

Study on the development differences and optimization paths of urban and rural elderly canteens in China: taking Jinyun County, Zhejiang Province and Songjiang District, Shanghai as examples

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Abstract. This study addresses the supply-demand mismatch in elderly meal assistance services, with a specific focus on the operational challenges within mountainous counties, using a cross-regional comparative analysis of Jinyun County in Zhejiang (a basic guarantee model) and Songyang District in Shanghai (a quality-oriented benchmark). A mixed-methods approach combining qualitative and quantitative analysis was employed, grounded in fieldwork and data collection including site visits to 20 elderly canteens, 76 menu samples, 238 price data points, 15 operational observations, and verification of financial documents. This was supplemented by analysis of 18 policy texts and official data from 2021-2023 within an analytical framework of “policy design – practical implementation – service efficiency.” The findings reveal significant regional differences in service layout, financing, and refinement. Jinyun County exhibits a “small and scattered” model constrained by terrain, whereas Songjiang District utilizes a “central kitchen + distribution point” approach characterized by high social participation, universal aging-friendly modifications, and intelligent supervision. Based on these empirical results, the study proposes optimization pathways such as establishing county-wide coordinated service networks, diversifying operational mechanisms, promoting digital technology adoption, and strengthening standardization, thereby offering actionable strategies to enhance service quality and efficiency in mountainous regions.

Keywords: elderly canteens, urban-rural differences, aging population issue

1. Introduction

1.1. Research background

The dual superposition of population aging and rural hollowing-out is profoundly reshaping the demand structure of elderly care services in China. As one of the most basic livelihood guarantees, the supply quality of elderly meal assistance services has become a key indicator to measure the quality of the elderly care service system. Data from the Seventh National Population Census shows that China's population aged 60 and above reached 264 million, accounting for 18.70% of the total population. The aging degree in rural areas is significantly higher than that in urban areas, and the proportion of elderly population in towns and townships of some mountainous counties has exceeded 90%. It is estimated that the total elderly population in China will exceed 300 million by 2025, and the problem of meal security for special elderly groups such as rural elderly living alone and disabled has become increasingly prominent.

From the perspective of policy evolution, elderly meal assistance services have evolved from an "optional item" to a "mandatory guarantee". In 2022, the State Council issued the 14th Five-Year Plan for National Aging Cause Development and Elderly Care Service System, which for the first time clearly proposed to "build an urban-rural elderly meal assistance service system" and positioned it as the core pillar of home and community-based elderly care services. In 2024, 11 departments including the Ministry of Civil Affairs jointly issued the Action Plan for Actively Developing Elderly Meal Assistance Services, further specifying the phased goal of "basically forming a diversified supply pattern by the end of 2026", and requiring rural areas to explore flexible models such as "neighborhood mutual assistance and joint dining among multiple households" based on local conditions. Local governments have subsequently issued intensive implementation policies: Sichuan Province launched the "Shu Shi Happy Dining Time" three-year action plan, specifying that each county (city, district) must build at least one demonstration network for meal assistance services; counties such as Chun'an and Yueqing in Zhejiang Province have also

promoted canteen construction through financial subsidies and venue guarantees, among which Chun'an County has achieved a 93% coverage rate of elderly canteens in villages (communities).

However, in the implementation of policies, the problem of "supply-demand mismatch" in urban-rural meal assistance services is particularly prominent, with more obvious shortcomings in rural areas. In mountainous areas with complex geographical conditions, the construction of elderly canteens faces the dual challenges of "difficulty in coverage and operation": due to scattered populations, the coverage rate of meal assistance facilities in the northern mountainous old areas of Yueqing is less than 1/3 of that in economically developed areas; although 86.35% of administrative villages in Chun'an County have built canteens, 86.98% of the sites have fewer than 30 daily diners, and some canteens have fallen into the dilemma of being "built but unused" due to low attendance. The demands of rural elderly for "difficulty in dining, high dining costs, and inconvenience in dining" form a sharp contradiction with the reality of weakened family care functions caused by the outflow of young and middle-aged labor under the background of rural hollowing-out. As the core carrier of meal assistance services, the rationality of layout, sustainability of operation, and professionalism of services of elderly canteens are not only directly related to the quality of life of millions of rural elderly, but also test the realization of balanced development of urban-rural elderly care services. This constitutes the core motivation for this study to focus on the practice of elderly canteens at the county level.

1.2. Research objects and methods

This study selects Jinyun County, Zhejiang Province and Shanghai as cross-regional comparative samples not randomly, but based on their unique positions in China's elderly care service system—corresponding to the "basic guarantee-oriented practical sample in mountainous counties" and the "quality-oriented benchmark sample in megacities" respectively.

As a "miniature model" of the elderly care dilemma in mountainous areas across the country, Jinyun County faces problems such as service imbalance caused by geographical constraints, funding chain dependence on government input, and lagging standardization, which are highly consistent with mountainous counties such as Guangyuan in Sichuan and Ningde in Fujian, making it a typical reflection of the "difficulty in operation, coverage, and quality improvement" of elderly care in mountainous areas of China. Meanwhile, as a pilot county for the construction of the elderly care service system in Zhejiang Province, Jinyun has taken the lead in exploring policies such as "progressive dining subsidies" and "volunteer meal delivery point system". Its achievements and shortcomings provide referenceable practical experience for the county-level implementation of "how to transform national policies into operable plans in mountainous areas" across the country.

The particularity of Shanghai stems from the triple advantages of "megacity governance + economic development + policy coordination", and its typicality lies in building a reference system for the high-quality development of elderly care services in China, representing the future direction of elderly care services in economically developed areas in eastern China and even the whole country. Shanghai's exploration in the field of elderly meal assistance has formed a replicable standard system: from dish standardization to facility standardization, and then to supervision standardization. The Shanghai standards have been learned by cities such as Suzhou in Jiangsu and Shenzhen in Guangdong, becoming the "reference benchmark" for high-quality elderly care services in China.

2. Research methods

2.1. Theoretical basis: Welfare Pluralism Theory

Welfare Pluralism Theory advocates that elderly care services should break through the traditional single government supply model and form a collaborative pattern involving multiple subjects such as the government, market, society, and families. The theory holds that through the participation and cooperation of multiple subjects, optimal allocation of resources can be achieved, service efficiency and quality can be improved, and the diversified needs of the elderly can be better met.

Studies by Fan Fenglin et al. (2023) show that diversified financing models can significantly improve the sustainability of rural elderly canteens, providing theoretical support for the comparative analysis in this paper. In practice, elderly meal assistance services in various regions generally adopt a diversified financing mechanism of "government subsidies, enterprises' concessions, social donations, and individual payments". For example, Guangnan Village in Longsheng County, Guangxi has realized the sustainable operation of elderly canteens by introducing enterprise-funded caring canteen projects, providing supporting facilities by the county government, donating operating funds by the village, and collecting a small amount of fees from the elderly. Dameixi Village in Zhangzhou High-tech Zone innovatively adopted a model of "5 yuan from individuals, 5 yuan from the village committee, 5 yuan from the elderly association, and additional subsidies from social donations", forming a four-party joint funding guarantee system.

The participation of multiple subjects is not only reflected in fund raising, but also in service provision, management and operation. In the "one institution, two canteens" elderly care service model constructed in Shaxian District, the government provides policy support, the village collective is responsible for organization and implementation, the elderly association

participates in management, and young elderly people provide voluntary services, forming a new rural elderly care ecosystem with multiple collaboration. This multi-participation model not only reduces the financial pressure on the government, but also improves community participation, enhancing the sustainability and adaptability of services.

2.2. Policy framework: evolution of national and local policies

The evolution of elderly meal assistance service policies presents a gradient advancement feature of "national top-level design - local precise implementation". National policies clarify the direction and framework, while local policies form differentiated implementation paths based on resource endowments. Together, they build the institutional support system for urban-rural elderly meal assistance services.

2.2.1. National policies

Top-level design and nationwide coordination: In 2024, 11 departments including the Ministry of Civil Affairs and the National Development and Reform Commission jointly issued the Action Plan for Actively Developing Elderly Meal Assistance Services. As a programmatic document for elderly meal assistance services nationwide, it has for the first time constructed a policy framework of "inclusive and diverse, precise implementation, and sustainable development". Its core breakthrough is to transform "adapting to local conditions" from a principle to an operable implementation path: in terms of spatial layout, it proposes a dual network of "15-minute home-based elderly care service circle in cities + rural mutual assistance points", clarifying that rural areas can rely on carriers such as village-level neighborhood centers and happiness homes to adopt flexible models such as "joint dining at central households and neighborhood mutual assistance"; in terms of service supply, it establishes a diversified mechanism of "government coordination + market participation + social collaboration", encouraging the participation of catering enterprises, internet platforms, volunteer teams and other subjects, and especially emphasizing the cultivation of innovative models such as "service points" and "volunteer + credit".

The policy sets clear phased goals: by the end of 2025, the coverage rate of elderly meal assistance services in urban and rural communities nationwide will be "significantly improved", and the intensity of meal assistance services for elderly people in special difficulties (including low-income, disabled, and elderly living alone) will be significantly increased; by the end of 2026, a diversified supply pattern will be basically formed, and the convenience and satisfaction of the elderly with dining will be significantly improved. In terms of guarantee measures, it has for the first time included "intelligent service management" in national requirements, proposing to rely on the elderly care service information platform to achieve precise connection between demand and supply, and promote the application of technologies such as face recognition payment and intelligent settlement, providing clear guidance for the direction of technological empowerment in local policies.

2.2.2. Shanghai's policies

High-quality development practice in megacities: As a national benchmark for elderly care services, Shanghai issued the Implementation Opinions on Promoting the High-Quality Development of Elderly Meal Assistance Services in This Municipality in 2024, building a refined policy system of "municipal coordination, district implementation, and market leadership" under the national framework. Its core innovation lies in the hierarchical and classified subsidy mechanism and quantitative development goals: in terms of construction subsidies, the municipal welfare lottery public welfare fund provides subsidies in three grades according to meal supply capacity—community elderly canteens with a daily meal supply of 800 or more can receive 500,000 yuan, those with 500-799 meals can receive 300,000 yuan, and those with 150-499 meals can receive 100,000 yuan—and requires districts to provide supporting funds at a ratio of no less than 1:1; in terms of operation subsidies, a dynamic accounting mechanism of "service volume + quality evaluation + satisfaction" is established. In 2024, Songjiang District alone arranged more than 10 million yuan in meal assistance subsidies from the district-level finance, driving the participation of social funds to account for 55%.

The policy clarifies the core development indicators for 2025: achieving the layout goal of 400 community elderly canteens and 2,000 elderly meal assistance points, improving the meal assistance service capacity to 250,000 meals per day, and forming a number of high-quality chain service brands. In terms of service equality and intelligence, it has made a breakthrough by proposing the policy of "equal preferential treatment for elderly people with household registration and non-household registration residents", and established a unified municipal meal assistance service management information platform to realize the full-process digitalization of "ordering - distribution - settlement - supervision". Songjiang District has taken the lead in achieving full coverage of face recognition payment and real-time query of nutritional data.

2.2.3. Jinyun County's policies

Basic guarantee and resource integration in mountainous counties: Relying on the Detailed Rules for the Implementation of Elderly Care Service Subsidies in Jinyun County and supporting policies, Jinyun County has formed a "classified subsidy + resource activation" policy system adapted to the characteristics of mountainous areas. Its core is the progressive dining subsidy mechanism, which divides subsidy objects into six grades according to age and difficulty level: elderly aged 60-69 receive a subsidy of 1 yuan per meal, those aged 70-79 receive 4 yuan, those with low-income and low-income edge status and aged 80-89 receive 7 yuan, those in extreme poverty and aged 90-99 receive 9 yuan, and those over 100 years old receive full subsidy (10 yuan per meal). This policy directly supported the precise distribution of 2.7741 million yuan in dining subsidies across the county in 2021, ensuring that the dining cost for disadvantaged groups is controlled within 3 yuan.

In terms of operation guarantee, the policy adopts a "dual-track subsidy + social supplement" model: canteens in normal operation are given operating subsidies of 25,000-75,000 yuan per year in four grades based on the annual service volume; in 2021, governments at all levels issued a total of 4.0824 million yuan in operating subsidies. At the same time, it is clarified that village collectives can supplement funds through channels such as renting idle assets and donations from villagers who have left their hometowns for development. The standardized canteen in Guchuan Village, Xinjian Town was built with 3 million yuan raised by such villagers, and received the highest grade of operating subsidy. To address the difficulty of distribution in mountainous areas, the policy specifically includes "volunteer meal delivery" in the subsidy scope, giving "time bank" point rewards to volunteers who complete meal delivery tasks. Huzhen Town has established 23 professional meal delivery teams through this policy, covering 12 remote administrative villages.

2.3. Research methods

This study adopts a mixed research approach dominated by qualitative research supplemented by quantitative elements. It systematically studies the development differences of urban and rural elderly canteens through a combination of methods including "on-site investigation, in-depth interviews, case tracking, and policy and text data analysis". The specific operations are as follows:

First, the study conducts on-site visits to 12 village-level elderly canteens in 6 towns (including Huzhen Town and Xinjian Town) of Jinyun County, Zhejiang Province, and 8 community elderly canteens in 4 streets/towns (including Guangzhong Road Sub-district and Jiuliting Sub-district) of Songjiang District, Shanghai. During the visits, three core tasks were focused on: 1) Collection of dish and price data: By photographing public menus and reviewing dining records, indicators such as dish types (including meat-vegetable ratio and aging-friendly improvement), average single meal price, and individual self-payment amount after subsidies of canteens in the two regions were systematically recorded. A total of 76 valid menu samples and 238 pieces of price data were collected to provide quantitative support for analyzing service affordability; 2) Observation of operation scenarios: On-site records were made of the spatial layout of canteens (such as the configuration of aging-friendly facilities and the number of dining seats), service processes (such as ordering methods and distribution mechanisms), and staffing (such as the qualifications of service personnel and volunteer participation), forming 15 observation notes; 3) Verification of public information: The posted documents of canteens such as financial subsidy receipt vouchers and food procurement receipts were checked to cross-verify the authenticity of policy implementation and fund use.

Second, with policy texts and official data as the core analysis objects, a two-level text analysis framework of "national - local" was constructed: At the policy level, 18 policy documents were selected, including the national Action Plan for Actively Developing Elderly Meal Assistance Services (2024), Shanghai's Implementation Opinions on Promoting the High-Quality Development of Elderly Meal Assistance Services in This Municipality, and Jinyun County's Detailed Rules for the Implementation of Elderly Care Service Subsidies. Content analysis was used to decode the subsidy orientation (inclusive / basic guarantee-oriented), subject positioning (government-led / market-participated), and implementation path (standardized / flexible) of the three regions' policies; At the data level, the elderly care service subsidy distribution data of Jinyun County Government from 2021 to 2022 (including details of 4.0824 million yuan in operating subsidies and 2.7741 million yuan in dining subsidies), the 2023 meal assistance service statistical bulletin of Songjiang District, Shanghai (core indicators such as 6,000 daily service person-times and 55% social participation rate) were integrated, and combined with the dish price data collected on-site, to realize the full-chain analysis of "policy design - practical implementation - service efficiency" through cross-validation.

3. Case analysis: practice and dilemmas of elderly canteens in Jinyun County

3.1. Development status and operational characteristics

Based on the actual situation of elderly care in mountainous areas, Jinyun County has built a basic elderly care service network with the "1+X" model (with 1 home-based elderly care service center as the core carrier, extending to X types of services such as meal assistance, care, and culture). After multiple rounds of integration and optimization, as of the beginning of 2024, there are 239 registered urban and rural home-based elderly care service centers in the county, with 210 meal assistance service points built relying on them, including 148 on-site dining points and 62 meal distribution points, forming a service pattern of "dining in canteens as the mainstay and meal delivery as a supplement". Since 2024, it has provided 1.08 million person-times of meal assistance services, with an average of 4,119 daily diners, representing a significant increase in service scale compared with 2022, and has become the core support for the daily dining of the elderly in mountainous areas. Its operation shows four distinct characteristics:

3.1.1. Financing model: collaborative support of policy guidance and diversified mutual assistance

A "four-part" financing mechanism of "government subsidies, collective supplements, individual contributions, and social donations" has been established to activate the vitality of multi-subject participation through policy leverage. At the financial support level, the Measures for the Subsidization of Funds for the Elderly Care Service System in Jinyun County issued in 2021 clarified hierarchical subsidy standards. After further policy optimization in 2023, a dual guarantee of "star-rated operating subsidies + special meal assistance subsidies" was formed: service centers are given annual operating subsidies of 10,000-50,000 yuan according to star ratings; elderly canteens are given graded subsidies based on "operation days + number of diners", and canteens operating for more than 300 days a year with more than 40 daily diners can receive a maximum annual subsidy of 60,000 yuan. Meanwhile, elderly people over 70 years old and low-income and extremely poor groups are given dining subsidies of 2-3 yuan per meal, and mutual assistance points in remote natural villages enjoy the same policy preference.

Social participation has become an important supplement: Villagers who have left their hometowns for development in Guchuan Village, Xinjian Town raised 3 million yuan to build a standardized service center; party member volunteers in Yangshan Village donated 38,000 yuan during the epidemic to ensure the operation of the canteen; the county has implemented a "time bank" volunteer service mechanism, with more than 1,000 volunteers accumulating points through meal assistance services and care services. Currently, 24 elderly care institutions have realized the deposit and withdrawal of points, effectively filling the labor gap.

3.1.2. Service coverage: dual guarantee of precise reach and volunteer extension

Meal assistance services cover the needs of different groups through "fixed on-site dining + mobile delivery": The canteen in Daishi Village, Dongfang Town provides a set meal of one meat and two vegetables at 2 yuan per meal for more than 50 elderly people over 70 years old and disadvantaged groups every day; Hubei Village, Huzhen Town has established an elderly care volunteer team composed of village cadres, villagers who have left their hometowns for development, and villagers, which not only assists in the operation of the canteen, but also conducts home visits to elderly people who fail to dine on time.

For disabled and semi-disabled elderly, a "party member volunteer meal delivery" mechanism has been established. Canteens in villages such as Daishi Village rely on the strength of village committee cadres and volunteers to smooth the "last mile" of meal assistance, achieving full coverage of services in natural villages. Some towns have further expanded the service scope: Huzhen Town has explored the "dining + medical care" integration model, cooperating with village clinics to provide basic physical examinations, medication consultation and other additional services for dining elderly, improving the comprehensive efficiency of services.

3.1.3. Facility construction: simultaneous advancement of standardized upgrading and resource integration

With welfare lottery public welfare funds as leverage, the upgrading of canteen facilities has been promoted. In recent years, 20 service centers have completed standardized transformation, and 13 new upgrading and transformation sites were added in 2024. A maximum of 150,000 yuan in transformation funds is given through "subsidies instead of rewards", focusing on improving aging-friendly dining areas, thermal insulation food collection platforms and other facilities. In terms of digital construction, 18 key service centers have been equipped with intelligent terminals, and some canteens have been connected to the county-level elderly care service information platform, initially realizing the information management of dining data statistics and subsidy accounting.

Facility layout focuses on resource reuse: Canteens in villages such as Daishi Village, Dongfang Town are renovated based on village committee buildings and adjacent to village office areas, which not only reduces construction costs, but also facilitates village cadres to collect service feedback from the elderly in real time.

3.1.4. Spatial field: bearing multiple values beyond meal assistance

Fieldwork found that elderly canteens (villager canteens) in Jinyun County have broken through the single function of dining and become "composite positions" for rural public services. In places such as Yanmen Village and Tianyang Village in Rongjiang Township, canteens also have the function of hosting meals for weddings and funerals. When villagers handle funerals and other matters, they can hold simple banquets relying on the canteen venue and the team of "local chefs". A banquet of 10 tables can save more than 3,000 yuan compared with being held in hotels, which not only curbs the trend of comparison and waste, but also preserves local customs.

During the visit, it was observed that after a funeral banquet in a village canteen, village cadres took the opportunity of villagers' gathering to promote policies on forest fire prevention and changing customs, making the canteen a natural carrier for policy dissemination. In addition, the canteen is usually the core space for the elderly to socialize. The canteen in Yanbei Village, Huzhen Town organizes activities such as chess and opera after meals every day, and "time bank" volunteers regularly organize services such as golden wedding photography and health lectures, making the canteen an important link to maintain rural emotional connections.

3.2. Core development dilemmas

3.2.1. Service efficiency imbalance under geographical constraints

Affected by the terrain of "eight parts mountains, one part water, one part farmland", 40% of meal assistance points are located in remote mountain villages, with a service radius generally reaching 3-5 kilometers. A village canteen in Dongfang Town serves 6 scattered natural villages, with a daily delivery distance of more than 40 kilometers, and delivery costs account for more than 35% of operating expenses.

Spatial dispersion leads to the lack of economies of scale: the average daily number of diners in mountainous canteens is mostly less than 20, while that in plain areas can reach more than 50; the annual operation days of mountainous canteens are 39 days less than those in plain areas. Some remote sites have temporarily suspended meals many times due to weather conditions such as road icing in winter and heavy rain in summer, which is consistent with the difficulty of meal assistance coverage in "hollow villages" in J Town.

3.2.2. Administrative dependence on funding chain and insufficient sustainability

The operating cost structure shows the characteristics of "high rigidity and low flexibility": food procurement accounts for 52%, labor costs account for 38%, while market-oriented revenue accounts for less than 10%, mainly relying on financial and collective subsidies. Although a graded subsidy mechanism has been established, there are rigid constraints on the use of funds: 50% of the star-rated subsidies must be specially used for the remuneration of mountainous elderly care managers (275 elderly care managers in the county rely on this fund to guarantee their treatment), and the remaining funds are difficult to cover unexpected expenses such as food price increases and equipment maintenance.

The subsidy pressure on village collectives is prominent: the daily operating cost of a village canteen is 500 yuan, and financial subsidies and dining fees can only cover 70%, while the remaining 30% needs to be specially allocated by the village collective from income such as store rent. Some villages with weak collective economies have faced the risk of subsidy interruption, which confirms the "county-level canteen financial dependence syndrome" proposed by Fan Fenglin et al. (2023).

3.2.3. Lagging standardization construction and professional capabilities

The process of standardized transformation is slow. Although 20 canteens have been upgraded, they only account for 9.5% of the total number of meal assistance points. Most canteens still have simple facilities: 37% of the interviewed elderly reported "single dishes and insufficient heat preservation". In some canteens in Dongfang Town, the temperature of dishes has dropped below the safety standard of 60°C when delivered in winter.

The professionalism of services is low: only 23% of service personnel in canteens across the county have qualifications in elderly care or catering services, and there is a lack of guidance from public nutritionists. Dishes are mostly "large-pot dishes", without considering the dietary needs of elderly patients with common diseases such as diabetes and hypertension. There are blind spots in food safety supervision: 62% of village-level canteens have not established a food traceability system, and problems such as incomplete food procurement receipts and missing tableware disinfection records are common.

4. Regional comparison: development differences of elderly canteens between Jinyun County and Shanghai

4.1. Comparison of core indicators

As shown in Table 1, notable differences emerge in the development of elderly canteens between Jinyun County (with 2022 data) and Songjiang District, Shanghai (with 2023 data) across five core dimensions. In service coverage, Songjiang District boasts 213 meal assistance points with full coverage of 17 streets/towns, while Jinyun County has 110 points covering 253 administrative villages. For service scale, Songjiang District serves 6,000 person-times daily (with 55,600 people in its settlement system), vastly surpassing Jinyun County's average of 26 diners per canteen daily and 949,000 annual person-times. The financing model also diverges: government subsidies constitute 82% of funding in Jinyun County, whereas in Songjiang District, government subsidies account for only 45%, with enterprise operation making up 55%—indicating a more market-oriented funding structure. In technology application, Songjiang District realizes full coverage of face recognition and intelligent settlement systems, while Jinyun County has just 18 sites equipped with basic intelligent terminals. Lastly, in service extension, 89% of canteens in Songjiang District offer additional services (e.g., cultural/entertainment activities, health lectures), in contrast to only 15% of canteens in Jinyun County providing medical auxiliary services. Overall, Songjiang District exhibits more advanced, diversified, and technology-integrated development in elderly canteen services compared to Jinyun County.

Table 1. Core indicators comparison of elderly canteens

Dimension	Jinyun County (2022)	Songjiang District, Shanghai (2023)	Data Source
Service Coverage	110 meal assistance points, covering 253 administrative villages	213 meal assistance points, full coverage of 17 streets/towns	Jinyun County Government, Shangguan News
Service Scale	26 diners per canteen per day, 949,000 person-times of service per year	6,000 person-times of service per day, 55,600 people included in the settlement system	Jinyun County Government, Shangguan News
Financing Model	Financial subsidies account for 82%, social donations account for 18%	Government subsidies account for 45%, enterprise operation accounts for 55%	Jinyun County Government, Beijing Normal University Research Institute
Technology Application	18 sites equipped with basic intelligent terminals	Full coverage of face recognition + intelligent settlement	Jinyun County Government, Shangguan News
Service Extension	15% of canteens provide medical auxiliary services	89% of canteens provide additional services such as cultural and entertainment activities + health lectures	Jinyun County Government, Beijing Normal University Research Institute

4.2. Core analysis of differences

4.2.1. Resource endowment and layout logic

Relying on the resource endowment of plain terrain and dense population, Songjiang District, Shanghai has built an intensive layout system of "central kitchen + grid distribution points". As of August 2025, the district has built 205 elderly meal assistance service sites, including 28 elderly canteens as regional central kitchens, radiating 177 community meal assistance points, and achieving full coverage of 17 streets/towns.

This layout adopts the model of "centralized procurement, unified cooking, and regional distribution", reducing the cost of food collection by more than 30%. Fangsong Sub-district has 3 central kitchens radiating 45 points, established a standardized meal delivery schedule, realized uninterrupted delivery 365 days a year, with an on-time rate of 99.94%. Its core logic is to reduce marginal costs through spatial coordination, with the delivery cost per meal being only 3.2 yuan, 67% lower than that in mountainous areas of Jinyun.

Restricted by the terrain of "eight parts mountains, one part water, one part farmland", Jinyun County has formed a "small and scattered" village-level layout—among the 210 meal assistance points in the county, 148 are on-site dining points and 62 are distribution points, and 40% of the points are located in mountain villages above 500 meters above sea level. Canteens such as Daishi Village in Dongfang Town are mostly renovated based on village committee buildings, with a service radius generally reaching 3-5 kilometers. A village canteen serves 6 scattered natural villages, with a daily delivery distance of more than 40 kilometers, and logistics and labor costs account for more than 35% of operating expenses.

Although this "one point per village" layout is suitable for the elderly in mountainous areas to dine nearby, due to the limited service scale (the average daily number of diners in mountainous canteens is less than 20), it is difficult to form economies of scale, resulting in a unit operating cost 2.8 times that of Songjiang.

4.2.2. Policy support and market participation

Shanghai has built a policy system of "municipal top-level design + district-level precise implementation", forming a synergy through rigid subsidies and market incentives. In terms of policy support, the municipal welfare lottery public welfare fund provides construction subsidies in three grades according to meal supply capacity: 500,000 yuan for canteens with a daily meal supply of more than 800, 300,000 yuan for those with 500-799 meals, and at the same time requires districts to provide supporting funds at a ratio of 1:1; in the operation stage, preferential policies such as tax and fee reductions and resident prices for water, electricity and gas are also given, directly reducing the cost of enterprise participation.

Guided by policies, Songjiang has introduced local catering enterprises and urban chain brands to participate in operation. Platforms such as "Ele.me" are responsible for distribution scheduling, and have further explored the "property + elderly care" model, establishing 34 professional meal delivery teams. The social participation rate has reached 68%, and the proportion of market-oriented revenue has exceeded 55%. It is worth noting that the policy clearly states "equal preferential treatment for elderly people with household registration and non-household registration residents", and among the 83,800 elderly people included in the settlement system, non-household registration accounts for 19%.

Jinyun County's policies focus on "county-level coordination + public welfare guarantee". The Measures for the Subsidization of Funds for the Elderly Care Service System issued in 2021 has built a dual subsidy mechanism: service centers are given annual operating subsidies of 10,000-50,000 yuan according to star ratings; elderly canteens are given graded subsidies based on "operation days + number of diners", with a maximum of 60,000 yuan per year. Meanwhile, elderly people over 70 years old and disadvantaged groups are given dining subsidies of 2-3 yuan per meal.

However, the policy lacks market-oriented incentive designs, and only supplements the gap through "donations from villagers who have left their hometowns for development + time bank". The proportion of social funds in canteens such as Guchuan Village, Xinjian Town is less than 15%, and elderly non-household registration residents are not included in the subsidy scope. Restricted by the market scale in mountainous areas, local catering enterprises have low willingness to participate. All 62 distribution points are operated by village collectives or volunteers, forming a dependent model of "government funding as the mainstay and social participation as the supplement".

4.2.3. Level of service refinement

Shanghai has built a full-chain refined service system with "aging-friendly + personalized" as the core. Elderly canteens in Songjiang District launch three sets of packages A, B, and C every week and update the menu dynamically. Canteens in sub-districts such as Guangzhong Road have further divided customized options such as exclusive windows for diabetics and seasonal health meals, and are equipped with public nutritionists to adjust the dietary structure in real time.

In terms of facility configuration, 100% of the canteens have undergone aging-friendly transformation, including anti-slip floors, wheelchair-accessible passages, and call bell systems. Fangsong Sub-district also provides value-added services such as "insulated meal boxes + home meal arrangement" for disabled elderly. In terms of service supervision, the intelligent platform realizes full coverage of food traceability and nutritional data query, and the satisfaction rate of the elderly reaches 92%.

The services in Jinyun County still remain at the "basic guarantee" level. Although it can meet basic needs through "a set meal of one meat and two vegetables at 2 yuan", the refinement level is significantly insufficient. Personalized dietary supply is scarce: only 9.5% of the standardized transformed canteens can provide adaptive options such as soft food and low-salt meals; 37% of the interviewed elderly reported "single dishes and insufficient heat preservation". In some canteens in Dongfang Town, the temperature of meals delivered in winter is lower than the safety standard of 60°C.

The construction of aging-friendly facilities is lagging behind: except for some pilot sites in Huzhen Town, 68% of the canteens lack basic configurations such as anti-slip floor tiles and wheelchair-accessible tables. Although the canteen in Daishi Village has completed wall renovation, it is not equipped with emergency call equipment. Only 23% of the service personnel have elderly care qualifications, lacking professional dietary guidance capabilities.

5. Optimization paths and policy recommendations

Combining the benchmark experience of Songjiang District, Shanghai and the actual situation of mountainous areas in Jinyun County, and based on the four cores of "coordinating efficiency, activating vitality, empowering technology, and guaranteeing standards", this study constructs an upgrading plan for elderly meal assistance services adapted to mountainous counties. The specific recommendations are as follows:

5.1. Build a county-level coordinated service network

Referring to the intensive logic of the "central kitchen + distribution point" model in Songjiang District, and combining the population distribution and topographical characteristics of 18 towns (streets) in Jinyun, regional central canteens should be focused on layout in 6 densely populated towns such as Huzhen Town and Xinjian Town, forming a service circle of "1 center radiating 5-8 administrative villages", covering scattered natural villages within a radius of 2-3 kilometers.

Central canteens should be built in a standardized manner, equipped with 3200 m²-level central kitchen functional modules, including automatic vegetable washing machines, air shower disinfection rooms, cold storage areas and other facilities, to realize the closed-loop management of "centralized procurement, unified cooking, and regional distribution". Referring to data from Songjiang, centralized procurement can reduce food costs by 30%, and large-scale distribution can reduce the logistics cost per meal from 8 yuan to less than 3 yuan, and the overall operating expenditure is expected to decrease by 28%.

To address the difficulty of distribution in remote mountain villages, a dual-track model of "fixed routes + mobile supplementary" should be established: central canteens are equipped with 3-5 constant-temperature meal delivery vehicles, which deliver meals to meal assistance points within 3 kilometers in two fixed shifts every day; for natural villages above 800 meters above sea level, mobile meal delivery teams are established relying on "time bank" volunteers, and the "last mile" delivery is completed through "motorcycles + insulated boxes", with a transportation subsidy of 5-10 yuan per trip.

Learning from the experience of the "meal delivery schedule" management in Songjiang District, it should be clarified that the time from meal preparation to delivery should not exceed 40 minutes per meal, ensuring that the meal temperature is not lower than the safety standard of 60°C. Referring to the experience of "renovating canteens from village committee buildings" in Daishi Village, Dongfang Town, Jinyun, central canteens should be required to give priority to using idle school buildings, old office buildings and other public resources in towns and townships. The county finance should provide a renovation subsidy of 500 yuan per square meter (referring to the subsidy standard for village-level canteens in Heilongjiang Province), and at the same time clarify that township governments must provide venue use rights free of charge for more than 3 years to reduce construction costs.

5.2. Improve the diversified and collaborative operation mechanism

The existing subsidy policy should be optimized. Referring to the "graded subsidy based on meal supply scale" model in Songjiang District, regional central canteens should be given annual operating subsidies of 60,000 yuan, 40,000 yuan, and 20,000 yuan respectively according to "more than 100 daily diners, 50-100 daily diners, and less than 50 daily diners". The proportion of welfare lottery public welfare funds invested in meal assistance facilities should be increased from 5.4% in 2022 to more than 20%, which is specially used for the purchase of intelligent equipment and aging-friendly transformation of central canteens.

Meanwhile, referring to the principle of "four parts", the payment standard should be set in grades according to age and income: ordinary elderly aged 60-79 pay 3 yuan per meal, elderly aged 80 and above and low-income elderly pay 1 yuan per meal, and elderly in extreme poverty enjoy free meals. The proportion of individual payment should be increased from the current 12% to 20% to enhance service sustainability.

In addition, market-oriented operation subjects should be cultivated. Local chain catering enterprises should be introduced to operate regional central canteens, and "three exemptions and three subsidies" support should be given: exemption from real estate tax and urban land use tax for the first three years, and 5% of annual revenue as tax rebate; operating subsidies of 20 yuan per person per month according to the number of elderly served, and an additional reward of 30,000 yuan for completing standardized transformation. Local governments should require operating enterprises to sign service agreements with civil affairs departments for more than 3 years, clarifying rigid terms such as the number of dishes (no less than 15 kinds per week) and nutritional standards (low-salt and low-fat ratio). Referring to the "transparent kitchen" model in Songjiang District, monitoring equipment should be installed in the back kitchen of canteens, which are connected to the county-level elderly care service platform for real-time supervision.

5.3. Strengthen the support of standardization construction

Through incentives such as bonuses, aging-friendly transformation should be included as a "mandatory item" in canteen construction. Referring to the regulations on the use of public welfare funds in Heilongjiang Province, the transformation content should be clarified to cover three categories: basic safety facilities (anti-slip floor tiles, emergency lighting, accessible passages), dining-adaptive facilities (wheelchair-accessible tables, adjustable seats, thermal insulation food collection platforms), and emergency support facilities (emergency call bells, caring seats).

Meanwhile, monthly training courses should be carried out in cooperation with county-level vocational and technical schools, covering elderly dietary matching, emergency care and other contents, and qualification certificates should be issued to those

who pass the examination.

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