Pandemic Period**

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**Abstract**

The COVID-19 pandemic caused unprecedented disruption to the global tourism and hospitality industry, resulting in massive economic losses, job reductions, and structural transformations. This article examines the recovery process of the tourism and hospitality sector in the post-pandemic period, focusing on key drivers, challenges, and strategic responses. Using a systematic analysis of international reports, academic literature, and industry data, the study highlights the role of digitalization, sustainability, government support, and changing consumer behavior in shaping recovery outcomes. The findings emphasize that a resilient and adaptive approach is essential for long-term recovery and sustainable growth in the post-pandemic era.

**Keywords**

tourism recovery, hospitality industry, post-pandemic period, COVID-19 impact, sustainable tourism, digital transformation

**Introduction**

The tourism and hospitality industry is one of the most significant contributors to global economic development, employment generation, and cultural exchange. Prior to the COVID-19 pandemic, the sector accounted for approximately 10% of global GDP and supported millions of jobs worldwide. However, the outbreak of the pandemic in early 2020 led to widespread travel restrictions, border closures, and lockdown measures, causing an unprecedented collapse in international and domestic tourism.

The pandemic exposed the vulnerability of the tourism and hospitality sector to global crises. Hotels, airlines, restaurants, and travel agencies experienced severe financial





distress, while millions of workers faced unemployment or reduced working hours. As the world gradually transitions into the post-pandemic period, understanding the recovery mechanisms of this sector has become a critical research priority.

The aim of this article is to analyze the recovery of the tourism and hospitality industry in the post-pandemic period by examining key recovery drivers, emerging trends, and long-term strategic implications.

### Materials and Methods

This study adopts a qualitative and analytical research design based on secondary data analysis. The research materials include:

- Academic journal articles related to tourism recovery and crisis management;
- Reports from international organizations such as the World Tourism Organization (UNWTO), World Travel & Tourism Council (WTTC), and World Bank;
- Industry publications and policy documents released between 2020 and 2024.

The methodological approach involves content analysis, comparative analysis, and synthesis of existing research findings. The data were systematically reviewed to identify patterns, recovery strategies, and best practices implemented across different regions. This approach allows for a comprehensive understanding of post-pandemic recovery dynamics in the tourism and hospitality sector.

- **Research Design:**  
This study employs a qualitative and analytical research design aimed at examining recovery trends and strategic responses in the tourism and hospitality industry during the post-pandemic period.
- **Data Sources:**  
Secondary data were collected from peer-reviewed academic journals, international tourism reports, and policy documents published between 2020 and





2024.

- **Key Information Providers:**
  - World Tourism Organization (UNWTO)
  - World Travel & Tourism Council (WTTC)
  - World Bank and OECD publications
  - Industry reports from hospitality associations and tourism ministries
- **Data Collection Method:**

Relevant literature and reports were systematically reviewed to identify major recovery drivers, challenges, and industry responses.
- **Analytical Approach:**
  - Content analysis was applied to evaluate recovery strategies and policy measures;
  - Comparative analysis was used to assess regional and sectoral differences in recovery patterns;
  - Synthesis of findings allowed the identification of common trends and best practices.
- **Study Scopes**

The analysis focuses on both tourism (travel flows, destination management) and hospitality (hotels, restaurants, accommodation services) sectors at the global and regional levels.
- **Limitations:**

The study is limited to secondary data sources and does not include primary data collection such as surveys or interviews.

### **Global Impact and Recovery Context**

- The COVID-19 pandemic resulted in an unprecedented global decline in tourism demand.





- International travel restrictions significantly disrupted global tourism flows.
- The hospitality sector experienced widespread business closures and revenue losses.
- Tourism-dependent economies were disproportionately affected.
- Recovery timelines differ significantly between developed and developing countries.
- Domestic tourism acted as a buffer during border closures.
- Regional tourism corridors supported partial recovery.
- Travel confidence gradually improved with vaccination rollouts.
- Health risk perception continues to influence travel decisions.
- Pandemic preparedness has become a strategic priority for the industry.

### **Consumer Behavior and Demand Trends**

- Tourists increasingly prioritize health and safety measures.
- Demand for flexible booking and cancellation policies has increased.
- Short-distance and regional travel gained popularity.
- Nature-based and rural tourism experienced growth.
- Wellness tourism became more prominent post-pandemic.
- Travelers prefer less crowded destinations.
- Digital information sources influence travel planning more than before.
- Customer loyalty depends on trust and transparency.
- Personalized travel experiences are in higher demand.
- Sustainable travel choices influence consumer decisions.

### **Hospitality Sector Adaptation**

- Hotels implemented enhanced sanitation and hygiene protocols.
- Contactless check-in and check-out systems became standard practice.
- Digital payment methods replaced cash transactions.
- Room occupancy rates recovered gradually.
- Revenue management strategies were revised.
- Smaller accommodation providers adopted online booking platforms.





- Restaurants shifted toward delivery and takeaway services.
- Hybrid service models emerged in hospitality operations.
- Cost optimization became a major operational focus.
- Customer service training emphasized health compliance.

### **Digital Transformation and Innovation**

- Digitalization accelerated across tourism services.
- Mobile applications improved customer engagement.
- Artificial intelligence supported demand forecasting.
- Big data analytics enhanced decision-making processes.
- Virtual tours promoted destinations during travel restrictions.
- Smart tourism technologies improved visitor management.
- Social media marketing influenced recovery outcomes.
- Online reputation management became critical.
- Automation reduced operational costs.
- Cybersecurity gained importance with digital expansion.

### **Government Policies and Institutional Support**

- Governments introduced financial aid packages for tourism businesses.
- Tax relief measures supported small and medium-sized enterprises.
- Public-private partnerships facilitated recovery efforts.
- Destination marketing campaigns stimulated demand.
- Health certification programs enhanced traveler confidence.
- Travel bubbles supported cross-border mobility.
- Infrastructure investments improved tourism resilience.
- Policy coordination improved crisis response.
- Labor protection measures reduced workforce displacement.
- Tourism recovery strategies aligned with national development plans.

### **Sustainability and Long-Term Development**





- Sustainable tourism gained strategic importance.
- Environmental awareness increased among travelers.
- Carbon footprint reduction became a policy focus.
- Community-based tourism supported local economies.
- Cultural heritage preservation gained attention.
- Responsible tourism practices improved destination resilience.
- Green investments enhanced tourism infrastructure.
- Sustainable certifications influenced market competitiveness.
- Climate resilience became part of tourism planning.
- Long-term sustainability supports economic stability.

### **Workforce and Human Capital Challenges**

- Labor shortages emerged due to workforce displacement.
- Skill gaps widened during the pandemic.
- Employee retraining became necessary.
- Working conditions influenced labor retention.
- Mental health support gained importance in hospitality workplaces.
- Digital skills became essential for tourism employees.
- Youth employment programs supported sector recovery.
- Gender equality issues gained policy attention.
- Informal employment declined in some regions.
- Workforce resilience contributes to service quality.

### **Economic and Financial Outcomes**

- Tourism revenues gradually recovered post-pandemic.
- Investment flows resumed cautiously.
- Small businesses faced slower recovery rates.
- Financial resilience varied across subsectors.
- Price sensitivity increased among travelers.
- Cost pressures affected profit margins.
- Currency fluctuations influenced international travel demand.





- Tourism contributed to broader economic recovery.
- Risk diversification became an investment strategy.
- Long-term financial planning improved sector stability.

### **Future Outlook and Strategic Implications**

- Crisis management planning is essential for future resilience.
- Industry adaptability determines recovery success.
- Innovation remains a key competitive advantage.
- Cross-sector collaboration strengthens tourism systems.
- Data-driven decision-making improves strategic planning.
- Health security remains a long-term consideration.
- Sustainable growth models ensure long-term viability.
- Tourism recovery supports social and cultural exchange.
- Global cooperation enhances crisis response capacity.
- Post-pandemic recovery represents an opportunity for transformation.

### **Results**

The analysis reveals that the recovery of the tourism and hospitality industry is uneven across regions and subsectors. Domestic tourism recovered more rapidly than international tourism due to ongoing travel restrictions and health concerns. Countries with strong domestic tourism markets demonstrated greater resilience and faster recovery.

Several key factors contributed to recovery outcomes:

- Vaccination campaigns and health protocols increased traveler confidence;
- Government support measures, including financial aid and tax relief, helped businesses survive the crisis;





- Digital transformation, such as contactless services and online booking systems, improved operational efficiency;
- Shift in consumer preferences toward safety, flexibility, and sustainable travel experiences.

The hospitality sector, particularly hotels and restaurants, benefited from adopting enhanced hygiene standards and flexible booking policies. Small and medium-sized enterprises that embraced innovation showed higher recovery rates compared to those relying on traditional business models.

### **Discussion**

The findings highlight that recovery is not merely a return to pre-pandemic conditions but a structural transformation of the tourism and hospitality industry. Digitalization has become a core component of resilience, enabling businesses to adapt to changing market demands. The use of mobile applications, artificial intelligence, and data analytics has enhanced customer engagement and operational decision-making.

Sustainability has also emerged as a central theme in the post-pandemic recovery. Tourists increasingly prefer environmentally responsible and socially inclusive destinations. This shift aligns with global efforts to promote sustainable tourism development and reduce the environmental footprint of travel activities.

Furthermore, human resource management remains a critical challenge. Labor shortages and skill mismatches have slowed recovery in some regions, highlighting the need for workforce reskilling and improved working conditions.

### **Implications for Policy and Industry Practice**

The recovery of the tourism and hospitality industry requires coordinated efforts between governments, private sector stakeholders, and international organizations. Policymakers should focus on:





- Developing crisis preparedness and risk management frameworks;
- Supporting innovation and digital adoption;
- Encouraging sustainable tourism practices.

Industry leaders must prioritize flexibility, customer trust, and long-term resilience. Investing in technology, employee training, and sustainable infrastructure will be essential to ensure competitiveness in the post-pandemic era.

### Conclusion

The post-pandemic recovery of the tourism and hospitality industry is a complex and multifaceted process. While significant progress has been made, the sector continues to face challenges related to uncertainty, workforce shortages, and evolving consumer expectations. The findings of this study suggest that resilience, innovation, and sustainability are the key pillars of successful recovery. By embracing these principles, the tourism and hospitality industry can achieve sustainable growth and greater preparedness for future global crises.

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## **EVOLUTION OF CONTEMPORARY ECONOMIC THEORIES**

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### **Abstract**

This article analyzes the evolution of contemporary economic theories. The development of economic thought is examined within a historical context, highlighting its fundamental principles and methodological approaches. The study covers the progression of economic theories from classical economics to neoclassical, Keynesian, and modern economic schools. The distinctive characteristics of each theory, their approaches to solving economic problems, and their adaptability to modern economic conditions are analyzed. The transformation and development of economic doctrines are also assessed in the context of globalization, technological advancement, and social change. The article explores the interrelationships among economic theories and their practical significance, while providing insights into potential future directions in the evolution of economic thought.

### **Keywords**

economic theories, evolution of economic thought, classical economics, neoclassical economics, Keynesian economics, modern economic theories, globalization, technological progress

### **KIRISH**





Hozirgi zamon iqtisodiy ta'limotlari evolyutsiyasi iqtisodiy fikrning rivojlanishi va o'zgarishi jarayonini o'z ichiga oladi. Iqtisodiyot, insoniyat tarixida muhim rol o'ynagan sohalardan biri bo'lib, uning nazariy asoslari va amaliyotlari doimiy ravishda yangilanib bormoqda. 20-asrning boshlaridan boshlab, iqtisodiy ta'limotlar ko'plab yangi yo'nalishlar va yondashuvlar bilan boyidi. Klasik iqtisodiy ta'limotdan boshlab, keyinchalik keyneschilik, monetarizm, institutsionalizm va boshqa ko'plab nazariyalar paydo bo'ldi.

Bugungi kunda iqtisodiy ta'limotlar globalizatsiya, raqamli iqtisodiyot va ekologik barqarorlik kabi zamonaviy muammolarni hisobga olgan holda rivojlanmoqda. Iqtisodiy nazariyalar nafaqat iqtisodiy jarayonlarni tushuntirish, balki ularni boshqarish va rivojlantirishga ham qaratilgan. Shuningdek, iqtisodiy ta'limotlar ijtimoiy, siyosiy va madaniy omillarni inobatga olgan holda yanada kengaymoqda. Bu esa iqtisodiy fikrning multidimensional va kompleks tabiatini ko'rsatadi. Hozirgi zamon iqtisodiy ta'limotlari evolyutsiyasi, shubhasiz, kelajakdagi iqtisodiy siyosat va strategiyalarni shakllantirishda muhim ahamiyatga ega.

### **1. Iqtisodiy ta'limotlarning tarixiy rivojlanishi va zamonaviy tendensiyalar**

Iqtisodiy ta'limotlarning tarixiy rivojlanishi insoniyatning iqtisodiy faoliyati bilan bog'liq holda shakllangan. Dastlabki iqtisodiy fikrlar qadimgi Yunon va Rim davrlarida paydo bo'lgan bo'lib, ularning asarlari iqtisodiy nazariyalar uchun asos bo'lgan. O'rta asrlarda iqtisodiy fikrlar diniy ta'limotlar bilan bog'langan holda rivojlangan. Bu davrda iqtisodiy faoliyat ko'proq qishloq xo'jaligi va savdo bilan bog'liq edi.

Renessans davrida iqtisodiy fikrlar yangi yo'nalishlarga yuzlandi. Merkantilizm





iqtisodiy o'sishni tashqi savdo orqali ta'minlashga qaratilgan. Keyinchalik, XVIII asrda Adam Smit, David Ricardo va Karl Marks kabi iqtisodchilar klassik iqtisodiy ta'limotlarni ishlab chiqdilar. Adam Smitning "Millatlarning boyligi" asari iqtisodiy nazariyaning asosiy manbalaridan biri hisoblanadi.

XX asrda iqtisodiy ta'limotlar yanada rivojlandi. Keynesiy nazariya iqtisodiy inqirozlar davrida davlatning iqtisodiy faoliyatga aralashuvini ta'kidlab, yangi iqtisodiy siyosatlarni ishlab chiqdi. Zamonaviy iqtisodiyotda esa, neoklassik va institutsional iqtisodiyot kabi yangi yo'nalishlar paydo bo'ldi.

Bugungi kunda iqtisodiy ta'limotlar globalizatsiya, raqamli iqtisodiyot va barqaror rivojlanish kabi zamonaviy tendensiyalar bilan bog'liq holda rivojlanmoqda. Iqtisodiy nazariyalar iqtisodiy jarayonlarni chuqurroq tushunishga yordam beradi va jamiyatning turli sohalarida muammolarni hal qilishda muhim ahamiyatga ega.

## **2. Hozirgi zamon iqtisodiy ta'limotlarida asosiy konsepsiyalar va ularning amaliyotga tatbiqi**

Hozirgi zamon iqtisodiy ta'limotlari turli konsepsiyalarni o'z ichiga oladi, ularning har biri iqtisodiy jarayonlarni tushunish va boshqarishda muhim ahamiyatga ega. Ushbu ta'limotlar ichida eng ko'p e'tibor qaratiladiganlari orasida mikroiqtisodiyot va makroiqtisodiyot, hamda xulq-atvor iqtisodiyoti mavjud.

Mikroiqtisodiyot individual iste'molchilar va firmalar qarorlarini o'rganadi. Bu konsepsiya narxlar, talab va taklif, bozor muvozanati kabi tushunchalarni o'z ichiga oladi. Masalan, iste'molchilarning xarid qilish qarorlari qanday qilib narxlar va





mahsulot sifatiga ta'sir ko'rsatishini o'rganish orqali iqtisodchilar bozorning samaradorligini baholay oladilar.

Makroiqtisodiyot esa iqtisodiy o'sish, inflyatsiya, ish bilan ta'minlash va davlat siyosati kabi umumiy ko'rsatkichlarga e'tibor qaratadi. Bu konsepsiya iqtisodiy sikllar va ularning ijtimoiy-iqtisodiy oqibatlarini tahlil qilishda muhim ahamiyatga ega. Masalan, davlatning iqtisodiy siyosati orqali inflyatsiyani nazorat qilish yoki ish bilan ta'minlash darajasini oshirish mumkin.

Xulq-atvor iqtisodiyoti esa insonlarning iqtisodiy qarorlarini psixologik va ijtimoiy omillar bilan bog'liq holda o'rganadi. Bu ta'limot iste'molchilar va firmalar qanday qilib o'z qarorlarini qabul qilishini tushunishga yordam beradi, shuningdek, iqtisodiy siyosatni samarali amalga oshirishda muhim ahamiyatga ega.

Umuman olganda, hozirgi zamon iqtisodiy ta'limotlari iqtisodiy jarayonlarni chuqurroq tushunishga va ularni amaliyotda tatbiq etishga yordam beradigan muhim konsepsiyalarni taqdim etadi. Bu esa iqtisodiy barqarorlikni ta'minlash va rivojlanish uchun zarurdir.

### **3. Globalizatsiya va raqamli iqtisodiyot: yangi iqtisodiy ta'limotlarning shakllanishi**

Globalizatsiya va raqamli iqtisodiyot bugungi kunda iqtisodiy ta'limotlarning shakllanishida muhim rol o'ynamoqda. Globalizatsiya jarayoni mamlakatlar o'rtasidagi iqtisodiy, madaniy va ijtimoiy aloqalarni kuchaytirib, yangi iqtisodiy tizimlarning paydo bo'lishiga sabab bo'lmoqda. Bu jarayon natijasida xalqaro savdo, investitsiyalar





va texnologiyalar almashinuvi tezlashmoqda.

Raqamli iqtisodiyot esa internet va raqamli texnologiyalarning rivojlanishi bilan bog'liq. U an'anaviy iqtisodiyotdan farq qilib, ma'lumotlar va raqamli xizmatlarga asoslangan yangi biznes-modellarni shakllantirmoqda. Raqamli iqtisodiyotning rivojlanishi, shuningdek, ishchi kuchining yangi ko'nikmalarini talab qiladi va iqtisodiy jarayonlarni yanada samarali va tezkor amalga oshirish imkonini beradi.

Bu ikki jarayon bir-birini to'ldirib, yangi iqtisodiy ta'limotlarni yaratishga olib kelmoqda. Masalan, raqamli transformatsiya orqali kompaniyalar o'z faoliyatlarini optimallashtirib, xarajatlarni kamaytirish va foydani oshirish imkoniyatiga ega bo'lmoqda. Shuningdek, globalizatsiya tufayli yangi bozorlar va imkoniyatlar paydo bo'lmoqda, bu esa raqamli iqtisodiyotning yanada kengayishiga zamin yaratadi.

Shu sababli, globalizatsiya va raqamli iqtisodiyot o'rtasidagi o'zaro bog'liqlik iqtisodiy ta'limotlarning yangilanishi va rivojlanishiga olib kelmoqda. Bu jarayonlar iqtisodiy barqarorlikni ta'minlash va yangi imkoniyatlarni ochish uchun muhim ahamiyatga ega. O'z navbatida, iqtisodiy siyosat va strategiyalarni yangilash zarurati yuzaga kelmoqda.





### **XULOSA**

Hozirgi zamon iqtisodiy ta'limotlari evolyutsiyasi, o'z ichiga turli nazariyalar va yondashuvlarni olgan holda, iqtisodiy fanlarning rivojlanishida muhim rol o'ynaydi. Ushbu jarayonning asosiy jihatlari sifatida, klassik iqtisodiy ta'limotlardan boshlab, neoklassik, keynsian va hozirgi zamon iqtisodiy nazariyalarigacha bo'lgan o'zgarishlarni keltirish mumkin. Har bir nazariya o'z davrining ijtimoiy va iqtisodiy sharoitlariga mos ravishda shakllangan va o'ziga xos yechimlar taklif qilgan.

Bugungi kunda, globalizatsiya, raqamli iqtisodiyot va ijtimoiy-iqtisodiy muammolar iqtisodiy ta'limotlarning yangi yo'nalishlarini talab qilmoqda. Masalan, ekologik iqtisodiyot va xulqiy iqtisodiyot kabi yangi yondashuvlar, iqtisodiy faoliyatning barqarorligini ta'minlashga qaratilgan. Shuningdek, iqtisodiy ta'limotlar, amaliyot va nazariya o'rtasidagi uzviy bog'liqlikni ta'minlash uchun innovatsion metodologiyalarni qo'llashda davom etmoqda.

Shunday qilib, hozirgi zamon iqtisodiy ta'limotlari evolyutsiyasi, zamon talablariga javob beradigan, innovatsion va barqaror iqtisodiy rivojlanishni ta'minlaydigan muhim jarayon sifatida davom etmoqda. Iqtisodiy bilimlar va yondashuvlar rivoji, kelajakda ham ijtimoiy va iqtisodiy muammolarni hal etishda muhim ahamiyatga ega bo'ladi.





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**Economic Development of the Industrial Sector**

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**Annotation.** This article analyzes the processes of economic development of the industrial sector and its role and importance in the national economy. The paper examines ways to ensure economic development through the growth of industrial production, increased investment activity, implementation of innovative technologies, and enhancement of competitiveness. In addition, the main factors influencing the sustainable development of the industrial sector and its future prospects are discussed.

**Keywords:** industrial sector, economic development, industrial production, investments, innovations, competitiveness.

**Sanoat sohasining iqtisodiy rivojlanishi.**

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**Annotatsiya.** Ushbu maqolada sanoat sohasining iqtisodiy rivojlanish jarayonlari, uning milliy iqtisodiyotdagi o'rni va ahamiyati tahlil qilinadi. Sanoat ishlab chiqarishining o'sishi, investitsiya faolligi, innovatsion texnologiyalarni joriy etish hamda raqobatbardoshlikni oshirish orqali iqtisodiy rivojlanishni ta'minlash masalalari yoritib beriladi. Shuningdek, sanoat sohasining barqaror rivojlanishiga ta'sir etuvchi asosiy omillar va ularni rivojlantirish istiqbollari ko'rib chiqiladi.

**Kalit so'zlar:** sanoat sohasi, iqtisodiy rivojlanish, sanoat ishlab chiqarishi, investitsiyalar, innovatsiyalar, raqobatbardoshlik.





**Аннотация.** В данной статье анализируются процессы экономического развития промышленной отрасли, ее роль и значение в национальной экономике. Рассматриваются вопросы обеспечения экономического развития за счет роста промышленного производства, инвестиционной активности, внедрения инновационных технологий и повышения конкурентоспособности. Также выделяются основные факторы, влияющие на устойчивое развитие промышленности, и перспективы ее дальнейшего развития.

**Ключевые слова:** промышленная отрасль, экономическое развитие, промышленное производство, инвестиции, инновации, конкурентоспособность.

Sanoat sohasi har qanday mamlakat iqtisodiyotining tayanch tarmoqlaridan biri bo‘lib, uning rivojlanish darajasi milliy iqtisodiyotning umumiy holatini belgilab beradi. Sanoat ishlab chiqarishining barqaror o‘sishi yalpi ichki mahsulot hajmining oshishiga, eksport salohiyatining kengayishiga hamda aholi bandligini ta’minlashga xizmat qiladi. Shu sababli sanoat sohasining iqtisodiy rivojlanishi masalasi davlat iqtisodiy siyosatining ustuvor yo‘nalishlaridan biri sifatida qaraladi. Zamonaviy bozor iqtisodiyoti sharoitida sanoat tarmoqlarini rivojlantirish nafaqat ishlab chiqarish hajmlarini ko‘paytirish, balki ishlab chiqarish samaradorligini oshirish, innovatsion texnologiyalarni joriy etish va raqobatbardosh mahsulotlar ishlab chiqarishni ta’minlash bilan chambarchas bog‘liqdir.

Sanoat sohasining iqtisodiy rivojlanishi, avvalo, ishlab chiqarish quvvatlarining holati va ulardan foydalanish darajasi bilan belgilanadi. Mavjud ishlab chiqarish quvvatlarining eskirganligi sanoat korxonalarida mehnat unumdorligining pasayishiga, resurslar sarfining ortishiga va mahsulot tannarxining oshishiga olib keladi. Shu bois sanoat korxonalarini texnik va texnologik jihatdan modernizatsiya qilish iqtisodiy rivojlanishni ta’minlashning muhim sharti hisoblanadi. Zamonaviy texnologiyalarni





joriy etish ishlab chiqarish jarayonlarini avtomatlashtirish, mahsulot sifatini yaxshilash va ishlab chiqarish xarajatlarini kamaytirish imkonini beradi.

Investitsiyalar sanoat ishlab chiqarishini kengaytirish, yangi korxonalar tashkil etish va mavjud ishlab chiqarishlarni rekonstruksiya qilish uchun zarur moliyaviy resurslarni ta'minlaydi. Ichki va tashqi investitsiyalarni samarali jalb etish sanoat tarmoqlarining barqaror o'sishiga zamin yaratadi. Xorijiy investitsiyalar, ayniqsa, ilg'or texnologiyalar va boshqaruv tajribasining kirib kelishiga, eksportbop mahsulotlar ishlab chiqarish hajmining oshishiga ijobiy ta'sir ko'rsatadi. Shu bilan birga, investitsion muhitning qulayligi sanoat sohasining rivojlanish sur'atlarini belgilovchi asosiy omillardan biri hisoblanadi.

Sanoat sohasining iqtisodiy rivojlanishi 2025 yilda ham O'zbekiston Respublikasining milliy iqtisodiy siyosatida ustuvor yo'nalish bo'lib qolmoqda. Respublikada sanoat ishlab chiqarishining barqaror o'sishiga erishish uchun amalga oshirilayotgan islohotlar, tarmoqlarni modernizatsiyalash, diversifikatsiya strategiyalari va xom-ashyo bazasini mustahkamlash bo'yicha chora-tadbirlar o'z samarasini bermoqda. 2025 yilda respublika sanoat korxonalari tomonidan ishlab chiqarilgan mahsulotlar umumiy qiymati 1,1 kvadrillion so'mni tashkil etdi, bu esa o'tgan yilga nisbatan 6,8% ga o'sish ko'rsatdi va sanoatning o'sish dinamikasining ijobiy ta'sirini ochiq ko'rsatmoqda.

2025 yilda O'zbekistonning sanoat ishlab chiqarishidagi asosiy rol qayta ishlash sanoatiga to'g'ri keladi: sanoat mahsulotlarining jami hajmidan 86% qayta ishlash tarmog'iga to'g'ri kelib, bu sohaning milliy iqtisodiyotdagi ulushi sezilarli darajada yuqori ekanligini ko'rsatadi. Tog'-kon sanoati esa jami ishlab chiqarishning taxminan 7% ini tashkil etdi, energiya ta'minoti va kommunal xizmatlar sohasi esa 6,4% ga teng bo'ldi.





Sanoatning qayta ishlash tarmoqlarida yuqori qo‘shimcha qiymatli mahsulotlar ishlab chiqarish ham davom etdi. Ayni paytda oziq-ovqat mahsulotlari, tekstil va kiyim-kechaklar, kimyo va plastmassa mahsulotlar, metall mahsulotlar, farmatsevtika preparatlari ishlab chiqarish sezilarli o‘shish ko‘rsatmoqda. Bu tarmoqlarda ishlab chiqarish hajmlarining kengayishi nafaqat ichki bozor talabini qondirish, balki eksport salohiyatini kuchaytirish imkonini beradi va sanoat sohasining diversifikatsiyasiga hissa qo‘shadi.

2025 yilda kichik va o‘rta biznes sub’ektlarining sanoat tarmog‘iga qo‘shgan hissasi ham oshishga davom etdi. Xususiy tadbirkorlik korxonalari sonining ko‘payishi va ularning ishlab chiqarishda samaradorligini oshirish milliy iqtisodiyotning tortuvchi kuchi sifatida ahamiyat kasb etmoqda. Kichik biznesning ishlab chiqarish tuzilmasidagi ulushi ham o‘smoqda, bu esa ishchi o‘rinlari yaratish va ijtimoiy barqarorlikni ta‘minlashda muhim omil hisoblanadi.

Sanoat sohasining iqtisodiy rivojlanishiga mehnat resurslarining sifati va malakasi ham katta ta‘sir ko‘rsatadi. Malakali kadrlar sanoat ishlab chiqarishining samarali tashkil etilishi, texnologik jarayonlarning uzluksiz ishlashi va innovatsion yechimlarning joriy etilishida muhim rol o‘ynaydi. Shu sababli sanoat tarmoqlari uchun kadrlar tayyorlash tizimini rivojlantirish, ta‘lim va ishlab chiqarish integratsiyasini kuchaytirish sanoat rivojlanishining muhim shartlaridan biri hisoblanadi. Mehnat resurslaridan samarali foydalanish ishlab chiqarish hajmlarining oshishiga va mahsulot tannarxining pasayishiga olib keladi.

Sanoat ishlab chiqarishida resurslardan oqilona foydalanish iqtisodiy rivojlanishni ta‘minlovchi asosiy omillardan biridir. Moddiy, moliyaviy va energetik resurslardan samarali foydalanish ishlab chiqarish xarajatlarini kamaytirishga va iqtisodiy natijalarni yaxshilashga xizmat qiladi. Energiya tejankor texnologiyalarni joriy etish, chiqindilarni qayta ishlash va ekologik jihatdan barqaror ishlab chiqarishni





rivojlantirish sanoat sohasining uzoq muddatli rivojlanishini ta'minlaydi. Bunday yondashuv nafaqat iqtisodiy, balki ekologik samaradorlikni ham oshiradi.

Energiya samaradorligi bo'yicha amalga oshirilayotgan strategiyalar natijasida sanoatda energiya sig'imi pasayishga erishildi. Bu o'z navbatida ishlab chiqarish xarajatlarini kamaytirish va resurslardan oqilona foydalanish imkonini berdi. Sanoat korxonalarining asosiy vositalarini yangilash koeffitsienti ham ijobiy tendensiyani ko'rsatib, zamonaviy texnologiyalarni joriy etish darajasining oshganini bildiradi.

Umuman olganda, 2025 yilda O'zbekiston sanoat sohasining iqtisodiy rivojlanishi ijobiy dinamikaga ega bo'lib, sanoat ishlab chiqarishining umumiy hajmi o'sdi, qayta ishlash tarmog'ining ulushi sezilarli darajada ko'paydi va hududlar kesimida ishlab chiqarish samaradorligi oshdi. Bunday natijalar respublika iqtisodiy siyosatining ustuvor yo'nalishlari — texnologik modernizatsiya, sanoat diversifikatsiyasi, investitsiyalar jalb etish va kichik biznesni qo'llab-quvvatlash orqali erishilayotgan umumiy iqtisodiy barqarorlik ko'rsatkichidir.

Bozor iqtisodiyoti sharoitida sanoat sohasining iqtisodiy rivojlanishi raqobat muhitining shakllanishi bilan uzviy bog'liqdir. Raqobat sanoat korxonalarini mahsulot sifatini oshirish, xarajatlarni kamaytirish va innovatsion faoliyatni rivojlantirishga undaydi. Raqobatbardosh sanoat ishlab chiqarishi ichki bozorni sifatli mahsulotlar bilan ta'minlash bilan birga, eksport imkoniyatlarini kengaytiradi. Eksport salohiyatining oshishi esa mamlakatning valyuta tushumlarini ko'paytirib, iqtisodiy barqarorlikni mustahkamlaydi.

Sanoat sohasining iqtisodiy rivojlanishini baholashda turli makroiqtisodiy va mikroiqtisodiy ko'rsatkichlardan foydalaniladi. Sanoat ishlab chiqarish hajmi, mehnat unumdorligi, rentabellik darajasi, investitsiya faolligi va eksport ko'rsatkichlari sanoat rivojlanishining asosiy mezonlari hisoblanadi. Ushbu ko'rsatkichlar tahlili asosida sanoat tarmoqlarining rivojlanish darajasi aniqlanib, mavjud muammolar va ularni





bartaraf etish yo'llari belgilanadi. Samarali tahlil sanoat sohasini rivojlantirish bo'yicha asosli qarorlar qabul qilish imkonini beradi.

Xulosa qilib aytganda, sanoat sohasining iqtisodiy rivojlanishi ko'p qirrali va murakkab jarayon bo'lib, u investitsiyalar, innovatsiyalar, mehnat resurslari, davlat siyosati va bozor mexanizmlarining o'zaro uyg'unligiga bog'liqdir. Sanoatning barqaror rivojlanishi milliy iqtisodiyotning raqobatbardoshligini oshiradi, iqtisodiy o'sishni jadallashtiradi va aholi farovonligini yuksaltiradi. Shu sababli sanoat sohasini rivojlantirishga qaratilgan kompleks va tizimli chora-tadbirlarni amalga oshirish hozirgi davrda muhim vazifalardan biri bo'lib qolmoqda.

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