

The Influence of China's Tax Policy on the Elderly Care Service Industry

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Abstract: This paper aims to analyze the impact of China's tax policies on the elderly care service industry. With the aging population and social-economic development, elderly care services have become an important sector. This paper reviews relevant literature, policy documents, data sources, questionnaire surveys, and research findings to study the role of China's tax policies in promoting the development of the elderly care service industry. Several policy recommendations are proposed based on the results obtained from data modeling.

Keywords: Aging population, Old-age dependency ratio, Elderly care service industry, China's tax policies.

1. Introduction

Currently, China's elderly care service industry has great development potential and room for growth. With the increasing aging population, the market demand for elderly care services is continuously expanding. However, for various reasons, the development of the elderly care service industry still lags behind, and both the market size and service quality need to be improved.

According to the "Statistical Bulletin on the Development of Civil Affairs in 2021", by the end of 2021, there were a total of 358,000 elderly care institutions and facilities nationwide, with a total of 8.159 million beds. Among them, there were 40,000 registered elderly care institutions, a year-on-year increase of 4.7%, with 5.036 million beds, a year-on-

year increase of 3.1%; there were 318,000 community elderly care service institutions and facilities, with a total of 3.123 million beds. By the end of 2021, a total of 39.947 million elderly people enjoyed elderly subsidies nationwide. Among them, 32.466 million elderly people received high-age subsidies, 903,000 elderly people received nursing subsidies, 5.736 million elderly people received elderly care service subsidies, and 842,000 elderly people received comprehensive subsidies. The national expenditure on elderly welfare funds reached 38.62 billion yuan, and the elderly care service funds amounted to 14.49 billion yuan. The proportion of elderly care institutions has increased reasonably.

According to data from the National Bureau of Statistics, both the number of participants and the amount of urban and rural residents' pension insurance have steadily increased. However, there are also some issues that need to be addressed.

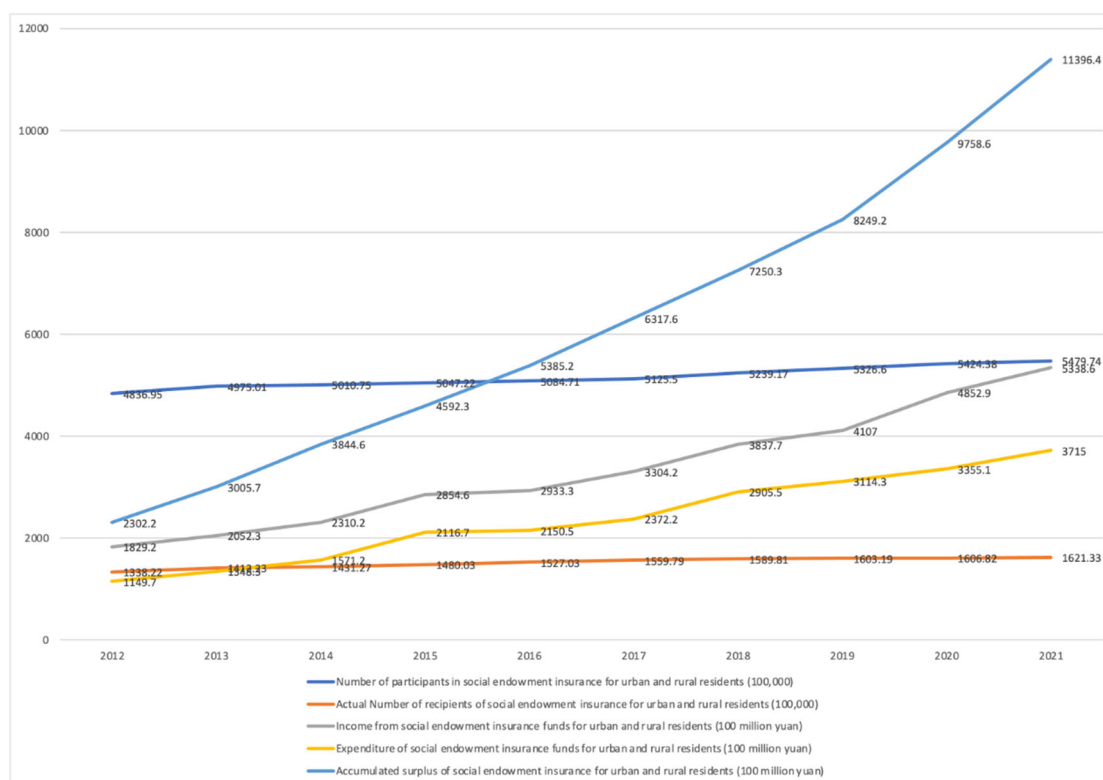


Figure 1. Urban and Rural Residents' Pension Insurance Situation

1.1. Service quality needs to be improved

With the increasing elderly population, the current elderly care facilities are unable to meet the demand. Many regions have outdated and small-scale elderly care institutions with inadequate service quality. As a result, some elderly individuals are even left to take care of themselves at home.

Low Quality of Elderly Care Services: In elderly care institutions, seniors require more than just accommodation; they need personalized services and compassionate care. However, presently, many elderly care institutions suffer from low service quality, poor attitudes, a lack of skilled nursing staff, and even instances of elder abuse.

1.2. The number of elderly care workers is insufficient

The field of elderly care services encompasses a wide range of areas, including daily living assistance, meal delivery, health promotion, health consulting, disease prevention, healthcare, medical rehabilitation, nursing care, wellness management, home care, long-term care insurance, household services, elderly products, retirement insurance, and cultural activities. The demand for elderly care services requires a significant number of care providers.

According to statistics, there are currently 78 full-time elderly care professionals per 1,000 elderly individuals, while the United Nations recommends a ratio of at least 1 full-time elderly care professional per 100 elderly individuals. Therefore, the Chinese elderly care service industry needs to increase recruitment and training efforts to meet the growing demand.

1.3. Elderly care services cost a lot

Elderly care services are long-term and high-cost social services. Due to the lack of market competition and government subsidies, the cost of elderly care services is prohibitively high, exceeding the financial capabilities of many elderly individuals.

Based on the aforementioned issues, this article explores investors' understanding, investment experience, and investment amounts in the elderly care service industry.

Through a questionnaire survey, it conducts correlation analysis and regression statistical analysis to study the relationship between investors' understanding and concerns regarding value-added tax, corporate income tax, deed tax, property tax, and urban land use tax, as well as the impact of various tax policies on the elderly care service industry.

2. Population Aging Background

2.1. Aging of population

Population aging refers to the dynamic process in which the proportion of the elderly population increases correspondingly due to a decrease in the birth rate and an increase in life expectancy, resulting in a decrease in the number of young population and an increase in the number of older population. According to the United Nations' classification criteria for aging, a country is considered mildly aging when the proportion of the population aged 60 and above exceeds 10% or the proportion of the population aged 65 and above exceeds 7%; moderately aging when the proportion of the population aged 60 and above exceeds 20% or the proportion of the population aged 65 and above exceeds 14%; and severely aging when the proportion of the population aged 60 and above exceeds 30% or the proportion of the population aged 65 and above exceeds 21%.

In China, the proportion of the population aged 65 and above reached 7% in the year 2000, officially entering an aging society. In 2021, the proportion of the population aged 65 and above surpassed 14%, indicating a moderate aging society. By the end of 2022, China's total population was 1,411.74 million, with 209.78 million people aged 65 and above, accounting for 14.86% of the total population. China not only has a large elderly population base but also experiences rapid aging. Some developed countries took the following number of years to transition from an aging society to a moderately aging society: France (115 years), Sweden (85 years), the United States (69 years), and even Japan, which experienced rapid population aging, took 26 years, while China accomplished this transition in just 22 years. This demonstrates the fast pace of aging in China.

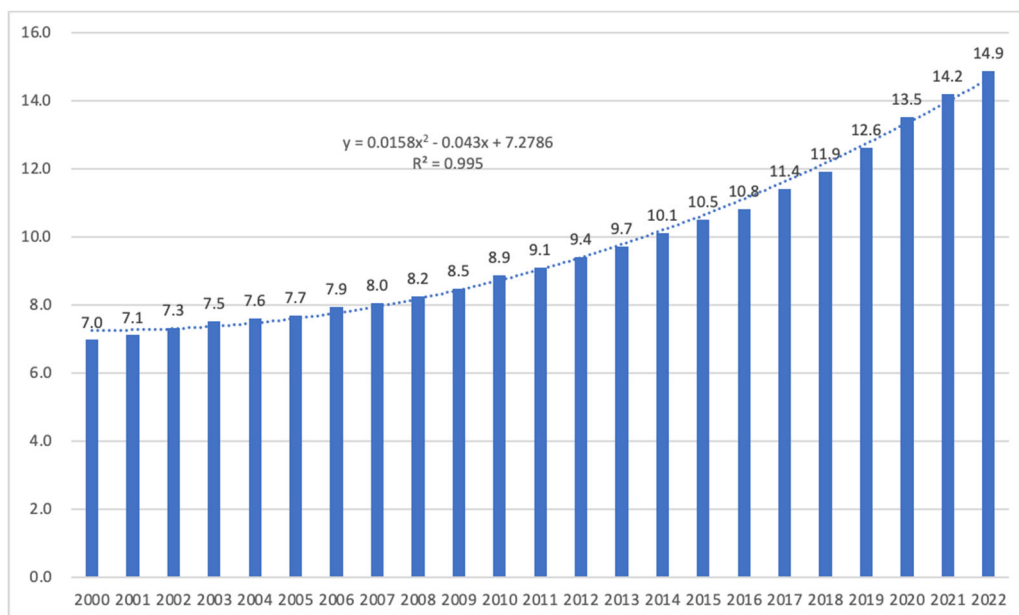


Figure 2. Proportion of Population Aged 65 and Above (%)

2.2. old-age dependency ratio

Old-age dependency ratio, also known as the elderly support ratio, refers to the ratio between the number of elderly individuals and the working-age population in a given population, usually expressed as a percentage. In 2021, the

population aged 65 and above in China reached 212 million, and the old-age dependency ratio surpassed the 20% mark for the first time in recent years (i.e., the ratio of the population aged 65 and above to the population aged 15-64). Prior to 2000, China had a consistently low old-age dependency ratio, remaining below 10%.

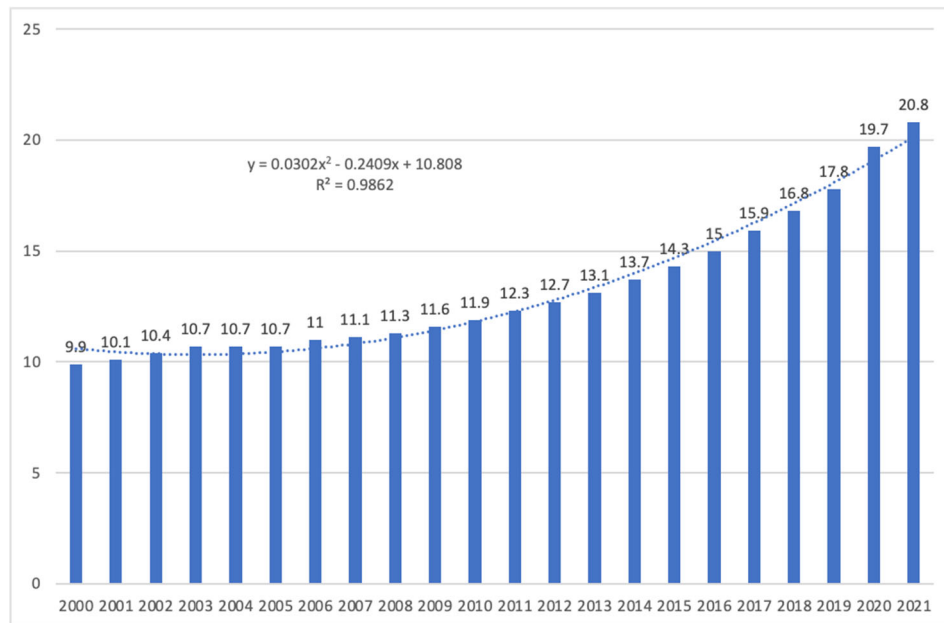


Figure 3. Old-age dependency ratio (%)

This indicates that since entering an aging society, China has been experiencing a significant trend characterized by a large elderly population, rapid growth, increased share of older age groups, prevalence of disability, and empty-nest households. This trend is further compounded by the country's situation of aging before becoming wealthy, the shift towards smaller family structures, and the lagging social security system. As a result, the issue of elderly care has become exceptionally urgent, imposing substantial pressure on the demand for elderly care services and presenting new challenges for the government and society.

3. The Influence of Tax Policy on Elderly Care Service Industry

Based on the retrieval of the keywords "elderly care services taxation" on the China National Knowledge Infrastructure (CNKI) database, a total of 431 literature articles were found on the relevant subject, as shown in Figure 4. The research topics primarily revolve around "elderly care services" and "fiscal and taxation policies". The number of publications has shown an upward trend from 2004 to 2022, indicating its potential as a future development trend.

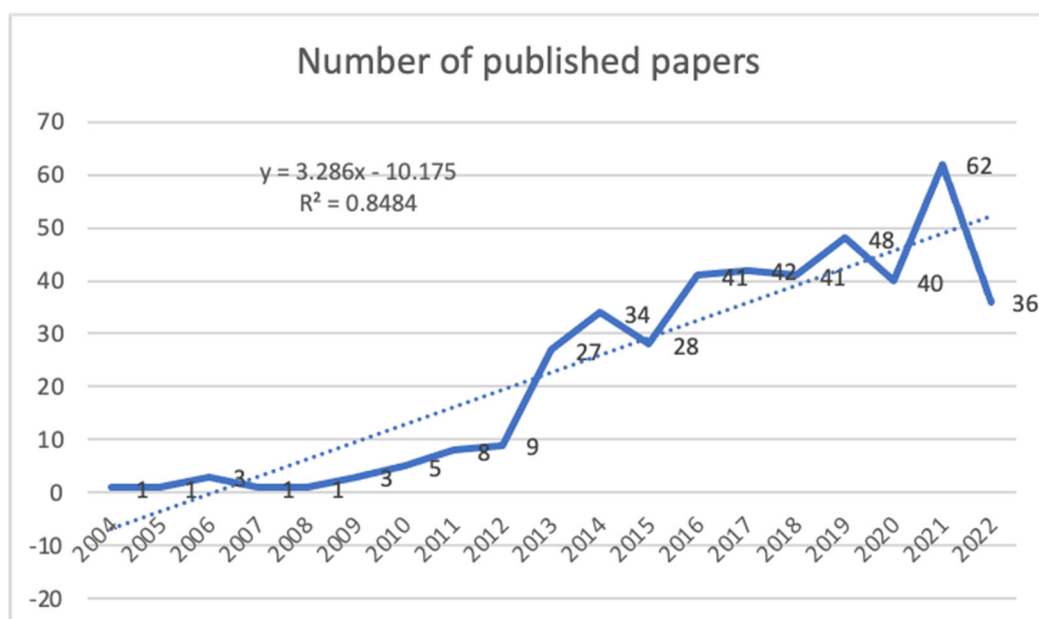


Figure 4. Number of published papers

Figure 5 reveals that the majority of articles are focused on the themes of "elderly care services" and "elderly care service industry", followed by "fiscal and taxation policies", with a total of 177 articles published. Among these 20 themes, there

is a significant amount of research dedicated to the connection between elderly care services and taxation policies, indicating that it is currently a research hotspot and a potential future development trend worth exploring.

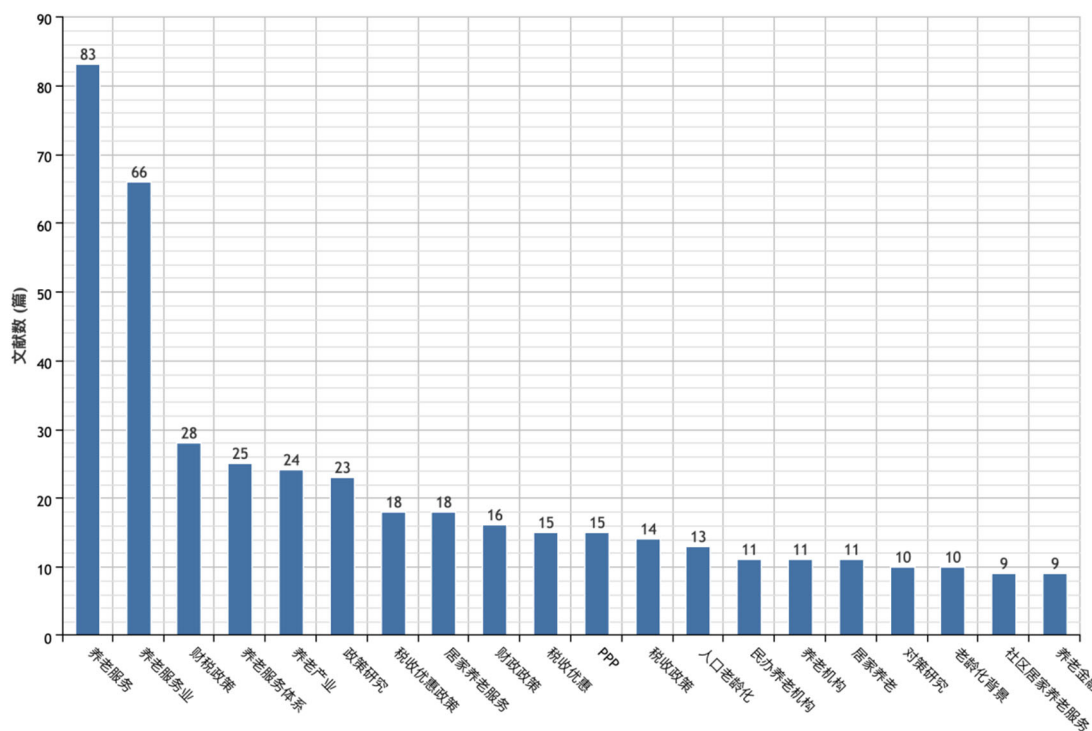


Figure 5. Related topics of "Taxation of Elderly Care Services"

The questionnaire for this study was conducted through an online survey in China on March 24, 2023, with a total of 351 responses. The demographic variables' statistical results are as follows: 1. Gender: Males accounted for 36.18%, while females accounted for 63.82%. 2. Age: 8.26% were aged 20 and below, 37.89% were aged 21-30, 11.68% were aged 31-45, 39.32% were aged 46-65, and 2.85% were aged 65 and above. 3. Education level: 22.51% had a high school education or below, 24.5% had a college education, 46.72% had a bachelor's degree, and 6.27% had a graduate degree or higher. 4. Occupation: 37.61% were students, 38.75% were employed, 11.11% were self-employed, 11.97% were retirees, and 0.57% had other occupations.

The statistical results of investors' investment behavior in the elderly care service industry are as follows: 1. The average level of investment understanding is 2.39, with a standard deviation of 0.82, kurtosis of 0.76, and skewness of 0.73. 2. The average level of investment experience is 0.28, with a standard deviation of 0.68, kurtosis of 8.50, and skewness of 2.83. 3. The average investment amount is 17,770.66, with a

standard deviation of 51,949.82, kurtosis of 50.38, and skewness of 6.52.

This study examines the correlation between investors' investment behavior (investment understanding, investment experience, investment amount), investors' perception of the elderly care service industry, value-added tax, corporate income tax, deed tax, property tax, and urban land use tax. As shown in Table 1, investors' perception of the elderly care service industry, value-added tax, corporate income tax, deed tax, property tax, and urban land use tax are all moderately and positively correlated with investment understanding, investment experience, and investment amount. The influencing factors, including investors' perception of the elderly care service industry, value-added tax, corporate income tax, deed tax, property tax, and urban land use tax, and investment understanding, investment experience, and investment amount, vary to some extent as they increase, but the magnitude of change is relatively small, and there are certain differences between the changes.

Table 1. Correlation of investment behavior and influencing factors of the elderly care service industry

influence factor	investment behavior		
	IUD	IE	AI
ICPSI	0.34(0.000***)	0.263(0.000***)	0.089(0.096*)
VAT	0.26(0.000***)	0.266(0.000***)	0.183(0.001***)
CIT	0.284(0.000***)	0.238(0.000***)	0.228(0.000***)
DT	0.281(0.000***)	0.347(0.000***)	0.221(0.000***)
PT	0.283(0.000***)	0.261(0.000***)	0.223(0.000***)
ULUT	0.323(0.000***)	0.241(0.000***)	0.19(0.000***)

Note: ***, ** and * represent significance levels of 1%, 5% and 10% respectively

IUD:Investment Understanding Degree
 IE:Investment Experience
 AI:Amount Of Investment
 ICPSI:Investors' Cognition Of The Pension Service Industry
 VAT:Value-added Tax
 CIT:Corporate Income Tax
 DT:Deed Tax
 PT:Property Tax

ULUT:Urban Land Use Tax

The present study conducted a stepwise regression analysis with the dependent variables being the level of investment understanding, investment experience, and investment amount. The independent variables included gender, age, education level, occupation, investment purpose, investors' perception of the elderly care service industry, value-added tax, corporate income tax, deed tax, property tax, and urban land use tax.

Table 2. Results of stepwise regression model analysis table

	IUD	IE	AI
constant	0.794***	-0.845***	-31104.549***
ICPSI	0.084***	0.038**	
CIT			5888.482***
DT		0.1***	
ULUT	0.091***		
Educational level			12041.247**

Note: ***, ** and * represent significance levels of 1%, 5% and 10% respectively

$$IUD=0.794+0.084*ICPSI+0.091*ULUT$$

Based on the positive regression coefficients, it can be inferred that there is a positive correlation between these independent variables and the level of investment understanding. Further investigation is warranted to examine the impact of these independent variables on investors' investment behavior. It is expected that investors who have a greater understanding of the elderly care service industry and a higher level of familiarity with urban land use tax, which offers tax incentives in this industry, are more likely to have a higher level of investment understanding and therefore, are more inclined to invest in the elderly care service sector.

Specifically, a higher level of investors' perception of the elderly care service industry often indicates their greater interest in social and economic aspects and their ability to comprehend and analyze various types of information. Such investors are more likely to grasp relevant investment knowledge, thereby enhancing their level of investment understanding. Consequently, a positive correlation can be observed between investors' perception of the elderly care service industry and their level of investment understanding.

$$IE=-0.845+0.1*DT+0.038*ICPSI$$

There is a positive correlation between investors'

perception of the elderly care service industry and deed tax with investment experience. If investors have a greater understanding of the elderly care service industry and a higher level of familiarity with deed tax, which offers tax incentives in this sector, these factors are likely to contribute to an improvement in their investment experience. However, it should be noted that the coefficient for investment experience is negative, indicating a decreasing trend as the independent variables increase. This may be due to the fact that investors may encounter risks or other unfavorable factors in specific circumstances, leading to a decrease in their investment experience.

$$AI=-31104.549+5888.482*CIT+12041.247*Educational\ level$$

There is a positive correlation between corporate income tax and education level with investment amount. In other words, if investors have a higher understanding of corporate income tax in the context of the elderly care service industry, along with greater tax incentives in this sector, and if their education level is higher, these factors are likely to contribute to an increase in their investment amount.

Table 3. Analysis table of independent sample T-test results

	Gender	Age	Educational level	Occupation	Purpose of investment
IUD					✓
IE			✓		✓
AI			✓		✓
ICPSI					
VAT			✓		
CIT			✓		✓
DT			✓		
PT			✓		
ULUT			✓	✓	✓

Based on Table 3, it can be observed that gender and age are not statistically significant. However, education level shows a significant relationship with IE, AI, VAT, CIT, DT, PT, and ULUT. Occupation also exhibits a significant relationship with ULUT. Furthermore, investment purpose is

significantly related to IUD, IE, AI, CIT, and ULUT.

These findings indicate that the level of education has an impact on investors' investment experience and investment amount, as well as their understanding of value-added tax, corporate income tax, deed tax, property tax, and urban land

use tax, and their awareness of the tax incentives in the elderly care service industry. Moreover, investors' occupation influences their understanding of corporate income tax. Investors' investment purpose, whether focused on profit or wealth preservation, affects their level of investment understanding, investment experience, and investment amount, as well as their perception of corporate income tax and urban land use tax and their impact on the elderly care service industry.

4. Summarize and Look to The Future

Value-Added Tax (VAT): The elderly care service industry typically enjoys VAT exemptions or lower tax rates. These preferential policies reduce the operating costs for elderly care institutions and attract more investors to enter the industry. It is recommended that the government continue to maintain or expand VAT exemptions for the elderly care service industry to reduce the tax burden on these enterprises, encourage more investors to invest in the industry, and promote its development.

Corporate Income Tax (CIT): Chinese tax laws stipulate a certain period of exemption from corporate income tax for elderly care institutions. This tax exemption policy encourages investment and innovation in the elderly care sector. It is recommended that the government further extend the tax exemption period for elderly care institutions to incentivize long-term investment and sustained development. Additionally, considering tax incentives for companies providing elderly care services to their employees can further promote the industry's growth.

Urban Land Use Tax and Property Tax: Elderly care institutions enjoy relevant exemptions or preferential treatments in urban land use tax and property tax, which relieves the burden on these enterprises. It is recommended that the government continue to introduce tax relief policies for urban land use tax and property tax to alleviate cost pressures on elderly care institutions and attract more investors to participate in the industry.

Apart from tax policies, a series of other measures can be taken to further promote the development of the elderly care service industry. For example, providing certain exemptions or preferential policies on social insurance contributions for elderly care enterprises reduces the burden on employers. It is advised that the government continues to strengthen support in terms of social insurance contributions for elderly care enterprises, lower labor costs, and encourage more investors to engage in the elderly care industry. Other measures include providing land supply and rental subsidies, promoting standardization and regulation of elderly care services, as well as enhancing training and talent introduction.

To summarize, Chinese tax policies have a positive impact on the elderly care service industry by providing certain

exemptions and preferential treatments. To further advance the development of the sector, it is recommended that the government continues to increase its support through tax policies for the elderly care service industry. Additionally, in conjunction with other relevant policies and measures, creating a more favorable environment for investor participation and industry development in the elderly care sector is highly encouraged.

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