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FARMERS' MOTIVATIONS AND BARRIERS TO PARTICIPATION IN THE RICE FARMING INSURANCE PROGRAM (AUTP) IN KULON PROGO REGENCY INDONESIA

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ABSTRACT

This study examines farmers' knowledge, motivations, and barriers to participation in the Rice Farming Business Insurance Program (AUTP) in Kulon Progo Regency, a disaster-prone area in the Special Region of Yogyakarta, Indonesia. Data were collected between July and August 2024 through a structured survey of 93 rice farmers, comprising 48 participants and 45 non-participants of the AUTP program. The results show that overall knowledge of the program remains low, with only 29% of respondents demonstrating a high level of understanding. Key motivations for participation include directives from farmer group leaders, peer influence, support from agricultural extension officers, and perceived production risks. In contrast, significant barriers include insufficient information about registration procedures and a perceived lack of need for insurance. These findings underscore the need for targeted awareness campaigns, enhanced extension services, and streamlined administrative processes designed explicitly for disaster-prone farming communities. By integrating social influence factors and environmental risk contexts, this study provides policy-relevant insights for enhancing farmer engagement in agricultural insurance schemes such as AUTP.

Keywords: agricultural insurance; AUTP; barriers; farmer participation; motivation.

INTRODUCTION

Rice farming is inherently vulnerable to a wide range of risks and uncertainties (Ghosh et al., 2022; Harwood et al., 1999). Production risks, in particular, pose a significant threat to farmers' livelihoods, as they increase the likelihood of yield losses. According to Harwood et al. (1999), such risks are primarily driven by uncontrollable factors, including weather variability—such as excessive or insufficient rainfall, extreme temperatures, and hailstorms—as well as pest and disease outbreaks (Ghosh et al., 2022). To minimize these risks, proactive mitigation strategies are necessary, particularly in disaster-prone agricultural areas such as Kulon Progo Regency, where repeated exposure to floods, droughts, and landslides poses a significant threat to farming livelihoods. One such strategy is participation in agricultural insurance schemes, which offer protection against natural disasters such as floods and droughts, as well as attacks from plant pests and diseases (Direktorat Pembiayaan Pertanian Kementerian Pertanian, 2023).

In response to these risks, the Indonesian Ministry of Agriculture launched the Rice Farming Business Insurance Program (AUTP) to provide financial protection for farmers affected by production shocks. The program offers premium subsidies to make insurance more affordable. While the actual insurance premium is IDR 180,000 per hectare per planting season, participating farmers only need to pay IDR 36,000, with the government covering the remainder (Direktorat Pembiayaan Pertanian Kementerian Pertanian, 2023). Eligible farmers who enroll in AUTP are entitled to submit claims for compensation following crop damage, provided they comply with the program's requirements.

Despite this policy support, participation rates in Kulon Progo remain low, even though the region recorded 1,071 disaster events in 2022 alone (Badan Penanggulangan Bencana Daerah Kabupaten Kulon Progo, 2023). This mismatch between high disaster exposure and low participation has not been explicitly explored in prior studies, which have generally focused on either motivations or barriers in other regions without considering both dimensions simultaneously in a disaster-prone context. According to Wulandari et al. (2022), several factors contribute to farmers' reluctance to participate in AUTP, including a lack of awareness of the program, unfamiliarity with registration procedures and premium payments, perceived high premium costs, and a belief that insurance is unnecessary. Notably, the issue of low farmer participation is not unique to Indonesia. Dragos et al. (2023) found that in Romania, rising insurance premiums discouraged farmer enrollment, while Ghosh et al. (2022) noted that Indian farmers without prior experience in agricultural insurance were less likely to participate in such programs. By integrating both motivational and barrier perspectives in the specific context of a disaster-prone region, this study aims to address a gap in the literature and generate policy-relevant recommendations for improving agricultural insurance adoption.

Kulon Progo and Gunung Kidul Regencies are highly prone to natural disasters, including floods, landslides, droughts, extreme weather, and tsunamis. In 2022 alone, Kulon Progo experienced a total of 1,071 disaster events, including 357 extreme weather incidents, 91 floods, 622 landslides, and one recorded drought (Badan Penanggulangan Bencana Daerah Kabupaten Kulon Progo, 2023). These environmental hazards directly impact rice yields and farm income, making risk mitigation efforts essential. Despite the high exposure to natural disasters, the level of farmer participation in the AUTP program in Kulon Progo remains low, indicating a significant implementation gap that warrants further investigation. This study, therefore, examines farmers' knowledge, motivations, and barriers to participating in the AUTP program, explicitly linking the analysis to Kulon Progo's disaster profile to strengthen the theoretical and practical contributions of the research.

MATERIALS AND METHODS

This study employed a quantitative approach, using a basic descriptive method, to provide an overview of the relationships among variables, test formulated assumptions, and derive practical implications for the problem under investigation (Suryabrata, 1998). Data were collected through a structured questionnaire using a survey method, enabling comparison between observed phenomena in the field and established theoretical frameworks. The study was conducted in Panjatan District, Kulon Progo Regency, Special Region of Yogyakarta, involving both rice farmers who were enrolled in the Rice Farming Business Insurance Program (AUTP) and those who were not.

A two-stage sampling technique was applied, combining purposive sampling at the location-selection stage and simple random sampling at the respondent-selection stage. In the first stage, two flood-prone villages in Panjatan District were purposively selected to represent areas with high disaster risk. In the second stage, lists of farmer group members in each selected village were obtained, and respondents were randomly selected to represent two categories: AUTP participants and non-participants. A total of 93 respondents were selected, consisting of 48 AUTP participants and 45 non-participants. This approach ensured that the sample captured both participation status categories while focusing on areas with high exposure to flooding. However, as the initial stage involved purposive selection, the results should be interpreted within the study's geographic scope. Data collection was conducted from July to August 2024.

The questionnaire was developed based on prior literature and the guidelines of the AUTP program. No formal pre-test was conducted due to time limitations, but all questions were reviewed internally by the research team to ensure clarity and contextual relevance.

Data analysis was conducted using descriptive statistics to assess farmers' levels of knowledge, motivation, and barriers to participation in the AUTP program. Each construct was operationalized using specific indicators. Farmers' knowledge was measured based on their responses to questions related to various aspects of the AUTP program. Each correct response was assigned a score of 1. Farmers scoring 5 to 8 points were classified as having high knowledge, while those scoring 0 to 4 points were categorized as having low knowledge. Motivational and barrier factors were assessed through multiple-choice questions, in which respondents indicated relevant drivers or challenges that affected their decision to participate. All responses were processed using frequency counts and percentages to describe the distribution of answers across respondent groups. No statistical significance tests were conducted. Sample items from the questionnaire include: (1)

"What types of risks are covered by AUTP?" and (2) "How much of the insurance premium is subsidized by the government?". The whole questionnaire instrument is available upon request.

RESULTS AND DISCUSSION

Respondent Characteristics

The demographic characteristics of the respondents in Table 1 are presented, disaggregated by participation status in the AUTP program. The results show that AUTP participants (N = 48) were relatively younger, with an average age of 54.73 years, compared to non-participants (N = 45), whose mean age was higher at 61.04 years. In terms of education, AUTP participants had a slightly longer average schooling period (10.87 years) than non-participants (8.52 years). Farming experience, however, was higher among non-participants, who reported an average of 31.33 years, compared to 26.51 years among participants. These findings suggest that younger and more educated farmers are more likely to engage in agricultural insurance, while older farmers with longer farming experience tend to opt out of the program. This aligns with the broader findings of the study, which indicate that participation is influenced not only by structural and informational barriers but also by farmers' demographic and experiential profiles.

Table 1. Demographic characteristics of the respondents

Category	AUTP-Participants (N=48)			Non-Participants (N=45)		
	Min	Max	Average	Min	Max	Average
Age (years)	32	77	54,73	31	86	61,04
Education (years)	2	16	10,87	0	16	8,52
Farming Experience (years)	8	54	26,51	5	69	31,33

Source: Primary data analysis (2024).

Farmers' Knowledge of the Rice Farming Insurance Program (AUTP)

The level of farmers' knowledge regarding the Rice Farming Insurance Program (AUTP) was measured using eight indicators. These include the eligibility criteria to become a program participant, types of land that are eligible for coverage, types of agricultural risks insured under the program, the insured value or compensation per hectare per planting season, the amount of premium paid after subsidy, crop conditions eligible for claims, as well as the procedures for registration and filing insurance claims. Table 2 summarizes the distribution of farmers' knowledge based on these indicators. Overall, only 29.03% of respondents demonstrated high knowledge (scores of 5–8), while 70.97% had low knowledge (scores of 0–4). Notably, AUTP participants were four times more likely to have high knowledge (45.83%) compared to non-participants (11.11%), indicating that program involvement provides greater exposure to relevant information.

Table 2. Farmers' level of knowledge of the rice farming insurance program (AUTP) in Kulon Progo Regency (N = 93)

Farmers' Knowledge	AUTP Participants		Non-AUTP Participants		Overall	
	Amount	%	Amount	%	Amount	%
Low	26	54.17	40	88.89	66	70.97
High	22	45.83	5	11.11	27	29.03
Total	48	100.00	45	100.00	93	100.00

Source: Primary data analysis (2024).
Note: Scores of 5–8 indicate high knowledge; scores of 0–4 indicate low knowledge.

The low levels of knowledge observed are consistent with earlier findings by Jamanal et al. (2019), who argued that a farmer's awareness of agricultural insurance depends mainly on the amount of accurate and relevant information they receive regarding program design, benefits, and procedures. Farmers who possess a comprehensive understanding of how insurance works are more likely to make informed enrollment decisions and to sustain participation over time. The data presented in Table 3 further illustrate the specific dimensions of farmers' knowledge. Among the respondents, 40.86% understood the eligibility criteria for participation, while 39.78% were aware of the covered risks. However, fewer than one-third of farmers understood the insurance value (29.03%) and the claim submission procedure (15.05%). This pattern suggests a lack of holistic understanding and highlights the need for targeted communication strategies that explain not only the program's purpose but also its underlying mechanisms.

Table 3. Distribution of farmers' knowledge by indicator on the rice farming insurance program (AUTP) in Kulon Progo Regency

Knowledge Indicator about AUTP	Number of Farmers	Percentage (%)
Eligibility to participate	38	40.86
Land type criteria	30	32.26
Covered risks	37	39.78
Insurance value	27	29.03
Amount of premium paid	33	35.48
Conditions to claim compensation	35	37.63
Registration mechanism	16	17.20
Claim submission procedure	14	15.05

Source: Primary data analysis (2024)

These results suggest that while some key concepts may be understood by a segment of farmers—particularly those involved in active farmer groups—there remains a systemic shortfall in the dissemination of broader knowledge. Farmers involved in groups that receive regular counseling or extension services are more likely to be informed, as such forums provide opportunities to discuss eligibility, claim procedures, and the practical benefits of insurance. Nevertheless, the overall performance across all eight knowledge indicators—none of which exceeded 50%—highlights the urgency for the government and agricultural stakeholders to improve outreach and education. Policy interventions should aim to simplify technical language, use farmer-friendly communication tools, and integrate insurance literacy into ongoing agricultural extension programs. It is also critical that messaging emphasizes not only the benefits of AUTP, such as financial protection during crop failure, but also the practical steps to enroll, understand land type criteria, premium payments, and successfully claim compensation. Enhancing farmer knowledge is an essential step toward improving program uptake and ensuring that the AUTP scheme fulfills its intended role in agricultural risk management.

Farmers' Motivation to Participate in the AUTP Program

Farmers' motivation to participate in the Rice Farming Insurance Program (AUTP) can be attributed to a combination of individual risk perceptions, social influences, and institutional encouragement. The most prominent motivating factor was the direction from farmer group leaders (89.58%), which underscores the pivotal role of local leadership in influencing members' decisions to adopt agricultural programs (Falo, 2016; Putra et al., 2016). Leaders within farmer groups serve not only as organizers but also as key agents in disseminating information and reinforcing behavioral norms within agricultural communities. Their endorsement often legitimizes participation in such programs among group members.

Table 4. Motivating factors for farmers' participation in the AUTP program in Kulon Progo Regency (N = 48)

Motivational Factor	Number of Farmers	Percentage (%)
Concern over the increasing risk of floods	35	72.92
Concern over the increasing risk of drought	22	45.83
Concern over the increasing risk of pests and disease	15	31.25
Recommendation from extension officers (PPL)	25	52.08
Influence of fellow farmers	30	62.50
Direction from the farmer group leader	43	89.58
Desire for protection in the event of crop failure	35	72.92

Source: Primary data analysis (2024)

In addition to leadership influence, peer behavior also plays a substantial role. A total of 62.50% of farmers reported that they decided to enroll in AUTP because other farmers had participated, indicating the influence of fellow farmers. This pattern reflects the "bandwagon effect," in which individuals emulate the choices of others, especially in uncertain situations (Nuswantoro, 2013). The role of agricultural extension officers (PPL) was also considerable, with 52.08% of farmers indicating that they were motivated by institutional encouragement. This highlights the importance of extension services not only in disseminating knowledge, but also in shaping farmers' perceptions and attitudes toward risk management through insurance (Abdullah et al., 2021).

Risk-related considerations further strengthened farmers' motivation. Concerns over flood risk (72.92%), drought risk (45.83%), and pest and disease outbreaks (31.25%) reveal that environmental hazards are recognized as real threats to livelihoods. As emphasized by Lin & Wang (2024), farmers who have experienced or anticipate climate-induced disasters are more likely to adopt risk-mitigation tools. Additionally, 72.92% of farmers expressed a desire for protection in the event of crop failure, reinforcing the notion that AUTP is perceived not only as a response to risk but also as a mechanism to safeguard farm income stability. Overall, while social and institutional dynamics are central, environmental vulnerability remains a powerful driver in farmers' decisions to participate in the AUTP program.

Barriers to Participation in the AUTP Program

Despite the potential benefits of the AUTP program, numerous barriers hinder full participation among rice farmers in Kulon Progo Regency. These barriers span informational, psychological, institutional, and social dimensions. As shown in Table 5, the most frequently cited barrier was the lack of information about the AUTP program, reported by 60% of non-participating farmers. Closely related to this, 40% of respondents indicated that they had not received any registration information from farmer groups or agricultural extension officers. These findings align with those of Pratiwi et al. (2023), who reported that the absence of effective program socialization and clarity also posed significant barriers to the implementation of livestock insurance schemes. These communication deficiencies highlight structural weaknesses in the dissemination of information to target populations, which can ultimately undermine even well-designed policy frameworks.

Table 5. Barriers to farmers' participation in the AUTP program in Kulon Progo Regency (N = 45)

Barrier	Number of Farmers	Percentage (%)
Lack of information about the AUTP program	27	60.00
Perception that the insurance premium is too expensive	1	2.22
Never experienced crop failure	9	20.00
Belief that droughts, floods, or pest attacks are unlikely	15	33.33
Perception of no need for rice farming insurance	16	35.56
No participation from farmer group members or leaders	14	31.11
Had previously enrolled, but failed to claim, so decided not to continue	2	4.44
No registration information received from the farmer group or extension agents	18	40.00
Others	5	11.11

Source: Primary data analysis (2024)

Internal perceptions among farmers also constitute significant barriers. Approximately 35.56% of respondents stated that they had a perception of no need for rice farming insurance, while 33.33% believed that droughts, floods, or pest attacks were unlikely to occur. These attitudes may reflect excessive optimism or a misjudgment of actual agricultural risks—perspectives often shaped by previous experiences or limited exposure to climate risk narratives. Bonney et al. (2020) explain that such optimistic bias and overconfidence can impair risk perception and diminish the perceived need for preventive measures such as insurance. Additionally, 20% of farmers claimed they had never experienced crop failure, reinforcing the notion that prior resilience can foster present complacency. These psychological barriers highlight the need for outreach efforts that go beyond simple information delivery, instead addressing deeper perceptual misalignments regarding vulnerability and preparedness.

Social dynamics, while often beneficial to program diffusion, can also become barriers to its implementation. About 31.11% of respondents noted that they did not participate in AUTP because no members or leaders within their farmer group had joined the program. This observation aligns with conformity theory, which suggests that individuals tend to conform their behaviors to those of their social group. In highly cohesive agricultural communities, the absence of visible participation from respected peers or leaders may lead to group-wide hesitancy, even when the benefits are well established. Encouraging pilot enrollment among influential individuals in these communities could help break such inertia and initiate broader adoption.

Several operational and experiential issues were also noted. A small proportion of respondents (4.44%) indicated that they had previously enrolled but failed to claim, which discouraged them from continuing their enrollment. According to Handayani (2017), dissatisfaction with the claims process can have a long-lasting impact on farmers' willingness to engage with

insurance programs. If the claims mechanism is perceived as inefficient, unfair, or overly bureaucratic, trust in the program may erode. Therefore, increasing transparency and efficiency in claim handling is essential. Interestingly, only 2.22% of farmers identified insurance premium cost as a barrier, suggesting that financial constraints may be less decisive than often assumed. Taken together, these results indicate that the primary obstacles to participation are not economic but instead rooted in information gaps, risk misperception, and social dynamics. Addressing them requires a multifaceted approach: improving the clarity and reach of program communication, tailoring messages to correct optimism bias, enhancing the visibility of participation among community leaders, and building trust through transparent and efficient claims handling**.**

CONCLUSIONS AND SUGGESTIONS

This study concludes that farmers' participation in the Rice Farming Insurance Program (AUTP) in Kulon Progo Regency is primarily hindered by a lack of knowledge and insufficient information dissemination, despite the presence of strong motivational factors such as social influence and disaster-related risk awareness. While directives from farmer group leaders, peer behavior, and institutional appeals positively shape farmers' intentions to participate, these factors are undermined by poor understanding of program procedures, limited exposure to the technical aspects of AUTP, and past negative experiences. The findings suggest that informational and perceptual gaps have a greater impact on participation than financial concerns such as premium costs, which were rarely cited as barriers. Therefore, efforts should prioritize improving the clarity, reach, and consistency of AUTP-related information through farmer-friendly communication tools and targeted extension activities in disaster-prone areas; streamlining registration and claims processes to reduce administrative complexity and rebuild trust; leveraging social influence by involving farmer group leaders and active members as role models; and integrating risk perception education to address optimism bias and conformity effects. This study acknowledges several limitations, including the use of a two-stage sampling technique with purposive selection at the location stage, which may introduce sampling bias and restrict generalizability beyond the study area. Additionally, the study relies on self-reported survey data, which may be subject to recall errors or response bias. Future research should investigate alternative extension service models, including digital platforms and peer-to-peer learning systems, to assess their potential in bridging knowledge gaps and promoting the broader adoption of agricultural insurance among smallholder farmers in disaster-prone contexts.

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