### Research on the Construction of the Old Age Institutions in Shanxi Province Based on PPP Model

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Keywords: Old age institutions; Shanxi Province; PPP model; SWOT analysis

**Abstract:** With the growing problem of population aging, Shanxi Province is facing increasing pressure from old-age care services, and the existing "public" and "private" modes of pension institutions are difficult to meet the market's demand for aged care services. Based on the relevant theories of PPP mode and the specific situation of the old age care service industry in Shanxi Province, this paper conducts SWOT analysis on the feasibility of applying PPP mode to the construction of old age care institutions in Shanxi Province, and concludes that it is feasible and necessary to establish a PPP project for pension institutions in Shanxi Province. Finally, based on the actual situation, it put forward feasible suggestions.

### 1. Status of Shanxi's old age care service industry

The status quo of the old-age care service industry in Shanxi Province is not optimistic: First, from the perspective of demand, the aging situation in Shanxi Province is becoming more and more serious. By the end of 2017, the elderly population over 65 years old is about 3.684 million, 9.95% of the total population of Shanxi Province, and the main family model is "421 characteristics", which increases the burden of old age care. Secondly, from the perspective of supply, the supply of old age beds in Shanxi Province is insufficient. By the end of 2018, the number of residential beds in Shanxi Province was 75,441, providing accommodation. There are 552 elderly and disabled services providing accommodation, with 50382 beds. And the shortage of affordable basic aged care services and improved mid-range aged care services is particularly serious.

#### 2. Problems in the old age care institutions in Shanxi Province

With the aging of the population becoming ever more serious, the governments at all levels and relevant departments in Shanxi Province have actively adopted various measures to adapt to the local pension situation. However, there continue to be some problems in the pension service industry in Shanxi Province.

# 2.1 The number of beds in the old age care institutions is insufficient, and the pension service is in short supply

The supply of beds in Shanxi old age care institutions, especially public pension institutions, is insufficient. There are a total of 125,823 old age beds, with an average of 34 beds per 1,000 elderly people, far below the level of developed countries and regions. Moreover, the government's funds for bed maintenance are insufficient every year, and some damaged equipment and beds are eliminated every year but cannot be replenished in time. At present, the problem of insufficient supply of affordable basic aged care services and improved medium quality aged care services in Shanxi Province is very prominent. The main reason for this problem lies in the government's fiscal deficit pressure, the government's financing channels are single, and the government needs to invest

DOI: 10.25236/etmhs.2019.303

in transportation, water conservancy, environmental protection and other projects every year, and cannot guarantee the funding to invest old age institutions.

### 2.2 The pension supply structure is unreasonable, and the old age resources are not maximized

The supply structure of old age care services is unreasonable. In some areas, there are numerous old age care institutions but some of them are not occupied. In other areas, the beds are seriously inadequate. This problem is prominently reflected in the private pension institutions. First, the demand caused by unreasonable pricing is discouraged. The private sectors pay too much attention to profitability and ignore public welfare, so they set higher prices. Second, the investment failure caused by information asymmetry is in the project construction. The private sectors don't fully grasp the local pension need, and the establishment of old age care institutions in areas with low demand leads to no-stay. The irrational structure of the old age supply service has caused waste of resources.

### 2.3 The service quality of the old age care institutions is not high and the service type is single

First of all, from the service providers, the service staff of the old-age care institutions in Shanxi Province are mostly laid-off workers recruited from the society or volunteers who provide services voluntarily, and their professional level is not high. Secondly, from the perspective of the environment of old-age care institutions, due to the limitations of the environment such as funds and policies, the existing Shanxi old-age care institutions are in a poor environment. Finally, from the perspective of management, public pension institutions are operated by the government, and government personnel do not have professional management capabilities. Although the private pension institutions have professional talents, they have limited private strength and are unable to carry out large-scale professional services, staying at the level of providing the most basic living places and entertainment for the elderly.

#### 3. Feasibility analysis of establishing a PPP project for the aged care institution

#### 3.1 Strengths

## 3.1.1 The government and the private sector combine to give play to their respective advantages to solve the imbalance of supply structure

There is an unreasonable structure of the provision of old age care services in Shanxi Province. Although the number of old age institutions is increasing, many private-age care institutions have left their beds in the old age institutions idle due to lack of scientific planning. If the PPP model of the old age care institution is established, the government will play a unified arrangement function, and the private sector will be the specialized task of financing, construction, operation, etc., providing the best quality service for the elderly at the lowest cost and improving the irrational supply structure of the old age service in Shanxi Province.

# 3.1.2 Diversification of financing methods, making full use of social capital, inciting government capital leverage, and guaranteeing the bed supply of pension institutions

There are only 34 old age beds for every 1,000 elderly people in Shanxi Province. The PPP model allows social capital to cooperate with government departments, and the two jointly contribute to the bed. On the one hand, the introduction of social capital has expanded the total investment and can build more old age beds. On the other hand, the cooperation between the two has increased the leverage of government funds, which alleviates fiscal pressure.

## 3.1.3 Give full play to the government supervision function and the ability of social professional management talents to effectively improve the quality of old age services

The existing old age care institutions in Shanxi Province only provide a single-based pension service. Most of the service personnel are retired laid-off workers or volunteers, and they cannot provide professional and personalized services. The PPP model can fully introduce professional

medical care and management personnel for the aged care institutions. The service supply is rationally planned and the market-based pension system is built. Different types of aged care services are divided to meet the individual needs of the market.

#### 3.2 Weaknesses

#### 3.2.1 PPP mode does not fundamentally solve the problem of profitability and public welfare

The PPP model combines the government with the private sector, sharing benefits and sharing risks. The government can formulate corresponding control policies to ensure the public welfare of the service of the old age care institutions, which can promise the public welfare of service. But the project company will still consider the profitability of the project itself when undertaking relevant tasks. The two sides want to reach a cooperative relationship unless both make some concessions. That is, the PPP model fails to fundamentally solve the essential contradiction between profit and public welfare, but only improves the present situation of public pensions' low profit and private pensions' low public welfare.

## 3.2.2 The construction of old age care institutions has the characteristics of long-term service provision, with long payback period and high risk

The construction of the old-age care institution itself belongs to the public social service project, which has two characteristics of public welfare and long-term service. These two characteristics determine that the project has low profit, slow capital recovery, and extended project duration. Although the government department and the private sector share the risks, the investment risk of the project is larger than some industries with fast capital recovery and large profit margin. For some companies that value the "profit-seeking" factor, the PPP model of the pension agency project is not the best investment project option.

#### 3.3 Opportunities

#### 3.3.1 Government policy

In 2017, the documents of the General Office of the People's Government of Shanxi Province "Implementation Opinions of the General Office of the People's Government of Shanxi Province on Further Stimulating the Investment Vitality in the Social Sector" pointed out: "The medical and pension areas with large social needs, insufficient supply, and high voices of the masses will be as soon as possible broken through". This shows that the government departments have realized the urgent need of the pension service industry and supported the introduction of social capital, providing development space and opportunities for the development of the PPP model.

#### 3.3.2 Economic development

The data of the statistical yearbook of 2018 in Shanxi Province shows that in 2017, the per capita disposable income of Shanxi Province is 20,420 yuan per year, and the consumption level is continuously improved. The government's subsidies and preferential policies for the elderly are gradually improved and comprehensive. The old age service market is gradually expanding with the increase of demand, providing a development market for the construction of the PPP model.

#### 3.3.3 Experience

Some developed regions at home and abroad have successfully applied the PPP model in the aged care service industry, and many projects have been put in the public infrastructure industries such as water conservancy construction and transportation in Shanxi Province. The project has been successfully established in the aged care service industry and is currently in the implementation stage. This shows that the PPP model can be used for successful experience in the old age service industry in Shanxi Province.

#### 3.4 Threats

#### 3.4.1 The lack of a sound legal system to clarify the rights and responsibilities of both parties

The PPP model is a new type of public service development with public and private cooperation. Although the government has paid attention to the legislative construction of the PPP model, it still stays at the level of administrative regulations and does not have perfect legal guarantees. And the current regulations and policies do not clearly point out the responsibility and profit distribution between the public and private parties when using the PPP model, which makes social capital have more concerns when investing. The regulations will make many investors afraid to invest.

### 3.4.2 Shanxi Province PPP model pension institutions can learn from fewer successful cases

At present, there is only one successful pension project in Shanxi Province—PPP project of Jiaocheng County Social Welfare Maintenance Institute in Luliang City, Shanxi Province. The project adopts BOT mode, whose contract period is 22 years. It is now in the implementation stage and has not yet reached the handover stage. It is unknown whether it will be successful or not. The construction of a PPP-type pension institution requires the government and the private sector to explore a correct path for local pension need during the cooperation period, which increases the risk of project investment to a certain extent.

#### 4. Conclusions and recommendations

## 4.1 Promote the legislative work of the development of PPP mode in Shanxi Province and establish a sound legal system

PPP model is also a new model for providing municipal services. The successful combination of the two requires a sound legal and regulatory system. First of all, there is a need for clear provisions to stipulate that the PPP model of the old-age care institutions should guarantee the public social welfare and public safety of the aged care services, and the government has an effective supervisory role. Second, public-private partnerships must establish an equal cooperative relationship. Finally, according to each project characteristics, clarify the respective tasks of the two parties in terms of construction, financing, operation and the profit distribution of the project.

#### 4.2 Adopt the TOT model to transfer public pension institutions to the private sector

The TOT model is mainly used to revitalize some existing public pension institutions with weak vitality. The government selects the cooperation units through open tendering, and formulates contracts to transfer the ownership of the old age care institutions to the private sector. The private sector is fully authorized during the contract period to provide specialized management and aged care services. At the end of the contract period, the private sector transfers all project funds and related rights to the government department, and the project ownership is owned by the government. At this point, the government can conduct an inspection based on the operation of the cooperation department during the contract period and the public's response, and decide whether or not to continue cooperation.

### 4.3 Using the ROT model to transform idle assets such as resorts into quality old age care institutions

The government can formulate favorable policies and encourage institutions and enterprises to transform their existing stocks of idle resorts, training institutions, nursing homes, etc., and build them into old age institutions. This model can not only make full use of idle resources, but also bring profits to the enterprise. At the same time, government departments can also reduce certain construction capital investment, and the elderly can enjoy the good old age in a beautiful environment, which can improve the economy of Shanxi Province by creating a high-quality old-age service industry, and form a branded, personalized and professional pension service industry chain.

#### 4.4 Creating a brand-age-care institution that integrates medicine, nutrition and health

The PPP model is used to build old age care institutions, which makes government departments, social capital, and medical units work together to introduce professional medical talents for the aged care institutions, and form a targeted training plan with local universities to create high-end branded pension institutions. In the old age institutions, a diversified service system with professional medical care and health care services is established with the core of basic old-age service.

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