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Development Evaluation of China’s Policy-oriented Agricultural Insurance: Based on the Realization Degree of Policy Objectives

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Abstract

In 2004, China began to carry out policy-oriented agricultural insurance pilot experiment. By the end of 2009, the premium income scale of China’s agricultural insurance had ranked second in the world and first in Asia. In this article, through in-depth analysis on the experiment background of China’s policy-oriented agricultural insurance, the objectives of its implementation are firstly revealed. Secondly, based on clarifying the development process of China’s policy-oriented agricultural insurance, we analyze and summarize China’s policy-oriented agricultural insurance development effectiveness by taking the realization degree of policy objectives as the evaluation criteria, and also excavate out the main existence and potential problems. Finally, some proposals to perfect the system of China’s policy-oriented agricultural insurance are briefly put forward.

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Keywords: policy-oriented agricultural insurance; crop insurance; premium subsidy; operation model; agricultural risk; China

1. Introduction

In 2004, China began to conduct policy-oriented agricultural insurance (POAI) pilot experiment in nine provinces (autonomous regions, municipalities) and it was carried out in the whole nation in 2007. By the end of 2009, the premium income scale of China’s agricultural insurance had ranked second in the world and first in Asia [1]. But, the business of China’s agricultural insurance was shrinking gradually from 1992 to 2003, and many districts had stopped the business because of serious loss by 2003. Therefore, besides excitedness about the smooth implementation and rapid development of POAI, we should calmly carry on an objective evaluation for its development, analyze and summarize its effectiveness, as well as excavate problems on its development in order to perfect POAI’s system and promote its sound, fast and sustainable development as soon as possible.

On the problem of China’s POAI, so far the researches mainly focus on the following three aspects: First, the analysis on the theoretical basis of POAI. Many scholars, such as Guozhu Tuo et al. [2], Lu Chen [3], Wenli Feng [4] and Yuehua Zhang et al. [5], pointed out that agricultural insurance has a (quasi) external nature, the market demand...
of agricultural insurance is insufficient and government should implement POAI, which has laid theoretical rationale for POAI practice. Second, the exploration on the model of POAI’s system. On the one hand, based on referencing overseas successful experience and combining with China’s national conditions, Jingsheng Liu [6], Jiazhi Xie et al. [7] and Guozhu Tu [8] analyzed and discussed different system models of China’s POAI; on the other hand, Haiying Gu et al. [9], Chun Meng [10], Haijun Li [11] and Junsheng Zhu et al. [12] summarized and analyzed the POAI’s system models of partial provinces (autonomous regions, municipalities). The third is the studies on how to improve POAI system. Guozhu Tu et al. [13] discussed some aspects closely related to legislation, such as agricultural insurance legislation goal, operating principle and business scope of agricultural insurance, and so on; Li Xing [14], Qiao Zhang et al. [15] conducted in-depth study on crop production risk analysis, assessment and zoning; Tao Gao et al. [16] carried on the simulation analysis of POAI’s catastrophe risk-sharing mechanism. The results of these studies not only establish solid theoretical foundation for the implementation of POAI, also provide beneficial suggestions and references for enhancing management technical level and improving POAI system.

Although it has been six years since China’s POAI pilot experiment, the current studies on its development were largely confined to the developments of some regions or certain type’s research, the systematic evaluation study on its overall development actually has been rarely seen. Because China’s POAI burden on special missions, if taking the realization degree of policy objective as evaluation criteria to analyze and evaluate its development, it is undoubtedly of practical significance.

Based on the above consideration, the remainder of this paper is organized as follows. Section 2 deeply analyses the background and objectives of China’s POAI pilot experience, and Section 3 clarifies the development process of China’s POAI. We analyze and summarize the development effectiveness of China’s POAI by taking the realization degree of policy objectives as the evaluation criteria in Section 4, followed by discussing and excavating the main problems in Section 5. Section 6 is conclusions and brief proposals.

2. The implementation background and objectives of China’s POAI

2.1. To manage agricultural risk and stabilize farmer income effectively

China is a large agricultural country with nearly 900 million farmers, and it is also one of the countries that natural disasters happen most frequently and losses are the most serious in the world, especially since 1990s, regardless of the frequency of disasters or the extent of losses are becoming increasingly serious. Statistics show that natural disasters caused more than 100 billion Yuan direct economic losses and more than 200 million victims annually. However, the reform of China’s financial system began in 1994, which prompted the major business mainstay of agricultural insurance, the Peoples Insurance Company of China (PICC), to switch to commercial insurance company from state-owned insurance company. Because of annual losses and lack of government support, the agricultural insurance business rapidly decreased. Up to 2001, China’s agricultural insurance premium income had decreased to 333 million Yuan from 862 million Yuan in 1992 (shown in Fig.1), and different kinds of agricultural insurance products were also down to about 20 from more than 130 in 1993.

![Fig.1 China's agricultural insurance premium income (1982-2001)](image-url)
More severely, many provinces (autonomous regions and municipalities) gradually halted agriculture insurance business due to its serious loss. According to reckoning, the average annual agriculture loss from 1998 to 2000 is 168.159 billion Yuan, while the average annual compensation from agricultural insurance is 4.5 billion Yuan; the compensation ratio is only 0.27%. At the same time, the farmers’ poverty phenomenon caused by natural disaster is more serious than before. Here is an extremely sharp contradiction between the growing of agriculture disaster losses and the shrinking of commercial agriculture insurance business.

2.2. To promote modern agriculture development and stabilize agricultural products market

According to the practical experience on agricultural insurance of developed countries in the world, agricultural insurance has many important functions that include dispersing and transferring agriculture risk, reducing agricultural production loss, stabilizing farmer income, enhancing the capability and speed of agricultural production recovery, and so on. Meanwhile, through innovating agricultural insurance, it can incite farmers to adopt advanced science and technology, improve agricultural products structure, raise the quality of agricultural products, stabilize agricultural products supply, satisfy the diverse needs of the society for agricultural products and further accelerate the process of building modern agriculture. At that time, China’s modern agriculture just started, it urgently needed agricultural insurance to escort it.

2.3. To improve agricultural protection system and enhance international competitiveness of agricultural products

After the founding of People’s Republic of China, in order to accelerate industry development, the Chinese government carried out the development strategy of “Nurturing industry based on agriculture, giving priority to industry”. Well, agriculture had provided industry with huge accumulation in long-term. As a result, its basis and resulting accumulation capability was very weak. At the same time, because of the rapid growth of domestic agricultural production costs in those years, the comparative advantage of China’s agricultural products in international markets became gradually weakened. Along with the degree of industrialization unceasing enhancement in recent years, the state’s financial capacity was increased year by year, and China had possessed the capability of nurturing agriculture by industry. However, China had already become the member of WTO; it must conform to WTO rules to support agriculture. While agricultural insurance is not only one of the “green box” policies permitted by WTO, also already becomes one of the important means and effective tools of WTO members to support agricultural development. Therefore, referencing successful experience of developed countries, it is one of the best choices to develop agricultural insurance for improving agricultural support and protection system, realizing the multiplier effect of financial investment in agriculture, enhancing the comprehensive productivity capacity of agriculture and international competitiveness of agricultural products.

Based on the above considerations, absorbing the lessons from China’s commercial agricultural insurance and drawing on successful experience of operating agricultural insurance oversea, the central government of China decided to carry out the pilot experiment of POAI.

3. The main development course of China’s POAI

3.1. The first stage: establishment of POAI and selective pilot (2004-2006)

The No.1 Document of 2004 of the CPC Central Committee and the State Council for the first time explicitly pointed out: “To accelerate the establishing of POAI system, some kinds of agricultural products and regions as the pilot site firstly should be selected; in some regions with good economic condition, some certain premium subsidy should be provide to farmers who participate in crop and living stock insurance” [17]. Take this as the symbol, the (quasi-) public product attribute of agricultural insurance has been recognized by the government level. Subsequently, in order to explore POAI’s system and operation model adapted to local conditions, China Insurance Regulatory Commission (CIRC) designated 9 provinces (autonomous regions, municipalities) to carry out the pilot experiment of POAI, including Heilongjiang, Jilin, Shanghai, Xinjiang, Inner Mongolia, Hunan, Anhui, Sichuan and Zhejiang. In the same year, in order to coordinate and promote the development of pilot experiment, CIRC...
approved to establish 3 professional agricultural insurance companies: Shanghai Anxin Agricultural Insurance Co. Ltd., Heilongjiang Sunlight Agricultural Mutual Insurance Company and Jilin Anhua Agricultural Insurance Co. Ltd..

3.2. The second stage: promotion and implementation on the nationwide level (2007-present)

After three years’ pilot experiment, the central government of China decided to put forward POAI’s pilot work and actively expand the coverage of agricultural insurance in 2007. Under the impetus of this policy, China’s POAI had obtained substantial breakthroughs. First, the Ministry of Finance budgeted 100 million Yuan premium allowance (the final expenditure was 205 million Yuan) for 6 provinces (autonomous regions) that carried on POAI pilot experiment, they were Inner Mongolia, Jilin, Jiangsu, Hunan, Xinjiang and Sichuan. Subsidy range included rice, maize, wheat, soybeans and cotton, the five kinds of major crop insurances. Secondly, most of provinces, autonomous regions and municipalities conducted POAI continually. In July 2007, in order to stabilize the pork market, properly solve the people’s livelihood issues caused by the pork price rising and promote the healthy development of living pig industry, the Ministry of Finance decided to establish the insurance system of breeding sow in nationwide since this year and provide insured farmer with a certain percentage of premium subsidy. In 2008, the Ministry of Finance arranged 6 billion Yuan budget for crop insurance premium subsidy and expanded subsidy region from 6 to 16 provinces and autonomous regions. Simultaneously, rape, peanuts and other oil crops were also ranked into POAI (for details, refer to Table 1). From then on, China’s POAI have developed rapidly in all the country.

4. The development effectiveness of China’s POAI

4.1. Business scale and risk safeguard level swift growth

With the enhancement of subsidy supporting from all levels of governments, the business scale and coverage of POAI expand swiftly year by year, especially since the central government implemented and promoted breeding sow insurance in nationwide (shown in Table 1). From 2004 to 2009, China’s agricultural insurance premium income was 3.96, 7.5, 8.48, 53.3, 110.70 and 133.9 hundred million Yuan respectively. In 2009, agricultural insurance provided risk safeguard up to 3812 hundred million Yuan for agriculture, countryside and farmers, and 1.33 hundred million households insured. At the same time, the premium income scale of China’s agricultural insurance had risen to the second place worldwide and ranked first in Asia.

4.2. Different types of POAI develop collaboratively and rapidly

According to the difference of premium subsidy mainstay, China’s POAI might be divided into two types, which are central POAI and local POAI [18].

Central POAI is that, within the designated area, for the related operation institutions of agricultural insurance guided by provincial level government to develop the specific agricultural insurance business, the central finance provides subsidy for the insured farmers, leading enterprises and specialized cooperative economy organizations according to a certain percentage of premiums. It’s necessary to illustrate that in the implementation of the central POAI, concerning the premium subsidies provided for prescriptive insurance coverage, only after a certain proportion of premium supplied by the local provincial level finance subsidy, the Ministry of Finance subsidizes the corresponding proportion of premium again, otherwise it does not subsidy. The implementation situation of central POAI is listed in Table 1.

Local POAI is that, only the local finance provides premium subsidy according to a certain percentage of premiums for the insured farmers, leading enterprises and specialized cooperative economy organizations, who insure specific agricultural insurance. Although the central authorities do not provide the premium subsidy for local POAI, they offer the relevant policy support to encourage local governments to actively carry out agricultural insurance.
Through the concerted efforts of all levels governments, at present central POAI has proliferated to 23 provinces autonomous regions and municipalities in the mainland (for details, reference Table 1); meanwhile, almost all the provinces, autonomous regions and municipalities have carried out kinds of local POAI adapted to local conditions.

Table 1. The implementation and subsidy situation of central policy-oriented agricultural insurance

<table>
<thead>
<tr>
<th>Item</th>
<th>Start time</th>
<th>Subsidy region</th>
<th>The subsidy proportion of central government</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maize Rice</td>
<td>2007</td>
<td>Inner Mongolia, Jilin, Jiangsu, Hunan, Xinjiang, Sichuan</td>
<td>Increased: Heilongjiang, Henan, Hebei, Anhui, Liaoning, Shandong, Hubei, Fujian, Zhejiang, Hainan, XJPCC, RADC</td>
</tr>
<tr>
<td>Wheat Cotton</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soybean</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peanut</td>
<td>2008</td>
<td>Hebei, Shanxi, Anhui, Jilin, Heilongjiang, Jiangxi, Henan, Hubei, Hunan, Hainan, Inner Mongolia, Sichuan, Guangxi, Chongqing, Yunnan, Guizhou, Tibet, Shanxi, Gansu, Qinghai, Ningxia, Xinjiang, XJPCC, RADC</td>
<td>The same with 2007</td>
</tr>
<tr>
<td>Rape</td>
<td></td>
<td>Ibid</td>
<td></td>
</tr>
<tr>
<td>Breeding sow</td>
<td>2007</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cow</td>
<td>2008</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: XJPCC—Xinjiang Production and Construction Corps; RADC—Reclamation Areas Directly under the Central

4.3. Adapted to local conditions created diverse operation model

During the experiment of China’s POAI, a very important achievement is having been formed a variety of typical models, which accumulates rich wealth for POAI system’s sound and sustainable development. According to the difference of operation mainstay, these operation models might be grouped into the following three types.

4.3.1. Commercial insurance company agent model

This model in accordance with the principle of “government guidance, policy support, market operation and farmer voluntary”, commercial insurance companies act as the agents of governments to manage POAI business; and the governments provide the commercial insurance companies with premium subsidies and other preferential policies. In the model, the governments can make use of the operating institutions, networks and techniques of commercial insurance companies, and curtail huge expenditures increased by establishing an independent policy-oriented agricultural insurance company; On the other hand, commercial insurance companies can improve operational efficiency. Thus the governments and insurance companies can achieve the cooperation of win-win situation. Therefore, the model is currently the most widely used; Tianjin city is a typical representative region.

4.3.2. Jointly-held and co-insurance model

According to the principle of “government promotion, market operation and farmer voluntary”, the government and “policy-oriented agricultural insurance co-insurance body” (POAICIB) combined by several insurance companies adopt this model to co-manage POAI. The so-called POAICIB is the kind of insurance organization, two or more commercial insurance companies authorized by the government manage and operate the business of POAI; at the same time, they share premium, undertake risk and together provide services according to the proportion of charter agreement.

The typical feature of the model is that POAICIB underwrites the business of agricultural insurance in the region by adopting uniform provision, carrying on market operation and implementing the management accounting system
of “setting up an account alone, independently accounting, profit sharing and risk bearing”. The model not only can fully play the function of government to lead the development of POAI, but also can avoid the improper market competition among insurance companies. Meanwhile it can effectively reduce the business risk of insurance companies and arouse the enthusiasm of insurance companies to operate POAI. The model was first created by Zhejiang province; and it was recently adopted by Jiangsu provinces and other provinces (cities).

4.3.3. Professional agricultural insurance company operation model

In this model, the government sets up specialized agricultural insurance company through funding to carry out POAI business according to the operation pattern of “government finance subsidy impetus, commercialization operation”.

The main operation features of the model are that professional agricultural insurance companies manage the business of POAI according to commercialization operation and they balance business risks through the approach of “supporting one kind of insurance product with others”. In the model, besides enjoying the tax preference and fiscal subsidy of POAI business, the insurance companies also may have priority to manage other agriculture-related property insurance and farmer life insurances in countryside according to commercialization operation; meanwhile, these businesses also can enjoy the preferential policies of agricultural insurance. But, in order to prevent the insurance companies from deviating the business of POAI with low profit margins, the governments usually make provision for the proportion of different insurance business. Such as Shanghai’s regulation, which the premium income of planting and breeding insurance accounted for the proportion of total premium income must not be less than 60%. At present, Shanghai is the typical representative region of the model.

4.4. Relevant regulations and operation system have been established initially

Since the POAI pilot experiment, the China’s government has proposed many times by official documentation to make clear and specific requirements for POAI, and has issued a series of documents to support and standardize its development. As have provided guarantee for expanding the business scope of POAI and promoting the diversification of business entities. By the end of 2009, the different kinds of agricultural insurance products of POAI had been more than 160; the insurance companies of managing POAI had been more than 20; the management system of POAI had been formed initially, which was composed of the commercial insurance companies and professional agricultural insurance companies; the business networks of which had proliferated all the country; the operation system of POAI had been established initially. As the result, the overall development goal of “low assurance, wide coverage” of policy-oriented agricultural insurance had been achieved.

5. Main problems in the development of China’s POAI

5.1. Prominent contradiction between sharp increasing risk responsibility and unsound risk dispersion mechanism

That rapid development of China’s POAI has played significant role and made the unwise to underestimate contribution on enhancing the capability of disaster prevention and resilience, decentralizing agricultural risk, stabilizing agricultural products market, accelerating the process of modern agriculture, and so on. In the cheering about these, we should also clearly recognize the basic characters of agricultural insurance, such as high risk, high payment, and so on. China’s agricultural insurance practice has already confirmed these. As from 1982 to 2003, the simple average payment rate of China’s agricultural insurance was 87.97%. If coupled with about 20% of administrative cost, the payment rate was much higher than 79% the generally accepted agricultural insurance business break-even point. As mentioned earlier, with the rapid growth of POAI business, the risk responsibility is also swiftly increasing. However, at present China has not established perfect risk dispersion mechanism of POAI, especially for catastrophic risk. Once it encounters severe natural disasters and suffers serious losses, not only will insurance companies face a serious risk of loss, but the sustained and stable development of POAI will be threatened.
5.2. The imperfection of supply market competitive mechanism is causing risk agglomeration

An important mathematical foundation that insurance management must follow is the law of large numbers. Meanwhile, insurance management also satisfies the principle of risk dispersion, including spatial and time disperse. For agricultural insurance, these are even more important. Only in this way, could the risk loss accumulation arising from the systemic and regional agriculture risk be avoided and reduced. Therefore the POAI’s management body should make its business reasonably spread in different district, as well as make efforts to expand the scale of business. But, at present, there are only two agricultural insurance companies that manage business nationwide in China, they are PICC Property and Casualty Co. Ltd. (PICC P&C) and China United Property Insurance Co. Ltd.. Furthermore, their business distributions are still in disequilibrium. In many areas, due to the business models or government decision-making, the businesses of POAI are underwritten only by one regional insurance company. Combining with the unsound catastrophic risk transfer mechanisms, the risks are over-centralized, which is leading to potential risks for POAI’s sustained management.

5.3. The unmatched phenomena between risks safeguard level and government subsidy capability is serious

Why can China’s POAI achieve such rapid development? The most important impetus comes from all levels of governments’ strong financial supports. But the undeniable is that some partial local authorities have treated it wrongly as the achievement project. In order to quickly expand the business scale and coverage of POAI and improve risk safeguard level, they established the insurance coverage and subsidy level that surpassed the local economy development levels and government financial subsidy capabilities. The result is that the phenomenon of government owed premium is serious, so that the receivable premium rates of insurance companies are very high. Take XXX Insurance Company as an example, which is one of the biggest insurance companies managing POAI. Its receivable premium rates of POAI are 10.27% and 8.54% in 2008 and 2009 respectively, higher than 8% requested by China Insurance Regulatory Commission. Among them, in 2009, the amount of POAI’s receivable premiums was up to 597.96 million Yuan; in the company’s 35 POAI’s branches nationwide, only 2 branches did not have receivable premiums; the other 33 branches had receivable premiums and the receivable premium rates of 17 branches were above 8% (details shown in Fig. 2).

![Fig. 2 The receivable premium rates of POAI in 33 branches of XXX Insurance Company, 2009](source: XXX Insurance Company (2010))

Through analyzing the payment subjects of receivable premium, we found that most of them belong to the receivable premium generated by local governments finance and they accounted for the proportion more than 50%. Thus it could be speculated that the most important reason why the local government defaulted premium is the limited capability of financial subsidies. This not only affects the government's image, but also restricts the healthy development of policy-oriented agricultural insurance.
5.4. Business management techniques and management level needs to be enhanced

Decided by the particularity of subject-matter insured, the management technicality of agricultural insurance is very strong. Whether from risk assessment, premium rates making, policy design and other product development links to underwriting, loss prevention, defining loss and other operation aspects, a large number of professional and technical personnel are needed. Coupled with inferior agricultural production conditions, more regional disparity in natural disasters types, short operation history in agricultural insurance and lack of the statistical data of historical disasters and loss in China, all these make POAI business more difficult. The most prominent problems are as follows: the risk zoning and premium rates making are more extensive; the moral hazard and adverse selection are serious; the payment rate is very high; the comprehensive cost charges is high and the operation efficiency is low. Such are severely restricting to achieve the implementation objectives and effects of POAI.

6. Conclusions

China’s POAI emerges as the times require and has rapidly developed. It has played an important role in stabilizing agricultural products market and farmer income, enhancing the international competitiveness of agricultural products, promoting the development of modern agriculture and so on. The contributions should not be underestimated and policy objectives have been achieved remarkably. However, in the development process some prominent issues were also exposed and seriously restricted POAI’s healthy and sustainable development.

In the future development and exploration of China’s POAI, firstly, all levels of governments should more deeply understand the significance of POAI, continually play the leading role, and set the management and development objectives of POAI adapted to local conditions. Secondly, the governments should encourage those qualified insurance companies to participate in the development of POAI through multi-channels approach in order to build national-wide and multidiscipline involved risk dispersion and transfer mechanisms, especially for catastrophic risk; Thirdly, local governments and insurance companies should cooperate to explore appropriate development model, make reasonable incentive mechanism, improve the participant subjects’ enthusiasm and increase business operation techniques and management levels; Finally, the government should formulate and perfect the corresponding law system to create a favorable operation environment for the sustained and healthy development of China’s POAI.

References

