

A Research on Potato Growers' Demand and Willingness for Insurances--Based on the Empirical Analysis of Liangshan Yi Autonomous Prefecture

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ABSTRACT. Liangshan Yi Autonomous Prefecture is one of the main producing areas for potatoes in China. This paper conducts a systematic study on the demand for potato insurances in Liangshan Yi Autonomous Prefecture. Firstly, it investigates the situation of potato insurances in Liangshan Yi Autonomous Prefecture and establishes a regression model for analysis in line with the results of questionnaires. Furthermore, according to specific analysis, it puts forward suggestions that the government should enhance propaganda and boost the effective demand for potato farmers' insurances.

KEYWORDS: Liangshan yi autonomous prefecture, Potato, Insurance

1. Introduction

Since Liangshan Yi Autonomous Prefecture implemented policy-based agricultural insurances and launched the pilot program named "Preferential Treatment for Renewal of Insurance under the Premise of No Indemnity in the Previous Year" in 2012, potato insurances have achieved remarkable results in Liangshan. However, there are still some problems in the development of potato insurances in Liangshan. The government, for instance, is inadequate in propaganda. Furthermore, the effective supply of insurance companies and the effective demand of insurance demanders are still insufficient.

1.1 The Inadequate Propaganda of the Government

During the interview with potato growers in Liangshan, they illustrate that they learn about potato insurance-related policies mainly through the channels of government propaganda. Most growers are short of comprehensive understanding on insurances and basically unclear about the specific subsidy policies by the government. Since Liangshan Yi Autonomous Prefecture is a poverty-stricken area in Wumeng Mountain, farmers have low educational level and fail to read words in leaflets. The propaganda of potato insurances in Liangshan is too simplistic, and it is basically just a simple verbal description by the village cadres. Without the combination of modern information technology, the publicity of potato insurances is too singular to intuitively and straightforwardly conduct audio-visual promotion.

1.2 The Insufficiency in Effective Supply of Potato Insurances by Insurance Companies

Most of planting areas in Liangshan Yi Autonomous Prefecture are located in Alpine regions, and natural disasters occur from time to time. Insurance companies are faced with large compensations once disasters happen. In particular, the business of potato insurances is very risky, which may cause extremely large losses. Therefore, the loss ration is relatively high. Because insurance companies have greater risks in developing potato insurance business, even with the support of the Liangshan government, they are absent of enthusiasm in selling those insurances. The current question is that the government departments have insufficient incentives for insurance companies, which makes insurance companies reduce the effective supply of potato insurances under adverse selection and moral hazard.

1.3 Low Effective Demand of Growers for Potato Insurances

Firstly, growers have insufficient knowledge about potato insurances. Through field researches, we find that most village cadres set an example in purchasing potato insurances. However, local growers are basically unclear about how to insure potatoes and how to file a claim. Only a few people have a clear understanding on potato insurances. It's ironic that some growers have negative attitudes about potato insurances and believe that potato insurances are fraudulent by insurance companies. Secondly, some growers report that they are not very satisfied with the insurance payment. Most growers illustrate that potato insurance claims are not settled in time, which reduces the enthusiasm of applicants to purchase insurances, and affects the effective demand for potato insurances by growers in Liangshan Yi Autonomous Prefecture.

2. An Empirical Analysis of Growers' Willingness on Potato Insurances

Growers' willingness on potato insurances is usually affected and restricted by various factors. Based on relevant researches of scholars at home and abroad, this article selects 9 variables as explanatory variables, including gender, age, education level, scale of farmland, income level, the effect degree of natural disasters, the degree of understanding of potato insurances, the evaluation of the importance of insurances, and the degree of satisfaction with insurance claims. The willingness of farmers to purchase potato insurance is used as the explanatory variable. The relevant data is collected through field surveys. SPSS software is employed for logistics regression analysis. The output is as follows:

Table 1 Logistics Regression Analysis

| | coefficient | Z value | P value |
|--|-------------|---------|---------|
| gender | 0.236 | 2.06 | 0.322 |
| age | -0.3045 | -13.25 | 0.135 |
| education level | 0.5472 | 3.05 | 0.38 |
| scale of farmland | 0.15706*** | 1.02 | 0.000 |
| income level | 0.0057*** | 8.35 | 0.000 |
| the effect degree of natural disasters | 0.00026*** | 0.01 | 0.000 |
| the degree of understanding of potato insurances | 0.00285*** | 5.26 | 0.000 |
| the evaluation of the importance of insurances | 0.48732*** | 0.31 | 0.000 |
| the degree of satisfaction with insurance claims | 0.57412*** | 0.22 | 0.000 |

Note: *, ** and *** are significant at the level of 10%, 5%, and 1% respectively.

It can be seen from the regression results:

(1) P value of gender does not reach a significant level, indicating that there is no significant difference in the willingness to participate in insurance for different genders. Generally speaking, men belong to the type of risk preference compared with women. Influenced by the traditional concept of Yi people in Liangshan, men have greater discourse power at home and stronger willingness to apply for insurances. However, since most of men go out to work, only women stay at home during the survey, but they would purchase potato insurances under the leadership of local village cadres. All in all, gender plays no significant effect on the participation of insurances.

(2) P value of age does not reach a significant level, illustrating that there is no significant difference in the willingness to participate in insurance for different ages. In recent years, with the increasing popularity of insurances by local government departments in Liangshan and the leadership of village cadres, farmers have increasing enthusiasm for purchasing insurances regardless of age.

(3) P value of education level is insignificant, which means that there is no significant difference in the willingness to participate in insurances for different education levels. However, the higher educational level of farmers hints the stronger risk awareness and the deeper understanding of agricultural insurances, which leads to the stronger demand for agricultural insurances. However, restricted by the low education level of the Yi people in Liangshan, most of the interviewees are incapable of reading books or speaking Chinese. As a result, those people are short of insurance awareness and unwilling to buy potato insurances.

(4) The scale of farmland and income level of farmers are significantly and positively correlated with their willingness to participate in insurances. Agricultural income is the main source of income for farmers in Liangshan Yi Autonomous Prefecture. If the scale of farmland is larger, the income level of farmers will be higher, the dependence will be greater, and the willingness to buy agricultural insurances will be stronger.

(5) There is positive correlation between the impact of natural disasters and purchase intention. The function of insurances is to minimize losses as much as possible when risks occur. Since potatoes and tartary buckwheats are the main commercial crops in Liangshan Yi Autonomous Prefecture, once any natural disaster happens, potatoes, the most important source of income, will be severely affected, increasing farmers' willingness to purchase potato insurances.

(6) The degree of farmers' understanding of potato insurances and their evaluation of the importance of potato insurances are significant positive correlation with their willingness on insurances. If farmers know more about agricultural insurances, they will comprehend that potato insurance can avoid losses caused by natural disasters largely. Consequently, the higher evaluation of the importance of potato insurances will result in stronger willingness of farmers for potato insurances.

(7) Farmers' satisfaction with insurance claims play a significant positive role in insurance participation. This is because when the risk causes losses, whether farmers can effectively receive claims and whether they are satisfied with the results of claims, will directly affects their willingness to participate in insurance. The higher the satisfaction of claims is, the higher their willingness to continuously participate in insurances is.

3. Policy Recommendations

3.1 The Amplification of Publicity and Transformation of Publicity Modes by the Government

In order to increase the enthusiasm of potato farmers to buy insurances, the government should firstly transform the awareness of potato farmers from an ideological perspective, and extensively publicize and popularize insurances in the target area. Therefore, farmers can understand potato insurances. Since Liangshan government serves as the main force in the publicity of agricultural insurances, it is extremely important to choose appropriate publicity methods in the process of publicity. Moreover, since the Yi people in Liangshan generally have a low level of education, strong sense of small farmers, elder age distribution and traditional ideas, their ability to accept new things is relatively weak. Therefore, the government should be as easy to understand as possible in the way of publicity. For example, the government can select some typical cases in farmers' compensation after disasters to make short videos and micro advertisements, make full use of the collective broadcast to advertise before spring plowing. It is also possible to publicize and promote agricultural insurances by distributing publicity materials at villagers' concentrated locations or launching activities to explain household policy. Therefore, local growers can understand the benefits of potato insurances.

3.2 The Enhancement of the Effective Supply by Insurance Companies

Once agricultural development is confronted with huge losses, insurance companies are required to bear corresponding liability for losses. The government should take the lead in establishing Liangshan Agricultural Catastrophe Risk Fund, which can prevent the huge impact of substantive compensation on insurance companies in the event of a major disaster; Moreover, the government should build a sound reinsurance mechanism (insurers sign a reinsurance contract on the basis of the original contract) to transfer risks to other insurers; Finally, the government should strengthen the supervision of insurance companies in Liangshan to effectively protect the legitimate rights and interests of farmers, make accidents of morals risks minimized, and upgrade the effective supply of potato insurance companies.

3.3 The Advancement of the Effective Demand of Growers for Insurances

One way to advance the effective demand of growers for insurances is to enhance the growers' understanding of potato insurances. In fact, most growers feel that insurance is meaningless after they purchase insurance without any loss caused by disasters. Sequentially, they will be repulsive and unwilling to participate in the insurance. Therefore, the government should strength the propaganda work and let farmers know that insurances are beneficial agricultural products for them to avoid risks and ensure production. Another way is to upgrade the efficiency of claims settlement and enhance the satisfaction of farmers with claims settlement. Some growers report that the application procedures for insurance claims are complicated and time-consuming, which seriously affects the growers' satisfaction with potato insurances. Targeting at the special circumstances of the Liangshan, insurance companies should simplify the process of claim settlement as much as possible and enhance the level of service and professionalism, which will boost the willingness of local growers in turn.

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