

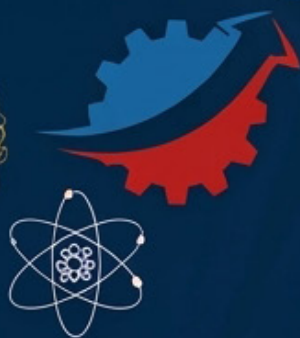
MUHANDISLIK

& IQTISODIYOT

ijtimoliy-igʻtisodiy, innovatsion texnik,
fan va taʼlimga oid ilmiy-amaliy jurnal

2026-YIL

SENTYABR / 9-SON, IV-QISM



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05.00.00 – Texnika fanlari

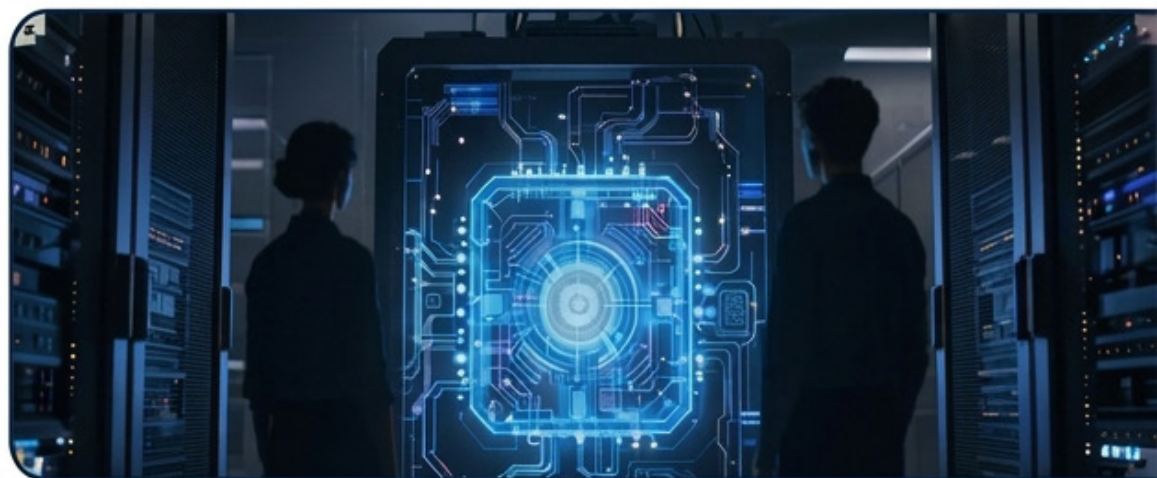
08.00.00 – Iqtisodiyot fanlar



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INTERNATIONAL
STANDARD
SERIAL
NUMBER
INTERNATIONAL CENTRE

OpenAIRE



ISSN: 3060-463X

РЭУ.РФ
НАУЧНО-ИССЛЕДОВАТЕЛЬСКИЙ
ЦЕНТР НАУКИ И ТЕХНИКИ



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05.01.00 – Axborot texnologiyalari, boshqaruv va kompyuter grafikasi
05.01.01 – Muhandislik geometriyasi va kompyuter grafikasi. Audio va video texnologiyalari
05.01.02 – Tizimli tahlil, boshqaruv va axborotni qayta ishlash
05.01.03 – Informatikaning nazariy asoslari
05.01.04 – Hisoblash mashinalari, majmualari va kompyuter tarmoqlarining matematik va dasturiy ta'minoti
05.01.05 – Axborotlarni himoyalash usullari va tizimlari. Axborot xavfsizligi
05.01.06 – Hisoblash texnikasi va boshqaruv tizimlarining elementlari va qurilmalari
05.01.07 – Matematik modelashtirish
05.01.11 – Raqamli texnologiyalar va sun'iy intellekt
05.02.00 – Mashinasozlik va mashinashunoslik
05.02.08 – Yer usti majmualari va uchish apparatlari
05.03.02 – Metrologiya va metrologiya ta'minoti
05.04.01 – Telekommunikasiya va kompyuter tizimlari, telekommunikasiya tarmoqlari va qurilmalari. Axborotlarni taqsimlash
05.05.03 – Yorug'lik texnikasi. Maxsus yoritish texnologiyasi
05.05.05 – Issiqlik texnikasining nazariy asoslari
05.05.06 – Qayta tiklanadigan energiya turlari asosidagi energiya qurilmalari
05.06.01 – To'qimachilik va yengil sanoat ishlab chiqarishlari materialshunosligi

05.08.03 – Temir yo'l transportini ishlatish
05.08.06 – "G'ildirakli va gusenisali mashinalar va ularni ishlatish" (texnika fanlari)
05.09.01 – Qurilish konstruksiyalari, bino va inshootlar
05.09.04 – Suv ta'minoti. Kanalizatsiya. Suv havzalarini muhofazalovchi qurilish tizimlari
10.00.06 – Qiyosiy adabiyotshunoslik, chog'ishtirma tilshunoslik va tarjimashunoslik
10.00.04 – Yevropa, Amerika va Avstraliya xalqlari tili va adabiyoti
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

Ma'lumot uchun, OAK

Rayosatining 2024-yil 28-avgustdagi 360/5-son qarori bilan "Dissertatsiyalar asosiy ilmiy natijalarini chop etishga tavsiya etilgan milliy ilmiy nashrlar ro'yxati"ga texnika va iqtisodiyot fanlari bo'yicha "Muhandislik va iqtisodiyot" jurnali ro'yxatga kiritilgan.

Muassis: "Tadbirkor va ishbilarmon" MChJ

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2. Toshkent davlat iqtisodiyot universiteti
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9. Jizzax politexnika instituti



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ASSESSMENT OF ECONOMIC SECURITY LEVELS AND ANALYSIS OF REGIONAL RISKS IN THE REGIONS OF UZBEKISTAN

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Abstract. This article examines the assessment of economic security levels across the regions of the Republic of Uzbekistan. The analysis is based on indicators such as gross regional product per capita, per capita income, industrial output, the number of internet users, electricity generation, and foreign economic activity. Differences in regional economic development and risk profiles are identified, and the regions are classified into clusters based on an integrated risk assessment. The findings support the use of differentiated approaches to regional economic policy.

Keywords: economic security, regional development, integrated risk assessment, gross regional product, industrial production, energy security, digital infrastructure, regional policy, external shocks, economic stability.

Annotatsiya. Ushbu maqolada O'zbekiston Respublikasi hududlarida iqtisodiy xavfsizlik darajasini baholash masalalari tadqiq etilgan. Tahlil yalpi hududiy mahsulotning aholi jon boshiga to'g'ri keladigan hajmi, aholi jon boshiga daromadlar, sanoat mahsuloti hajmi, internet foydalanuvchilari soni, elektr energiyasi ishlab chiqarish hamda tashqi iqtisodiy faoliyat ko'rsatkichlariga asoslangan. Hududlarning iqtisodiy rivojlanish darajasi va risk profillaridagi farqlar aniqlanib, integral risk baholash asosida hududlar klasterlarga ajratilgan. Tadqiqot natijalari hududiy iqtisodiy siyosatda differensial yondashuvlardan foydalanish maqsadga muvofiqligini ko'rsatadi.

Kalit so'zlar: iqtisodiy xavfsizlik, hududiy rivojlanish, integral risk baholash, yalpi hududiy mahsulot, sanoat ishlab chiqarishi, energetik xavfsizlik, raqamli infratuzilma, hududiy siyosat, tashqi shoklar, iqtisodiy barqarorlik.

Аннотация. В статье рассматриваются вопросы оценки уровня экономической безопасности регионов Республики Узбекистан. Анализ основан на таких показателях, как валовой региональный продукт на душу населения, доходы на душу населения, объем промышленного производства, численность пользователей интернета, производство электроэнергии и показатели внешнеэкономической деятельности. Выявлены различия в уровнях экономического развития и профилях рисков регионов, а также проведена их кластеризация на основе интегральной оценки рисков. Результаты исследования подтверждают целесообразность применения дифференцированных подходов к региональной экономической политике.

Ключевые слова: экономическая безопасность, региональное развитие, интегральная оценка рисков, валовой региональный продукт, промышленное производство, энергетическая безопасность, цифровая инфраструктура, региональная политика, внешние шоки, экономическая устойчивость.

INTRODUCTION

In the modern economy, ensuring regional economic security is one of the key factors determining a country's sustainable development and competitiveness. Globalization processes, external economic shocks, demographic pressures, imbalances in resource allocation, and digital transformation affect the economic security of regions in different ways. Therefore, assessing and analyzing economic security not only at the national level but also across regions has significant scientific and practical importance.

In recent years, Uzbekistan has implemented a number of measures aimed at regional development, improving the investment environment, supporting industrial development, and expanding the digital economy. At the same time, differences remain among regions in terms of economic potential, income levels, industrial capacity, and infrastructure provision. Accordingly, the level of exposure to internal and external economic risks may vary across regions.

The purpose of this study is to assess the economic security level of Uzbekistan's regions based on key macroeconomic, industrial, energy, and digital indicators and to identify their risk profiles. The results provide a basis for determining priority directions of regional economic policy and developing recommendations to strengthen economic security.

LITERATURE REVIEW

Economic security is generally understood as the capacity of an economy to maintain stable development, withstand internal and external shocks, and preserve the conditions necessary for sustainable economic activity. In the literature, this concept is examined not only at the national level but also in relation to regions, sectors, and individual economic entities. Glazyev [5] associates economic security with the ability of an economic system to maintain stable economic development and maintain stability under changing internal and external conditions. Senchagov [8] develops this approach by emphasizing the importance of a system of indicators that reflects the state of production, income, investment, infrastructure, and other components of economic sustainability.

At the regional level, economic security depends on the interaction of several factors rather than on a single macroeconomic indicator. High gross regional product or income alone does not necessarily guarantee a region's resilience if industrial capacity, energy supply, infrastructure, or access to digital technologies remain limited. For this reason, regional economic security is increasingly assessed through a combination of economic, industrial, infrastructural, and technological indicators. Such an approach makes it possible to identify structural differences between regions and to determine the areas in which particular vulnerabilities are concentrated.

Contemporary international research also places increasing emphasis on productivity, technological capacity, infrastructure quality, and resilience to external shocks as important determinants of sustainable regional development. The World Bank [9], in particular, highlights the role of productivity growth, technological upgrading, institutional capacity, and structural transformation in sustaining economic development. These factors are relevant for regional analysis because differences in industrial specialization, infrastructure availability, and access to technology may significantly influence the ability of individual territories to adapt to changing economic conditions.

For Uzbekistan, the regional dimension of economic security is particularly important because the regions differ considerably in economic structure, industrial development, income levels, digital access, and energy capacity. Accordingly, an assessment based on several complementary indicators provides a more informative picture than the use of a single measure. In this study, regional economic security is therefore considered as a multidimensional category reflected in economic performance, industrial capacity, digital development, energy provision, and resilience to external shocks. This approach provides the conceptual basis for comparing the regions of Uzbekistan and identifying differences in their risk profiles.

RESEARCH METHODOLOGY

The study applies a comparative indicator-based approach to assess differences in economic security across the regions of Uzbekistan. The analysis is based primarily on official statistical data for 2024–2025 published by the National Statistics Committee of the Republic of Uzbekistan [7]. The selected indicators were chosen to reflect several interconnected dimensions of regional economic security: economic capacity, household income, industrial development, digital access, and energy provision.

Gross regional product per capita and income per capita are used to characterize the general level of economic development and income-generating capacity of the regions. Industrial output per capita reflects differences in production capacity and the relative strength of the industrial base. The number of internet users is included as an indicator of digital access and the development of regional digital infrastructure. Electricity generation is used to reflect differences in energy capacity, which may affect both industrial activity and the resilience of regional economies.

The empirical analysis is carried out in two stages. First, the selected indicators are compared across regions in order to identify differences in their economic, industrial, digital, and energy characteristics. This comparison makes it possible to determine which regions demonstrate relatively stronger positions and which face limitations in several dimensions simultaneously. Second, the results are combined into an integrated regional risk assessment that allows the regions to be grouped according to their relative economic security profiles.

On the basis of the observed indicators, the regions are classified into groups ranging from relatively low to comparatively high levels of economic risk. The classification is used primarily as a comparative analytical tool rather than as an absolute measure of regional performance. Particular attention is given to cases in which strong results in one dimension coexist with weaker results in another, since such differences may reveal structural limitations that are not visible from aggregate economic indicators alone.

The final stage of the analysis interprets the identified regional differences in terms of economic resilience and policy relevance. The results are used to compare the economic base, industrial capacity, digital access,



energy autonomy, and resilience to external shocks across groups of regions. This makes it possible to identify the main sources of regional differentiation and to formulate recommendations that take into account the specific economic and infrastructural characteristics of different territories.

ANALYSIS AND RESULTS

The analysis focuses on differences in the economic, industrial, digital, and energy capacities of the regions (see Table 1).

Table 1
Diagnostic Indicators for Selected Regions¹

Region	GRP per capita 2025 (thousand UZS)	Income per capita 2025 (thousand UZS)	Industrial output per capita 2024 (thousand UZS)	Internet users 2024 (thousand persons)	Electricity generation 2024 (million kWh)	Integrated Risk Assessment
Navoi Region	152,238.2	44,694.2	134,209.0	1,047.9	10,847.1	Low
Tashkent City	116,747.3	73,910.5	55,807.3	6,433.1	6,273.4	Low-Medium
Tashkent Region	57,480.2	29,830.9	44,983.4	2,122.1	20,003.2	Low-Medium
Bukhara Region	41,399.1	35,176.2	20,501.3	1,677.8	2,582.0	Medium
Andijan Region	30,852.1	26,275.9	26,439.6	2,448.2	820.0	Medium
Samarkand Region	28,001.8	24,471.0	10,676.7	3,055.6	515.0	Medium-High
Fergana Region	26,603.6	24,582.7	11,185.8	3,633.2	479.2	Medium-High
Namangan Region	27,020.6	21,304.6	10,228.2	2,278.1	6,561.6	Medium
Republic of Karakalpakstan	26,489.5	20,656.0	12,064.0	1,640.9	5,079.0	High
Jizzakh Region	34,116.8	22,907.4	16,357.3	1,129.7	1.1	Medium-High
Surkhandarya Region	22,223.4	22,572.2	4,746.9	1,871.5	653.7	High

Four main conclusions can be drawn from this table.

First, a “high gross regional product” does not necessarily imply “high regional security.” Tashkent City demonstrates high income levels and digital maturity; however, it relies on interregional energy supplies, making it vulnerable to logistics and infrastructure disruptions.

Second, Navoi Region and Tashkent Region demonstrate relatively strong industrial and energy indicators and make a significant contribution to regional economic stability.

Third, regions with large populations, such as Samarkand and Fergana, have achieved substantial digital expansion; however, if productivity growth and local energy capacity do not increase sufficiently, demographic factors may place additional pressure on regional infrastructure and productivity.

Fourth, the indicators for the Republic of Karakalpakstan and Surkhandarya Region suggest that economic risks are associated with several interrelated factors, including income levels, productivity, infrastructure, and adaptability to external shocks.

¹ Source: Compiled by the author based on data from the National Statistics Committee of the Republic of Uzbekistan.

Table 2
Regional Indicator Map²

Regional Cluster	Economic Base	Industrial Base	Digital Access	Energy Autonomy	Resilience to External Shocks
Navoi, Tashkent City, Tashkent Region	Very Strong	Strong	Strong	Medium/Strong	High
Bukhara, Syrdarya, Andijan	Strong/Medium	Medium/Strong	Medium	Medium/Strong	Above Average
Samarkand, Fergana, Namangan, Khorezm, Kashkadarya	Medium	Medium	Medium/Strong	Uneven	Medium
Karakalpakstan, Jizzakh, Surkhandarya	Low/Medium	Low/Medium	Below Average	Low/Medium	Low

This regional indicator map suggests that a differentiated approach to regional development may be appropriate. In regions with relatively stable indicators, greater attention may be given to economic diversification and the application of innovative solutions. In medium-level regions, measures aimed at increasing labor productivity and improving logistics systems may be relevant. In regions with comparatively higher risk levels, the development of human capital, energy infrastructure, and digital infrastructure may be considered among the priority areas.

CONCLUSION AND SUGGESTIONS

The study results indicate that economic security levels vary across the regions of Uzbekistan. Navoi Region, Tashkent City, and Tashkent Region demonstrate comparatively strong indicators of economic potential, industrial development, and infrastructure capacity. At the same time, the Republic of Karakalpakstan, Surkhandarya Region, and, according to some indicators, Jizzakh Region demonstrate comparatively higher economic risk levels.

The analysis suggests that regional economic security is associated not only with gross regional product and income levels but also with industrial capacity, energy supply, digital infrastructure, and adaptability to external shocks. These findings support the use of differentiated approaches in regional economic policy.

In regions with relatively stable indicators, further development of innovation and high-technology industries may contribute to economic diversification. In medium-level regions, increasing labor productivity and improving logistics efficiency may be relevant. In regions with comparatively higher risk levels, strengthening energy, digital, and human capital infrastructure may contribute to reducing regional disparities and improving economic resilience.

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2 Source: Compiled by the author based on the author's calculations.



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muhandislik **& iqtisodiyot**

ijtimoiy-iqtisodiy, innovatsion texnik,
fan va ta'limga oid ilmiy-amaliy jurnal

Ingliz tili muharriri: Feruz Hakimov

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Sahifalovchi va dizayner: Abdurahmon Qurbonov

2026. № 9

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"Muhandislik va iqtisodiyot" jurnali 26.06.2023-yildan
O'zbekiston Respublikasi Prezidenti Adminstratsiyasi huzuridagi
Axborot va ommaviy kommunikatsiyalar agentligi tomonidan
№S-5669245 reyestr raqami tartibi bo'yicha ro'yxatdan o'tkazilgan.
Litsenziya raqami: №095310.

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