

SOCIO-ECONOMIC EFFICIENCY OF PRESCHOOL EDUCATION ORGANIZATIONS BASED ON PUBLIC-PRIVATE PARTNERSHIP: THE EXPERIENCE OF NAMANGAN REGION

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Abstract. This article investigates the socio-economic efficiency of Public-Private Partnership (PPP) mechanisms in the context of transforming the preschool education system, focusing on the Namangan region as a case study. The study systematically analyzes empirical data, investment flow dynamics, and institutional coverage indicators spanning the years 2019–2024. Furthermore, a comparative-critical assessment of the financial and economic efficiency of public and non-state preschool education institutions is provided. Scientifically grounded proposals and recommendations are put forward to ensure the sustainable development principles of PPP models and to eliminate institutional challenges within the sector.

Keywords: public-private partnership (PPP), preschool education, socio-economic efficiency, institutional coverage, investment flow, profitability ratio, cost optimization.

Introduction. In the contemporary stage of economic development, the expansion of human capital and the formulation of its foundational bedrock constitute one of the fundamental priorities of state economic policy. The preschool education system serves as the primary institutional tier that ensures high growth rates of an individual's intellectual potential. Over the past decade, systematic reforms have been implemented in the Republic of Uzbekistan aimed at expanding preschool education coverage and aligning its quality standards with international benchmarks.

However, under conditions of rapid demographic growth and constrained state budget resources, relying solely on traditional public financing mechanisms to satisfy social demand can escalate the budgetary burden and induce fiscal imbalances. Driven by this objective necessity, public-private partnership (PPP) mechanisms were introduced to channel private sector capital, managerial expertise, and innovative approaches into the preschool education system. Resolutions of the Cabinet of Ministers of the Republic of Uzbekistan No. 991 dated December 18, 2017, and No. 475 dated June 25, 2018, served as the primary regulatory and legal framework governing economic and legal relations in this domain. These regulatory instruments established procedures for allocating preferential loans, long-term tax preferences, and state subsidies to private sector entities.

As a region characterized by high population density and birth rates, the Namangan region stands out due to an inherently high social demand for preschool education services. Consequently, assessing the socio-economic efficiency achieved through the implementation of PPP models in the region from both quantitative and qualitative perspectives, identifying systemic bottlenecks, and conducting a comparative study of the financial outcomes of public and non-state sectors possess profound practical and scientific significance.

Macroeconomic Analysis of Public-Private Partnership Projects and Investment Dynamics. Between 2020 and 2024, a stable growth trend was observed in the dynamics of attracting investments within the framework of PPP mechanisms in the Namangan region. During this period, a total of 266 million USD in investment funds was directed into the social segments of the regional economy via PPP models. This indicator demonstrates a regional-level improvement in the investment climate and reflects the private sector's growing confidence in the economic guarantees extended by the state.

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Table 1

Annual Dynamics of PPP Projects and Investment Volumes in Namangan Region (2020–2024)

Indicators / Years	2020	2021	2022	2023	2024	Total
Number of implemented projects (units)	4	8	11	14	18	55
Annual investment volume (million USD)	20	38	52	66	90	266
Growth rate (compared to the previous year, %)	-	190.0%	136.8%	126.9%	136.4%	-

A sectoral analysis of the attracted investments reveals that the most substantial share of total capital allocations-40 percent-was channeled into infrastructure projects. This is followed by the healthcare system (25%) and the direct education sector (15%). The remaining 20 percent of funds is attributed to other social and communal service sectors.

Within the 15 percent allocation dedicated to the education sector (approximately 40 million dollars in direct private capital and corresponding state resources), the preschool education system holds absolute dominance. Retrospective analysis indicates that nearly 20 large-scale PPP projects were executed within this specific sub-sector. Within these projects, a combined financing model was utilized, blending 60 million USD of centralized funds provided by the state with 40 million USD in direct investments mobilized by private partners. This approach not only mitigated the fiscal burden imposed on the state budget but also enhanced capital turnover efficiency within the social sphere.

PPP Indicators in the Preschool Education System: Enrollment and Institutional Dynamics. The institutional expansion of the preschool education system in the Namangan region underwent a structural transformation during 2019–2024 due to the systematic deployment of PPP mechanisms. According to statistical data, as of December 2024, the total number of preschool education organizations operating in the region reached 3,962, representing a 3.3-fold increase compared to the baseline metric of 2019.

The enrollment rate of children aged 3–6 years, which stands as one of the critical social efficiency indicators, was 20.8 percent in 2019. Driven by increased private sector engagement and the widespread adoption of family-based preschools, this figure accelerated to 77.2 percent by the end of 2024. This signifies an absolute increase of 56.4 percent, which represents a major socio-economic achievement for a region experiencing high demographic pressure.

An analysis of the institutional structure of the non-state preschool education sector indicates that as of January 1, 2025, there were 3,348 institutions operating within this sector, accommodating 93,212 children. Three main institutional models have emerged within the sector: private preschools, PPP-based preschools, and family-based preschools.

Table 2

Development Dynamics of Non-State Preschool Education Forms in Namangan Region (in units)

Institutional Form	2020	2021	2022	2023	2024	Growth Coefficient
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Private Preschools	45	58	69	78	85	1.89
PPP-Based Preschools	22	31	40	49	56	2.54
Family-Based Preschools	935	1,420	2,110	2,680	3,207	3.43
Total Non-State Preschools	1,002	1,509	2,219	2,807	3,348	3.34

The analysis shows that the highest growth rate was registered within the family-based preschool education segment (3.43 times). The primary economic drivers behind this model include its low capital intensity (minimal entry costs), structural simplicity of organizational processes, and high adaptability at the neighborhood (*mahalla*) level. Concurrently, stable growth trends persist within the PPP-based and purely private preschool segments; they maintain a vital presence in the system as asset-heavy, capital-intensive segments that secure high-quality standards and infrastructural sustainability.

Overall, this process has generated a *mixed governance* model within the educational services market, fortifying the functional equilibrium between the state and private sectors.

Economic Efficiency of Public and Non-State Preschool Institutions: A Comparative-Critical Analysis. An evaluation of financial and accounting reports compiled during the research revealed discrepancies in cost-efficiency between state-owned preschool institutions and PPP-based organizations. At present, a substantial portion of state preschool education institutions operate under a heavy subsidy burden, resulting in a negative economic profitability ratio (R_b):

$$R_b = \frac{\text{Revenues} - \text{Expenses}}{\text{Expenses}} < 0$$

Elevated operational and administrative overheads, insufficient deployment of energy-efficient technologies, and low labor productivity within public institutions lead to suboptimal utilization of budgetary allocations.

Conversely, PPP-based non-state and family-based preschool institutions demonstrate high indices of economic resilience. Private management attains superior economic efficiency through resource optimization, rigorous control over operational expenses, and the establishment of a well-balanced revenue framework driven by auxiliary paid services (extracurricular clubs, foreign language classes, sports sections).

Conclusion and Practical Recommendations. Comprehensive economic research indicates that the public-private partnership mechanism has become the primary lever for advancing the preschool education system in the Namangan region across both quantitative (extensive) and qualitative (intensive) metrics. Under fiscal constraints, raising the enrollment rate to 77.2 percent was achieved precisely through the mobilization of private sector investments.

To further fortify economic stability within the sector, implementation of the following strategic proposals is deemed appropriate:

- ✓ Optimizing Fiscal and Institutional Incentives: Extending long-term tax preferences for PPP-based institutions and maintaining their utility consumption tariffs (electricity, natural gas, water) at the same price cap levels designated for public institutions.
- ✓ Mitigating Regional Discrepancies: Introducing differentiated (scaled) increases in state subsidy allocations for entrepreneurs launching PPP projects in remote and mountainous districts (remote villages of Pop, Chortoq, and Yangiqo‘rg‘on districts).

✓ Upgrading Digital Monitoring and Target Planning Systems: Integrating a unified digital ERP (Enterprise Resource Planning) platform to guarantee transparent, targeted expenditure of per-capita subsidies allocated by the state.

✓ Enhancing Human Capital Quality: Expanding frameworks that offer state-funded, free, or subsidized professional development and recertification programs for pedagogical and caregiving staff operating within non-state and family-based preschool institutions.

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