

Loss Aversion Effect: Current Situation and Future Prospect of Agricultural Insurance in China

Weilun Xiao *

Shanghai Weiyu High school, Shanghai, China

* Corresponding author: 20170135@ntit.edu.cn

Abstract. The subsidy for farmer and peasant is well-developed in a few agricultural countries, since those countries' GDP mostly rely on crops or vegetables and it is understandable why those counties have a such comprehensive agricultural insurance system. China does not rely on farming to raise GDP so facilities and subsidy for farmers are not that advanced. However, China is going toward a good tendency, and the coverage and completeness is increasing drastically. So even China was not completable with those countries in the world, it would likely to find a way to establish comprehensive agricultural insurance. This essay analyzes several drawbacks of the insurance in China and provide some solutions for it. By separating the popularization of education and the introduction of talents, China will solve the problem of insurance in poor areas in a short time. At the same time, national policies can also be modified accordingly. For different kinds of crops, diverse guarantee amounts and compensation amounts can be formulated, together with the national subsidy mechanism.

Keywords: Loss aversion, agricultural insurance, future prospect.

1. Introduction

Agricultural Insurance is now considered to be a crucial part of guaranteeing farmers' living security. In China, the development of agriculture has stepped into green agriculture and successfully transferred from high-efficiency crops into sustainable ecologically crops. Agriculture insurance has also put more attention on indispensable new technology and talents. In America, due to the well-developed system and welfares for farmers, the government-imposed laws on insurance companies which highly restrict them when farmers facing emergencies. Rural vitalization strategy has not only opportunities but also challenges. The decoupling of villages and trade recovery program might cause the plan of insurance to stagnate. Moreover, the level of educations would cause the distrust between the government and the farmers so it takes more time to explain those insurance to peasants. The level of each farmer to accept new ideas is different so government should set different sections in order to fit all people.

The situation indicate there is huge opportunities to increase the participation rate of agricultural insurance. Organizations can also provide a larger market for those products, with the safeguards, those peasants can deal with the problem of food and clothing. While sometimes people who lives in rural areas might not understand those sophisticated knowledges, giving options and showing benefits in front of them seems more practical for them. This is where loss aversion comes in and affecting those people. Figuring out the way which farmers are most easily to accept is the key part of this study. Loss aversion appears commonly in daily lives, including investment, consumption and even government spending. By emphasizing the gain and ignoring the loss is where loss aversion might be useful to influence consumers' choice. Undoubtedly, people always looking for benefits instead of losses so it vital important to analyze the fact why agricultural insurance can also change famers' mind.

2. Literature Review

According to the definition of decision lab: Loss aversion is a cognitive bias that describes why, for individuals, the pain of losing is psychologically twice as powerful as the pleasure of gaining [1].

The loss felt from money, or any other valuable object, can feel worse than gaining that same thing.¹ Loss aversion refers to an individual's tendency to prefer avoiding losses to acquiring equivalent gains. In a nutshell, consumers consider loss more than the benefits, which means consumers have less mental fluctuation when facing winning [2]. Also, when people are more willing to take risks, the possibility of loss aversion occurs more frequently. By the way, risk appetite for gain and loss of the same value is reversed. The most common example is the weather based micro insurance [3]. It strongly fluctuates farmers' income. It is quite effective and direct but it is not widely used in most developing countries.

Some scholars suggested that insurance have many ways to publish their products to public. But there are three preparation skills of checking this insurance before they are published [4]. First, maximum expected effect of terminal wealth. This is a process of predicting the best investment choice of the gains it will eventually bring. Second, minimum bankruptcy percentage [5]. This is also a prediction but the opposite of the first one. It helps the consumer to analysis the minimum loss by showing them the effect after purchasing the insurance. Third, average number. This would show the average compensation level of each insurance in order to attract customers [6]. The essay is also quite sophisticated and useful, by considering many aspects of the problem might happen, insurance may have been widespread.

3. Development Situation of Agricultural Insurance

3.1. Agricultural Insurance Subsidies in Major Countries

From Table 1, it can be found that China did not put much attention on agricultural insurance at 2007, the compensation was very little comparing to other countries. India was the highest of the proportion of agricultural insurance subsidies in agricultural insurance premium income. And China was even below the average level of proportion of income which generated by agriculture. In 2007, Chinese government imposes an agricultural insurance on cattle. The government afford 80 percent of the insurance fee and peasants only need take charge of the rest 20 percent. Under this circumstance, farmers are more willing to raise cattle because insurance is in charge of emergencies such as weather, disease and other situations.

Table 1. Comparison of global agricultural insurance subsidies 2022

Country	The proportion of agricultural insurance premium income in GDP	The proportion of agricultural insurance subsidies in agricultural insurance premium income	The proportion of agricultural insurance subsidies in agricultural GDP
Average of 65 global countries	2.14	73	1.56
America	7.8	89	6.94
Canada	6.9	66	4.55
Japan	3.3	80	2.64
India	N/A	143	N/A
Korea	N/A	73	N/A
China in 2007	0.2	80	0.16
China in 2022	1.1	88	9.68

The situation revealed the comparison of China and many other countries to see whether they have a fine facility system for farmers. As it can be found in many countries which highly rely on crops, the financial support usually stands for higher proportion of the subsidy [7]. But still, quite a lot of countries do not need grains to stimulate the economy [8]. It is not difficult to see that China did a great job in increasing the coverage of the insurance. Therefore, it is natural to expect China to keep the same passion as the time pass.

3.2. China's Agricultural Insurance Premium Income

The agricultural insurance since 2015 to 2020 is progressive, increasing dramatically. However, there are factors influencing those independent variables. COVID-19 is a strong factor among all of the reason, it directly affected both productive efficiency and allocative efficiency of the whole country. Workers' quality and quantity falls violently, so agricultural GDP also decreases. Now, in 2023, as the whole society is reopened, the labor force has also recovered to its previous level. In the face of complex and severe natural disasters, China's disaster prevention, mitigation and relief system still has weaknesses and deficiencies [9]. According to the plan, it will establish and improve the catastrophe insurance system, promote and improve the agricultural insurance, residential disaster insurance, commercial property insurance, fire public liability insurance and other systems, give full play to the role of the insurance mechanism, and further improve the country's insurance system.

According to Figure 1, the scale of agricultural insurance premiums has exceeded billions of yuan, up 26.7% year on year, and the scale remains the first in the world. From a national perspective, by the end of this year, the scale of agricultural insurance premium reached 105.9 billion yuan, with a year-on-year growth of 26.7%, maintaining the first scale in the world, which strongly supports the development of agriculture. From this year, agricultural insurance has provided more than 210 billion yuan of risk protection for 8104500 households of farmers. Among the 6.5 billion yuan of agricultural insurance premiums, about 5 billion yuan came from financial subsidies, which laid a solid foundation for the implementation of agricultural insurance. Loss aversion can provide more coverage to remote areas and areas with less developed information. With three steps, not only farmers have more security, but also government implement those policies more successfully. As it can be found that the gain and the loss are not proportional, so there need to transform the loss into a more acceptable way in order to let people to choose [10]. First, positioning. It helps to classify the different categories or breeds of plants, which one needs more money to grow or which one sells a higher price. Second, pricing. Release market research reports to give market reference selling price regularly: High reference selling price for the good quality crops. Third, promotion. Establish a market data sharing platform to promote trade. Invite both buyers and sellers to participate in centralized trading activities to promote trade.

In 2021, the overall coverage of basic old-age insurance for workers and urban and rural residents under the new Rural insurance Scheme has reached 96.7%, with 1.025 billion people covered by medical insurance. The new rural social endowment insurance is a new type of rural social endowment insurance, which is a social endowment insurance system organized and implemented by the government for the purpose of guaranteeing the basic life of rural residents in their old age.

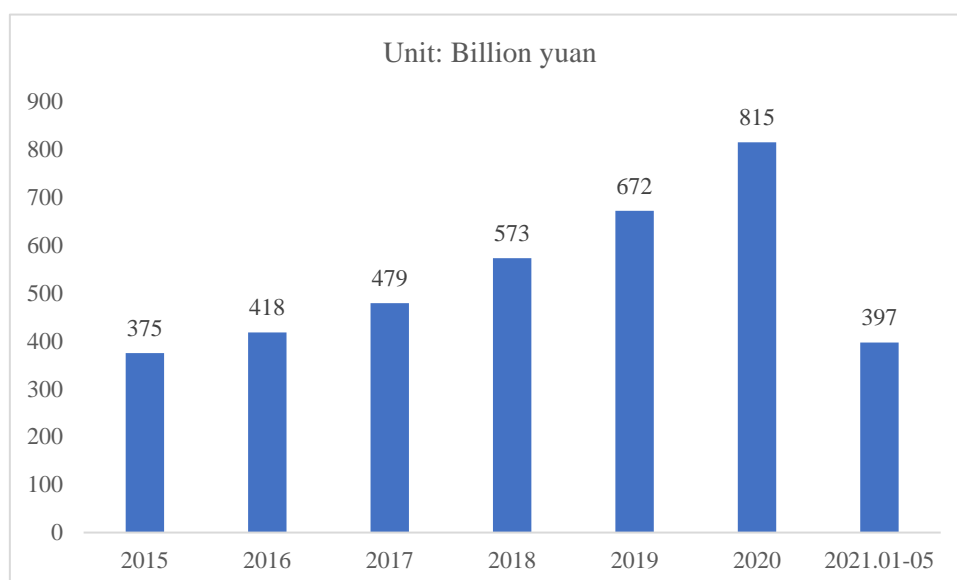


Figure 1. China's agricultural insurance premium income

3.3. Example of Corn Insurance in China

The standard of corn insurance is divided into two levels. The first level: the price of buying insurance is 18 yuan per mu, of which 20% needs to be paid by oneself, and the compensation amount of this level is 400 yuan per mu. The second level: purchase insurance price is 36 yuan per mu, also need to pay 20%, and this first level of compensation is 850 yuan per mu. Specific compensation standards should be based on local policies, it is suggested that small farmers choose the first gear, and large farmers choose one gear according to the situation.

Insurance liability: During the insurance period, if the insured wheat, corn and peanut are directly caused by the following reasons, and the loss rate reaches the agreed proportion, the county People's Insurance Property Insurance Company shall be responsible for compensation according to the agreement of the insurance contract: (1) rainstorm, flood (except government flood storage), wind disaster, hail disaster, low temperature freezing damage, heat damage and other direct causes of loss rate of more than 20% (including); (2) The loss rate of drought, epidemic or outbreak of cordyceps sinensis and rodents in the village is above 30% (including); (3) Earthquake, debris flow, landslide, fire and other accidents according to the actual occurrence area.

Compensation treatment: For corn insurance, the PICC property insurance company shall calculate the compensation according to the insured amount and loss rate at the growth stage of corn. The maximum compensation standard per mu is: the insured amount per mu $\times 60\%$ at the seedling stage; From small trumpet period to large trumpet period, insurance amount per mu $\times 80\%$; From grouting stage to mature stage, insurance amount per mu $\times 100\%$. The insurance period and the time limit for settling claims are vital important. Corn insurance shall start from the time when the insured corn emerges and end when the insured corn is mature and harvested. The specific period of insurance liability shall be the period signed in the insurance contract. Time limit for settling claims for corn is November 30. After the insured crops are in danger, the insured farmers shall report to the village agricultural policy insurance liaison officer in time, who shall make a summary according to the facts after a preliminary on-the-spot inspection. Survey and determination of the damage should in accordance with the relevant documents of agricultural policy insurance. When announcing the damage, the village usually as a unit to participate in the insurance information. The village should deliver the claim data to the county's insurance property insurance company. Price property insurance companies should properly prepare claims, adopt the method of "zero cash transfer direct compensation to the household", and pay the compensation directly to the bank account (card) or the special financial subsidy account of the insured farmers through the fund payment system.

In general, corn insurance is a beneficial policy that can help farmers cope with natural disasters and other risks. On the basis of the voluntary efforts of the masses, it will ensure that all necessary guarantees are fulfilled.

4. Conclusion

Agricultural insurance is now getting more and more attention from the public, with the support of the government, farmers receive better subsidy for their work. From the analysis above, China was not that competitive with countries that highly rely on agriculture, but China is in a good tendency of approaching developing countries. Several provinces in China still remain phenomenon like under-educated and people who is illiterate. So, spreading those insurance to farmers became a huge barrier in front of the way that China improves the economy. After introducing the loss aversion effect, government would have a better solution in importing those strategies to peasants. That works pretty effective because human has the initiation to gain benefit than losses, because of the specialization of the loss aversion effect, those people are more willing to receive than giving. Insurance gave them the protection of gaining so the percentage that they would purchase will dramatically increase.

China has an absolute advantage in land and labor, that means the government should be more efficient and diversified. With the development in technology in a few years, China has the ability to enhance the level of education and quality of labors by improving hospitals. Variety kinds of crops

give more options for farmers to sale, at the same time it means that more plants need to be classified as different standards of insurance. Furthermore, machines can be built in front of the bank which allowed farmers to automatically set insurance. More speeches and videos are required to populate those new ideas. In a nutshell, China has incredible potential in comprehensive development of the whole country. As the reopen after the COVID, it time for China to recover.

References

- [1] Wang Fei. Analysis on the development and innovation of agricultural insurance in China. *Business & Economy*, 2021, (11): 137 - 139.
- [2] Jiang Xiaoling. Analysis of high-quality development of agricultural insurance in China. *Co-Operative Economy & Science*, 2022, (24): 54 - 55.
- [3] Lu Xiaojiao. Problems and suggestions in the development of agricultural insurance under the background of rural revitalization. *Modern Agricultural Science and Technology*, 2022, (20): 211 - 214.
- [4] Zhang Aimin. Development status, problems, countermeasures and suggestion of live pig industry in China. *Meat Industry*, 2014, (10): 1 - 4.
- [5] Feng Wenli, Su Xiaopeng. Agricultural insurance promoting rural revitalization strategy: Institutional constraints and reform. *Issues in Agricultural Economy*, 2020, (4): 82 - 88.
- [6] Zhang Qiao, Wang Ke, Li Yue, et al. On the current situation and problems of risk protection of agricultural insurance in China and relevant suggestions. *Insurance Studies*, 2019, (10): 3 - 18.
- [7] Analysis of the influence of agricultural insurance on the development of agricultural economy in China. *China Market*, 2022, (20): 50 - 52.
- [8] Ye Zhaohui. Research on improving China's agricultural insurance system. *Journal of Financial Research*, 2018, (12): 174-188.
- [9] Feng Wenli, Su Xiaopeng. Development of agricultural insurance in rural revitalization strategy. *Rural Finance Research*, 2019, (04): 14 - 18.
- [10] Du Wenlan. Main problems and development suggestions of agricultural insurance system. *Agricultural Engineering Technology*, 2021, 41 (29): 6 - 7.