

Article

Ways to Develop the Services Market for the Population Older Than Working Age Based On Public-Private Partnership Principles

Ochilova Nargiza Akramovna^{*1}

1. Associate Professor of the Department of Innovative Economics of the Karshi State Technical University

Correspondance: nargizaochilova07@gmail.com

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Abstract: This article examines the development of the services market for the population older than working age based on public-private partnership principles. The study focuses on the formation of a regional elderly services market as a separate socio-economic segment that includes home care, medical and rehabilitation services, digital assistance, social adaptation, transport support, consulting, leisure, and active ageing services. Unlike traditional approaches that consider elderly services mainly as a budget-funded social support mechanism, this article substantiates the need to develop a mixed market model in which the state, private sector, mahalla institutions, non-governmental organizations and digital platforms participate as complementary actors. The research proposes a public-private partnership model based on service vouchers, social orders, subsidized service packages, co-financing mechanisms, accreditation of private providers, digital monitoring and risk-sharing contracts. A methodological framework for estimating the market potential and institutional readiness of PPP-based elderly services is developed. The results show that public-private partnership can expand service supply, improve accessibility, increase quality, attract private investment, create new jobs and reduce the excessive burden on public budgets. The article also proposes practical recommendations for introducing "Silver Service Vouchers", "Regional Silver Service Centers" and a digital registry of elderly service needs.

Keywords: public-private partnership, elderly services market, population older than working age, silver economy, social order, service voucher, private investment, regional economy, home care, service accessibility, social entrepreneurship.

1. Introduction

Population ageing is becoming one of the most important socio-economic challenges for regional development. The growth of the population older than working age changes the structure of demand in the service economy and creates the need for new forms of social, medical, household, rehabilitation, cultural, digital and consulting services. In many countries, elderly citizens are no longer considered only as recipients of social assistance; they are also consumers of specialized services and participants in the emerging "silver economy".

In regional conditions, the development of the elderly services market is especially important because the needs of older people are highly dependent on place of residence, income level, family support, health status, transport accessibility and digital literacy. In

rural and remote areas, the main issue may be physical access to services, while in urban areas the demand may be stronger for rehabilitation, wellness, legal consulting, digital services and active ageing programs [1].

The traditional state-funded model of elderly support is socially necessary, but it is often insufficient for meeting the growing and diversified needs of the older population. Public budgets cannot always finance a broad range of services at high quality and with full territorial coverage. Therefore, the participation of the private sector, social entrepreneurs, non-governmental organizations, digital platforms and community institutions becomes a necessary condition for expanding the elderly services market.

Public-private partnership is one of the most effective institutional mechanisms for this purpose. It allows the state to preserve social responsibility and guarantee basic services, while the private sector introduces innovation, investment, management flexibility, service diversity and client-oriented approaches [2]. In this regard, the development of the services market for the population older than working age should be based on a balanced PPP model that combines public regulation, private initiative and social guarantees.

The purpose of this article is to develop scientific and practical proposals for expanding the elderly services market in the region based on public-private partnership principles.

2. Literature Review

The theoretical foundations of the elderly services market are closely connected with the concepts of social services, public-private partnership, silver economy, active ageing and regional service development. In the literature on public-private partnership, PPP is interpreted as a long-term cooperation mechanism between the public and private sectors aimed at providing socially important infrastructure or services. In the social sphere, PPP differs from purely commercial cooperation because its final goal is not only economic efficiency, but also social impact [3].

The concept of the silver economy considers population ageing as a source of new demand in the service market. Older people need not only medical care, but also financial consulting, digital training, adapted housing, rehabilitation, wellness, leisure, mobility, home care and psychological support. Therefore, ageing creates a new market segment that can stimulate entrepreneurship, innovation and employment.

In the field of service economics, the elderly services market can be viewed as a mixed market. This means that part of services should be guaranteed by the state, part can be financed through subsidies or vouchers, and part can be offered by private providers on a commercial basis. Such a structure allows the state to protect vulnerable groups while also encouraging market development.

Studies on social entrepreneurship also show that private actors can participate in socially important services if appropriate institutional conditions exist. These conditions include state orders, subsidies, accreditation, tax incentives, preferential loans, transparent contracts and clear quality standards. For elderly services, this is particularly relevant because the profitability of such services may be lower than in conventional commercial markets, while the social effect is high[4].

Thus, the analysis of scientific approaches shows that the development of the elderly services market requires not only an increase in public spending, but also the creation of a regulated market ecosystem based on public-private partnership.

3. Research Methodology

The research methodology is based on institutional analysis, market segmentation, economic modeling, comparative analysis, risk assessment and logical generalization. The

elderly services market is considered as a system of interaction between demand, supply, financing mechanisms, quality standards and institutional regulation.

The methodology includes four main stages:

1. identification of service demand among the population older than working age;
2. classification of potential service providers;
3. selection of PPP instruments suitable for each service segment;
4. assessment of market capacity and PPP readiness.

Unlike previous approaches based mainly on service quality indices, this article proposes a market-oriented methodological framework. The first key indicator is the estimated market capacity of elderly services:

$$MC_{es} = N_o \times C_n \times F_u \times P_a \quad (1)$$

where:

MCes — market capacity of elderly services;

No — number of people older than working age in the region;

Cn — coefficient of service need;

Fu — expected frequency of service use;

Pa — average affordable payment per service package.

This formula allows regional authorities to estimate the potential size of the elderly services market and determine which segments may attract private providers.

The second indicator is the PPP Attractiveness Coefficient:

$$PAC = \frac{S+V+G+I}{R+C} \quad (2)$$

where:

PAC — PPP attractiveness coefficient;

S — state subsidy level;

V — volume of service vouchers;

G — guaranteed public demand through social order;

I — investment incentives;

R — operational risks;

C — initial capital costs.

If PAC is higher than 1, the PPP project is attractive for private participation. If PAC is lower than 1, additional state support mechanisms are required.

The third indicator is the Affordability Balance Ratio:

$$ABR = \frac{Y_e + V_s}{P_s} \quad (3)$$

where:

ABR — affordability balance ratio;

Ye — average disposable income of an elderly person;

Vs — value of state voucher or subsidy;

Ps — price of the service package.

If $ABR \geq 1$, the service is financially accessible. If $ABR < 1$, the service requires additional subsidy or price regulation.

These formulas provide a methodological basis for evaluating not only the quality of services, but also the economic feasibility of developing the elderly services market through PPP.

4. Analysis and Results

The development of the elderly services market based on PPP principles should begin

with the correct segmentation of services. Not all services have the same commercial potential and the same social importance. Some services, such as emergency social assistance or support for lonely low-income elderly people, should remain strongly state-guaranteed [5]. Other services, such as home care, rehabilitation, transport support, digital literacy and wellness programs, can be effectively developed through PPP mechanisms.

The most important principle is that the state should not withdraw from the elderly services sector. On the contrary, the state should become a regulator, co-financier and quality controller. The private sector should act as a service provider, investor and innovator[6]. Mahalla institutions should identify needs, monitor service relevance and support communication with elderly citizens.

Table 1

Segmentation of the elderly services market based on PPP potential

No	Service segment	Social importance	Commercial potential	Recommended PPP instrument	Expected result
1	Home care and daily assistance	Very high	Medium	Service voucher + accredited providers	Support for independent living
2	Rehabilitation and wellness services	High	High	Co-financing + private centers	Improved health and mobility
3	Digital literacy and e-service assistance	High	Medium	Social order + IT companies	Digital inclusion of elderly people
4	Special transport services	High	Medium	Municipal PPP contract	Better access to hospitals and service centers
5	Leisure and active ageing programs	Medium	High	Private clubs + subsidized membership	Reduced social isolation
6	Legal and financial consulting	Medium	Medium	Contracted consulting services	Better protection of elderly rights
7	Emergency social support	Very high	Low	State guarantee + NGO participation	Protection of vulnerable elderly people

This table shows that the elderly services market cannot be developed through a single mechanism. Each segment requires a different PPP instrument. For example, home care needs vouchers, rehabilitation requires co-financing, digital literacy can be organized through social orders, and transport services may be developed through municipal PPP contracts.

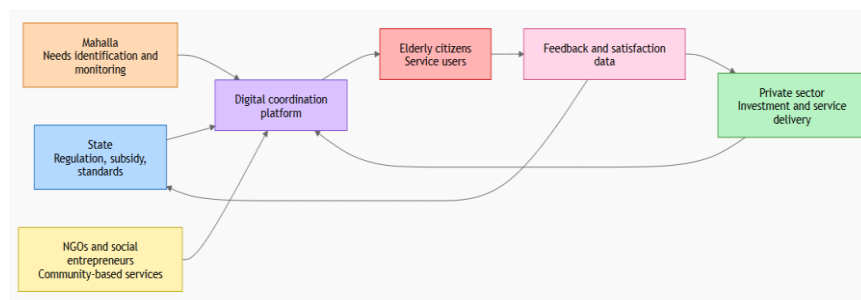


Figure 1. PPP-based ecosystem for developing the elderly services market¹

Figure 1 demonstrates that the elderly services market should function as an ecosystem. The digital platform connects public authorities, private providers, mahallas, NGOs and service users [7]. This makes it possible to register needs, monitor service delivery, collect feedback and evaluate provider performance.

Table 2

¹ Compiled by the author during the research process
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Financial mechanisms for developing elderly services through PPP

Financial mechanism	Content	Main advantage	Possible limitation	Recommended use
Service voucher	Elderly citizen receives a voucher to buy a service from an accredited provider	Choice and competition	Requires strong monitoring	Home care, digital help, transport
Social order	State purchases socially important services from private or NGO providers	Guarantees demand	Risk of formal implementation	Digital literacy, consulting, leisure
Co-financing	State and user/private provider share costs	Reduces budget pressure	May exclude low-income elderly	Rehabilitation, wellness
Subsidized tariff	State compensates part of the service price	Improves affordability	Requires budget discipline	Transport, home assistance
Tax incentive	Provider receives tax benefits for elderly services	Attracts business	Effect may be delayed	Private care centers
Preferential loan	Provider receives low-interest financing	Stimulates investment	Needs project selection	Silver Service Centers

The financial structure of the PPP model should be diversified. Relying only on direct budget financing limits the expansion of services. Service vouchers create demand from the user side, while social orders guarantee demand from the state side. Preferential loans and tax incentives stimulate private investment [8], [9].

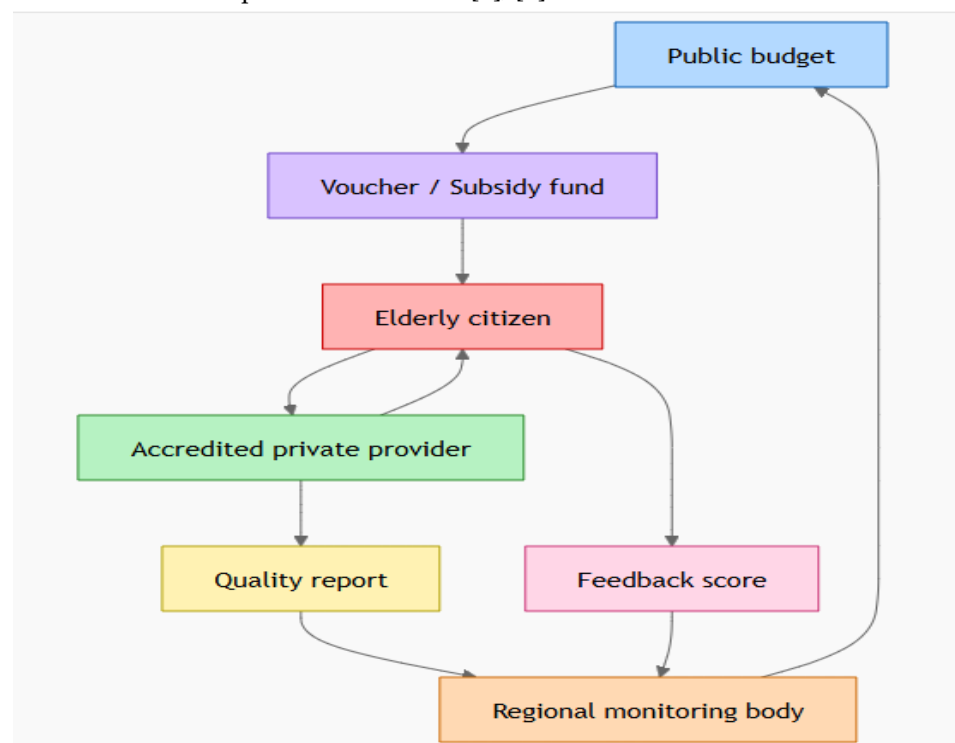


Figure 2. Movement of funds and services in the PPP elderly services market²

Figure 2 shows the financial logic of the voucher-based PPP mechanism. The state does not simply finance institutions; it supports the elderly citizen directly through a voucher or subsidy [10]. The elderly person chooses an accredited provider, and the provider receives payment only after the service is delivered and reported. This increases competition and

accountability.

Table 3

Risk distribution in PPP projects for elderly services

Type of risk	State responsibility	Private sector responsibility	Shared mechanism
Demand risk	Guarantees minimum demand through social order	Attracts additional paying clients	Mixed demand portfolio
Quality risk	Establishes standards and monitoring	Provides service according to standards	Accreditation and rating system
Financial risk	Provides subsidies and guarantees	Controls costs and invests efficiently	Co-financing agreement
Social risk	Protects vulnerable elderly groups	Applies ethical service rules	Social impact monitoring
Operational risk	Supports coordination with mahalla and healthcare	Manages personnel and daily operations	Digital reporting
Price risk	Regulates subsidized tariffs	Offers differentiated service packages	Price corridor mechanism

Risk distribution is a key condition for successful PPP. If all risks are transferred to the private sector, providers may avoid entering the market. If all risks remain with the state, PPP loses its economic meaning. Therefore, a balanced risk-sharing model is necessary.

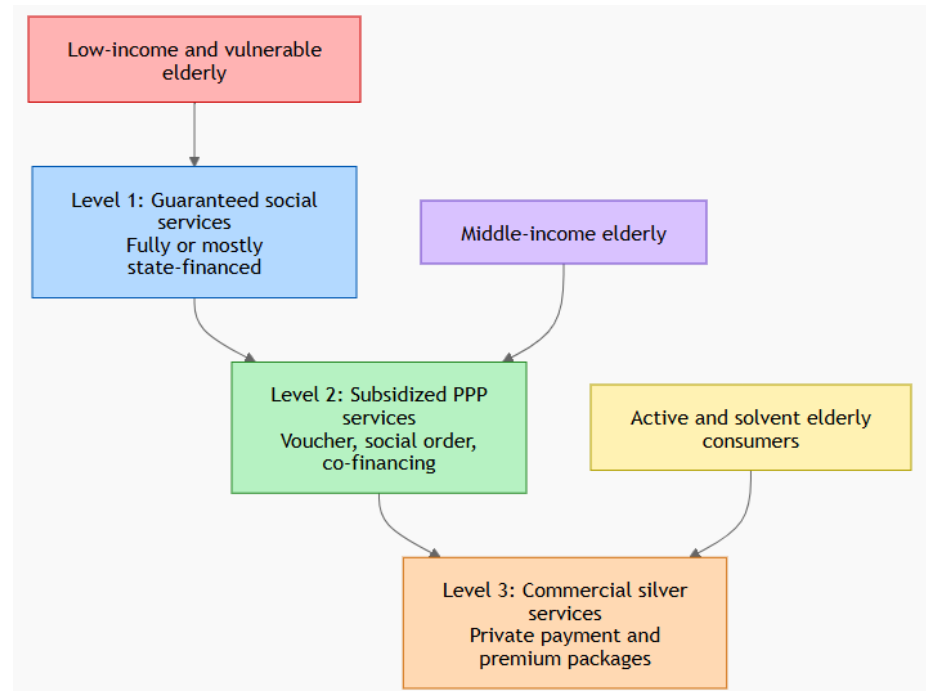


Figure 3. Three-level model for developing the elderly services market

Figure 3 reflects the proposed three-level market model. The first level includes guaranteed services for vulnerable elderly people[11], [12]. The second level includes subsidized PPP services. The third level includes commercial services for elderly consumers who are able to pay for additional comfort, wellness, leisure and consulting services.

Table 4

Practical roadmap for developing the elderly services market through PPP

Stage	Main task	Practical measure	Responsible actors	Expected outcome
Stage 1	Needs assessment	Create a regional registry of elderly service needs	Mahalla, social protection bodies	Clear demand database
Stage 2	Provider selection	Accredit private and NGO service providers	Regional administration	Reliable service network

Stage 3	Financial mechanism	Introduce service vouchers and social orders	Public finance bodies	Targeted financing
Stage 4	Service launch	Start pilot services in selected districts	Private providers, NGOs	Practical testing of PPP model
Stage 5	Digital monitoring	Track service delivery and user feedback	Digital platform operator	Transparency and accountability
Stage 6	Scaling	Expand successful services to other territories	Regional government	Wider market coverage

The roadmap shows that the elderly services market should be developed gradually. First, demand must be identified [13]. Second, providers must be accredited. Third, financial mechanisms should be introduced. Fourth, pilot projects should be launched. Only after monitoring and evaluation should the model be scaled to other districts.

5. Discussion

The proposed PPP-based approach differs from the traditional social assistance model in several important aspects. First, it treats elderly services as a structured market segment rather than only as a state obligation. Second, it introduces competition among service providers while preserving social guarantees [14]. Third, it allows financing to follow the user through vouchers and subsidies. Fourth, it links service payment to service quality and feedback.

However, the development of such a market also requires caution. If PPP is introduced without regulation, there is a risk that private providers will focus only on profitable services and avoid vulnerable elderly citizens. Therefore, public regulation, accreditation, tariff control and social monitoring are essential [15], [16].

Another important issue is affordability. Elderly people often have limited income, so purely commercial services may not be accessible to them. This is why the service voucher mechanism is particularly important. It allows the state to support the user directly while also stimulating market competition.

The mahalla institution can play a unique role in Uzbekistan's regional context. It can help identify elderly citizens who need support, monitor whether services are actually delivered and provide feedback to local authorities. In this sense, mahalla can become not only a social institution, but also a local coordinator of the elderly services market.

6. Conclusion and Recommendations

The development of the services market for the population older than working age based on public-private partnership principles is a necessary condition for improving the quality, accessibility and sustainability of elderly services in the region. The study shows that the traditional budget-funded model alone cannot fully meet the growing and diversified needs of elderly citizens. Therefore, a mixed market model involving the state, private sector, mahallas, NGOs and digital platforms should be developed.

The main scientific conclusion is that PPP in elderly services should be based on three interconnected principles: social guarantee, market diversification and quality control. The state should guarantee basic access and protect vulnerable groups. The private sector should expand service supply and introduce innovation. Digital platforms should ensure transparency, monitoring and feedback.

Based on the research results, the following recommendations are proposed:

First, a regional registry of elderly service needs should be created in cooperation with mahallas and social protection bodies.

Second, private and non-governmental service providers should be accredited according to clear quality standards.

Third, “Silver Service Vouchers” should be introduced for home care, digital assistance, transport support and rehabilitation services.

Fourth, social orders should be used to purchase socially important services from private providers and NGOs.

Fifth, “Regional Silver Service Centers” should be established on the basis of PPP to provide integrated services in one place.

Sixth, preferential loans and tax incentives should be introduced for entrepreneurs who invest in elderly services.

Seventh, a digital monitoring platform should be created to track service delivery, user satisfaction and provider ratings.

Eighth, the affordability of services should be controlled through subsidies, differentiated tariffs and voucher mechanisms.

In general, the development of the elderly services market through PPP will help improve the quality of life of older people, expand regional service infrastructure, create new jobs, attract private investment and strengthen the social orientation of the service economy.

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