The Path Study of Supply-side Reform of Chinese Medicine Health Industry Based on Computer Technology

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Abstract. In recent years, with the advent of the era of an aging population and the increase in the general standard of health consciousness, health care expenditures in gradually shift from disease treatment to health care, health care social welfare promotion, disease prevention and early intervention into big trend under the background, has the unique advantages of traditional Chinese medicine "cure not ill" industries ushered in the great development opportunities. Especially in this year's special circumstances [1], Chinese medicine has played an important role, but also provides a good opportunity for its industrialization development. In addition, China has been carrying out the transformation of economic structure, corresponding to people's need for traditional Chinese medicine health care is to better promote the supply side reform of traditional Chinese medicine health care industry, give full play to its role in the medical system reform, and contribute to people's health.

Keywords: Computer Technology, Traditional Chinese Medicine Health Industry, Supply-side Reform, Path

1. Introduction
There are a lot of diseases in modern people. Modern medicine (Western medicine) is basically helpless. This is the time for traditional medicine to step on the stage of history. TCM treatment of chronic diseases, stubborn diseases, TCM health preservation, treatment of disease are the future will be fashionable ideas. Therefore, engaged in traditional Chinese medicine health care, we should be in line with the mentality of serving the people [2], looking for ways and methods that people need, urgent, for example, for some cardiovascular and cerebrovascular diseases, we had better treat the idea of disease, prevention work well, so that people do not get sick. However, the contradiction in the pharmaceutical industry is very complex, with multiple reasons such as history, system and society. Moreover, the public resentment is large and the perception is not good. The annual government report and the two sessions are focused on the discussion, and the pharmaceutical industry is a key industry in the second round of supply side structural reform of the central government. In order to better meet people's demand for TCM health preservation, the supply-side reform is imperative, and computer technology also provides help from the other side [3].
2. Present Situation of Chinese Medicine Industry

As an important part of Chinese medicine industry, it is one of the most important national industries in China. The market size of the Chinese medicine industry in 2015 was 391.8 billion yuan, it accounts for 32.1% of the Chinese pharmaceutical market. 2011-2015, the compound growth rate of Chinese medicine market is 16.8%, far higher than the GDP growth rate. 2016-2020, The Chinese medicine industry will continue to grow rapidly, The market is expected to reach 58.06 billion yuan by 2020, The compound growth rate is 8.2.

3. Supply-side structural reform of Chinese medicine industry guided by demand

Chinese medicine is a unique health resource in China, Harmony is the core of TCM health view. If Western medicine has many fine scientific instruments, measurement standards, More quickly and clearly than traditional Chinese medicine in the treatment of diseases [4]; So, in terms of disease prevention, The advantages of traditional Chinese medicine are more obvious. The culture of health preservation that it advocates is to "root it, To cultivate this, The core idea of "good after" is, Aimed at improving the quality of life and prolonging life, It coincides with the concept of great health. Analysis of China's Great Health Industry Prospects and Investment Opportunities in 2017-2022, The scale of China's health industry reached 5.6 trillion yuan in 2016, By 2020, the output value of domestic health industry is expected to account for more than 10% of GDP. Such a huge business prospect, How much energy Chinese medicine can exert, how much health bonus can create, Is a question that must be considered. Based on modern information systems, Using traditional Chinese medicine health care channels, Achieving self-health management, The key is to take the actual market demand as the consideration. First of all, to provide a cheaper and more beneficial combination of medical services. According to the State Council's Chinese Medicine, the total output value of Chinese medicine industry reached 786.6 billion yuan in 2015, accounting for nearly a third of the scale of the pharmaceutical industry [5]. In the future, the emphasis should turn to the two-way interworking and seamless link of traditional Chinese medicine "medicine and nourishment ", enrich service items, perfect service mode, fully connect with medical insurance fund, give full play to the all-round value of traditional Chinese medicine in prevention, medical treatment, health care, rehabilitation and so on, and meet the diversified needs of the market. Secondly, construct the standard system of traditional Chinese medicine. At present, the standard system of traditional Chinese medicine is initially formed, the number of standards reached 649, the average annual increase of 29. However, the construction of Chinese medicine standard system started late, the technical difficulty is very big, is a very professional work. In order to meet the needs of the further development of traditional Chinese medicine industry, it is necessary to speed up the construction of a set of Chinese medicine standard system that conforms to the characteristics of the development of Chinese medicine in China and obtains international recognition, so that the people can use it safely and improve the level of modernization and international competitiveness. Finally, comply with the global pharmaceutical industry chain development model [6]. At present, Chinese medicine has been spread to 183 countries and regions, 86 cooperation agreements with foreign governments and international organizations have been signed, and some countries and regions have even included Chinese medicine in medical insurance. Traditional Chinese medicine should be "technical and technological ", so that people in other countries can see the actual effect of traditional Chinese medicine on health management, eliminate cultural, economic and institutional barriers, expand the popularity of traditional Chinese medicine, and expand the global market of traditional Chinese medicine industry.

4. Top-level Design and Construction of Cooperative Innovation Mechanism for Research and Research of Administration, Industry and Research

To realize the innovation and development of traditional Chinese medicine industry in the era of "Internet health ", it is necessary to develop from production circulation to sales service, from research and development to talent training, and to cooperate in all directions [7], which requires the top level design of the country. The design diagram is shown in figure 1 below.
The establishment of traditional Chinese medicine, "production-marketing-use "data storage warehouse. Since 1984, the Chinese Academy of Traditional Chinese Medicine Information Institute has been carrying out the construction of a large database on traditional Chinese medicine. At present, there are 48 databases and more than 1.2 million data. The Chinese Medicine Data Center of the Chinese Academy of Traditional Chinese Medicine, established in 2014, integrates the data resources of modern Chinese medicine literature, ancient books and the data resources of the national Chinese medicine clinical research base, to a certain extent, solves the problems of traditional Chinese medicine scientific research, traditional Chinese medicine clinical, traditional Chinese medicine research and so on. However, in general, the current database of traditional Chinese medicine in China is not perfect, lack of macro control, weak coordination, insufficient sustainable construction, low utilization rate, and can not be built and shared. It is difficult to meet the needs of the industrial chain of production, marketing and use of traditional Chinese medicine. For example, pharmaceutical farmers, pharmaceutical enterprises and hospitals in the production, operation and service process, all need to collect Chinese herbal medicine price data [8], Chinese herbal medicine storage data, Chinese medicine hospital clinical data, but the current database is difficult to support the above data mining. The construction of information data storage warehouse in Chinese medicine industry is a long-term and arduous basic work. Once the construction is completed, the promotion of Chinese medicine development in China is inestimable.

Thirdly, promote the integrated education mechanism of traditional Chinese medicine. The 13th Five-Year Plan for the Development of Chinese Medicine Talent of the State Administration of traditional Chinese Medicine announced that in 2015, only 3.35 Chinese medicine practitioners (assistant) doctors in health institutions owned by every 10,000 people in China, regardless of the number of talents, the level of structure and the ability to innovate, were far from meeting the needs of the market. The integrated education mode of "production-learning-research" is the combination of enterprises, schools and research institutions, and the integration and coordinated development of all aspects of production, learning and research, so that enterprises, schools and research institutions can give full play to their respective abilities and reflect their comprehensive advantages [9]. Local governments can take the lead in setting up training platforms for schools and enterprises, engineering training platforms and innovative experimental platforms.

5. Big Data Platform to Promote Chinese Medicine Health Management System
Arterial net 2016" Internet Chinese medicine industry venture capital trend report statistics, At present, " traditional Chinese medicine "," traditional Chinese medicine "or" traditional Chinese medicine "as the keyword search, APP、 WeChat, PC and other Internet Chinese medicine products can be found more than 2 000 species, Forty percent of the products are O2O, 30% in pure online mode, B2C types
of products are 61. In addition, according to the media consultation "2016-2017 China Mobile Health Market Research report [10], China Mobile’s healthcare market is growing steadily. Nearly 300 million yuan in the fourth quarter of 2016, an increase of 16.0% over 2015. Visible, Using new technologies such as cloud computing, Internet of things, mobile Internet, Providing convenient services such as online appointment, waiting reminder, price payment, report inquiry, drug distribution, etc, The realization of automatic and intelligent health information service is the trend of the development of Chinese medicine industry in the future.

First of all, through the Chinese medicine four diagnostic instrument, wearable equipment and other remote equipment to collect and analyze TCM diagnostic information, complete the health state parameters collection. Secondly, with the help of Internet of things, cloud computing and other means, the collection of various index parameters are stored to establish personal health files. Thirdly, through data mining technology, based on state identification, personal health status report is issued. Then, with the help of traditional Chinese and western medicine standards, physiological and pathological characteristics and other medical professional knowledge to judge from parameters to state, to complete the evaluation of individual health status, through the comprehensive and massive data of individual health risk factors long-term dynamic monitoring [11], health risk assessment, and then form a risk warning and intervention adjustment program. Finally, individualized health intervention programs were developed for different individuals, and personal health files were entered to form circular evaluation feedback (see figure 2). The health cloud platform of traditional Chinese medicine uses intelligent terminal, cloud computing, Internet of things and so on to connect community health service center, disease prevention and control center, hospital and health management center. With the help of cloud storage technology, personal health information cloud sharing can be realized.

![Figure 2. Circulating feedback](image)

In the process of constructing Chinese medicine health management system, there are still many problems to be solved. First, in the aspect of health data collection and evaluation, the quality and standardization of data itself can only be identified and screened by the personal experience of doctors. If a health risk prediction model is constructed, The accuracy of dialectical diagnosis and treatment of traditional Chinese medicine can be improved. Second, in the aspect of data sharing, if the health
management center can integrate big data, it can provide reference for national public health decision-making, but how to protect personal health privacy is a difficult problem to test the government's decision-making ability [12]. Third, in the focus of health management, the current health cloud platform focuses on disease treatment, how to achieve the full cycle of personal health management, establish a set of health management intervention system for personal diet, physical exercise, health care, Especially when individuals are in sub-health state, how to intervene and promote their timely adjustment, this is the focus of the future development of cloud platform.

6. Conclusion
Traditional Chinese medicine is a unique health resource in China, and also a huge economic potential resource. With the advancement of modernization of Chinese medicine, promote the formation of traditional Chinese medicine health industry quietly, showed in Chinese herbal medicine planting, product research and development, production, distribution, marketing, cross-industry, cross-regional industrial chain, and adjust the industrial structure, increase employment, increasing farmers' income, health care services, benefit the livelihood of the people, protect the ecological aspects of the comprehensive advantages, etc. Therefore, it should bear the brunt of supply-side reform.

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