New Model of Endowment Insurance Driven by Insurance Technology - a Case Study of Taikang Endowment Community

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Abstract

Under the background of the increasingly trend of aging, China has begun to implement the "combination of medical treatment and endowment" to meet the needs of the elderly for medical services, in which commercial insurance companies have played an important role. Based on the relevant knowledge of insurance ecology theory and the combination of medical treatment and endowment led by commercial insurance companies, this paper analyzes the important influence of insurance technology in the current insurance ecology and puts forward the prospect of the future development of the endowment community.

Keywords: Endowment community; Insurance technology; Insurance ecology

1. Introduction

With the accelerating process of population aging in our country, the endowment problem has gradually become the focus of social attention. China has

begun to implement the "combination of medical treatment and endowment" to meet the needs of the elderly. However, under the current background, the quality and quantity of the government-led combination of medical treatment and endowment are not high, which makes it a trend for commercial insurance companies. With the continuous innovation of financial technology, the community, which combines medical treatment and endowment with insurance technology, has become the development trend. On August 20th, 2018, the General Office of the State Council issued the "Key Tasks for Deepening the Reform of the Medical and Health System in the Second Half of 2018" and instructed the National Health Commission, the National Development and Reform Commission, the Ministry of Civil Affairs and National Administration of Traditional Chinese Medicine to cooperate and jointly formulate the "Guidelines for the Service and Management of Combination of Medical Treatment and Endowment". As an important part of the development of the insurance industry, insurance technology has great research significance.

This paper studies the innovative endowment model led by commercial insurance companies under the background of "combination of medical care and support". Taking Taikang endowment community as an example, this paper studies the current development situation, advantages and disadvantages of the endowment community and put forward corresponding suggestions. The innovation of this paper lies in the combination of the application scenarios of insurance technology and the endowment community, which provides relevant research basis for the further development and maturity of the endowment community.

2. Introduction of Insurance Ecological Theory and Insurance technology

2.1. Insurance ecology

Yingping Tan (2012) summarized the research process of China's insurance ecology theory. The theoretical basis of insurance ecology comes from ecological economics. The concept of insurance ecology continues to expand with the development of insurance practice and the evolution of its functions. Qiang Fu and Dongfeng Zhang (2007) defined insurance ecology as: In order to survive and develop, various insurance organizations have formed a complex, orderly competition and benign cooperation dynamic balance system with certain structural characteristics and certain functions through division of labor and cooperation in the long-term close contact and interaction with their living

environment and other internal organizations. In conclusion, insurance ecology consists of external environmental organizations and internal elements.
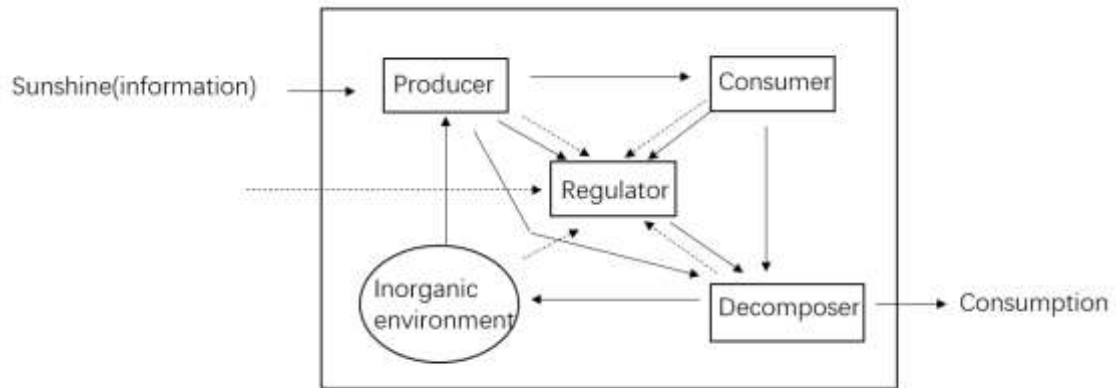

Figure 1: Quaternary Structure Diagram of Ecosystem

As shown above, Qiang Fu and Dongfeng Zhang (2007) believed that the inorganic environment in insurance ecology refers to the macro environment including political system, economic situation and legal system. Regulators refer to state supervision organs, producers are all kinds of insurance subjects, and consumers refer to insurance intermediary organizations and customers. They are all decomposers. All kinds of information and information flow about market, economy, risks and needs are the energy sources that promote its operation and circulation. This structure is used for reference in the following case analysis.

2.2. Insurance technology

In recent years, with the rapid development of big data, cloud computing, Internet of Things (IoT), artificial intelligence, block chain and other technologies, the insurance industry has actively embraced insurance technology, accelerated the application process of insurance technology, and achieved phased results in various fields.

At present, the academic circle has not yet made a unified definition of insurance technology. Zhanjun Song and Xinjie Guo (2017) pointed out that insurance technology is a deep integration of technology and insurance, including not only digital technologies such as mobile Internet, but also various high-tech technologies that can be used in all aspects of the insurance industry. Xian Xu (2017) believed that insurance technology is an innovative technology that improves the insurance ecology through various channels, which overcomes the pain points of the industry, and enhances the value of relevant subjects in the insurance industry through various application scenarios. Xuguang Liu and

Tianjiao Xu (2017) believed that insurance technology refers to technology-driven insurance innovation, that is, optimizing, upgrading or even reshaping the insurance market, insurance institutions or the way insurance services are provided by creating new business models, applications, processes or products.

At present, insurance technology is mainly manifested as digital technology. In the future, it will present diversified technical characteristics such as digital technology, biotechnology and physical technology. Beijing Ifenxi Technology Co., Ltd. (2020) pointed out that the penetration of digital technology has pushed insurance technology through the three times of Internet insurance, technology empowerment and digital ecology. Insurance technology has officially entered the "technology empowerment" stage from the "Internet insurance" stage in 2019. Cloud computing, big data, IoT and other technologies are changing the core value chain of the insurance industry.

Therefore, the insurance technology refers to insurance innovation that uses specific scientific and technological means such as artificial intelligence, big data, block chain and IoT to improve and upgrade the external environment and internal subjects in the insurance ecology and finally enhance the overall value of the insurance ecology.

In an ideal insurance ecology, insurance participants can only rely on the close relationship within the system to meet their own needs for survival and even development. Among them, the most important thing is to keep users in the ecology, and then transform and reuse user resources through scientific and technological means. In the process of improving the insurance ecology, the application of scientific and technological means such as big data, IoT, cloud computing and artificial intelligence is an important link to realize the transformation and upgrading of the insurance industry.

3. Case Analysis-Taikang Endowment Community

3.1. Development background

Recently, the aging in China is becoming more and more serious, and the demand for family support for the aged is increasing. However, ordinary endowment communities do not have medical conditions, and the elderly are forced to frequently travel to and from hospitals, endowment communities and families. In 2015, the State issued the "Guiding Opinions on Promoting the Combination of Medical Treatment and Endowment", which proposes to establish a "combination of medical treatment and endowment" model that combines medical and endowment resources.

At the beginning of the construction of the endowment community, Taikang

began to explore its own "combination of medical treatment and endowment" model, and innovate the concept of "one community and one hospital". Hospitals featuring rehabilitation and geriatric diseases are set up in the endowment community. Partition care is carried out according to the different physical conditions of customers. What's more, four service areas of independent living, assisted living, professional nursing and memory care are set up to realize one-stop continuous care.

Table 1   Changes and Forecast of China's Endowment Industry Market
Unit: Trillion Yuan

Year	2018	2019	2020 (Forecast)	2021 (Forecast)	2022 (Forecast)
Total assets	6.57	6.89	7.44	8.85	10.29

Source: China Banking and Insurance Regulatory Commission

Taikang Group has so far built endowment communities in 15 cities across the country with a total investment of 20 billion yuan. Up to now, the occupancy rate of Yanyuan Independent Living Area has reached 99.7%, and 90% in Shenyuan. The high occupancy rate makes Taikang Community a far lead in the competition with the same industry.

3.2.Development issues and suggestions

In this case analysis, we focus on the analysis of the development of various organizational components in the insurance ecosystem and put forward corresponding suggestions. The decomposers described in the previous paper include all kinds of insurance subjects, customers and intermediary organizations. The decomposers here are analyzed on behalf of insurance intermediary organizations.

3.2.1. Producer——Taikang Insurance Group

For the providers of the endowment community, the investment cost of the project is high, including heavy asset investment, community environment maintenance cost, labor cost of a large number of professional nursing workers, etc. The return period of the project is long, which makes producers, i.e. insurance companies, have to speed up cost recovery with a higher occupancy threshold. The price competitiveness of the endowment community is small.

According to the official website of Taikang Home, the cost of staying in the community includes the entry fee, Letai card, monthly fee and residents' persona-

lized consumption, of which the entry fee is 200,000 per year nationwide. Customers can also obtain the right to stay by purchasing Taikang insurance, but they have to pay the insurance premium of 200,000 per year for more than 10 years. In addition, they all hinder the improvement of the occupancy rate of the endowment community to varying degrees such as the lack of experience in the management of the endowment community of producers, the high cost of obtaining customer publicity and the limited value-added services of the project.

The derivation and development of insurance technology promote the optimization of the operation of the endowment community. First of all, at the marketing front end of the insurance value chain, big data and IoT technology are used to establish a database of users and quasi-users to accurately identify and locate potential customers of Taikang House and provide more targeted sales publicity and services to consumers in the insurance ecology. In addition, the application of insurance technology in the future is expected to build scenario marketing for the endowment community, such as AR scenario, which can effectively stimulate people's demand for the endowment community and control the marketing costs of producers. Therefore, combined with more optimized enterprise management mode, high-quality talent attraction and more efficient use of project funds, the overall production cost of Taikang House can be controlled, market price advantages can be gradually formed, and the endowment service needs of more middle-and low-income classes can be met. In the future, it is expected for differentiated pricing according to user portraits with the help of technology.

Secondly, as producers, insurance companies can jointly build a complete industrial chain of endowment services through cooperation with real estate companies, construction enterprises, property management, health consulting and other relevant institutions, integrate effective social resources, and improve the quality and efficiency of endowment service supply. Because the block chain has the characteristics of anonymity, data tamper-proof and distributed storage, it can effectively realize the information storage of producers and ensure information security, which greatly promotes the cross-industry cooperation of insurance companies.

In addition, for the internal management of producers and the service arrangements of endowment communities, it is playing its effective role, which is mainly reflected in the health detection and health assessment of community users by insurance companies as a crucial part of insurance technology. The community can monitor the physical condition of elderly users in real time through intelligent wearable devices, control their physical risk indicators, and realize the functions of emergency call, green channel, telemedicine, etc. through networked devices. In the community, the application of artificial intelligence and other technologies

can also provide entertainment and leisure activities and spiritual companionship for the elderly, improve the irreplaceability of insurance services, and thus enhance customer stickiness.

Finally, for the back-end claim settlement link of the insurance value chain, after applying big data and artificial intelligence technology, the system can make comparative analysis based on the information of the customer's social network and the claim settlement behavior with high similarity in the past, so as to judge whether the customer's claim settlement behavior is true and effective, which can not only save labor costs, but also prevent moral hazard. Therefore, it can effectively reduce the claims disputes of insurance companies in the later period, which is conducive to improving the good image of insurance companies.

3.2.2. Consumers——Customers of Taikang House

China's per capita income and consumption level are not high enough to achieve a higher occupancy rate and consumption rate in the endowment community. As mentioned earlier, consumers need to pay up to 3.6 million yuan in one lump sum or purchase 2 million yuan of related insurance in installments when staying in Taikang, excluding daily food, clothing and housing expenses. Therefore, consumers in Taikang community are mostly high net worth people. According to relevant data, the main source of income for the elderly in cities and towns in China is pension and subsidies from other family members, which accounts for 66.3% and 22.4%, respectively. However, the overall level of pension in our country is not high and there are regional differences. If the subsidy for children is less, the needs of the elderly for high-end medical and endowment communities are difficult to meet. Influenced by traditional ideas, Chinese consumers have some misunderstandings about insurance and the concept of insurance consumption is weak.

On the basis of objective material, first of all, consumers need to have sufficient consumption ability to choose the endowment community. Producers need to optimize their operations to lower the occupancy threshold of Taikang House. Consumers should also save well in advance, accumulate certain wealth and make financial arrangements. Producers and consumers should play their respective roles in the insurance ecology and complement each other.

Subjectively, it is also necessary to enhance consumers' concept of insurance consumption, stimulate their demand for endowment insurance, and promote the upgrading of consumption of endowment insurance. The use of insurance technology can achieve a comprehensive understanding and accurate positioning of customers through data collection, analysis and processing, efficiently and accurately identify customer needs, and "suit the remedy to the case", which can not only optimize the sales mode of insurance companies, but also enhance the

professional image of insurance companies. For customers who have chosen Taikang House, cloud computing and IoT can effectively help to establish and maintain customers' health records, which is helpful to improve professional recognition and product acceptance of insurance companies.

3.2.3. Decomposer——Insurance Intermediary

As an important subject connecting producers and consumers, insurance intermediary organizations can improve their professional level, expand their business scope and seek appropriate positioning with the help of insurance technology, so as to better participate in insurance ecological competition.
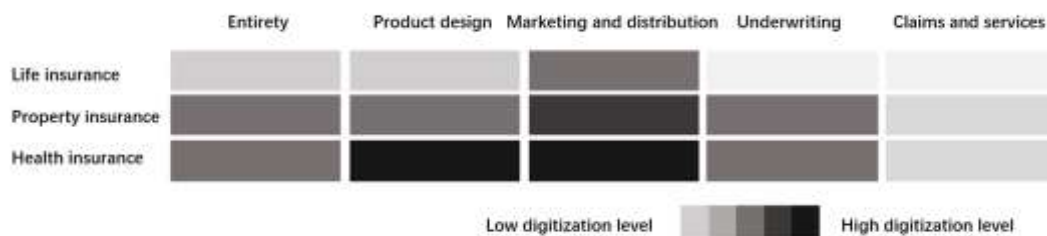

Figure 2: Digital Penetration in Insurance Industry

According to the digital penetration chart of the insurance industry drawn by Beijing Ifenxi Technology Co., Ltd. (2020), health insurance has the highest digital level at the product design end and the marketing and distribution end, which puts forward higher service requirements for the insurance intermediary agencies involved in the marketing and distribution links.

On the one hand, when distributing insurance products to producers, for example, as an insurance agent or an Internet distribution channel, innovative insurance technology means, including accurate portraits of users by big data and the IoT, should be used to realize data intelligence and network collaboration, and service upgrading should be carried out through more accurate advertising, personalized scene construction and differentiated pricing, so as to optimize the insurance ecology. At the same time, anti-insurance fraud and anti-money laundering operations can also be carried out through the application of block chain technology to enhance the enterprise risk control of producers and decomposers. On the other hand, as a service provider to consumers even representatives of consumer interests, such as insurance brokers and decomposers, need to use insurance technology means like the application of block chain to improve their professional level, reduce information asymmetry in the insurance industry and misleading sales of customers by bad information, increase selling

points through information security stored by block chain technology, and then enhance customers' trust in producers.

4. Conclusions

In conclusion, facing the increasingly severe endowment problem in our country, commercial insurance companies are trying their best to play their own role. However, many problems existing in the endowment community, such as the imbalance between supply and demand, insufficient industrial investment and the contradiction between public welfare and profitability, need to be influenced and solved to a deeper extent by insurance technology.

With the further penetration of insurance technology into insurance ecology, it is expected that through the use of new technologies such as big data, IoT, artificial intelligence, block chain, etc., the development of intelligent residential areas, intelligent homes, intelligent services, intelligent equipment, intelligent culture, etc. will be promoted to build an intelligent endowment community, thus promoting the healthy and rapid development of the intelligent endowment industry.

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