Analysis of Elderly Service Stations in Beijing Using a Two-Dimensional Framework to Match Policy Instruments and Services

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Abstract: Around 2016, Beijing started to build community elderly service stations across the city. As a new government-led effort to provide at home care, the government introduced several policies to support the development of elderly service stations in various ways. So far, the operation of the service stations still suffers from many problems, such as difficulties in profitability and shortage of manpower. Based on the method of policy text analysis, this paper identifies the policy tools and the service elements of the service stations that the Beijing Municipal Government focuses on in the 32 policies related to the elderly service stations issued during 2015-2022 through the grounded theory and constructs a two-dimensional framework to analyze the match between the policy tools and the service elements to understand how the policies shape the environment of the service stations.

Keywords: Aging in Place, Elderly Service Stations, Policy Text Analysis, Grounded Theory, Policy Tools

1. Introduction

On May 1, 2015, the Beijing Regulations on In-Home Elderly Care Services were officially implemented. Community-based home-based elderly care services, led by the government, provide services such as life care, medical care integration, cultural entertainment, and spiritual comfort for the aging population living at home.^[11] Like the Shanghai Elderly Service Complex, Wuhan's "Home-Machine Integration" model, and Guangzhou's "3+X" model, Beijing's elderly care stations are a local attempt at community-focused in-home care. In 2016, the Beijing Municipal Commission for the Elderly issued the Opinions on Carrying out the Construction of Elderly Care Stations in Beijing (hereinafter referred to as the "Opinions"), which emphasized that elderly care stations are the grass-roots service providers of the home-based elderly care system and that they are the extension and downward sinking of the elderly care services they need without having to leave the community.

The governance model of Beijing's elderly care stations is "market operation + government support", and since the release of the "Community Elderly Service Station Facility Design and Service Standards (for Trial Implementation)" in September 2016. The policy has not only provided targeted responses in terms of standards, norms, and supervision, but also in terms of stimulating demand and market access and preferences. Many attempts have been made. However, as more than 1,000 stations have been built and operated across the city, many problems are starting to come to the fore. Academic discussions of senior care centers have focused on operational aspects, with most centers in Beijing struggling to maintain an essential balance of income and expenditures, experiencing a shortage of staff, and offering a single service. ^[2]Some of the stations are either idle or stagnant and do not provide elderly care services. ^[3]It remains to be seen whether the current governance framework and policy tools can truly support senior care centers in Beijing. This article reviews and summarizes the policy texts issued by the Beijing Municipal Government on elderly care stations, to identify the elements and policy tools for elderly care stations, and discusses the matching of the two.

2. Literature review

Regarding policy focus, senior care service stations have two levels of meaning. The first layer discusses the number, distribution, and proportion of people covered by the city's elderly service stations as a whole from the meso level; the second layer explores the operational elements, such as service,

management, and nature, of a single or a branded chain of elderly service stations as an independent individual from the micro level. Since senior care service stations were given flexibility in operational modes, qualifications, and construction standards when the policy was drafted, from the point of view of attention, both academic research and this paper focus more on the second layer.

Although there is a lack of empirical research and theoretical constructs, studies of Beijing's elderly service stations have discussed the operation of the stations. These studies divide them into several elements. A part of the existing studies describes the operation status quo and service characteristics of the service stations by fieldwork and lacks explanatory research. For example, Chen et al. Describe the operation mode, service content, and service characteristics of stations, pointing out that stations face insufficient funds, resource constraints, and low service quality in operation. Another part of the research combed the policies and explored the influence and optimization paths of the government, operating entities, and consumers on the operation of stations from an embedded theory and multi-subject perspective.^[4] Scholars Wei Zehua and Zhou Jingmin analyze the space utilization, service configuration, and operation and management of the stations in a case study of four senior citizen stations in Chaoyang District, pointing out the lack of an effective regulatory mechanism for the stations.^[5] Since the elderly station model as a vertical extension of the home care field lacks a mature theoretical system and practical results, the purpose of this paper is to sort out and summarize the policy texts on elderly service stations issued by the Beijing Municipal Government, to identify the elements and policy tools for the operation of elderly stations, and to discuss the matching of the two, rather than engaging in theoretical constructs.

The existing research base is fragmented and non-theoretical, and the summarization of the elements of stagecoach operation is also based on the subjective judgment of the researchers, so we do not know the deviation of this subjective judgment from the individual or the overall stagecoach. In addition, the existing studies have not addressed the matching of policy instruments with the service elements of the service stations. They have put them under a unified analytical framework to demonstrate their causal relationship, making it impossible to evaluate existing policies systematically.

3. Analytical Framework

Elderly care stations are essentially a policy-driven product, and thus policy tools have had a profound impact on key elements of station operations at all stages of elderly care service stations. For example, standards and norms promote the standardization of station management, and subsidies and concessions drive the participation of market players. Based on this, this paper will construct a two-dimensional analytical framework from the content dimension of the operational elements of senior care stations and the dimension of the policy tools targeting senior care stations to discuss the degree of matching between the two, as detailed in Figure 1.

3.1. Dimension X: Policy Tools for Old Age Stations

Several studies have verified that the categorization of supply-, demand- and environment-based policy instruments proposed by Rothwell and Zegveld is compatible with the generalization of policy instruments in the field of old age. This classification downplays the coercive character of policy instruments. It has a clear market orientation, highlights the critical role of supply and demand in promoting policy programs, and its specific sub-policies are more user-friendly. According to the "Opinions" stipulated in the concept of elderly service stations, the government utilizes a variety of policy tools to manipulate the supply and demand sides as well as the market environment and encourages a wide range of market players to explore self-financing as a business model. Specifically manifested as supply-oriented policy tools to provide facilities and venues, personnel training, information management tools, etc.; demand-based policy tools such as price subsidies to stimulate consumer willingness of community-based elderly groups, pilots, and cooperation models; and environment-oriented policy tools such as standard-setting, industry regulation, financial support, subsidies, and tax incentives.

3.2. Dimension Y: Service Elements of Senior Living Stations

Combining the Community Elderly Service Stations Facility Design and Service Standards (for Trial Implementation) issued by the Beijing Municipal Civil Affairs Bureau on September 26, 2016, with the identification of service elements in previous studies, this paper deconstructs the operational elements into three parts: service facilities, service supply, and service management. This division emphasizes the

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service nature of the station. It stresses that station profitability, standardization, and the need for talent are all means to achieve sustainable and optimized services, not ends in themselves.



Figure 1: Two-dimensional framework diagram of old-age home service elements and policy instruments.

4. Data Sources and Research Methodology

Policy Document	Time of Introduction
Regulations of Beijing Municipality on Elderly Services at Home	2015.05
Notice on the Issuance of Ten Policies on Supporting the Development of Home-Based Elderly Services in Beijing Municipality	2016.05
Opinions on the Development of Community Elderly Service Stations	2016.05
Notice on Strengthening the Construction, Transfer and Management of Elderly Facilities in Newly Built Residential Complexes in the City	2016.06
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Opinions on the Development of Community Elderly Service Stations	2016.07
Notice on Radiating Community Home Care Services of Nursing Institutions in 2016	2016.09
Design and Service Standards for Community Elderly Service Stations Facilities (for Trial Implementation)	2016.09
Implementation Opinions on Promoting the Integration of Healthcare and Elderly Services	2016.11
Opinions on Strengthening the Elderly Service Talent Workforce	2016.12
Measures for the Administration of Subsidies for the Pilot Reform of the Central Financial Support for the Reform of Elderly Services at Home and in the Community	2017.03
Implementation Opinions on Comprehensively Liberalizing the Market for Elderly Services and Further Promoting the Development of the Elderly Services Industry	2017.03
Beijing Plan for the Construction of Community Elderly Service Stations (2016-2020)	2017.04
Notice on Strengthening the Standardized Management of Elderly Service Facilities	2017.08
Circular on the Issuance of the List of Experts and the Working Mechanism of the Beijing Municipal Steering Committee for the Construction of the Elderly Service Industry	2017.09
Opinions on Strengthening Rural Elderly Services	2017.1
Implementing Opinions on Strengthening Care Services for the Elderly and Improving the Elderly Care System	2018.1
Beijing Work Program for Promoting Consumption in the Elderly Sector	2019.03
Notice on doing a good job in the service quality star rating of elderly service organizations	2019.06
Notice on Preferential Policies for Some Fees and Charges of Community-based Family Service Industries such as Elderly Care, Child Care, and Home Economics	2019.09
Implementation Opinions on Financial Support for the Development of the Elderly Service Industry	2019.09
Implementation Opinions on Accelerating the Development of Commercial Pension Insurance	2019.09
Implementation Measures for the Administration of Subsidized Elderly Services and Allowances for the Elderly in Beijing Municipality	2019.1
Implementation Program on Accelerating the Development of Elderly Services	2020.05
Implementation Plan for Vocational Skills Training for Elderly Caregivers in Beijing	2020.08
Measures for the Administration of Community Elderly Service Stations in Beijing (for Trial Implementation)	2021.01
Measures for the Financial Management of Private Non-Profit Nursing Care Service Organizations in Beijing	2021.02
Beijing Measures for Supporting the Operation of Community Elderly Service Stations	2022.01
Notice on Supporting the Pilot Work of "Property Services + Elderly Care"	2022.01
Implementation Opinions on Enhancing the Management Level of Elderly Meal Assistance Services in Beijing	2022.03
Guidance on Promoting the Construction of Street and Township Nursing Service Consortia	2022.04
Administrative Measures for Star Rating of Service Quality of Beijing Community Elderly Service Stations (for Trial Implementation)	2022.09

Table 1: Local policies for senior citizen stations in Beijing.

This article examines policy texts on elderly care stations issued by the Beijing Municipal Government. It includes local normative documents such as standards and specifications, local working documents, and regional regulations at the provincial level. The policy texts were matched by searching for the keywords "home care" and "station" on official government websites and Beida Fabao. The policy texts were then screened for provisions that were specific to elderly service stations but had titles that appeared unrelated. Table 1 shows 32 policy texts related to elderly care stations from May 1, 2015, to September 15, 2022.

As a first step, this paper uses the grounded theory approach to identify the specific content of each type of policy instrument and service element. It then derives and then derives and refines secondary coding that corrects and adds to the original framework until it traverses the policy text. In turn, frequency counts for the service element dimension and the policy instrument dimension were conducted using the existing code base. As opposed to grounded theory or bibliometrics alone, this paper is rooted in the text itself, identifying the unique service elements and policy tools of the senior citizen station based on the subjective and fragmented categorization that emerges through the application of grounded theory; using econometric analysis to assess the degree to which they are closely aligned.

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5. Data Analysis and Content Identification

5.1. Dimension X: Analysis of Policy Tools and Content Identification of Beijing's Elderly Station Policy

Table 2 shows the identification and frequency of policy instruments. Similarly to previous studies, Rothwell and Zegveld's categorization allows a good fit with old age service stations policies. The existing policy texts do not propose a new categorization of policy instruments.

Demand-based policy instruments are the least represented of the three, at 10 percent. This type of policy instrument refers to various ways the Government provides stable service demand. Based on direct to indirect, they can be categorized as government services purchases, price subsidies, and social security. Existing policy documents indicate that the government redistributes and increases the station's income through direct purchases from the station. Price subsidies target the majority of the elderly population, aiming to stimulate consumption and increase senior citizen station patronage. Social Security is mainly concerned with helping disabled and poor older groups by providing benefits, including fee waivers, spatial accessibility, and information accessibility, for their use of station services.

Environmentally-based policy instruments are the most commonly used policy instruments in senior living stations, accounting for 72%. Among them, regulations and standards, industry regulation, and policy-based strategies are particularly common. According to the policy texts available, environment-based policy tools are characterized by three characteristics: encouragement of market innovation, decentralization, and phased regulation, which accompany the entire process of stimulating market vitality. Policy-based strategies and financial services give private capital and enterprises the incentive to explore new models; tax incentives reduce the cost of trial and error for enterprises; and industry regulation and regulations and standards are centered around controlling risks and balancing innovation.

Supply-based policy instruments amount to 18%, with infrastructure provision and government subsidies accounting for 6% and 10% respectively, and information services accounting for only 2%. This type of policy tool is directly provided by the government. In this type of policy tool, the government directly funds the development of senior citizen stations through human, physical, or financial resources. The Beijing municipal government mainly supports senior citizen stations through one-time and continuous investments in facilities equipment and financial resources. It is worth mentioning that the Beijing Municipal Government has repeatedly emphasized in several documents that station rooms are provided completely free of charge, with most unused properties owned by institutions or the government, with a small portion of them provided free of charge to station operators through resource integration.

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While one-time subsidies are generous, ongoing subsidies are based on station service flow and eligibility evaluation.

Туре	Policy tools Frequency Percentage Policy instruments		Policy code		
Demand-based	Government purchased services	7	0.03	The government pays stations to provide certain elderly services to designated groups of people.	1-6-1-3, 1-8-2, 2- 8
	Social welfare	8	0.04	Introducing a comprehensive assessment of the capacity of older persons to determine the level of coverage for different population groups.	1-13-1, 1-15-1, 2- 10
	Price subsidy	7	0.03	The Government's direct payment of allowances enables the elderly in need to benefit from disability assistance services.	1-16-1, 1-17-1, 2- 2
Environmental	Policy-oriented strategy	38	0.18	Strategic measures formulated by the Government to promote the development of elderly care centres, including piloting, resource integration, manpower training, publicity and promotion, and encouraging innovative modes of cooperation	1-8-2, 2-6, 3-4-6
	Industry regulation	37	0.17	Prior access, supervision and accountability of senior citizen stations.	1-7-1-2, 3-4-2-1, 4- 6
	Financial service	12	0.06	Provide financing and credit support for pension enterprises; encourage the development of commercial pension insurance.	2-6, 9-4-6, 19-6-3
	Tax incentives	9	0.04	Reduction of taxes for businesses providing elderly care services.	1-11-1, 8-5-2, 9-4- 5-3
	Regulations and Standards	59	0.27	Standards and regulations to regulate the market order and improve the quality of service and management of elderly stations	1-3-1,1-5-1-3,1-5-1- 6
Supply-side	Infrastructure provision	12	0.06	The government provides facilities and unused rooms free of charge for the operation of senior citizen stations.	1-8-3, 2-3, 3-1-3
	Financial subsidy		0.1	Direct financial subsidies are provided to senior citizen stations based on the quality, size and type of service.	3-1-3, 3-5-1, 3-7- 3
	Information service	5	0.02	Establishing an information technology platform sharing mechanism and promoting the timely sharing of elderly-related data among members of the elderly care consortium.	1-6-1-1, 12-2, 12- 2
(grand) total		216			

Table 2 Policy instrument identification and frequency.

5.2. Dimension Y: Identification of Service Elements and Contents of Elderly Stations in Beijing

Table 3 summarizes the service elements repeatedly highlighted in the policy text and frequency statistics. The current policy text suggests that both "facility standards" and "service management standards" in the Standards are relatively rich. In contrast, service management cannot summarize the external output of service content in policy text. In the author's view, service management and service supply are aimed at the internal station and service users respectively. In the policy text, the former is often the object of industry supervision, while the latter is often used as the basis for financial subsidies. Therefore, this paper retains the category of "service supply" for the original division of service elements.

First, the frequency share of service equipment is 22%. This is relatively small compared to the other two elements. There are two distinct categories of facilities in the Standards: standard facilities and necessity-based functional facilities. In response, the policy text fully demonstrates the importance of these two types of facilities, which the author calls "service facilities". Policy text pays more attention to standard facilities than functional ones. Standard facilities include the standardized management of the station's premises and facilities. There are three types of facilities: living space, healthcare space, public activity space, and service space. Functional facilities, although not listed separately in the Standards, have continued to surface in subsequent policy documents. This highlights the flexibility of stations in setting up functional areas and bringing in external suppliers.

The next highest percentage, 42%, is for service management. In contrast to the Standard, which emphasizes only management systems construction, the policy text further enriches its connotation. On the one hand, the policy text also takes all kinds of system construction as important content. On the other hand, it introduces the connotation that the system must be implemented in practice. The two are merged into the new service element of "system compliance". Within the element of service management, the policy text mainly puts forward requirements on service station management capacity from two dimensions: internal and external. Internally, it focuses on administrative management and system construction. Externally, it includes two categories, external suppliers and operation models, which

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involve service innovations in the context of the stations. These innovations include the combination of medical and nursing care and the "property + elderly care" model.

Third, the share of service provision is 36%, with the emphasis on service setting reaching a maximum of 17% of all service elements. The Standards limit service provision to six major service categories: daycare, call service, meal assistance service, health guidance, culture and recreation, and psychological comfort. The policy text emphasizes the importance of service flow on this basis, further subdividing service provision into three focuses: service setting, service flow, and demand matching. Service flow is an indicator of the scale of services provided by the stations. It reflects the service quality and operation of the stations from the side. Demand matching refers to whether the station pays attention to the core demands of the elderly in the community where it is located from the perspective of service supply. It is the ability to combine its strengths with service users' needs. According to the policy, it receives a moderate level of attention (13%).

Service elements	Sub-elements	Frequency	Fercentage	Connotation of service elements	Policy code
Service equipment	Standard equipment	24	0.14	There are detailed standards for the hardware facilities that a post must have, and these facilities are set up.	1-10-2, 3-4-3, 4- 5
	Functional equipment	14	0.08	There is a great deal of flexibility in the equipment that can be selectively set up by the post.	1-8-3, 1-20-1, 3- 4-1-3
Service management	human resources	7	0.04	Staffing and talent development at the post.	1-18-1-2, 8-2-3, 6-3-1
	Institutional Compliance	28	0.16	All administrative and service matters of the station are supported by written standards, and the station operates in compliance with the standards.	6-3-5, 9-2-2-3, 24-4-1
	External suppliers	15	0.09	Non-stagecoach operators provide services directly or indirectly at the stagecoach.	3-1-3, 3-4-4
	operating model	23	0.13	The nature and mode of composition of the main body of the stage.	1-6-1-2, 1-9-1, 2-6
Service provision	Service Settings	30	0.17	Types of services carried out by the post.	1-3-1, 2-3-1, 6- 3-4
	Service flow	11	0.06	The total amount of services provided by the post.	1-4-1, 2-2, 3-5- 1
	Demand matching	23	0.13	The post obtains information about the needs of service users and adjusts accordingly.	1-6-1-4, 2-10, 3- 1-2
(grand) total		175			

Table 3: Service elements identification and frequency.

5.3. Two-Dimensional Analysis of Policy Instruments and Service Elements of Elderly Stations

Table 4 illustrates how different policy instruments respond to different service elements. The proportion of matches indicates how the service element is echoed by the policy instrument and vice versa. Matching Ratio = Total Matches/ Total Frequency. First, the mean value of the matching ratio of each service element is 0.71, which means that most of the policy instruments in the policy text are targeted toward these service elements, indicating that policymakers have a value tendency more in line with this framework of service elements. Secondly, there are large differences in the matching ratio values between service elements. The most supported elements are standardized equipment, institutional compliance, operation mode, and service flow, all of which exceed 0.90. The policy matching ratios of functional equipment and service settings also exceed the average value, at 0.79 and 0.76, respectively.

The values for Human Resources, Matching Demand, and External Supply Side are low, with Human Resources having a policy matching ratio of only 0.14. Such low figures may reflect policymakers' desire to direct more self-effort from the stations in these areas. The variability of these three service elements is even more pronounced from one stations to another than for the other elements. Because each station is located in a different community, older adults have unique needs. These needs require different external service providers and internal professionals. Universal policy instruments cannot have a significant impact on service elements with significant internal differentiation. Policy objectives can only be set within the larger industry context.

First, service equipment is the most basic facility of the station. Both service elements under this categorization are highly compatible with the policy instrument. The policy, while providing a large amount of equipment, establishes strict equipment management standards and equipment self-selection options, which are accompanied by regular spot checks and regulatory measures.

Second, under the classification of service management, policymakers' strategies in choosing policy

instruments for institutional compliance and operational models are quite different. As mentioned earlier, institutional compliance has two meanings, namely, there is a system that can be followed for all the work of a private station, and all the work is in line with the government regulations and standards of the station. Naturally, regulations and standards provide a model management system for station operators. The industry regulates and urges service stations to operate standardized through inspection and punishment. In terms of operation mode, the Government has mainly used environmental policies to guide service station chaining and scaling.

Finally, in the service provision classification, there is a high proportion of policy matches between service settings and service flows. The government used the most diverse policy tools to influence the service setting of the stagecoach. For example, the government uses policy instruments that specify the services necessary for the stations. It also uses demand-based policies that increase the importance of a particular service for the station. Policy instruments encourage service traffic. On the one hand, price subsidies bring traffic to the station; on the other hand, government funding is linked to station traffic.

		Service equipment		Service management				Service provision			
		Standardized equipment	Functional equipment	human resources	Institutional Compliance	External suppliers	operating model	Service Settings	Service flow	Matching demand	Total
Demand-based	Government purchased services	-	-	-	-	-	-	2	-	2	4
	Social security	-	-	-	-	-	-	1	-	2	3
	Price subsidy	-	-	-	-	-	-	2	4	-	6
Environmental	Policy-oriented strategy	2	2	-	-	5	6	3	-	4	22
	Industry regulation	5	1	-	14	-	-	-	1	-	21
	Financial service	-	-	-	-	1	4	2	-	-	7
	Taxincentives	1	-	-	-	-	4	2	-	-	7
	Regulations and Standards	9	5	1	12	-	4	8	-	-	39
Supply-side	Infrastructure provision	6	3	-	-	-	1	-	-	-	10
	Financial subsidy	-	-	-	-	-	2	3	5	3	13
	Information service	-	-	-	1	-	-	-	-	2	3
(grand) total		23	11	1	27	6	21	23	10	13	
Matching ratio		0.96	0.79	0.14	0.96	0.4	0.91	0.76	0.91	0.57	

Table 4: Cross-cutting analysis of policy instruments and service elements.

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