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A Study Of Farmer Crop Insurance Behaviour With Application Of Tpb

1. Mrs. R. RADHIKA

Part-time Research Scholar, PG and Research Department of Commerce,

Poompuhar College (Autonomous), Melaiyur, Tamilnadu India (Affiliated to Bharathidasan University). Thiruchirappali – 620024.

Assistant Professor, Department of Commerce, Idhaya College for Women, Kumbakonam.

2. Dr. P. RENGARAJAN

Assistant Professor & Research Advisor, PG and Research Department of Commerce,

Poompuhar College (Autonomous), Melaiyur, Tamilnadu India (Affiliated to Bharathidasan University). Thiruchirappali – 620024.

Abstract

The study reveals that safety concerns do not significantly impact farmers' attitudes towards crop insurance. Farmers with higher risk perceptions are more likely to have favourable attitudes towards crop insurance. Social influence may be significant, but not enough. Perceived behavioural control (PBC) does not significantly predict intention, with control beliefs like ease or difficulty not being significant. Farmers willing to pay show lower intention to insure, possibly due to affordability concerns or reverse causality. A positive attitude does not directly translate to intention. Farmers who intend to purchase crop insurance are more likely to follow through, indicating that behavioral intention precedes action.

Keyword – Perceived behavioural control, Theory of Planned Behaviour , Social norms

Introduction

Biswal and Bahinipati (2025) Crop insurance is a crucial tool for farmers to diversify their crops and protect against climate change and extreme events. However, the adoption rate of these practices is low, indicating a need for a more comprehensive approach. This study investigates the role of crop insurance in promoting crop diversification, revealing a decline in adoption rates among smallholders. Factors such as household size, land size, irrigation facilities, and access to government policies also contribute to this decline. The study recommends designing policies that promote a bundle of options, including low insurance premium rates for farmers opting for crop diversification. Feier Yan, Fujin Yi, and Huang Chen (2013) Farmers' willingness to pay for insurance varies by farming activity, with dairy and greenhouse farmers showing higher WTP. WTP positively correlates with climate hazards, market participation, and contractual arrangements. Future research could use choice experiments. Du (2025). Farmers' insurance decisions are influenced by inertia, a study reveals. It uses econometric procedures and machine learning to differentiate plans, expand understanding of choice behaviour in crop insurance markets, and offer a micro-level perspective on farmers' choices.

Shi, Sun, Song, and Ali (2025) The study explores inertia in U.S. farmers' crop insurance decisions using econometric procedures and machine learning techniques. It expands understanding of choice behaviour in crop insurance markets and offers a micro-level perspective on farmers' insurance choices. Huang, Su and Wang (2025) The study explores the role of agricultural insurance in promoting green agricultural practices in China, highlighting its positive impact on large-scale farming operations. Legal trust enhances the effectiveness of insurance, while increased income from insured farming activities supports sustainable production transitions. Biswal and Bahinipati (2025) Climate change and extreme weather events are causing farmers to face yield risks, leading to the adoption of climate-smart agriculture practices like crop diversification and crop insurance. However, adoption rates remain low, particularly among smallholder farmers. Crop insurance plays a crucial role in supporting diversification, while other positive factors like household size, landholding, irrigation access, and participation in programs like MGNREGS positively influence diversification decisions. Dong, Jia and Su (2025) Digital agricultural insurance significantly promotes the adoption of fertilizer reduction technology among farmers, reducing risk aversion, mitigating information asymmetry, and alleviating financial constraints. This positive effect is primarily observed among large-scale farmers and grain crop growers.

Hou, D., & Wang, X. (2025) This study examines the relationship between agricultural insurance, farmers' income, and grain production scale in China. Using provincial panel data, it finds that insurance positively impacts farmer income and indirectly affects grain planting scale. However, the effect size is small, possibly due to differences in resources and demand for insurance among farmer types. Agricultural insurance also indirectly affects planting area through increased farmer income, supporting the findings. Policy recommendations for enhancing agricultural insurance policies are proposed.

Theoretical background of the study: Theory of Planned Behaviour

The Theory of Planned Behavior (TPB) is a psychological framework that explains human behavior by examining the relationships between beliefs, attitudes, intentions, and actions. Developed by Ajzen in 1985, TPB posits that an individual's intention to perform a behavior is influenced by three primary factors: attitudes towards the behavior, subjective norms, and perceived behavioral control. This model has been widely applied across various fields, including health, marketing, and finance, to understand and predict behaviors such as insurance purchasing, investment decisions, and health-related actions. Several studies have applied the TPB to investigate insurance purchasing behavior, providing valuable insights into the underlying psychological and social factors driving this decision-making process.

Oka, Putu, Sri, and Henny (2025) The study explores the TPB concept to understand the factors influencing coffee farmers' innovative behavior in implementing Good Agriculture Practice (GAP). It reveals that innovation characteristics directly impact attitudes and knowledge, while local characteristics only affect attitudes. Perceived behavioral control indirectly influences farmers' intentions and behavior. The findings can help policymakers and businesses develop effective strategies to encourage farmers to adopt GAP, enhancing the accuracy of the predictive model. Yang, Turvey and Kong, R. (2025) The study explores why Chinese farmers don't adopt online credit, focusing on perceptions. Based on field survey data, it identifies five groups with different perception characteristics: socially influenced non-believers, socially independent non-believers, just see fraud skeptics/Socially independent skeptics, suspicious but socially influenced, and neutral independent, and no distinctive perception. The results show distrust and suspicion among farmers, subjective norms, and socio-demographic factors such as gender, age, education, physical health, off-farm work, and broadband coverage. Oka, Putu, Sri, and Henny (2025). This study explores the impact of financial knowledge on insurance purchasing behavior, using the Theory of Planned Behavior (TPB) framework. Results show that financial knowledge positively influences attitudes towards insurance by increasing awareness of its benefits and enhancing perceived behavioral control, despite limited financial literacy.

Objective of the study

To apply the TPB to study the farmers' crop insurance behaviour

To study farmers' attitudes towards crop insurance behaviour

To study farmers' intention towards crop insurance behaviour

To study social norms Farmers' crop insurance behaviour

To study PBC role in Farmers' crop insurance behaviour

Perceived behavioral control

Mamun, Rahman, Munikrishnan and Permarupan (2021) Perceived behavioral control refers to an individual's perception of their insurance purchasing ability. Understanding insurance products, eligibility requirements, and decision-making processes increases self-efficacy and confidence, leading to more informed decisions and increased insurance uptake. Research on the Theory of Planned Behavior highlights the complex interplay of attitudes, subjective norms, and perceived behavioural control in shaping insurance purchases.

Social norms

Social norms influence an individual's financial decisions, influenced by their peers, family, and broader network, which can either encourage or discourage insurance purchases based on their understanding of financial concepts. Fostering a supportive social environment that promotes financial literacy and responsible insurance purchasing behaviours is crucial for driving greater financial inclusion and security among consumers(Dalton & Holland, 2017)

Attitudes towards insurance

Dalton and Holland (2017) Financial knowledge significantly influence attitudes towards insurance purchases, with higher financial literacy leading to more positive attitudes towards insurance products. Working adults with better financial knowledge are more likely to engage in financial security behaviours, such as purchasing insurance.

Research methodology:

Sample size and method The present research uses a simple random sampling technique to gather data from the sample framework work, which consists of farmers from the Thanjavur District. Sample size is 220 units. The Measured Structural Equation Model (MSEM), MSEM, consists of latent variables, observed/measured variables, and structural paths. These paths show how one latent variable influences another. The model includes a measurement model, which defines how observed variables load onto latent variables, and model fit indices, which show how well the full model fits the data. To report a measured SEM, confirm the validity and reliability of the latent variables, summarize key significant and non-significant paths, and mention overall fit.

The Measured Structural Equation Model (MSEM

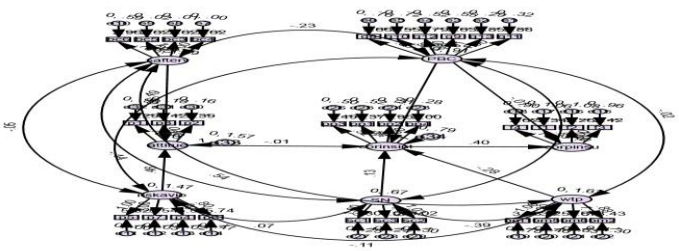

Figure 1

Table 1: MSEM results

	Dependent variable		Independent Variable	**Estimate**	**S.E.**	**C.R.**	**P**
H1	Attitude towards crop insurance	<	Safety concern	-.049	.054	-.907	.364
H2	Attitude towards crop insurance	<	Risk perception	.463	.061	7.543	***
H3	Crop insurance intention	<	SN	.128	.080	1.613	.107
H4	Crop insurance intention	<	PBC	-.022	.063	-.355	.723
H5	Crop insurance intention	<	Willing to Pay for it	-.279	.052	-5.393	***
H6	Crop insurance intention	<	Attitude towards crop insurance	-.008	.042	-.190	.849
H7	Farmer insurance behaviour	<	Crop insurance intention	.401	.063	6.345	***
H8	Crop insurance intention	<	PBC	-.006	.035	-.181	.857

Results of the study

H1 is rejected. Attitude towards crop insurance is influenced by safety concerns, but safety concerns do not significantly impact farmers' attitudes towards crop insurance.

H2 is accepted, and it suggests that Farmers with higher risk perceptions are more likely to have favourable attitudes towards crop insurance, according to a significant positive effect.

The study found that social influence may be significant, but not significantly enough in this sample.

H3 is rejected. The study found that perceived behavioural control (PBC) does not significantly predict intention, with control beliefs like ease or difficulty not being significant.

H4 is rejected, and it suggests that Farmers willing to pay show lower intention to insure, possibly due to affordability concerns or reverse causality.

H5 is accepted, and it suggests that a higher willingness to pay is associated with a lower intention to adopt crop insurance, despite the theory that higher perceived costs reduce actual intention. This may be due to confounding variables like trust in insurance providers or access issues.

H6 is rejected, and it suggests that the study found that a positive attitude does not directly translate to intention, with an estimated value of -0.008, SE = 0.042, C.R. = -0.190, p = 0.849.

H7 is accepted, and it suggests that the study found that farmers who intend to purchase crop insurance are more likely to follow through and do so, indicating that behavioural intention precedes action.

H8 is rejected, and it suggests that Perceived Behavioural Control (PBC) does not significantly influence farmers' intention to adopt crop insurance, as previously found, reinforcing the model's findings on the subject.

Conclusion The study reveals that safety concerns do not significantly influence farmers' attitudes towards crop insurance. Farmers with higher risk perceptions are more likely to have favourable attitudes towards crop insurance. Social influence may be significant, but not enough. Perceived behavioural control (PBC) does not significantly predict intention. Farmers willing to pay show lower intention to insure, possibly due to affordability concerns or reverse causality. A positive attitude does not directly translate to intention. Farmers who intend to purchase crop insurance are more likely to follow through.

References

Biswal, D., & Bahinipati, C. S. (2025). Farmers' preference for crop-diversification in India: Does crop-insurance play a part? Mitigation and Adaptation Strategies for Global Change, 30(3). doi:10.1007/s11027-025-10205-0

Biswal, D., & Bahinipati, C. S. (2025). Farmers' preference for crop-diversification in India: Does crop-insurance play a part? Mitigation and Adaptation Strategies for Global Change, 30(3). doi:10.1007/s11027-025-10205-0

Dalton, C. M., & Holland, S. B. (2017). Why do firms use insurance to fund worker health benefits? The role of corporate finance. Journal of Risk and Insurance, 86(1), 183-212. doi:10.1111/jori.12207

Dalton, C. M., & Holland, S. B. (2017). Why do firms use insurance to fund worker health benefits? The role of corporate finance. Journal of Risk and Insurance, 86(1), 183-212. doi:10.1111/jori.12207

Dong, Y., Jia, C., & Su, L. (2025). The impact of digital agricultural insurance on farmers' fertilizer reduction technology adoption: Evidence from China. China Agricultural Economic Review. doi:10.1108/caer-11-2023-0322

Du, X. (2025). Inertia in the U.S. federal crop insurance market. International Journal of Industrial Organization, 100, 103149. doi:10.1016/j.ijindorg.2025.103149

Feier Yan, Fujin Yi, & Huang Chen. (2013). Willingness-to-pay (WTP) for insurance against low-probability flood risks. Managing Extreme Climate Change Risks through Insurance, 305-340. doi:10.1017/cbo9781139519540.012

Hou, D., & Wang, X. (2025). How does agricultural insurance influence grain production scale? An income-mediated perspective. Frontiers in Sustainable Food Systems, 9. doi:10.3389/fsufs.2025.1524874

Huang, Z., Su, K., & Wang, S. (2025). The role of agricultural insurance in promoting farmers' green production behavior: The moderating effect of legal trust. Finance Research Letters, 80, 107269. doi:10.1016/j.frl.2025.107269

Maha Dewi, P. E., & Cahyaningtyas, F. (2024). Financial management behavior pada pengguna paylater dalam perspektif theory of planned behavior. JURNAL LENTERA BISNIS, 13(1), 43. doi:10.34127/jrlab.v13i1.960

Mamun, A. A., Rahman, M. K., Munikrishnan, U. T., & Permarupan, P. Y. (2021). Predicting the intention and purchase of health insurance among Malaysian working adults. Sage Open, 11(4). doi:10.1177/21582440211061373

Putri, A., Rahmat Syahni, Hasnah, & Miko, A. (2025). The role of agricultural cooperatives in enhancing credit access, market information, and smart farming among rural farmers. Research on World Agricultural Economy, 16-30. doi:10.36956/rwae.v6i2.1567

Shi, H., Sun, H., Song, Y., & Ali, M. A. (2025). Eliciting farmer households' preferences for attributes of insurance schemes addressing wildlife conflict: A choice experiment study. Environmental Impact Assessment Review, 114, 107927. doi:10.1016/j.eiar.2025.107927

Yang, S., Turvey, C. G., & Kong, R. (2025). Using K-means clustering to explore farmers' behavior and intention towards online credit in China based on extended theory of planned behavior. Agribusiness. doi:10.1002/agr.22026