

Research on the Sustainable Development of the "Time Bank" Mutual Assistance Elderly Care Model

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Abstract: Against the backdrop of deep population aging, this paper systematically explores the sustainable development path of the "Time Bank" mutual assistance elderly care model in China based on the theories of sharing economy, social capital, and transaction costs, using case analysis and comparative research methods. The study reveals that the current model faces core challenges such as institutional deficiency, technological lag, insufficient participation, and inconsistent measurement standards. It proposes innovative solutions including constructing a national institutional framework, empowering with blockchain technology, promoting multi-stakeholder collaboration, and establishing a classified measurement system. Through empirical analysis of domestic and international cases, the feasibility of the "government-led, community-based, and social participation" trinity model is demonstrated, providing academic reference and practical guidance for improving China's elderly care service system.

Keywords: Time Bank; Mutual Assistance Elderly Care; Sustainability; Aging; Social Security

1. Introduction

The aging population in China has reached unprecedented levels, with the 7th National Population Census revealing that individuals aged 60 and above constitute 18.70% of the total population, and those aged 65 and above account for 13.50%. By 2025 and 2033, the population aged 60 and above is projected to exceed 300 million and 400 million, respectively, exacerbating the aging crisis. In particular, Shanghai is expected to have over 6 million registered elderly by 2025, with an aging rate of 40%, highlighting the immense caregiving pressures in megacities. Traditional family-based

caregiving has weakened due to family coreization and low fertility rates, while institutional care faces resource shortages and high costs, intensifying the supply-demand gap in elderly care services. Thus, innovating elderly care models and integrating social resources are crucial for addressing the aging challenge.

The "Time Bank," an innovative mutual assistance elderly care model proposed by Edgar Cahn in the 1980s, has gained global traction. It involves volunteers, particularly healthy younger elderly, providing services to older or disabled elderly, with the service time recorded as "time credits" in personal accounts. These credits can be redeemed for equivalent services when needed, facilitating intergenerational resource allocation and balancing social welfare with economic rationality. Since its pilot in Shanghai's Tilanqiao Subdistrict in 1998, the Time Bank has been implemented in cities like Beijing and Nanjing. In 2021, Shanghai's Elderly Care Service Regulations formally institutionalized the Time Bank.

However, China's Time Bank faces sustainability challenges. Pilot projects in Harbin and Liuzhou have encountered declining participation rates, inconsistent service quality, and difficulties in cross-regional exchanges. Structural barriers such as low public awareness, fragmented policy support, and inadequate technical platforms further impede large-scale development. This study, grounded in sociology, employs empirical analysis and theoretical discussion to address core issues: how to overcome the sustainability bottleneck of the Time Bank and construct a long-term mechanism aligned with China's national conditions. Resolving these issues holds significant theoretical and practical value for alleviating caregiving pressures, promoting social capital accumulation, and advancing a shared social governance framework.

2. Literature Review and Theoretical

Foundation

2.1 Research Progress at Home and Abroad

In the international research context, the theoretical development of the Time Bank can be divided into three stages:

The first stage (1980-2000) focused on concept definition and model exploration. Cahn proposed the concept of "Time Dollar," emphasizing its function as a supplementary monetary system to promote community mutual assistance.

The second stage (2000-2015) shifted to empirical analysis and effect verification. Scholars such as Cress proved through follow-up investigations that elderly groups participating in Time Banks showed significant improvements in health indicators and reduced social isolation.

The third stage (2015 to the present) focuses on technological innovation and institutional integration. Recent studies have mostly focused on the application of blockchain technology in Time Banks. For example, Greek scholar Amanatidou (2022) proposed a cross-regional exchange model based on smart contracts to solve the problem of trust mechanisms.

Domestic research dynamics show the characteristic of "practice preceding theory." Wang Zehuai (2020) divided the Time Bank into two models: broad-sense (universal participation) and narrow-sense (low-age elderly serving high-age elderly). Meng Shuang (2024) pointed out based on the SWOT analysis of the Harbin case that the lack of policies and low digitalization are the main constraints on the development of Time Banks in northern regions. Dong Dengxin (2012) argued from the perspective of incentive mechanisms that the Time Bank can alleviate the "volunteer fatigue" in traditional mutual assistance elderly care, and its remunerative characteristics enable participants to form stable psychological expectations. In recent years, research hotspots have focused on standardization construction (He Hong, 2023) and technological empowerment (Chen Tibiao, 2023), emphasizing the need to build a national unified storage-circulation-exchange system.

2.2 Theoretical Foundation

Sharing Economy Theory: Robin Chase's three elements of the sharing economy—idle resources, sharing platforms, and universal participation—fit the Time Bank model. Low-age elderly's leisure time and skills are idle resources, matched through community or

digital platforms. This model creates a crisscross service network, meeting diverse elderly care needs while providing social and psychological benefits, enhancing participants' self-esteem and achievement.

Social Capital Theory: The Time Bank reshapes community relations by enhancing trust, norms, and networks. In Virginia, 79% of elderly members found it reliable for home-based care, while a UK survey showed team identity improved health more than living alone. This highlights the Time Bank's role in boosting social capital and cohesion.

Transaction Cost Theory: He Hong (2023) categorized Time Bank transaction costs into ex-ante (search, matching), in-transaction (transportation, negotiation), and ex-post (supervision, default handling). Efficient platform design, such as proximity matching, standardized contracts, and blockchain evidence storage, reduces these costs, enhancing the Time Bank's economic sustainability.

3. Development Status of the Time Bank Mutual Assistance Elderly Care Model

3.1 Global Evolution Context and Stage Characteristics

The Time Bank model evolves through three stages, with China showing leapfrog development while most Western countries are transitioning from the second to the third stage.

First Stage: Neighborhood Mutual Assistance (1980s–1990s)

Characterized by community-driven efforts (e.g., Vermont Time Bank), this stage featured limited service scope, manual record-keeping, and weak institutional support. It relied on strong community cohesion but lacked scalability and sustainability.

Second Stage: Social Organization Intervention (2000s–2010s)

Non-profits became key operators (e.g., Time Bank UK), establishing basic training and regulatory frameworks. The UK formalized participant responsibilities and training requirements, while Japan focused on cultural services to enhance elderly quality of life. Service diversification improved, but cross-regional exchange remained challenging.

Third Stage: Social Enterprise Participation (2020s–Present)

Business model innovations were introduced, with some US states allowing time credits to be

exchanged for commercial discounts (e.g., utility bill reductions). Technological platforms expanded the scope of universal deposit and exchange. Chinese cities like Shanghai and Nanjing adopted a "public welfare + market" dual-track system, though commercial integration remains limited.

Future Directions

China's rapid adaptation of advanced practices highlights the need for balanced commercial and social welfare integration. Future efforts should focus on optimizing incentives, enhancing technical platforms, and developing regulatory frameworks to support cross-regional exchanges and scalability.

3.2 Chinese Practice Models and Localized Innovations

China's Time Bank development began with the "paper time passbook" model in Tilanqiao Subdistrict, Shanghai in 1998, but it stagnated due to issues like passbook loss and difficulties in cashing out after relocation. Since 2010, driven by digitalization and aging, cities have explored diverse models:

Government-led Model (Shanghai): Civil affairs departments established a city-level information platform. By 2022, Hongkou District had 3,306 registered users, accumulating 9,249 time credits, mainly for low-risk services like emotional support and companionship. This model integrates the "Old Partner Program," mobilizing younger elderly to assist older ones, creating an intergenerational mutual assistance cycle.

Community Self-governance Model (Dongtai Community, Liuzhou): Relying on neighborhood committees, this model links the Time Bank with an elderly canteen, allowing volunteers to exchange services for meals. Among the 9,000 residents, 17.78% are over 60 years old. The strengths are high community familiarity and efficient matching, but it faces financial constraints, relying on external subsidies.

Social Enterprise Model (Nanjing): Technology companies developed mini-programs to manage service release, order receipt, evaluation, and online operations. Innovations include "time credit inheritance," enabling volunteers to transfer credits to relatives or donate them to public welfare accounts. For example, a 23-year-old volunteer reserved care time for her bedridden grandmother, highlighting intergenerational value.

However, China's Time Bank development is

regionally imbalanced. Eastern coastal areas enjoy high digitalization and clear policy support, while central and western regions face dual constraints of funding and technology. The Harbin case illustrates that despite a high elderly population proportion (21.98%, above the national average), Time Bank promotion is hindered by "three lows": low informatization, low policy integration, and low professional service supply. Addressing these bottlenecks is key to sustainable development.

4. Multidimensional Challenges to Sustainable Development

4.1 Institutional Deficiency: Lack of Policy guarantee and Standards

China's Time Bank faces three main challenges due to insufficient top-level design and lack of legal guarantees:

Fragmented Policy System: Only a few regions like Shanghai and Hebei have provincial-level regulations, with no national unified legislation. Harbin, despite support from Heilongjiang Province's 14th Five-Year Plan, lacks safety supervision and risk assessment mechanisms, making cross-regional exchanges difficult and weakening participant trust.

Lack of Incentive Compatibility Mechanisms: The Time Bank needs a sustainable motivation system combining material and spiritual incentives, unlike traditional volunteer services. Some regions simply copy volunteer service recording methods without tailored incentives. A survey in Liuzhou's Dongtai Community shows that younger elderly prefer immediate incentives (e.g., points for daily necessities), while younger volunteers prefer long-term guarantees (e.g., future care commitments), highlighting the need for diverse incentives.

Inadequate Supervision and Evaluation System: There is a lack of standardized processes for mediating service disputes, evaluating service quality, and identifying time credit value. Ignoring labor intensity differences (e.g., same credits for caring for self-care vs. disabled elderly) leads to lower service quality and potential moral hazards like false records and service exchange refusal, endangering public credibility.

4.2 Technological Lag: Data Isolation and Digital Divide

The lag in information platform construction

significantly hampers the large-scale development of the Time Bank, with specific dilemmas including:

System Isolation:

Communities use disparate registration systems with no interconnected data. For example, Liangcheng New Village Subdistrict in Shanghai developed a WeChat mini-program, but adjacent subdistricts must re-register. This fragmentation results in low resource matching efficiency. In Harbin, the lack of a platform means service matching must be done manually, with a response cycle exceeding 48 hours.

Digital Divide Among the Elderly:

Despite widespread mini-program use, less than 40% of elderly people use smartphones. In Dongtai Community, Liuzhou, most elderly rely on children or social workers to post needs, reducing information transmission efficiency. Volunteers also face challenges, such as Zhan Ninghui (62), who can use the order-receiving function but still needs technical support for issues like inaccurate positioning and network delays.

Data Security Risks:

The Time Bank stores sensitive user information, including identities, health conditions, and locations, but security is often inadequate. In 2023, a platform leaked thousands of user data, revealing flaws in encryption and access management. The limited use of trusted technologies like blockchain has raised public doubts about platform credibility, affecting participation.

4.3 Insufficient Participation: Cognitive Bias and Trust Dilemma

The sustainable development of the Time Bank relies on continuous user growth and an active mutual assistance ecosystem, but it currently faces three participation barriers:

Public Cognitive Bias:

A survey in Hebei showed only 32% of residents were aware of the Time Bank concept, with 60% equating it to "volunteer work." Many elderly view receiving services as "charity" and prefer government-purchased services or family care over mutual assistance.

Intergenerational Participation Imbalance:

In Shanghai, young volunteers (18% of registered users) mostly donate credits rather than use them. Reasons include high mobility and weak community belonging among young people, limited service types (e.g.,

companionship, shopping), and uncertainty about future exchanges.

Lack of Social Trust:

Traditional Chinese trust is based on acquaintances, while the Time Bank requires abstract trust in institutions. A survey in Liuzhou found residents worry about "time credit depreciation" and potential default events, which could trigger a chain trust crisis and system collapse.

4.4 Measurement Controversy: Dilemma of Service Standardization

The core innovation of the Time Bank is monetizing service time, but scientifically measuring service value remains a theoretical challenge:

Homogeneous Measurement Defects:

The current model uses "one hour of service = one time credit," ignoring differences in labor intensity and skills. For example, caring for disabled elderly requires more effort and skills than walking companionship, yet both earn the same credits. This method leads to a shortage of high-skill services, creating a "lemon market" effect.

Intertemporal Exchange Dilemma:

Service values may fluctuate over time. If future elderly care services are scarce, current time credits may depreciate. A value adjustment mechanism is needed. Additionally, mismatches between stored service types (e.g., housekeeping) and future needs (e.g., professional nursing) affect exchange efficiency.

Non-standardized Service Evaluation:

Services like emotional support and psychological counseling are hard to quantify. For example, Xu Min from Liangcheng New Village Subdistrict in Shanghai provided psychological support to an elderly person, who later entrusted her with a will for body donation. Such high-value services exceed simple time measurement. Evaluating intangible service value is a core challenge for Time Bank standardization.

5. Realization Paths for Sustainable Development

5.1 Institutional Design: Constructing a National Framework

To address the sustainability challenges of the Time Bank, a multi-level institutional guarantee system is essential:

Top-Level Legislative Design:

Add a "mutual assistance elderly care" chapter to the Elderly Care Service Regulations to clarify the legal status and regulatory body of the Time Bank. The Ministry of Civil Affairs should lead in formulating the Time Bank Operation and Management Measures, specifying access standards, risk reserves, and dispute resolution mechanisms. Promote cross-regional coordination, such as universal deposit and exchange agreements in the Yangtze River Delta, and pilot a "time credit conversion coefficient" based on regional aging levels.

Incentive Compatibility Policy Package:

Individual Level: Include time credits in "personal elderly care accounts" for fee deductions at care institutions; establish a "time millionaire" honor system.

Enterprise Level: Provide tax incentives for donations to Time Bank platform development; allow employees to convert paid vacations into public service time.

Social Organization Level: Set up special funds for government-purchased services and provide incentive subsidies for outstanding performance.

Standardized Evaluation System:

Service Classification: Categorize services by intensity (low/medium/high) and professionalism (general/professional). For example, Shanghai assigns a 1:1.5 coefficient for "medical care," granting 1.5 credits per hour.

Quality Evaluation: Use "double-blind evaluation" + third-party spot checks, with results impacting credit scores.

Value Adjustment: Establish a dynamic adjustment model for time credit purchasing power, referencing the CPI index, to mitigate inflation risks.

5.2 Technological Innovation: Empowering with Blockchain and AI

To break through the development bottleneck of the Time Bank, digital technology is essential, requiring a "one chain, one cloud, two terminals" technical support system:

Blockchain Credibility Platform:

Use a consortium blockchain architecture (e.g., Hyperledger Fabric) with nodes from civil affairs departments, banks, and hospitals to create tamper-proof and traceable service records. Shanghai could pilot cross-bank time credit exchange, allowing users to check cross-regional balances via mobile banking. Smart contracts can automate exchange rules, such as

"inheritance clauses" for unused credits.

Artificial Intelligence Matching Engine:

Develop a recommendation algorithm based on user profiles and service needs. Liuzhou's Dongtai Community pilots a "demand prediction model," triggering home visits by analyzing utility data of elderly living alone. Voice interaction supports dialect commands (e.g., "schedule a blood pressure check tomorrow") and matches certified volunteers.

Digital Inclusive Design:

Hardware Adaptation: Develop one-click call devices linked to the Time Bank customer service center.

Intergenerational Assistance: Encourage young volunteers to assist elderly with APP usage, storing service time as credits.

Offline Backup: Parallel paper service cards with electronic accounts, with regular data synchronization by community workers.

5.3 Multi-stakeholder Collaboration: Ecosystem Co-construction

A sustainable Time Bank needs to build a collaborative ecosystem of "government-market-society":

Transformation of government roles. From direct operator to rule maker and resource coordinator. Municipal governments establish a "Time Bank Development Fund," district-level establish regulatory committees (members include NPC deputies and elderly association representatives), and communities are responsible for service implementation. Harbin can learn from the experience of Dongfeng Community in Pingfang District: the government provides venues and start-up funds, and social organizations are responsible for operation, forming a "separation of government and society" model.

Activation of market entities. Guide enterprises to participate in CSR (corporate social responsibility) projects:

Insurance institutions: Develop "Time Bank performance insurance" to cover risks such as institutional bankruptcy or refusal to exchange.

Chain merchants: Allow time credits to partially offset consumption. For example, Shijiazhuang Convenience Store connects to the Time Bank, and 1 time credit offsets 5 yuan in cash.

Elderly care enterprises: Commit to giving priority to accepting elderly with high time credit savings and providing fee discounts.

Intergenerational integration projects. Design

all-age participation projects:

University student "time partners": Incorporate volunteer services into credits, such as Fudan University students recording oral histories for old Party members.

Low-age elderly "silver wisdom pool": Organize retired teachers and doctors to form professional service teams to contribute high-level human capital.

Family account system: Support three-generation circulation of time credits, such as children exchanging services for parents, enhancing young people's participation motivation.

5.4 Classified Measurement: Dynamic Value System

Establishing a scientific and reasonable service measurement system is the core to ensure fairness:

Multi-dimensional service evaluation model.

Design an evaluation matrix including:

Labor intensity indicators: Physical consumption (Level 1-5), skill complexity (general/professional)

Emotional value indicators: Psychological comfort level (e.g., end-of-life care coefficient increased by 30%)

Social benefit indicators: Service scarcity (weighted services in remote areas).

Dynamic exchange mechanism. Establish a "Time Credit Value Adjustment Fund." When a certain type of service is in short supply, the time credit income for that type of service is automatically increased to guide optimal resource allocation. At the same time, set differentiated exchange ratios for basic service packages (such as companionship chat 1:1) and professional service packages (such as wound care 1:1.8).

Non-monetary incentive compensation. Add honorary rewards for high-emotional-value services, such as the "Soul Partner" medal; promote Shanghai Sheng Meifen's "time donation" model, where volunteers donate 27 time credits to elderly orphans, gaining moral satisfaction and social praise. Combining spiritual incentives with material rewards forms a comprehensive value feedback system.

6. Case Studies and Practical Enlightenments

6.1 Harbin: Policy-Driven Integration Model

Harbin, a typical aging city in Northeast China

(21.98% aged 60+), has strong policy-driven "Time Bank" practices. Launched in Dongfeng Community in March 2021, it expanded to three communities by 2024, with over 800 registered users and 15,000 associated users. Innovations include:

Multi-stakeholder Collaboration:

A three-level framework of "civil affairs leading-street implementing-social work organization operating." The government sets service lists and training standards; communities provide venues; third-party organizations manage operations. This clear division improves efficiency.

Multi-dimensional Points Application:

Time points can be used for:

Future service exchanges

Discounts on community services (e.g., elderly canteen meals)

Exchanging for physical goods (e.g., rice, flour, oil)

Converting to "moral credit points" for priority in evaluations.

Challenges and Responses: Harbin faces low digitalization and insufficient professional services. SWOT analysis shows strengths (large elderly population, clear policy support), weaknesses (funding shortages, lagging informatization), opportunities (community intelligent upgrading), and threats (mismatched professional supply). The municipal government plans to integrate the "Time Bank" into smart city construction, completing a unified platform by 2025.

6.2 Hongkou District, Shanghai: Technology-Enabled Fine Operation

Hongkou District, Shanghai, launched in 2019, exemplifies the technology-driven Time Bank model. By October 2022, it had 3,306 users, 1,423 service recipients, 1,329 completed services, and 9,249 time credits generated. Its key features are:

Full-Process Digitization:

A WeChat mini-program creates a closed loop for "demand release-order receipt-service-evaluation-storage." Users like Sheng Meifen (63) can exchange 27 credits for services like movie tickets, TCM diagnosis, or photography courses. LBS positioning pushes nearby orders, and two-way evaluations affect credit scores.

Intergenerational Feedback Innovations:

Activities like "Celebrating Birthdays for Elderly Orphans" let young volunteers earn

credits that can be used for future care, transferred to relatives, or donated to the community pool, enhancing credit liquidity and value.

Cognitive Improvement Strategies:

To boost participation, Hongkou District launched an "image IP collection competition" for cartoon promotion, set up "digital counselors" to assist elderly users, and produced multilingual brochures (including Shanghai dialect) to reduce cultural barriers.

6.3 International Experience: UK Medical Integration and Japanese Cultural Activation

UK: NHS Linkage Model

Time Bank UK integrates deeply with the National Health Service (NHS). In Bristol, doctors issue "social prescriptions" for chronic disease patients to join Time Bank activities. For example, asthma patients saw a 70% reduction in emergency hospitalizations, saving significant medical costs.

Lessons for China:

1. Use medical insurance funds to purchase professional services (e.g., chronic disease management).
2. Involve medical staff as Time Bank consultants.
3. Include participation rates in healthy community evaluation indicators.

Japan: Cultural Community Construction

Japan's "Dandelion Time Bank" in Osaka focuses on elderly cultural capital. Activities include traditional tea ceremonies and gardening, where younger elderly teach skills to earn time credits for future care. Innovations include:

- i. A "skill certification system" offering extra credits for qualified skills.
- ii. Partnerships with local merchants to exchange credits for cultural supplies (e.g., washi paper, brushes).
- iii. A "silver hair theater troupe" whose performance income funds Time Bank operations.

These practices highlight the need for Time Bank sustainability to be rooted in local culture. China can explore models like "Time Bank + filial piety culture" or "Time Bank + neighborhood courtyard."

7. Conclusions and Prospects

This study analyzes the development status, challenges, and paths of the "Time Bank" mutual assistance elderly care model, reaching the

following conclusions:

First, the Time Bank, as an innovative application of the sharing economy in elderly care, offers a low-cost and high-humanistic-value solution to population aging. It activates the human capital of low-age elderly and promotes intergenerational mutual assistance by constructing an intertemporal exchange system based on time currency for optimal resource allocation.

Second, China's Time Bank faces four sustainability bottlenecks: lack of top-level design and legal guarantee; information islands and digital divide; public cognitive bias and intergenerational imbalance; and service standardization dilemmas. These challenges require systematic reforms.

Finally, future sustainable development should follow a four-dimensional path: establishing a national framework and legal guarantee; applying blockchain and AI for platform empowerment; achieving multi-stakeholder participation; and creating a scientific and dynamic evaluation model. The "policy + technology + culture" trinity model, as proven in Harbin and Shanghai, is highly feasible.

Looking ahead, the Time Bank should focus on three trends: expanding life cycle accounts to encourage early youth participation; experimenting with international time credit exchanges for cross-border service value conversion; and building a metaverse platform for digital services

like virtual companionship and online diagnosis. Population aging presents both challenges and opportunities to innovate intergenerational relations and social capital. The successful practice of the Time Bank will provide a new paradigm for Chinese-style elderly care and contribute to global aging governance.

References

- [1] Dong Dengxin. Time Bank: A New Model of Mutual Assistance Elderly Care [J]. Sunflower Insurance Network, 2012(6): 12-15.
- [2] Meng Shuang. Research on the "Time Bank" Mutual Assistance Elderly Care Model in Harbin Based on SWOT Analysis [J]. Knowledge Library, 2024(5): 22-24.
- [3] Shanghai Aging Science Research Center. Report on the Development of Shanghai Time Bank (2023) [R]. Shanghai: Shanghai Aging Science Research Center, 2024: 12-

- 15.
- [4] Shanghai's Aging Rate to Exceed 40% in 2025! Exploration of the "Time Bank" Mutual Assistance Elderly Care Model [J]. Pension Home Network, 2024(3): 8-11.
- [5] "Time Bank" and Mutual Assistance Elderly Care [J]. Xuanjiangjia Network, 2022(9): 15-18.
- [6] He Hong, Liu Jiawen. The Sustainable Development of Time Banks: Sharing Implications, Transaction Costs, and Operational Framework [J]. Journal of Huaqiao University (Philosophy and Social Sciences Edition), 2023(4): 48-58.
- [7] Time Bank: Unlocking a New Model of "Mutual Assistance Elderly Care" [N]. Hebei News Network, 2022-08-15(05).
- [8] Practices and Enlightenments of "Time Bank" Mutual Assistance Elderly Care [J]. Ifeng.com, 2018.
- [9] "Time Bank" and Mutual Assistance Elderly Care [J]. Study Times, 2022.
- [10] From "Time Bank" to "Emotional Account": The Generation and Maintenance of Trust in Mutual Assistance Elderly Care [EB/OL]. Guangming Online, 2025-04-14 [2025-04-14].
- Research on the Mutual Assistance Elderly Care Model in Urban Communities: Taking the "Time Bank" in Xinyu Community, Nanning as an Example [EB/OL]. Hanspub.org, [Date Not Mentioned].
- "Hello, I'd Like to Deposit Some Time!" The New Elderly Care Model "Time Bank" Is on Fire! [EB/OL]. Dahe Daily, 2024-10-22 [2024-10-22].
- Suggestions on Improving the "Time Bank" Mutual Assistance Elderly Care Model [EB/OL]. Shanghai Minjian, 2024-06-06 [2024-06-06].
- [14] Volunteer Service for Elderly Care: Strengthening "Universal Deposit and Withdrawal"—Observation on the "Time Bank" Mutual Assistance Elderly Care Model [EB/OL]. Economic Reference News, 2023-07-25 [2023-07-25].