

The Application and Prospects of Smart Elderly Care for Enterprise Transformation

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Abstract: With the deepening of China's aging population and the vigorous development of the digital economy, China's traditional elderly care industry has continuously integrated industrial development into the tide of the digital economy. However, there are still issues with the intelligent transformation of the elderly care industry, such as the insufficient support of the digital economy for the intelligent elderly care industry, the low maturity of the intelligent transformation model of the elderly care service industry, and the high difficulty of the elderly population crossing the "digital gap". Starting from the development difficulties of the elderly care industry, this article provides suggestions for the intelligent transformation of the elderly care industry, with the aim of providing reference opinions for the healthy and sustainable growth of China's "silver economy".

Keywords: Elderly care industry; Intelligent transformation; Smart Elderly Care

Introduction

With the increase of the elderly population in China, China has entered an aging society ahead of schedule. Data showed that the elderly population aged 60 and above in China exceeded 264 million by the end of 2020, accounting for 18.7% of the total population. It is expected that by 2050, the elderly population in China will reach 480 million, accounting for about two-fifths of the elderly population in Asia and one-fourth of the global elderly population, which is more than the total population of the United States, Britain and Germany. The issue of aging will bring new challenges to China's socio-economic development and transformation. With the promotion and popularization of technologies such as the internet, cloud computing, and big data computing, how to use internet thinking to reform the elderly care service industry has become an important issue of common concern for the academic and industrial communities in China.

Under this circumstance, in the face of various problems brought about by population aging, the academic and industrial fields have spontaneously shifted their solution ideas to modern information technology, thus smart elderly care emerging. Smart elderly care involves multiple levels such as the elderly, families, communities, elderly care institutions, medical institutions, and the government. Based on modern technology such as the Internet, social networks, the Internet of Things, mobile computing, etc., it supports elderly people's living services and management in various aspects such as daily life, healthcare, health rehabilitation, entertainment and leisure, learning and sharing. While improving the quality of life of the elderly, It is also possible to fully utilize the experience and wisdom of the elderly, and truly achieve the goal of "being cared for, treated, entertained, educated, and accomplished in their old age".

1. Industry Opinion Guidance for the Smart Elderly Care Industry at the Government Level

In October 2021, the Ministry of Industry and Information Technology, the Ministry of Civil Affairs, and the National Health Commission jointly issued the Action Plan for the Development of the Smart Health and Elderly Care Industry (2021-2025) (Ministry of Industry and Information Technology Joint Electronics [2021] No. 154, hereinafter referred to as the Action Plan), providing a short-term guidance for the development of China's smart elderly care industry.

The introduction of this Action Plan has four relatively favorable guidance for smart elderly care: 1. Demand driving, supply upgrading. Adhering to the combination of supply side reform and demand side management, and promoting a higher level of dynamic balance between the supply side and demand side. 2. Innovation driving, technology empowering. Promoting the integrated innovation and application of new generation information technology in the field of healthy and elderly care, and enhancing the intelligent level of healthy and elderly care products and services. 3. Government guidance and multi-party linkage. Strengthening government guidance, fully utilizing the advantages of all parties in the industry, and strengthening cooperation to form a development situation of cooperative development and complementary advantages. 4. Coordinating and demonstrating. Strengthening top-level design, and coordinating various elements of industrial development to promote optimized allocation of elements, create typical application scenarios, thus guiding differentiated development in different regions.

2. Layout of Enterprises in the Field of Smart Elderly Care

2.1 Dramatic Increase in the Number of Registered Smart Elderly Care Enterprises

With the introduction of the Action Plan, the registration of Chinese smart elderly care enterprises was booming in 2021. At present, there are over 7000 major enterprises in the smart elderly care industry in China, with 2021 being the main registration boom. In 2021, there were over 2000 registered enterprises. As of June 2022, there were over 1100 registered enterprises in 2022.

2.2 Low Cancellation Ratio of Smart Elderly Care Enterprises

As of the end of 2022, about 10% of smart elderly care enterprises have cancelled their businesses. Currently, there are over 5000 surviving enterprises in China's smart elderly care industry, accounting for nearly 70% of the total number of enterprises. The proportion of enterprises in operation is nearly 20%, and the number of canceled enterprises accounts for 10% of the total number of enterprises.

2.3 High Registered Capital of Smart Elderly Care Enterprises

More than 50% of smart elderly care enterprises have a registered capital of over 5 million yuan. At present, the registered capital of China's smart elderly care enterprises is mainly distributed between 10 million to 50 million, with over 1900 related enterprises. Secondly, there are more than 1200 related enterprises with a total registered capital of 1-2 million. Overall, more than 50% of Chinese smart elderly care enterprises have a registered capital of over 5 million yuan, and more than 35% have a registered capital of over 10 million yuan.

2.4 Smart Elderly Care Enterprises are Mainly Registered in Guangdong and Jiangsu

At present, China's smart elderly care enterprises are mainly located in the Yangtze River Delta and Pearl River Delta, especially represented by Guangdong and Jiangsu. By the end of 2022, there were over 1100 smart elderly care enterprises in Guangdong, and there are over 800 in Jiangsu.

2.5 The Financing Methods for Smart Elderly Care Enterprises Mainly Include Strategic Financing and A-round Financing

Currently, there are over 7100 surviving enterprises in operation, of which more than 60 have financing information, with strategic and A-round financing being the main ones. As of the end of 2022, among all the China's smart elderly care enterprises, 18 of which were in A-round financing, 19 were in strategic financing, followed by 16 in seed/angel rounds.

3. Layout Characteristics of Smart Elderly Care Enterprises

3.1 Giant Companies Take the Lead in Layout, and "Cross-border" Capital Actively Enters the Market

From the perspective of listed companies in the field of elderly care in China, elderly care real estate has become their primary choice to enter the elderly care market with a proportion of up to 45.7%. Following closely behind is the choice of combining medical care and healthcare to enter the elderly care industry, accounting for 18.5%. The listed companies that choose smart elderly care are ranked third, accounting for 17.4%. The above three are the three major fields that currently listed companies choose to enter the elderly care industry.

Among them, smart elderly care has developed rapidly under the dividends of recent years, the Action Plan publicized in 2013 points out that by 2025, China is expected to cultivate more than 100 demonstration enterprises, create more than 50 demonstration parks, establish more than 150 demonstration streets (towns) and more than 50 demonstration bases around no less than 10 key application scenarios, and establish a hierarchical dynamic management mechanism to strengthen demonstration guidance.

In the "blue ocean market" of the smart elderly care industry, multiple listed companies are quietly laying out smart elderly care. According to incomplete statistics from Yiou Health, a total of 31 companies are involved in the smart elderly care industry. It is not difficult to draw the conclusion from the summary that many non medical companies have taken the lead in laying out the smart elderly care field, among which the transformation trend in the technology and communication industries is obvious.

3.2 Key Enterprises Take the Lead

3.2.1 Hai'er Group: Applying a full range of household appliances to activate smart elderly care

As early as 2014, Hai'er U-home launched products, equipment, and technologies for the elderly industry, and announced that it was launching a weak current intelligent solution specifically for elderly care communities from the perspective of addressing the elderly, children, and community managers. Nowadays, Hai'er Group has developed into a successful transformation with a full range of home appliance solutions that can provide one-stop solutions for the smart elderly care industry.

As it is known that Hai'er Group has formed a complete set of smart solutions that can deeply meet the needs of elderly care industry projects. It provides four physical spaces such as smart living rooms and smart kitchens, as well as seven whole house solutions such as full house water and full house security. Based on the positioning of elderly care projects and special needs, it makes elderly care life more convenient. As of 2022, Hai'er Home Appliances has established over 50 smart experience centers, over 190 smart buildings, and over 150 smart communities nationwide.

3.2.2 ZTE: Keeping up with the Development of Medical Informatization in China

In 2015, ZTE Health Technology Co., Ltd., a subsidiary of ZTE Communications, reached a cooperation with China Telecom on the construction of a smart elderly care platform. The two sides took Hunan as a pilot and integrated comprehensive professional services, data platforms, cloud computing and other technologies to provide one-stop home elderly care service solutions for governments, enterprises, and individuals. This cooperation is also the first cooperation case between a domestic elderly care service enterprise and a network operator.

As one of the earliest enterprises in China to provide smart elderly care services, ZTE followed closely with the development of medical and health informatization, establishing a regional medical information sharing platform centered on residents' electronic health records. Through seamless integration and sharing of medical information, it has built a multi-level medical service system.

3.2.3 China Putian: Making Efforts to Innovate the Remote Medical Service Model

In 2016, centering on the new trend of tele-medicine development at home and abroad, Putian developed a pioneering "Internet+" health industry service model with independent intellectual property rights, focusing on research on new technologies such as unconstrained vital sign measurement, disease early warning, major chronic disease decision-making management, unconstrained vital sign measurement equipment development and tele-medicine application big data platform development.

At present, Putian's scientific and technological innovation achievements in "Internet+" smart medical service and smart elderly care include: government regulatory solutions, home-based elderly care solutions, institutional elderly care solutions and big data cloud service platform for healthy elderly care. In the future, Putian will plan to build a healthy elderly care service system led by "Internet +Smart Healthy Elderly Care" and integrated online and offline development. By the end of 2022, Putian's Smart Health Elderly Care Products and

Solutions have reached nearly 30 cities in several provinces, covering nearly 300 elderly care institutions and community service centers.

3.3 The Bottleneck of Smart Elderly Care Needs to be Broken

In recent years, with favorable national policies and entrepreneurial environment, many companies have adjusted and focused on the field of smart elderly care. However, through analysis and observation, it can be seen that China's current smart health elderly care industry is still in the stage of market development, and most projects have not yet formed clear and sustainable business models.

Seeking breakthroughs and innovation in development. Stimulated by the deep integration of domestic information technology industry and health and elderly care industry, the market size of China's smart health and elderly care industry has reached 8 trillion yuan in 2022. According to data, it is expected that the compound growth rate of China's smart health and elderly care industry will reach around 30% in the next three years. With the intensification of aging and a new round of population structure changes, China's smart health and elderly care market will face a comprehensive outbreak in the next 5-10 years.

Based on the current situation of China's elderly care development, the "9073" elderly care structure is a typical summary, which means that 90% of the elderly mostly adopt home based elderly care, 7% of the elderly rely on community elderly care centers to receive daytime care, 3% of the elderly choose to retire in elderly care institutions. It can be seen that due to the dual influence of traditional elderly care habits and the scarcity of high-quality elderly care resources, home-based elderly care occupies the "market leader".

4. Conclusion

In the current pattern of elderly care, the technology industry is attempting to integrate more "smart" elements into the elderly care model. At present, smart elderly care, as a government funded project, is no less than a "timely help" for start-up enterprises. Surrounded by many high-tech devices such as health bracelets and intelligent monitoring devices, elderly people are increasingly enjoying the convenience brought by technology.

But in the seemingly "peaceful blue ocean", many problems are gradually emerging. From the perspective of the entire smart health and elderly care industry chain, upstream smart health and elderly care equipment suppliers are responsible for providing intelligent hardware products, building intelligent software systems, and application platforms for the entire industry chain, and supporting services are the most core link of the smart health and elderly care industry.

However, there is a severe two-level differentiation in the product hierarchy of upstream enterprises in China, with most of them concentrated in the low-end product field of technology and fierce competition, while there are relatively few enterprises in the high-end product field with higher added value. Industry professionals in this field have stated that although many foreign investors have already formed a relatively complete smart elderly care ecosystem abroad, in order to truly implement it domestically, many institutional obstacles still need to be broken.

For example, the lack of detailed implementation of relevant policies, the lack of market awareness, inadequate standardization of industry technical standards, and difficulty in sharing data resources have greatly limited the development of China's smart elderly care market, resulting in a mixed bag of smart elderly care products and uneven service quality. For the existence of the above mentioned issues, starting from the top-level design, strengthening guidance and standardization, and forming a standard service system is an advisable strategy.

Due to factors such as traditional beliefs, cultural level, and lifestyle habits, the awareness of smart elderly care among the elderly population is currently relatively low. Secondly, for some elderly population in rural areas, there are also shortcomings in their consumption concepts and abilities.

In terms of development, many traditional enterprises in China that participate in the layout of smart elderly care are urgent to integrate and transform with the big health elderly care industry in present. Smart elderly care is still in the preparatory stage, and there are not many that have achieved healthy operation. With the passing of time, the aging process, changes in population structure, and changes in the cognitive and economic capacity of the elderly population, combined with the comprehensive development of the information age, the smart elderly care industry will rapidly rise in the entire elderly care industry.

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