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# CONTENTS

MECHANISMS FOR FORMING AND IMPLEMENTING INVESTMENT POLICY OF COMMERCIAL BANKS... 8 Abduvaliyev Sanjar Abdurahmanovich	8
EVALUATION OF MANAGEMENT EFFICIENCY BASED ON BUDGETING IN ENERGY ENTERPRISES (A FACTOR ANALYSIS CASE OF "HUDUDGAZTA'MINOT" JSC)..... 17 Sobirov Shoyadbek Kurbonaliyevich	17
PORTFOLIO OF POSTAL SERVICES AND THE ECONOMIC EFFICIENCY OF ITS DIGITALIZATION .....23 Mamatkulov Gulom Rustamovich	23
OPTIMIZING THE BALANCE BETWEEN LIQUIDITY AND CREDIT RISKS IN ENSURING BANKING STABILITY ..... 30 Anvarov Asliddin Nabijon ugli	30
ECONOMIC EFFICIENCY OF RENEWABLE ENERGY DEPLOYMENT IN UZBEKISTAN.....34 Hamroyeva Sabina Ismoil qizi, Dilshod Anvarjonovich Ismailov	34
MODERN TRENDS AND EFFICIENCY OF LENDING TO AGRICULTURAL PRODUCERS IN UZBEKISTAN..39 Shamshetova Gulraushan Sarsenovna	39
ANALYSIS OF THE RELATIONSHIP BETWEEN YOUTH EMPLOYMENT AND CRIME (CASE OF UZBEKISTAN) ..... 42 Khusniddinova Gulnoza	42
PRIORITY DIRECTIONS FOR IMPROVING THE INFRASTRUCTURE OF UZBEKISTAN'S FINANCIAL SYSTEM ..... 47 Qobilova Nodira Qayumjon qizi, Normurodov Kh.E.	47
FOREIGN EXPERIENCE OF INCREASING THE EXPORT CAPACITY OF THE REGION AND SPECIFIC FEATURES OF ITS APPLICATION IN UZBEKISTAN ..... 52 Mamadzhanova Tuygunoy Akhmadzhanovna	52
INSTITUTIONAL APPROACH TO WASTE MANAGEMENT AND ITS ECONOMIC EFFICIENCY ..... 56 Otbosarov Abrorbek Adhamjon o'g'li	56
LOSS MANAGEMENT MATRIX (LOSS MANAGEMENT MATRIX) MODEL IN POWER GRID ENTERPRISES.. ..... 61 Khojimurodov Zukhriddin Shukurullo oglu	61
MICROPROJECTS AS A MEANS OF INCREASING THE FINANCIAL ACTIVITY AND LITERACY OF THE POPULATION ..... 67 Irgashev Anvar Farxodovich	67
INSTITUTIONAL VA TEXNOLOGIK O'ZGARISHLAR SHAROITIDA INNOVATION BANK XIZMATLARINI JORIY ETISH METODOLOGIYASINI TAKOMILLASHTIRISH..... 74 Azlarova Aziza Axrorovna	74
PROBLEMS OF FORMATION AND DEVELOPMENT OF REGIONAL CLUSTERS IN THE LIGHT INDUSTRY OF UZBEKISTAN ..... 80 Umarkulov Kodirjon Maxamadaminovich	80
DIGITAL FINANCIAL INCLUSION AS A DRIVER OF SUSTAINABLE DEVELOPMENT: EVIDENCE FROM GLOBAL TRENDS AND IMPLICATIONS FOR EMERGING ECONOMIES..... 84 Sabitov Oybek Abduganievich, Sattoriy Fayzullokh Abdijabbor ugli	84
PROPERTIES OF HEAVY CONCRETE DISPERSEDLY REINFORCED WITH NON-METALLIC FIBERS AND SPECIFIC FEATURES OF CALCULATING CONCRETE STRUCTURES BASED ON THEM ..... 90 Usmonova Durdona, Gulomova Dilnura	90
THE EFFECT OF STABLE AND DYNAMIC PRICING ON CONSUMER BEHAVIOR ..... 98 Anvar DEBERDIYEV	98
ECONOMIC MECHANISMS FOR IMPROVING PRODUCTION EFFICIENCY IN INDUSTRIAL ENTERPRISES.. ..... 102 M.O. Yo'ldoshova	102

PEDAGOGICAL EFFECTIVENESS OF ARTIFICIAL INTELLIGENCE TECHNOLOGIES IN TEACHING POLITICAL SCIENCE AT HIGHER EDUCATION INSTITUTIONS .....	106
<b>Rasulev Bobirjon Atkhamovich</b>	
IMPROVING THE ORGANIZATIONAL AND ECONOMIC MECHANISM FOR REGULATING NON-STANDARD EMPLOYMENT IN THE DEVELOPMENT OF SMALL BUSINESSES .....	110
<b>Fayzullayev Nurulla Bakhromovich</b>	
PRIORITIES FOR IMPROVING THE HEALTHCARE FINANCING SYSTEM IN UZBEKISTAN .....	117
<b>Gulira'no Atabekovna Ruzmetova</b>	

# PRIORITIES FOR IMPROVING THE HEALTHCARE FINANCING SYSTEM IN UZBEKISTAN

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**Abstract:** This article examines strategic directions for improving healthcare financing mechanisms in Uzbekistan through an economic and institutional perspective. The purpose of the study is to assess the current financing structure, identify fiscal and organizational constraints, compare national reforms with global trends, and develop policy-oriented recommendations for strengthening financial sustainability, efficiency and equity in healthcare. The methodology combines systematic analysis, comparative institutional analysis, economic-statistical interpretation, structural analysis, SWOT analysis, trend analysis and benchmarking against selected international financing models. The empirical basis includes data from WHO, the World Bank, OECD, the Asian Development Bank, Uzbekistan's Ministry of Economy and Finance, Ministry of Health, National Statistics Committee and legal documents available through Lex.uz. The findings indicate that despite the growth of budgetary allocations, Uzbekistan still faces high out-of-pocket expenditure, regional inequalities, insufficient linkage between financing and service outcomes, and limited provider autonomy. The article argues that results-based financing, gradual expansion of state health insurance, strategic purchasing, preventive care financing, digital expenditure monitoring and transparent regional allocation formulas are essential for improving human capital and long-term economic growth.

**Keywords:** healthcare financing, human capital, public expenditure, health insurance, out-of-pocket payments, public-private partnership, digital health, financial protection, strategic purchasing, Uzbekistan.

**Annotatsiya:** Mazkur maqolada O'zbekistonda sog'liqni saqlash tizimini moliyalashtirish mexanizmlarini takomillashtirishning iqtisodiy mazmuni, institutsional cheklovlari va global tendensiyalar bilan uyg'unlashuv imkoniyatlari tahlil qilinadi. Tadqiqotda davlat budjeti mablag'lari, majburiy tibbiy sug'urta elementlari, xususiy sektor ishtiroki, davlat-xususiy sheriklik, xalqaro moliya institutlari kredit va grantlari hamda raqamli sog'liqni saqlashga yo'naltirilgan investitsiyalar sog'liqni saqlash tizimining moliyaviy barqarorligi nuqtayi nazaridan baholanadi. Mualliflik yondashuvi tibbiy xizmatlarning moliyalashtirish manbalari bilan inson kapitali sifati, mehnat unumdorligi, kambag'allikni kamaytirish va hududlararo tenglik o'rtasidagi sabab-oqibat aloqalarini ochishga qaratilgan. Maqolada Jahon banki, Jahon sog'liqni saqlash tashkiloti, O'zbekiston Respublikasi Iqtisodiyot va moliya vazirligi, Milliy statistika qo'mitasi hamda normativ-huquqiy hujjatlar ma'lumotlari asosida iqtisodiy-statistik, institutsional va qiyosiy tahlil amalga oshiriladi. Tadqiqot natijalari natijaga yo'naltirilgan moliyalashtirish, tibbiy sug'urtani bosqichma-bosqich kengaytirish hamda raqamli moliyaviy monitoringni kuchaytirish zarurligini ko'rsatadi.

**Kalit so'zlar:** sog'liqni saqlash moliyasi, inson kapitali, davlat budjeti, majburiy tibbiy sug'urta, xususiy sektor, davlat-xususiy sheriklik, raqamli sog'liqni saqlash, moliyaviy himoya, natijaga yo'naltirilgan moliyalashtirish, O'zbekiston.

**Аннотация:** В статье исследуются стратегические направления совершенствования механизмов финансирования системы здравоохранения в Узбекистане в контексте экономического анализа и глобальных тенденций. Цель исследования состоит в оценке действующей структуры финансирования, выявлении институциональных и фискальных ограничений, а также разработке предложений по повышению финансовой устойчивости, эффективности и доступности медицинских услуг. Методологическую основу составили системный, сравнительный, экономико-статистический, институциональный, структурный, SWOT- и трендовый анализ. В качестве информационной базы использованы данные ВОЗ, Всемирного банка, ОЭСР, АБР, Министерства экономики и финансов, Министерства здравоохранения, Национального комитета по статистике Республики Узбекистан и Lex.uz. Результаты показывают, что при росте бюджетных ассигнований сохраняются высокая доля прямых расходов домохозяйств, территориальные диспропорции, слабая связь финансирования с результатами и ограниченная финансовая автономия учреждений. Практическая значимость исследования заключается

в формировании комплекса мер по переходу к стратегическим закупкам, развитию государственного медицинского страхования, цифровому мониторингу расходов и усилению профилактического звена.

**Ключевые слова:** финансирование здравоохранения, человеческий капитал, государственный бюджет, медицинское страхование, прямые расходы домохозяйств, государственно-частное партнерство, цифровое здравоохранение, финансовая защита, стратегические закупки, Узбекистан.

## INTRODUCTION

Healthcare financing is not merely a sectoral mechanism for covering the costs of medical institutions, but also a strategic instrument for human capital development. Economics, as usual, does not forgive romantic expectations: if public health is financed on a residual basis, the consequences emerge in the form of declining labor productivity, increasing household expenditures, deteriorating educational outcomes among children, and constraints on long-term workforce efficiency. Therefore, healthcare expenditures should be regarded as investments in labor quality, demographic sustainability, and social stability.

For Uzbekistan, the relevance of this issue is intensified by the combination of several factors: population growth, demographic pressure on primary healthcare services, the high prevalence of chronic non-communicable diseases, the need for infrastructure modernization, the development of the private healthcare sector, and the transition toward new principles of state health insurance. According to the World Bank and the WHO, current healthcare expenditures in Uzbekistan accounted for 6.74% of GDP in 2023, while current health expenditure per capita amounted to USD 192.12. At the same time, out-of-pocket household expenditures reached 64.06% of current healthcare spending, indicating a high level of financial vulnerability among the population in the event of illness.

Official statistics demonstrate an expansion of the system's material base: by the end of 2024, the country had 1,972 hospital institutions, the number of hospital beds reached 179.9 thousand, the number of outpatient and polyclinic institutions amounted to 8,107, and the total number of physicians of all specialties reached 107.5 thousand people. However, the growth of physical resources alone does not guarantee efficiency, since the financial mechanism may continue to finance service volumes and staffing levels rather than actual treatment outcomes, preventive care, and patient satisfaction.

In global practice, sustainable healthcare financing is increasingly associated with universal health coverage, strategic purchasing, public or mandatory health insurance, health technology assessment, digital expenditure monitoring, and performance-based payment systems. These directions are becoming particularly important for Uzbekistan because, without transitioning from line-item budgeting to results-based management, it is impossible to simultaneously reduce the financial burden on households and improve the quality of medical services.

The purpose of this article is to analyze the existing mechanisms of healthcare financing in Uzbekistan, identify their economic limitations, compare them with global trends, and develop strategic directions for improving the financial sustainability, efficiency, and accessibility of healthcare services.

To achieve this objective, the following tasks are addressed: analyzing the structure of healthcare financing sources; assessing the role of budget expenditures; determining the significance of state health insurance and risk-pooling mechanisms; examining private and out-of-pocket household expenditures; comparing national approaches with international models; identifying expenditure efficiency problems; and proposing practical directions for reforming the financial architecture of the healthcare sector.

## REVIEW OF LITERATURE ON THE SUBJECT

Issues related to improving healthcare financing occupy an important place in modern economic science, since public health is directly connected with the quality of human capital, labor productivity, and the sustainability of socio-economic development. The theoretical foundation for healthcare financing research was established by K. J. Arrow in 1963. In his work, he demonstrated that the healthcare market differs significantly from ordinary commodity markets due to uncertainty, information asymmetry, the limited ability of patients to independently assess the quality of treatment, and the high social importance of medical services. This approach is fundamentally important for analyzing the healthcare system of Uzbekistan, as it highlights the necessity of active state participation in the regulation, financing, and provision of accessible healthcare services.

The practical aspects of modernizing primary healthcare in Uzbekistan were comprehensively examined in the materials of the Asian Development Bank published in 2020. The project documentation emphasizes that improving healthcare efficiency is impossible without strengthening primary healthcare services, upgrading infrastructure, introducing modern resource management mechanisms, and expanding public access to essential medical services. Particular attention is paid to the need for rational expenditure planning, improving

the targeting of financial resources, and strengthening the institutional capacity of healthcare institutions.

The study conducted by M. J. Cho and co-authors in 2023 analyzes out-of-pocket healthcare expenditures in Uzbekistan. The authors note that the high share of out-of-pocket expenditures may reduce the financial protection of households and limit access to quality healthcare services for low-income population groups. This conclusion is particularly important for substantiating the need to develop insurance-based financing mechanisms, expand state guarantees, and reduce the direct financial burden on the population.

A systemic analysis of the current state of healthcare in Uzbekistan is presented in the 2024 report prepared by the European Observatory on Health Systems and Policies and the WHO Regional Office for Europe. The report examines the institutional structure of the healthcare system, financing sources, healthcare delivery organization, and the main directions of reforms. The report demonstrates that Uzbekistan is currently undergoing an active transformation of its healthcare system, where the key priorities include improving expenditure efficiency, strengthening primary healthcare, enhancing the quality of medical services, and reducing inequality in access to treatment.

The works of G. N. Ruzmetova complement this issue from the perspective of human capital and expenditure planning. In her 2025 study devoted to the experience of Japan and Korea, the author reveals the importance of health, education, and institutional development in the transformation of human capital. In her 2024 study, the role of population health in the development of national human capital is analyzed, which is directly related to the effectiveness of healthcare financing. Another study published in 2025, dedicated to expenditure planning in higher educational institutions based on the example of the Urgench branch of the Tashkent Medical Academy, examines mechanisms for the rational allocation of financial resources, which may be useful in studying budget planning within the healthcare sector.

Thus, the existing literature demonstrates that improving healthcare financing in Uzbekistan should be considered not only as a matter of increasing budget expenditures, but also as a comprehensive task aimed at enhancing the efficiency of resource allocation, developing primary healthcare, reducing the financial burden on the population, strengthening insurance mechanisms, and ensuring the long-term development of human capital.

## RESEARCH METHODOLOGY

The study is based on systemic, comparative, economic-statistical, institutional, and dynamic analysis methods. The theoretical foundation consists of the works of K. Arrow, as well as materials from the WHO, the World Bank, the OECD, the Asian Development Bank, and the European Observatory related to healthcare financing and the financial protection of the population. National data from the Ministry of Economy and Finance, the Ministry of Health, the National Statistics Committee, and Lex.uz were used to evaluate healthcare financing reforms in Uzbekistan.

## ANALYSIS AND RESULTS

Healthcare financing in Uzbekistan has a mixed character: the state budget continues to play the central role, while a significant actual burden falls on households. The system also includes local budgets, projects of international organizations, infrastructure investments, private medical services, public-private partnerships, and emerging mechanisms of state health insurance. Such diversification potentially creates sustainability; however, without a unified mechanism of strategic purchasing, it may increase fragmentation of expenditures (Table 1).

**Table 1. Structure of Healthcare Financing Sources in Uzbekistan<sup>1</sup>**

Source of financing	Financing mechanism	Main recipients	Economic function	Advantages	Limitations
State budget	Line-item and program financing	State medical institutions, programs, PHC	Basic access and social protection	Large scale, controllability	Weak linkage to outcomes
Local budgets	Territorial allocations	District and regional institutions	Consideration of local needs	Regional flexibility	Inequality of tax base
State health insurance	Service package, risk pooling, service purchasing	Patients, service providers	Financial protection	Reduction of OOP, targeting	Pilot nature, digital readiness

<sup>1</sup> Source: developed by the author.

Households	Direct payments for services and medicines	Public and private providers	Compensation for insufficient public coverage	Rapid source of payment	Catastrophic expenditures, inequality
Private sector	Paid services, investments, voluntary health insurance	Private clinics, laboratories	Competition and service quality	Innovation, speed	Risk of access segmentation
Public-private partnerships	Contracts, concessions, joint projects	Infrastructure, diagnostics	Asset modernization	Budget relief	Contractual and tariff risks
International organizations	Loans, grants, technical assistance	Ministry of Health, regions, projects	Institutional reforms	Access to expertise	Dependence on project cycles
Digital healthcare	IT investments, e-polyclinic, e-hospital	Institutions and patients	Reduction of transaction costs	Transparency and data availability	Cyber risks, personnel shortage

Table 1 demonstrates that the problem lies not in the absence of financing sources, but in weak coordination among them. The state budget maintains the basic healthcare network, households effectively compensate for coverage deficits, international funds support reforms, while digital solutions are only beginning to evolve into instruments of expenditure management. Consequently, the strategic objective is to integrate these sources into a unified financial architecture in which money follows guaranteed service packages, quality, and outcomes.

Government healthcare expenditures perform three economic functions: they create a public good in the form of epidemiological security, ensure financial protection for the population, and improve the quality of human capital. Increasing expenditures is not an end in itself. Their significance emerges when budgetary resources reduce preventable hospitalizations, improve early diagnostics, increase access to medicines, and decrease forced out-of-pocket payments by patients (Table 2).

**Table 2. Dynamics of Healthcare Expenditures in Uzbekistan, 2019–2025<sup>2</sup>**

Year	Government expenditures, trillion soums	Share of GDP, %	Share in total budget expenditures, %	Per capita expenditures, thousand soums	Growth rate, %
2019	11.70	2.4	11.3	350	—
2020	14.80	2.8	11.8	435	26.5
2021	21.05	3.1	12.5	606	42.2
2022	24.70	2.9	12.1	700	17.3
2023	28.40	2.7	12.0	790	15.0
2024	34.50	2.7	11.4	935	21.5
2025	41.30	2.5	12.0	1100	19.7

According to Table 2, budget financing of healthcare increased in nominal terms from 11.7 trillion soums in 2019 to a planned 41.3 trillion soums in 2025. However, its share of GDP remains within a narrow corridor of approximately 2.5–3.1%, which indicates that nominal growth partly reflects inflation, wage increases, and network expansion, but does not always imply an equivalent improvement in the financial protection of the population. The year 2021 is particularly important, as pandemic-related expenditures strengthened fiscal attention to the sector, after which the need emerged to transition from crisis financing toward a sustainable model of healthcare payment.

The high share of direct household expenditures is the main economic indicator of insufficient financial protection. In 2023, out-of-pocket expenditure in Uzbekistan accounted for 64.06% of current healthcare expenditures. This means that a significant share of spending on medicines, diagnostics, consultations, and treatment is paid directly by families. For low-income households, illness becomes not only a medical issue, but also a financial shock (Figure 1).

<sup>2</sup> Source: developed by the author.

Figure 1. Comparison of Healthcare Financing Sources: State Budget, Private Expenditures, Insurance, and International Funding<sup>3</sup>

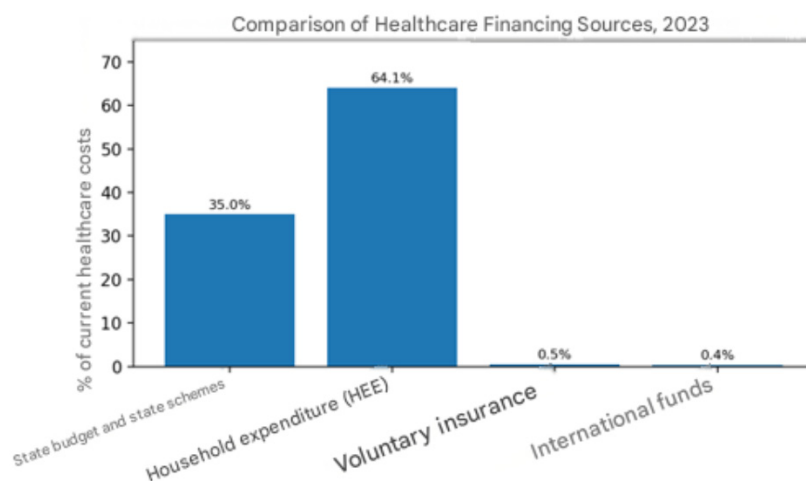


Figure 1 illustrates the imbalance between public and private financing. If the share of direct household expenditures exceeds half of current healthcare expenditures, the formal provision of free medical services does not always guarantee their actual accessibility. The economic consequences are reflected in delayed visits to physicians, self-medication, late diagnosis, and increasing future treatment costs for advanced diseases.

International experience demonstrates that sustainable healthcare systems rely not on a single financing source, but on a combination of tax-based financing, mandatory insurance, strategic purchasing, and regulated private sector participation. Germany relies on social health insurance, the Republic of Korea on a national insurance system supported by a strong digital infrastructure, Türkiye on a model of expanded universal coverage, Estonia on digital governance and an insurance fund, and Kazakhstan on mandatory social health insurance. For Uzbekistan, the value of these models lies not in direct imitation, but in adopting key managerial principles: risk pooling, performance-based purchasing, tariff transparency, and the protection of vulnerable population groups (Table 3).

Table 3. Comparative Analysis of Healthcare Financing Models: International Experience and Opportunities for Uzbekistan<sup>4</sup>

Country / Model	Main financing source	Role of the state	Role of insurance	Level of private expenditures	Practical significance for Uzbekistan
Germany	Social health insurance	Regulator and co-financing	Central role of sickness funds	Low OOP compared to Uzbekistan	Develop contractual purchasing and tariff regulation
Republic of Korea	National insurance + state subsidies	Strategic management and digital data	Single national insurer	Moderate OOP, high digitalization	Integrate e-health with healthcare payment systems
Türkiye	Tax-insurance UHC model	Active expansion of access	Insurance fund and service package	CHE around 4.3% of GDP, but broad coverage	Link insurance reform with primary healthcare
Estonia	Insurance fund and digital system	Compact regulator	Key financing channel	CHE 7.66% of GDP in 2023	Use digital prescriptions, registries, and monitoring
Kazakhstan	Budget + Mandatory Social Health Insurance	Guaranteed service volume and MSHI	Mandatory social insurance	CHE 3.77% of GDP in 2023	Consider transition-period risks and public trust issues
OECD countries	Mixed financing	High share of public financing sources	Different insurance models	Many countries spend 6–12% of GDP	Main lesson — efficiency is more important than impressive expenditure levels

<sup>3</sup> Source: World Bank WDI/WHO GHED, 2023; author's classification of sources. Unit of measurement: % of current healthcare expenditures.

<sup>4</sup> Source: compiled by the author based on OECD *Health at a Glance 2025*, World Bank WDI/WHO GHED, and WHO country reviews.

Comparative analysis demonstrates that successful healthcare models do not necessarily have identical expenditure volumes; however, they almost always share three common characteristics: pre-pooled financial resources, a clearly defined package of state obligations, and the digital capacity to track healthcare services from prescription to payment. These factors represent the main weakness of transition economies, where budgetary financing mechanisms already exist, but results-based purchasing of healthcare services has not yet become a standard practice (Table 4).

Table 4. SWOT Analysis of Healthcare Financing in Uzbekistan<sup>5</sup>

Block	Content
Strengths	State support for reforms; expansion of primary healthcare; digitalization; international cooperation; existence of a budgetary foundation for a guaranteed service package.
Weaknesses	High direct household expenditures; weak linkage between expenditures and outcomes; regional inequality; limited financial autonomy of institutions; insufficient tariff transparency.
Opportunities	Development of state health insurance; public-private partnerships; digital platforms; grants and concessional loans; investments in prevention and health technology assessment.
Threats	Demographic pressure; rising costs of medical technologies; chronic diseases; fiscal constraints; risk of increasing inequality in access to healthcare services.

The SWOT analysis demonstrates that Uzbekistan is currently at a typical reform stage: political will and the regulatory framework are already being established, but the economic outcome will depend on the quality of implementation. The most dangerous scenario would be to expand insurance formally without changing patient pathways, tariff systems, digital accounting, and quality control mechanisms. In such a case, the system would acquire a new institutional framework while preserving outdated financial practices (Table 5).

Table 5. Problems of Healthcare Financing in Uzbekistan and Strategic Solutions<sup>6</sup>

Problem	Economic consequence	Cause	Strategic solution	Expected result
High share of OOP expenditures	Risk of poverty and refusal of treatment	Incomplete coverage of medicines and services	Expansion of the guaranteed package and risk pooling	Reduction of financial vulnerability
Line-item financing	Low motivation for efficiency	Payment for resources rather than outcomes	Results-based financing	Improvement in quality and prevention
Regional disparities	Unequal access to doctors and hospital beds	Different needs and tax bases	Risk-adjusted allocation formulas	Reduction of territorial inequality
Weak digital integration	Lack of expenditure transparency	Fragmented information systems and accounting	Unified digital financial framework	Cost and quality control
Limited institutional autonomy	Weak managerial flexibility	Rigid budget procedures	Autonomy + KPI + audit	Responsible resource management
Insufficient financing of prevention	Growth of future treatment costs	Priority given to inpatient care	Targeted NCD prevention programs	Reduction of preventable morbidity

Table 5 links healthcare financing problems not to general slogans, but to their concrete economic consequences. A high share of direct expenditures means not simply that “people pay a lot,” but rather declining accessibility of healthcare services and increasing poverty risks. Line-item financing means not merely that “this has historically developed in such a way,” but also weak incentives for improving quality. Regional disparities signify not only different statistical indicators, but also unequal life opportunities for the population.

## CONCLUSIONS AND RECOMMENDATIONS

The conducted analysis demonstrates that the healthcare financing system of Uzbekistan is currently in a transitional state: government expenditures are increasing, the regulatory framework of reforms is expanding, and digital initiatives are becoming more active; however, the high share of direct household expenditures and the limited linkage between financing and outcomes remain the key constraints. Nominal budget growth

<sup>5</sup> Source: developed by the author.

<sup>6</sup> Source: developed by the author based on the analysis of official data and international practice.

is necessary but insufficient: financial sustainability requires changes in the methods of payment, purchasing, and control of healthcare services.

Diversification of financing sources should not be constructed as a mechanical addition of the private sector, insurance mechanisms, and international projects, but rather as the creation of a unified system of financial protection. The state budget should guarantee a basic package of services and protect vulnerable groups; state health insurance should pool risks and purchase services; the private sector should expand choice and innovation; and international institutions should support institutional and digital transformation.

Strategically, healthcare should be regarded as an infrastructure of human capital. Improving financial mechanisms reduces poverty, increases access to treatment, strengthens the working capacity of the population, decreases territorial inequality, and creates conditions for long-term economic growth. Otherwise, society risks obtaining an expensive and fragmented system in which money is spent, patients continue to pay, and efficiency sadly wanes from somewhere far away. This is precisely why the transition toward results-oriented, digitalized, insurance-budgetary, and prevention-focused healthcare financing should become the core of the next stage of healthcare reforms in Uzbekistan.

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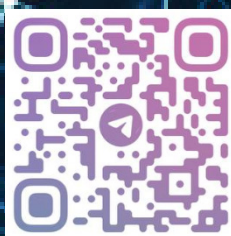
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