

FACTORS INFLUENCING TOWARDS DECISION MAKING ON WEATHER INDEX INSURANCE FOR RICE, A CASE STUDY OF FARMERS IN MUANG DISTRICT, KHON KEAN PROVINCE

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Abstract

This independent study aimed to explore the factors influencing farmers' decision-making regarding the weather index insurance against drought for in-season rice. The samples were 140 insured farmers and 393 uninsured farmers. In this study, a questionnaire was used to obtain the data and the statistics used to analyze the data included frequency, percentage and standard deviation and as well as the analysis of variance using T-test and F-test values. According to the results, the average perception of the insurance program gained from BAAC officers was found at the low level and the factors influencing farmers' decision-making regarding the marketing mix of the insurance program were rated at the very important level. The mean values were ranked from high to low as follows: place, people, physical evidence, productivity and quality, process, price, product and promotion. To increase the number of farmers applying for the weather index insurance against drought for in-season rice, the 3 projects that should be carried out include (1) public relations for the weather index insurance against drought for in-season rice, (2) education sessions to develop understanding of the weather index insurance program against drought for in-season rice, and (3) a double package of credit and insurance against drought for rice.

Keywords: insurance against drought for in-season rice, weather index, farmers, influencing factors



1. Introduction

Rice farming is a high-risk occupation. From cultivation to harvest, there is climate variability, such as drought and dry spell, which is the main cause of poverty among minor farmers in Thailand. The farmers have to get a loan almost every time they are about to start rice cultivation and they have to fall into poverty repeatedly. There were 20,734 households of rice farmers in Muang District, Khon Kaen Province, that had been registered as in-season rice farmers (2014-2015) at Khon Kaen Agricultural Extension Office [1] and there were 230,734 rai of rice fields. Also, they had been affected by natural disasters, especially drought and dry spell.

The weather index insurance against drought for in-season rice is one of the financial instruments [2] that can be used in risk management to diversify the risk from production activities and to repair the damage caused by natural disasters as the farmers receive compensation for production costs from the crop insurance company. The insurance for in-season rice in Khon Kaen Province started in 2010 by the Bank for Agriculture and Agricultural Co-operatives (BAAC) and Sampo Japan Nipponkoa Insurance (Thailand) Public Company Limited. Government agencies also encouraged 16,203 BAAC customers in Muang District, Khon Kaen Province, to apply for the insurance [3]; however, only 215 of them obtained the insurance, which was equivalent to 1.33 of farmers who were BAAC customers in Muang District, Khon Kaen Province.

2. Research Objectives

The objectives of this study were to explore the factors influencing farmers' decision-making regarding the weather index insurance against drought for in-season rice in Muang District, Khon Kaen Province.

3. Methodology

This survey research was based on the Bank for Agriculture and Agricultural Co-operatives as it was responsible for the government's policy to encourage all farmers to apply for the insurance against drought for in-season rice. The researcher collected documentary data from journals, books, dissertations and related study, and field data using a questionnaire as an instrument. This applied research adopted descriptive social science research methodology to interpret, analyze and assess the data and used descriptive analytical method to present the research, while descriptive statistics were used to explain dispersion of the data, frequency, percentage, mean value and standard deviation as well as the analysis of variance using T-test and F-test values. Inferential descriptive statistics were also used to explain relations between the data and hypotheses and the method of inference was used to draw conclusions about the population.

3.1 Framework

To examine the factors affecting the acceptance of the weather index insurance against drought for in-season rice, the research gathered the general information about farmers

in 5 areas based on the principles of demography as inputs [4]. The research instrument employed in this study was a questionnaire constructed based on the perception theory [5], the customer behavior theory [6] and the 8Ps theory of service marketing mix [7]. The framework used in this study to assess the knowledge and understanding of the weather index insurance for crop [2] in terms of customer behavior and opinions on the marketing mix is illustrated in Figure 1.

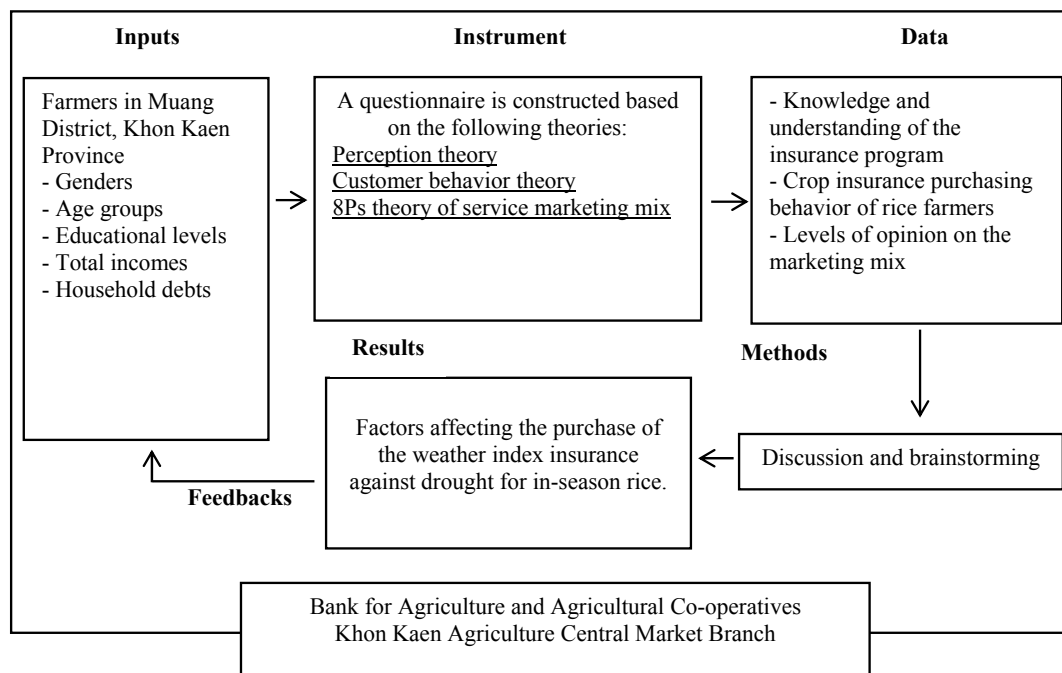


Figure 1 : Framework

3.2 Scope of the study, population and samples

The samples were 140 insured farmers and 393 uninsured farmers. The study had been conducted during February – March 2015 and the target area was Muang District, Khon Kaen Province.

3.3 Research instruments and validation

The instrument used in this study was a questionnaire based on population theory, customer behavior theory, perception theory and service marketing mix theory.

For instrument validation, the research had an expert in the weather index insurance against drought for in-season rice criticize and revise the questionnaire content in January 2015. In addition, the researcher employed an index of consistency to examine the quality of the research instrument. The questionnaire’s index of consistency (IOC) was at 1.0; therefore, it could then be used in this study.



3.4 Data collection

The data was collected in Muang District, Khon Kaen Province, during March 16-30, 2015, using an interview and a questionnaire carried out by the researcher and BAAC officers. The researcher chose the settings for data collection with a convenience sampling method and used a judgement sampling method to identify the target population according to the research objectives.

After collecting the questionnaires from the respondents, the researcher reviewed the questionnaires and analyzed the data using a microcomputer. The researcher also used SPSS for Windows Version 19.0 to analyze statistical data, including percentage, mean value, standard deviation, t-test and ANOVA.

4. Results

4.1 General information

Regarding the general information about rice farmers who responded to the questionnaire, 73.90% of the respondents did not apply for the weather index insurance against drought for in-season rice, 51% of them were female, 56% of them were 40-60 years old, 60.90% of them completed primary education, 30.20% of them had an average annual household income of 40,000-78,000 baht, and 36.20% of them had an average annual debt service of 40,000-78,000 baht.

4.2 Perception and understanding of the weather index insurance against drought for in-season rice

Concerning the perception and understanding of the samples about the weather index insurance against drought for in-season rice, the researcher found that 74.30 of the samples received the information about the insurance program from BAAC officers, only 6.90% of them precisely knew the requirements of the insured, only 68.70% of them understood the disaster coverage, 19% of them knew the premium rate per 10,000 baht sum insured, 23.50% knew about the compensation for drought damages, 16.90% of them knew about the compensation for severe drought damages, 5% of them knew the detailed information about rainfall measurement and rainfall measuring station, and 40.40% of them knew about the indemnity payment method.

4.3 Purchasing behavior of the weather index insurance against drought for in-season rice

With reference to the behavior of the samples, 81.90% of the rice farmers were decision makers, 56.10% of them themselves had an influence over the decision making, 30.70% of them did not manage risks, 76% of them had a sum insured of less than 10,000 baht, 56.10% of them chose to purchase the insurance program via BAAC officers, 44.50% of them paid the premium in cash, 35.20% of them purchased the insurance program in June, 66.30% of them had 10-20 rai of rice fields at the moderate risk level, 95% of them received help and support from the government agencies, and 39.70% of them were not confident about applying for the insurance program.

4.4 Marketing mix factors affecting the purchase of the weather index insurance against drought for in-season rice

Regarding the marketing mix of the insurance program, the factors influencing farmers' decision-making are overall rated at the very important level. The mean values of marketing mix factors are listed from high to low as follows: place, people, physical evidence, productivity and quality, process, price, product and promotion.

Considering the place or distribution channels, the reliability of the Bank for Agriculture and Agricultural Co-operatives as a distributor was rated at the most important level, while the adequate number of sales officers in the area was rated at the very important level.

In terms of the people, the areas that were rated at the very important level are respectively the well-dressed and professional officers and the knowledgeable officers.

Concerning the physical evidence, the well-established and highly regarded office and the well decorated interiors and exteriors were respectively rated at the very important level.

5. Discussion and Recommendations

5.1 Conclusion

The results were consistently align with the objectives as most farmers of different genders shared the same level of opinion on the marketing mix of the weather index insurance against drought for in-season rice; however, farmers of different age groups, levels of education, levels of household income and levels of debt held different levels of opinion about the insurance program. The findings conform to the demographic theory, the perception theory and the customer behavior theory.

5.2 Discussion

5.2.1 In terms of the perception and understanding of the weather index insurance against drought for in-season rice, the researcher found that 74.30% of the rice farmers gained the perception of the insurance program came from BAAC officers, which is line with the study of Theppaluck Prabsakun [8] on the evaluation of the weather index insurance for crop. In addition, the farmers' knowledge of the insurance program was at the low level. This information should be used to promote the knowledge and understanding of the insurance program among the rice farmers. The Bank for Agriculture and Agricultural Co-operatives and the officers should use appropriate methods and strategies to increase the farmers' knowledge and understanding of the importance of crop insurance. For example, BAAC officers might advertise the insurance program through public relations mobile units.

5.2.2 With regard to the crop insurance purchasing behavior, the researcher found that the farmers themselves were decision makers and they chose to purchase the insurance with a sum insured of less than 10,000 baht for their 10-20 rai of rice fields through the officers in June. It was important to note that they did not have risk management tactics although their rice fields had a moderate to high level of risk. This was because they received help and support



from the government agencies when they faced with natural disasters. Moreover, without the help and support from the government agencies, some farmers were still not interested in applying for crop insurance. This information should be use to find ways to encourage the farmers to manage production risks by saving or purchasing crop insurance in the future.

5.2.3 With respect to the marketing mix of the weather index insurance against drought for in-season rice, the factors affecting farmers' decision-making were overall rated at the very important level and their levels of opinion were varied according to their qualities. These findings conform to the work of Supanida Ngiwdee and Ravissa Suchato [9] on farmers' satisfaction towards in-season rice insurance, which stated that farmers mostly paid attention to the selling formats or distribution channels of the insurance. This information can be used to create the marketing mix that meets the farmers' needs.

5.3 Recommendations

To increase the number of farmers applying for the weather index insurance against drought for in-season rice at the Bank for Agriculture and Agricultural Co-operatives (BAAC) in Khon Kaen Province, the 3 projects that should be launched are (1) public relations for the weather index insurance against drought for in-season rice, (2) education sessions to develop understanding of the weather index insurance program against drought for in-season rice, and (3) a double package of credit and insurance against drought for rice.

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