

Research on the Construction of Mutual-Aid Social Care Service System in Rural Beijing

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Abstract

With the deepening of population aging in rural Beijing, the proportion of the elderly population in rural Beijing has risen sharply, and the demand for aging-friendly products and services, such as daily living aids, smart electronic products, new energy vehicles, green buildings and infrastructures, has also surged. This change poses a severe challenge to the traditional family pension model, and there is an urgent need for socialized pension services to provide a powerful supplement. In the context of the national governance system, this article constructs an operational framework for the time bank based on the mechanism of supply and demand matching, explores issues related to the construction of mutual-aid social care service system in rural Beijing based on the time bank, and explores its countermeasures and suggestions. It provides a powerful reference for the implementation of the rural revitalization strategy and the construction of beautiful villages in Beijing.

Keywords

Mutual-Aid Social Care Service System, Rural Beijing, Population Aging

1. Introduction

With the deepening of population aging in rural Beijing, the demand for social elderly care services in rural Beijing is growing. Historically, China has relied on the mechanism of raising children to support the elderly to address the issue of elderly care. This traditional concept originated in the vast rural areas of China, implying a contractual spirit maintained by the filial piety ethic system. However, realistically speaking, human and financial resources are the two core issues restricting the development of rural social elderly care services in rural Beijing. In recent years, with rural population movement, economic and social

transformation, and the decline of filial piety culture, family support based on children is constantly weakening, and there is an urgent need for the supplementation of social elderly care services. In this context, the time bank not only helps to solve the problem of rural elderly care in Beijing but also contributes to accelerating the construction of Beijing's rural mutual aid social elderly care service system.

The concept of the time bank originates from the idea of mutual assistance and sharing. By recording and storing the service time provided by individuals to the community, it allows service providers to redeem equal service time or other forms of returns in the future. This model not only effectively mobilizes community resources but also promotes mutual assistance and cooperation among community members, thereby building closer community relationships. Existing research suggests that the time bank, as an innovative elderly care service model, possesses significant advantages. It can alleviate the shortage of human and financial resources in rural elderly care services and improve the quality of elderly care services through mutual assistance and cooperation among community members (Nind et al., 2016). Time banking, based on the theoretical foundation of the sharing economy, holds unique significance in promoting the sharing of elderly care resources in Beijing. Therefore, it is crucial to establish a mutual-aid social elderly care service system based on the time bank in rural Beijing. This model provides a fundamental solution to address the elderly care issues of low-income aging populations. It requires the government to play the leading role, coordinating various social entities (such as enterprises, hospitals, nursing homes), market players, and regulatory authorities to jointly promote the high-quality development of the time bank elderly care model. Under this system, volunteers can transcend the boundaries of families, kinship, and regions, enabling the flow of excellent human resources between urban and rural areas. This mobility not only fosters cultural communication and exchange but also contributes to the creative transformation and innovative development of Chinese excellent traditional culture, injecting new vitality into the planning, construction, and management of beautiful villages in Beijing. Additionally, the non-discriminatory nature of time currency—regardless of region, urban or rural areas, occupation, or algorithm—and its characteristic of flowing with human resources greatly enhance the mobility of human resources and deepen the market depth, thus helping to promote high-quality economic development in Beijing. In summary, the construction of a rural mutual-aid social elderly care service system based on the time bank has significant theoretical and practical implications.

This paper constructs the operational framework of the time bank based on the basic mechanism of supply and demand matching, and deeply explores issues related to the construction of a mutual-aid social elderly care service system in rural Beijing based on the time bank. Through a comparative analysis of the time bank model and previous elderly care models, this paper finds that the time bank exhibits significant innovation in resource allocation, service models, and community participation. It not only enables optimal allocation of elderly care

resources but also promotes active participation and mutual assistance among community members. By extensively citing literature, deepening the theoretical framework, constructing a service system, and adopting safeguard measures, this paper actively responds to academic debates on aging, rural development, and social service innovation. It aims to provide a valuable reference for the construction of a mutual-aid social elderly care service system, as well as for the implementation of the rural revitalization strategy and the development of beautiful villages in rural Beijing.

2. Relevant Research Trends at Home and Abroad

International research on mutual-aid elderly care services focuses on three aspects: first, the construction of an elderly care service system based on needs; second, the time banking program and mutual-aid elderly care communities from the perspective of community building and volunteer service; and third, a comparative study of elderly care service systems in different countries and regions (Carrino et al., 2018; Xie & Fan, 2020; Sakanashi & Fujita, 2020).

Domestic research on elderly care services mainly concentrates on four areas: willingness and demand for elderly care services, elderly care service models and systems, elderly care service supply methods, and elderly care service supply innovation. Each of these areas has relatively rich research content (Li, 2012; Du & An, 2019; Liang et al., 2020). From the perspective of rural practices in economically developed areas, cities such as Beijing, Tianjin, Nanjing, Guangzhou, Qingdao, and other cities have explored and carried out mutual aid elderly care forms such as time savings, labor savings, and silver age mutual aid. From the perspective of rural practices in underdeveloped areas, the existing literature mainly involves rural neighborhood mutual aid elderly care services and various forms of mutual aid elderly care (Liu, 2017). The current development philosophy of China's elderly care service emphasizes equal emphasis on multiple subject responsibilities, focuses on building a comprehensive policy system, and emphasizes refined development (Guo, 2019).

The existing literature provides a high starting point for research and a wealth of practical summaries for this paper. However, in general: Firstly, at the theoretical research level, due to the different realities between China and developed countries, it is necessary to explore a theory of elderly care services with Chinese characteristics and localization in Beijing's rural areas, taking into account China's cultural tradition, actual conditions, and development realities. This will enrich the theoretical research on mutual-aid social elderly care services in rural Beijing. Secondly, at the practical application level, because of the large differences between urban and rural areas in Beijing, it is essential to strengthen the exploration of the supply of mutual-aid social elderly care services in Beijing's rural time banks, focusing on innovative service models and precise supply-demand matching, and taking into account the regional characteristics of rural areas (blood ties, geographical location, and autonomy) within the context of informatization, new technologies, and marketization. Thirdly, at the discipli-

nary research level, due to different perspectives from various disciplines, it is important to continuously promote interdisciplinary research and deepen the study of mutual-aid social elderly care services in rural Beijing more systematically through multidisciplinary and multi-perspective analyses.

3. Current Status of Elderly Care Service Supply and Actual Demand in Rural Beijing

According to a series of reports on “Rural Elderly Care Survey” by Beijing Community Newspaper, with the intensifying trend of population aging, the proportion of the elderly population in rural Beijing has increased significantly, and the demand for elderly care services is growing. The traditional family pension model is facing severe challenges. Therefore, Beijing has begun to attempt to build a mutual-aid social care service system, aiming to solve rural pension problems through community mutual aid and resource sharing. However, in practical implementation, the construction of this system still faces many problems.

1) The spiritual and cultural life of younger elderly people in rural areas is relatively scarce, and there is a strong demand for aging-friendly products and services such as smart electronic products, new energy vehicles, green buildings and infrastructures. However, according to the “2022 Elderly Consumption Survey Project Research Report,” nearly 60% of elderly people indicate difficulties in using electronic devices, which means they still need more support and help in bridging the “digital divide” and enjoying the convenient life brought by information technology. As the degree of population aging in China continues to deepen, the demand for the aforementioned aging-friendly products and services among younger elderly people in rural areas will become more urgent. Meanwhile, the supply of products and services is also shifting from simple life aids to a wide range of elderly products and services empowered by technology and capital. In response to this current situation, the “Report on the Development of Elderly Undertakings in Beijing (2022)” suggests fully utilizing radio, television, and online audiovisual media to actively build a media communication matrix for aging work. Additionally, relying on the educational base for understanding the national and municipal conditions of population aging in Beijing, flexible smart training activities for the elderly should be carried out to meet their actual needs.

2) The elderly care service facilities in rural Beijing still need to be improved, and fund-raising faces challenges, making it difficult to meet the diverse needs of the elderly. Due to the limited economic income of the elderly in rural areas, the high cost of elderly care services is a heavy burden for them. Therefore, most rural elderly people can only accept low-quality elderly care services or even cannot obtain any elderly care services. In view of this, the government should increase financial support and expand funding channels to improve rural elderly care service facilities and increase their utilization rate. At the same time, personalized elderly care service programs should be tailored to the specific condi-

tions and needs of the elderly.

3) Elderly care service resources in rural Beijing are relatively scarce, and service quality urgently needs to be improved. The scarcity of elderly care service resources makes the effective integration and interaction of resources particularly important (Mommaerts, 2018). In China, the choice of care models for the elderly follows the “pecking order preference,” which means families will first use internal care resources before considering social care. However, rural areas face difficulties in attracting and retaining professional elderly care service personnel, and the professional quality of existing service personnel also needs to be improved. To solve this problem, the government should adopt measures such as tax incentives, strengthening professional training, and talent introduction to attract more social capital into the field of rural elderly care services, providing a solid talent base for the rural mutual-aid social elderly care service system. This will not only increase the supply of elderly care services but also promote competition and development in the elderly care service market, thereby improving service quality.

4) The regulatory mechanism is not yet sound, and the participation and sense of community mutual assistance among rural elderly need to be improved. Due to the inadequate management mechanism and lack of effective supervision in rural areas, there are irregularities in the service process. Meanwhile, influenced by traditional concepts, some rural elderly are skeptical of mutual-aid social elderly care services and prefer family-based care. In addition, the sense of community mutual assistance in rural areas is relatively weak, and many elderly lack the motivation to participate in community mutual assistance. To address these issues, the government should improve the management mechanism and regulatory system, clarifying service quality requirements. At the same time, the government and all sectors of society should strengthen the promotion of the rural mutual-aid social elderly care service system, increasing elderly awareness and participation.

4. Construction of Mutual-Aid Social Care Service System Based on Time Banking in Rural Beijing

4.1. General Rules for Mutual-Aid Social Care Service System Based on Time Banking in Rural Beijing

Based on the dynamic equilibrium matching of the supply and demand of elderly care services in rural Beijing, and drawing on the research of Li et al. (2020), this paper designs general rules applicable to the mutual-aid elderly care service system based on time banking in rural Beijing from the following six aspects.

1) Focus on time resources. The time bank taps into users' idle time resources, enabling personal value transformation through the exchange of heterogeneous resources among different users, thus allowing users to achieve self-value through benign interactions.

2) Building competitive advantages. The time bank assists in developing a us-

er-centered relationship network and creating a borderless value system based on this. Through this process, the time bank gradually becomes a unique social networking platform for elderly care and continuously cultivates and reinforces its advantages in solving elderly care issues.

3) Government resource support. The government can provide dual guarantees of resources and legislation for the time bank. With its legitimate status, the time bank can more easily gain the support and trust of stakeholders. With the help of government resources, the time bank can further improve its system construction and develop its intrinsic value, enabling it to be popularized in a wider range and at a deeper level.

4) Improvement of the exchange mechanism. The time bank model has broken through the simple primary model of exchanging labor for goods, upgrading to a “multi-value exchange” model of labor → value provision → value reserve → value feedback.

5) Upgrading of technological means. Through the application of modern information technology, the time bank has significantly improved management efficiency, ensuring accurate and smooth information flow.

6) Expansion of participating users and other dimensions. People of different age groups have different resources and skills, and their demands for social products and labor services also vary. The time bank encourages people of more age groups to participate, advocates interactive services between young and old people, and promotes resource sharing between the two parties.

4.2. Specific Plans for Mutual-Aid Social Care Service System Based on Time Banking in Rural Beijing

Based on the geographical characteristics of rural Beijing and the natural and social attributes of rural residents, this paper designs a specific plan suitable for the elderly care service system of time banking in rural Beijing from three levels: the central government, local governments, and village committees.

1) Supervision and Incentives at the Central Government Level

The central government should take the lead, elevating Beijing’s rural mutual-aid social elderly care services to the level of national governance. Relevant policies and regulations should be formulated at the central government level to guide and support the development of time bank mutual-aid elderly care services, establishing unified standards for mutual-aid social elderly care services. Firstly, service supervision should be strengthened: establish and improve the regulatory mechanism to ensure service quality and safety, protecting the rights and interests of the elderly. By applying the principle of the “shadowless lamp effect,” the central government can effectively play its role in legislation and supervision to ensure the steady development of the mutual-aid social elderly care service system. This can be achieved by increasing the number of supervisors, enhancing supervision intensity, establishing a comprehensive mutual-aid elderly monitoring network, and integrating supervision platforms. Secondly, under the guidance of the central government, a channel for elderly universities

can be established on national media to guide the elderly to continue learning and updating their life concepts. Through this public opinion platform, volunteers can be encouraged to actively save time currency by promoting the values of mutual assistance. Thirdly, community participation should be advocated: encourage communities, social organizations, and volunteers to actively participate, forming a diversified elderly care service system. Fourthly, the central government can attract more social capital and professional talents to invest in rural elderly care services through incentive mechanisms such as tax incentives and talent introduction.

2) Implementation Details and Supporting Policies at the Local Government Level

Based on the top-level design of the central government and taking into account the actual situation in rural Beijing, local governments should formulate operable and standardized implementation details and supportive policies. They should also develop specific elderly care service policies, clarifying service standards, funding arrangements, and incentive mechanisms. Combining the geographical characteristics, rural flavor, and economic strength of rural Beijing, a new mutual-aid elderly care service system can be constructed, which is led by the local government and operated by the village committees. This system will innovatively adopt service strategies such as time banking, blockchain technology, and Internet+, with audit supervision as its foundation. Firstly, basic information about elderly people in rural Beijing, such as age, health status, and economic income, should be collected through Internet+ technology to accurately analyze the service needs of different elderly groups and achieve a dynamic balance between the supply and demand of elderly care services. Secondly, volunteers from urban areas should be encouraged to move to rural areas, promoting the exchange of elderly care resources between urban and rural areas. By establishing incentive mechanisms, volunteers can be motivated to actively participate in the construction of beautiful villages in Beijing. At the same time, by developing industries such as characteristic agriculture and rural tourism, young people can be attracted to return to rural areas, thereby improving the demographic structure of rural areas. Thirdly, enterprises and social organizations should be guided to actively invest in the construction of a mutual-aid social elderly care service system in rural Beijing to ensure its sustainable and high-quality development.

3) Policy Implementation and Service Innovation at the Village Committee Level

The village committees should focus on policy implementation, organization and coordination, and resource allocation, while utilizing modern technological means such as the Internet and the Internet of Things to improve the quality and efficiency of rural elderly care services. Firstly, they should encourage active participation in mutual-aid elderly care services in rural Beijing, with production teams or families as units. Secondly, they should advocate for a service model of “village committees blow the whistle, and volunteers report for duty.” Under

government supervision and guidance, a “15-minute elderly care service circle” integrating the village committees and volunteers should be constructed. The village committees will allocate volunteers with different professional levels to provide personalized and differentiated services to the elderly based on their health status, and use blockchain technology and Internet+ to timely store the service content and time in the form of time currency in the time bank. Thirdly, based on the national integrated supervision platform, each village committee will establish its own network monitoring platform to pay real-time attention to the quality of elderly care services provided by volunteers.

5. Safeguard Measures for the Mutual-Aid Social Elderly Care Service System of Beijing Rural Time Bank

The construction of a mutual-aid social elderly care service system in rural Beijing requires the joint participation of government, society, families, and individuals. To address the increasing challenge of population aging, we must gather the strength of the entire society to build a more complete and efficient rural social elderly care service system.

1) Strengthen the supervision and guidance of the government and the market. Government policy support and resource investment are crucial for establishing a unified Time Bank joint network in rural and urban areas of Beijing. At the same time, we should also make full use of the market’s fundamental role in information guidance, regulation, and optimization of elderly care resource allocation.

2) Strengthen the construction of a time accounting credit mechanism. With the help of blockchain technology, a more efficient, economical, and safe trust system can be built for the Time Bank (Li et al., 2020). This will ensure the fairness of time currency, guaranteeing that time currency is objectively, fairly, and accurately recorded in both text and digital form, thereby enhancing users’ trust in the Time Bank.

3) Promote the deep integration of modern information technology and the Time Bank. The operation system of the Time Bank can be improved through technical means such as mobile internet, big data, and artificial intelligence (Han et al., 2015), striving to turn the Time Bank into a smart bank and promoting its wide application and in-depth development in rural Beijing. Modern information technology can be utilized to establish an information platform for elderly care services, enabling resource sharing and matching supply and demand.

4) Strengthen the construction of a professional team. Enhance professional training for elderly care service personnel, improve service quality, and attract more young people to devote themselves to the elderly care service industry.

6. Conclusion and Discussion

Based on the dual perspectives of the historical background and the reality of rural Beijing, this paper uses the sharing economy as the theoretical foundation for the time bank, and theoretically explains the unique role of the time bank

pension model in promoting the sharing of pension resources in rural Beijing. Simultaneously, focusing on the basic mechanism of supply and demand matching, this paper aims to build a mutual-aid social pension service system with Chinese characteristics in rural Beijing, forming a theoretical achievement with reference value for rural Beijing. Through questionnaire surveys, this paper enhances the reference value of research results for the practice of pension services and the construction of beautiful villages in rural Beijing.

Specifically, this paper aims to construct a mutual-aid social pension service system led by the government, participated by society, and supported by families through the time bank model. This system aims to promote the sharing and effective integration of pension service resources in rural Beijing, improve the quality of rural pension services, and meet the diverse pension needs of the elderly. To this end, the specific plans and safeguard measures in this paper are briefly described in the following four aspects. Firstly, in terms of top-level design, the central government should carry out legislative supervision and establish incentive mechanisms; local governments should formulate implementation details and supportive policies based on the reality of rural Beijing. Secondly, in terms of resource integration, modern information technology should be utilized to establish a pension service information platform, realizing resource sharing and supply-demand matching; volunteers from urban areas are encouraged to move to rural areas, promoting the exchange of pension resources between urban and rural areas. Thirdly, in terms of service innovation, blockchain technology can be introduced to build a trust system for the time bank, ensuring the fairness of time currency; the service model of “village committee and party branch blowing the whistle, volunteers reporting” should be implemented to improve service efficiency. Fourthly, in terms of supervision and incentives, a national integrated supervision platform should be established to monitor the service quality of volunteers in real-time; through tax incentives, talent introduction, and other incentive mechanisms, more social capital and professional talents should be attracted to invest in rural pension services. Based on the above, the expected application effects of the mutual-aid social pension service system in rural Beijing can be summarized into three aspects: firstly, pension service facilities are more perfect, and service resources are more abundant; secondly, the quality of pension services has significantly improved, and the satisfaction of the elderly has greatly improved; thirdly, sustainable development of pension services in rural areas has been achieved, supporting the rural revitalization strategy and beautiful village construction.

Certainly, it should be acknowledged that this article may underestimate the complexity and potential shortcomings of implementing a time bank elderly care system in rural areas. That is, the application of Beijing’s rural mutual-aid social pension service system will also face some potential challenges, including issues of sustainability, resource allocation, social inclusivity, and risk control. To address these potential challenges, specific measures are outlined in the following four aspects.

1) Sustainability. Firstly, expand funding sources. Raise funds through various channels such as government subsidies, social donations, and corporate investments to ensure the sustainable operation of the service system. Secondly, promote the service model. Encourage more regions to learn from Beijing's experience and promote the time bank mutual aid pension service model, forming a nationwide pension service network.

2) Resource allocation. Firstly, establish a resource allocation mechanism. Allocate pension resources reasonably based on the actual needs of the elderly and service capabilities to ensure fairness and effectiveness of services. Secondly, strengthen cross-regional cooperation. Promote the sharing of pension resources between urban and rural areas and across regions to achieve optimal resource allocation.

3) Social inclusivity. Firstly, increase social awareness. Strengthen publicity and education, and promote the importance and advantages of mutual-aid social pension services through multiple channels, improving society's awareness and recognition of time bank mutual aid pension services. Secondly, eliminate discrimination and prejudice. Advocate for equal and inclusive pension service concepts, eliminating discrimination and prejudice against the elderly.

4) Risk reduction and participant protection. Firstly, establish a sound risk assessment mechanism. Regularly evaluate potential risks that may arise during the pension service process and take timely measures to reduce risks. Secondly, strengthen privacy protection. Establish a comprehensive information protection system to ensure that the privacy of the elderly and participants is not disclosed.

Through research and improvement of the construction of Beijing's rural mutual-aid social pension service system, this article proposes more specific and feasible policy suggestions and implementation measures. These measures aim to address potential challenges in the pension service process, ensuring the sustainability of the service system, fairness in resource allocation, social inclusivity, and effective risk control. At the same time, this article aims to provide beneficial references for the construction of the elderly care service system in other regions.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- Carrino, L., Orso, C. E., & Pasini, G. (2018). Demand of Long-Term Care and Benefit Eligibility across European Countries. *Health Economics*, *27*, 1175-1188. <https://doi.org/10.1002/hec.3665>
- Du, P., & An, R. (2019). Mutual-Aid Aged Care from the Perspective of Governmental Governance and Villager Autonomy in Rural China. *Journal of China Agricultural University (Social Sciences)*, *36*, 50-57.
- Guo, L. (2019). Elderly Services in China (1949-2019): Evolution, Policy Evaluation and Prospect. *Chinese Social Security Review*, *3*, 48-64.
- Han, K., Shih, P. C., Bellotti, V., & Carroll, J. M. (2015). It's Time There Was an App for That Too: A Usability Study of Mobile Timebanking. *International Journal of Mobile Human Computer Interaction*, *7*, 1-22. <https://doi.org/10.4018/ijmhci.2015040101>
- Li, H., Li, W., & Li, R. (2020). Research on China's Future Pension Model: Based on Time Bank as Development Path. *Journal of Management World*, *36*, 76-90.
- Li, W. (2012). The Empirical Study on Demand Conditions and Countermeasures of the Rural Social Elderly Services. *Social Security Studies*, *2*, 29-35.
- Liang, Y., Zhou, Y., & Cao, X. (2020). Knowledge Graph of China's Elderly Service Research-Visual Measurement Analysis Based on Citespace. *Social Security Studies*, *2*, 103-111.
- Liu, N. (2017). The Development of Mutual-Aid Social Aged Care in Rural China. *Population Research*, *41*, 72-81.
- Mommaerts, C. (2018). Are Coresidence and Nursing Homes Substitutes? Evidence from Medicaid Spend-Down Provisions. *Journal of Health Economics*, *59*, 125-138. <https://doi.org/10.1016/j.jhealeco.2018.04.003>
- Nind, M., Armstrong, A., Cansdale, M., Collis, A., Hooper, C., Parsons, S., & Power, A. (2016). Timebanking: Towards a Co-Produced Solution for Power and Money Issues in Inclusive Research. *International Journal of Social Research Methodology*, *20*, 387-400. <https://doi.org/10.1080/13645579.2016.1179469>
- Sakanashi, S., & Fujita, K. (2020). Development of the Empowerment Scale for Family Caregivers of Community-Dwelling People with Dementia in Japan. *Japan Journal of Nursing Science*, *17*, e12311. <https://doi.org/10.1111/jjns.12311>
- Xie, W., & Fan, R. (2020). Towards Ethically and Medically Sustainable Care for the Elderly: The Case of China. *HEC Forum*, *32*, 1-12. <https://doi.org/10.1007/s10730-019-09391-7>