



The Role of Trust, Regulatory Framework, and Government Insurance Schemes in Shaping Microinsurance Demand

CHANDRARATHNE WRPK¹, PERERA DAM² AND GAMAGE SK³

Faculty of Business Studies and Finance, Wayamba University of Sri Lanka

E-mails: priyankac@wyb.ac.lk¹, aminda@wyb.ac.lk², gamage@wyb.ac.lk³

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Abstract: Smallholder farmers are vulnerable to different kind of risk. Microinsurance can play a vital role in protecting their livelihoods. However, in Sri Lanka adoption of microinsurance remains limited. In this study we examine the impact of effectiveness of government insurance schemes, the regulatory framework, and trust on microinsurance demand among Sri Lankan paddy farmers. Data were collected from 382 farmers using an interviewer-administered questionnaire. Respondents were selected from North Western Province by using a cluster sampling technique combined with proportional allocation. Partial Least Squares Structural Equation Modeling (PLS-SEM) used to analyze the data. According to the findings, trust significantly and directly impacts microinsurance demand. Also, it acts as a mediator between institutional factors and demand for microinsurance. The effectiveness of government insurance schemes positively affects trust as well as microinsurance demand. Although regulatory framework significantly impacts on the trust, it does not have a direct significant impact on microinsurance demand. These results emphasize the significance of effective institutional support in enhancing trust and increasing microinsurance demand among farmers. Accordingly, this study contributes to the existing limited empirical literature on institutional support in promoting microinsurance adoption. Moreover, it suggests future research on additional

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mediating variables and institutional factors that impact on the participation of microinsurance schemes among diverse farming populations.

Keywords: Government Insurance Scheme, Microinsurance, Paddy Farmers, Regulatory Framework, Trust

1. INTRODUCTION

In the Sri Lankan economy, agricultural sector serves as a fundamental pillar. Paddy farming is crucial in agricultural sector, since 34% of agricultural land is used for paddy farming and it provides livelihoods for around 1.08 million farmers (Department of Agriculture, 2022/23). In the year 2022, the contribution of paddy production to the agricultural GDP was 10.67%, and its contribution to the total GDP was 0.8% (Central Bank of Sri Lanka, 2022). However, various unexpected agricultural incidents (crop failure, loss of livestock, loss of assets, and damages by wild animals) and non-agricultural factors (accidents, health issues, and death of a breadwinner and family members) severely impact the income and standard of living of paddy farmers.

To support paddy farmers, the Sri Lankan government has introduced policies and social security programs, but these programs are often fragmented and insufficient due to a lack of financing, among many other factors (Ranathunga *et al.*, 2018). Hence, farmers do not get the necessary social security (Micro Insurance Network, 2016) and are exposed to both agricultural and non-agricultural risks. Therefore, it is crucial to have a formal risk protection mechanism to reduce their vulnerability and boost the rural economy. According to the Maireva (2023), microinsurance has the potential to be an effective risk management strategy for smallholder farmers and, through that, improve the rural communities' standard of living and open the door to economic growth (Wanczeck *et al.*, 2017; Zenklusen & McCord, 2009) as well as food security.

Despite its numerous benefits, the penetration of insurance in Sri Lanka remains strikingly low, with an insurance penetration rate of just 1.0% in 2023 (IRCSL, 2023). Lack of trust is the main barrier to adoption of microinsurance among potential policyholders. It directly impacts to the willingness to purchase insurance. Farmers are hesitant to buy insurance products when they have doubts about its coverage and likelihood of receiving payment when they face losses (Ali *et al.*, 2020). Accordingly, trust plays a significant role in insurance

system. Therefore, confidence among potential customers can be improved by building trust in the insurance system while addressing the protection gap, and increasing insurance penetration. Moreover, through that can strengthen social safety nets particularly for vulnerable communities (Abeyawickrama, 2017).

Although trust is one of the most important factors influencing the demand for insurance (Matul *et al.*, 2013; Eling *et al.*, 2014; Platteau *et al.*, 2017; Asmare & Worku, 2018; Ali *et al.*, 2020; Biswal & Bahinipati, 2022; Debrah *et al.*, 2022), limited research has explored its specific role in microinsurance uptake among paddy farmers. Moreover, few studies have evaluated the **mediating effect** of trust on insurance purchasing intentions (Hasyim & Helmi, 2017; Nzowa *et al.*, 2023). There is a noticeable gap in literature regarding the mediating role of trust in linking **institutional factors** (such as regulatory frameworks and government insurance schemes) to microinsurance demand, particularly in the Sri Lankan context and among agricultural communities. Notably, no prior studies have investigated this mediation using **PLS-SEM**.

Furthermore, institutional factors such as the effectiveness of government insurance scheme and the regulatory framework is crucial in building a sound microinsurance system. In Sri Lanka main causes for low confidence in the compulsory crop insurance scheme is the little transparency in loss assessment and underestimation in indemnity payment (Wickramasinghe, 2019). Therefore, this scheme is not beneficial for the farmers and majority of farmers consider it as unrewarding policy (Dissanayaka *et al.*, 2017). A government insurance scheme with timely payment of compensation amounts, transparency in the settlement of claims, simplified procedures, fair premium rates, awareness programs, and grievance settlement mechanisms improves the trust of farmers and uptakes the microinsurance demand (Rawat & Zechariah, 2022). However, when reviewing the literature, one can identify a lack of focus on the effectiveness of government insurance schemes as a determinant of microinsurance demand.

On the other hand, as an institutional factor regulation have the power to either promote or hinder the insurance availability (Biener *et al.*, 2014). Therefore, an unsupportive regulatory framework is one of the factors largely affecting the uptake of insurance. Therefore, insurance regulator should come up with legislation and framework regarding microinsurance (Ndurukia *et al.*, 2017). However, despite their significance, there is a lack of research

that directly analyzes the impact of these factors on microinsurance demand, especially among paddy farmers. Most studies focus on the broader implications of regulation and government schemes without examining their specific influence on microinsurance adoption. Therefore, it is important to investigate the impact of effectiveness of government insurance schemes and regulatory framework on the microinsurance demand.

This study addresses this empirical gap in the literature by analyzing the impact of trust as a direct determinant of insurance adoption and as a mediating variable, connecting institutional factors. By analyzing these dynamics, this study contributes to the design of trust-based initiatives to improve microinsurance adoption and strengthen the resilience of agricultural communities.

2. LITERATURE REVIEW

2.1. Demand for microinsurance

In this study, the demand for microinsurance is considered the dependent variable. Generally, demand for insurance refers to the willingness to pay for insurance or the decision to purchase it (De Bock & Gelade, 2012). However, for this study, demand is conceptualized as the willingness of paddy farmers to use microinsurance products. Microinsurance, as a formal financial security tool, offers farmers protection against various risks, but its demand is influenced by variety of factors, including demographic factors, risk factors, economic factors, institutional factors and behavioral factors.

2.2. Factors affecting microinsurance demand

Despite increasing recognition of microinsurance as a valuable risk management tool, its voluntary uptake remains low due to a range of influencing factors. Platteau *et al.* (2017) identified key barriers such as limited understanding of insurance, peer influence, attitudes toward risk, price, transaction costs, contract design, service quality, information access, availability of substitutes, and most critically, trust and liquidity constraints. According to the Ndurukia *et al.* (2017) risk exposure, price, access to credit, and income are the factors significantly affect the microinsurance demand in Kenya other than demographic variables like gender, age, and education. Mazambani and Mutambara (2018) proposed a holistic framework including both demand-

side factors (awareness, affordability, and financial literacy) and supply-side factors (product customization, distribution, technology, and trust-building). According to them both sides are important to enhance the microinsurance adoption.

According to Asmare and Worku (2018), household size, employment status, education level, income, financial literacy, trust in providers, premium affordability, accessible delivery channels, and insurable assets are significant drivers of demand. As identified by them age, gender, religion, peer influence, concerns about adverse selection and moral hazard are insignificant factors. In their study Hasanabadizadeh *et al.* (2019), emphasized socio-cultural, economic, and educational factors as key determinant of microinsurance demand. In the Philippines, socio-cultural and demographic factors, financial literacy, and government intervention are the key factors impact to the microinsurance uptake (Etrata & Montemayor, 2019). According to the Gabrah *et al.* (2020) lack of product innovation, poor distribution, weak legal frameworks, uncompetitive pricing, low income, inadequate government support, and low public trust are the barriers to adoption of microinsurance. By supporting it Kajwang (2021) identified low income, complexity of insurance processes, and limited distribution infrastructure as barriers. Further they identified risk exposure, cultural beliefs, personal characteristics (e.g., gender, age, education), income, household size, knowledge of microinsurance, and product suitability as key determinants of microinsurance uptake.

Product quality and design, household income constraints, education and awareness, behavioral preferences, cultural attitudes, and supportive government policies are the six critical factors influencing agricultural insurance uptake (Nshakira-Rukundo *et al.*, 2021). As identified by Medard and Rodrigue (2021), education, household size, and motivations for joining associations on microinsurance adoption have positive influence on microinsurance demand while male gender and age of household head have a negative effect. It highlighted the importance of social affiliation and demographic dynamics in shaping demand.

In their study Gbigbi and Ndubuokwu (2022) identified, age, education, premium rate, credit access, awareness, and land tenure as the factors impact on microinsurance demand in Nigeria. According to the Debrah *et al.* (2022) age, marital status, education, trust, income, and risk experience are the factors

shaping microinsurance demand in Ghana. Aheeyar *et al.* (2023) conducted study to identify key factors affecting willingness to pay for crop insurance in Sri Lanka and they highlighted age, irrigation access, reliance on farming, and water availability as key factors. Similarly, Johari, *et al.* (2024) investigate the factors shaped insurance intentions among paddy farmers in Malaysia and identified knowledge, risk attitudes, and social influences as significant factors. According to the Biswal and Bahinipati (2022) all these factors can be categorized into five groups as economic, social-demographic, educational, structural, and behavioral biases.

Among these factors only few studies identify the effectiveness of government insurance schemes and regulatory framework as factors influencing the microinsurance demand. A well-structured regulatory framework can promote the adoption of microinsurance (Ndurukia *et al.*, 2017; Biener *et al.*, 2014). Similarly, the performance of government insurance schemes can either encourage or discourage farmers from seeking microinsurance coverage (Rawat & Zechariah, 2022).

Accordingly, in this study consider only three factors, the effectiveness of government insurance schemes, the regulatory framework, and trust due to their significance in shaping microinsurance demand and the relative scarcity of literature exploring their interrelationships in the agricultural context.

2.3. Effectiveness of government insurance schemes (EGIS)

Insurance schemes supported by the government can be categorized as government insurance schemes. These schemes essentially initiated by the government to cater to the needs of economically and socially disadvantaged groups of people (Pandey *et al.*, 2021). An effective government insurance scheme should achieve its intended objectives and provide adequate coverage for its beneficiaries. It can be measured by using several dimensions such as accessibility, adequacy of coverage, efficiency in claim settlement, awareness, and affordability.

Social protection refers to the total set of actions taken by the government or other parties to address risk, vulnerability, or persistent poverty (Churchill & Matul, 2012). Therefore, effective government insurance schemes can offer social protection by addressing risk vulnerability and reducing poverty. As well, by providing a safety net, these schemes can improve the quality of life. As

well, an effective government insurance scheme increases public trust in formal insurance mechanisms.

In Sri Lanka, the government implements two main insurance schemes for farmers through the Agriculture and Agrarian Insurance Board (AAIB): a compulsory crop insurance scheme linked to the fertilizer subsidy, and several voluntary insurance schemes covering crops, livestock, equipment, and health. These insurance schemes serving over 700,000 farmers since its inception in 1958. However, the AAIB's insurance penetration remains below 5% (Institute of Policy Studies of Sri Lanka, 2018). This is due to the low confidence in the compulsory scheme. Many farmers perceive scheme as an ineffective and unrewarding due to the issues arises from non-transparent loss assessment procedures and undervalued indemnity payments (Wickramasinghe, 2019; Dissanayaka *et al.*, 2017). As well significant number of farmers unaware of their enrollment in the compulsory insurance scheme (Aheeyar *et al.*, 2023; Wickramasinghe, 2019). According to the Rawat and Zechariah (2022), timely compensation, transparent claims processes, fair premiums, awareness initiatives, and accessible grievance mechanisms are the significant factors to enhance the trust on government insurance schemes (Rawat & Zechariah, 2022). Despite these challenges, the effectiveness of government insurance schemes remains an underexplored determinant of microinsurance demand in the existing literature.

To address this gap, the present study introduces effectiveness of government insurance schemes as a key independent variable in the conceptual framework. The study aims to assess its direct influence on microinsurance demand and its indirect influence through trust, thereby providing a more comprehensive understanding of how government support mechanisms shape insurance uptake among smallholder paddy farmers.

2.4. Regulatory framework and microinsurance adoption

Regulatory framework means set of rules and regulations that are designed to govern the stability of the microinsurance system, to promote good governance, and to guarantee the efficient and effective financial operations of insurance entities (Llanto, 2007). Mainly there are three primary functions of regulatory framework: Protecting policyholders in general, protecting individual policyholders, and developing insurance markets (Wiedmaier-Pfister &

Chatterjee, 2006). Accordingly, framework basically promote the development of microinsurance by establishing a basis for the regulation and supervision of microinsurance activities and providers including aspects such as licensing, consumer protection, product approval, and claims settlement procedures.

An unsupportive regulatory framework can act as a major barrier to insurance uptake (Biener *et al.*, 2014), highlighting the importance of enacting legislation and developing structures specifically tailored to the needs of microinsurance markets (Ndurukia *et al.*, 2017). A strong regulatory environment is essential for the sustainable growth of the insurance industry, as the lack of appropriate procedures has, in some contexts, facilitated fraudulent practices, and thereby hindering trust among both clients and providers (Galappattige *et al.*, 2011). However, there are limited empirical evidence on impact of supportive regulatory system on microinsurance demand. By using the research from traditional insurance markets, Eling *et al.* (2014) identified a positive relationship between supportive legal framework and insurance demand.

Transparency, fairness, and accountability are the significant conditions necessary for effective microinsurance delivery and strengthening stakeholder trust. A well-structured regulatory framework can maintain and promotes these factors. However, despite its recognized importance, the influence of regulatory quality on microinsurance demand remains underexplored in existing literature. To fill this gap, this study looks at the regulatory framework as a separate factor to see how it directly affects microinsurance adoption and how it indirectly influences it by building trust in the insurance sector.

2.5. Trust in insurance uptake

Trust means having faith, confidence, or reliance in another person, organization, or system. In regards to insurance, trust can be defined as a customer's bet on an insurer's future contingent actions, ranging from paying claims to protecting personal data (Schanz, 2019). It plays a key role in the insurance world affecting many parts of insurance deals and the bonds between insurance companies and their customers. The insurance field faces a huge challenge when it comes to trust, as it has a big effect on people's choices to buy insurance. If there is no trust, customers can not be sure about what they are paying for. Therefore, they also not like to share accurate details and finally it impacts on the effective insurance system (Coates *et al.*, 2021; Schanz, 2019).

Purchasing insurance involves making a known financial premium today in exchange for an uncertain future payout, as opposed to using credit or savings. Comparatively speaking to other forms of microfinance, it may be challenging to assess the advantages of insurance, particularly if the household has little or no financial literacy (Platteau *et al.*, 2017). Advice from trusted sources or the reputation of the insurance vendor are likely to have a greater impact on household decisions in this situation (Cole *et al.*, 2013). Therefore, trust plays a significant role in both the demand for insurance and the overall functioning of insurance markets. In regards to microinsurance services, trust can be considered the foundation. Microinsurance services cannot be offered in a sustainable manner without trust (Matul, Dalal, De Bock, & Gelade, 2013), because it directly affected the purchase intention of customer (Fiala & Wende, 2016; Djojo *et al.*, 2016).

The techniques to build trust include explaining the product, using trusted messengers, celebrating claim settlements, including value-added services, increasing payout frequency, and improving communication (Matul, Dalal, De Bock, & Gelade, 2013). In their study, Patt *et al.* (2009) provided three strategies and identified them as important aspects to establish and build trust: trust in the product, trust in the insurer and other institutions involved in the delivery of the product, and trust that already exists in communities. In this study these three aspects considered as the dimensions of trust.

Trust is a widely recognized key determinant of microinsurance demand. In their studies Matul *et al.* (2013), Cole *et al.* (2013), and Eling *et al.* (2014) highlight that, higher levels of trust significantly increase insurance uptake, while lack of trust acts as a major barrier. According to the Platteau *et al.* (2017) distrust in the insurer or the product itself can greatly reduce demand. Empirical evidence from Asmare and Worku (2018) confirms a positive relationship between household trust and participation in health microinsurance schemes.

2.6. Trust as a mediator

2.6.1. The mediating effect of trust on effectiveness of government insurance schemes and microinsurance demand

In the existing literature little attention has paid to the function of trust as a mediating variable of the effectiveness of government insurance schemes and microinsurance demand. Trust in insurance can be developed by enhancing

efficiency, competency, and transparency of government insurance schemes. These factors are critical in addressing clients' concerns and shaping their perceptions of insurance services. To establish a foundation of trust among clients, insurance providers need to align their operations with customer interests while ensuring transparency and fairness which can lead to increased demand and enhanced customer loyalty (Coates *et al.*, 2021).

Lack of trust is a major barrier to the uptake and participation of insurance schemes (Kibu *et al.*, 2024). In their study Rawat and Zechariah (2022) identified that government insurance schemes having timely compensation, transparent claims processing, simplified procedures, affordable premiums, awareness campaigns, and effective grievance handling mechanisms are more likely to build trust among farmers, thereby encouraging greater microinsurance participation. These findings highlighted the potential for trust to serve as a critical mediating link between the effectiveness of government insurance schemes and microinsurance demand.

2.6.2. The mediating effect of trust on regulatory framework and microinsurance demand

Trust between consumers and insurance providers can expand access to insurance. Achieving this requires effective policy, regulation, and supervision. Because these factors determine who can operate in the market, under what conditions, and ensure the provision of appropriate insurance products (Azcan *et al.*, 2015). Therefore, regulation and governance are fundamental to building and sustaining trust in the insurance system (Schanz, 2019).

In the insurance system, farmers need to pay premiums before they receive any benefits. Therefore, farmers' trust can be damaged if the government does not fulfill its obligations under the insurance contract and it will impact on the adoption of microinsurance. In their study, Cai, *et al.* (2015) highlight the significance of trust in microinsurance demand, through a randomized field experiment. According to their findings fairness and transparency of a insurance system can improve through a strong regulatory framework which strengthens confidence and enhance the insurance adoption.

Credibility and trust on insurance providers are essential to increase the insurance adoption, because in insurance clients prepay and rely on the assurance of future compensation. According to Dercon, *et al.* (2008), legal structures

through clear regulations and consumer protections play a vital role in shaping trust. A well-designed regulatory framework should streamline procedures, strengthen accountability, and protect consumer rights, all of which contribute to cultivating trust and, in turn, encouraging microinsurance demand.

2.7. Conceptual framework and hypotheses development

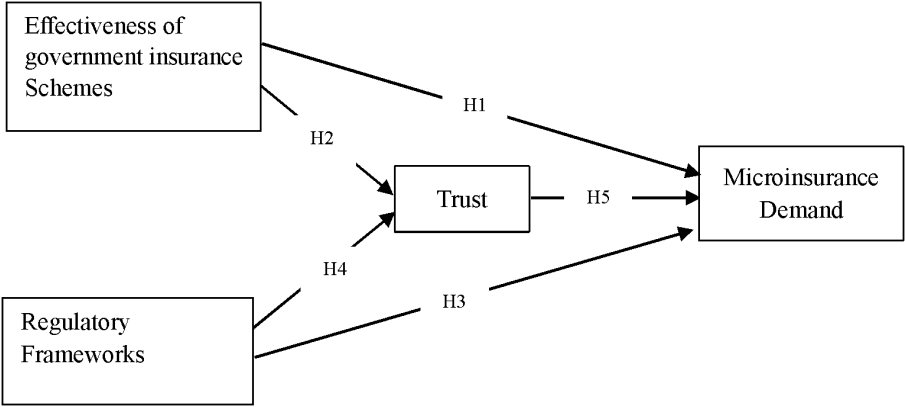


Fig. 1: Conceptual Model

Source: Developed by Author

- H1:** Effectiveness of government insurance schemes has a positive effect on microinsurance demand.
- H2:** Effectiveness of government insurance schemes has a positive effect on trust.
- H3:** A supportive regulatory framework positively influences microinsurance demand.
- H4:** A supportive regulatory framework positively influences trust.
- H5:** Trust has a significant positive effect on microinsurance demand.
- H5a:** Trust mediates the relationship between the effectiveness of government insurance schemes and microinsurance demand.
- H5b:** Trust mediates the relationship between the regulatory framework and microinsurance demand.

3. METHODOLOGY

This study adopts a quantitative, cross-sectional survey design to investigate the influence of institutional factors specially the effectiveness of government

insurance schemes and the regulatory framework and the direct and mediating role of trust on microinsurance demand among paddy farmers in Sri Lanka.

The target population comprises paddy farmers in the North Western Province, with a sample size of 382 farmers determined using Morgan's Table, based on a total population of 77,146 paddy farmers, ensuring a 95% confidence level and a 5% margin of error. A cluster sampling technique with proportional allocation was employed to select the sample. Interviewer-administered structured questionnaire survey used to collect the primary data for the study. The instrument included reflective constructs (Trust and Microinsurance Demand) and formative constructs (Effectiveness of Government Insurance Schemes, and Regulatory Framework), measured using seven-point Likert scales.

Data were analyzed using descriptive statistics and Structural Equation Modeling (SEM). In descriptive analysis, summarize key sample characteristics by using frequency distributions. Partial Least Squares Structural Equation Modeling (PLS-SEM) in SmartPLS 3 was used to assess the direct and indirect effects of institutional factors specifically the effectiveness of government insurance schemes and the regulatory framework and to examine the mediating role of trust in microinsurance demand. By following a two-step approach, first evaluate the quality of the measurement model and then as second step used the validated measurement model to assess the latent variables in the structural model. Accordingly in the measurement model assessment, Cronbach's alpha and composite reliability used to evaluate the reliability of reflective constructs. Further, convergent validity evaluated through average variance extracted (AVE) while discriminant validity evaluated through the HTMT ratio. Formative constructs were assessed by examining collinearity through variance inflation factors ($VIF < 5$) and the statistical significance of indicator weights ($p < 0.05$). The structural model assessment involved analyzing path coefficients (β), effect sizes (f^2), coefficient of determination (R^2), and predictive relevance (Q^2). The significance of relationships was tested using bootstrapping with 5,000 subsamples (Hair J. , Hult, Ringle, & Marko Sarstedt, 2017).

To completely understand the structural model and ensure its suitability for hypothesis testing, it is important to assess the model fit (Yahaya, Murtala, & Onukwube, 2019). Accordingly, model fit was evaluated using the Standardized Root Mean Square Residual (SRMR), the unweighted least squares discrepancy (d_{ULS}), and the geodesic discrepancy (d_G). SRMR

value of 0.08 or lower is generally considered indicative of a good fit. However this is the threshold for CB-SEM and the threshold values for PLS-SEM are unknown. As well, there are no established cutoff values for d_{ULS} and d_G (Henseler *et al.*, 2014; Hair *et al.*, 2021).

In this study, mediating impact was analyzed using framework proposed by Zhao *et al.* (2010), which classifies mediation types based on the significance and direction of direct and indirect effects. By using this framework, mediation can be categorized into three types as (1) Complementary mediation (both the indirect and direct effects are significant and aligned in the same direction), (2) Competitive mediation (both effects are significant but point in opposite directions), and (3) Indirect-only mediation (the indirect effect is significant while the direct effect is not).

4. RESULTS AND DISCUSSION

Results and discussion section describes the analysis of the demographic variables, describing the sample representation, and the analysis of the findings related to the research objectives.

4.1. Descriptive statistics

Highlighting the aging nature of the agricultural workforce, the sample comprises mainly middle-aged and older paddy farmers, with 65.9% aged 36 and above. Further, male farmers dominate the sector, representing 90.1% of respondents. According to the education levels most farmers have completed only secondary education, with 38.7% holding an Ordinary Level (O/L) qualification. 67.5% of farmers do the farming as part time occupation and 41.9% farmers earn between 25,000–50,000 LKR per month while only 10.2% earning above 100,000 LKR. Reflecting the prevalence of smallholder farming 66.8% of respondents cultivate less than two acres. When analyze the household sizes, 41.4% respondents having four members in their family. These demographic characteristics provide background for the socioeconomic conditions of paddy farmers, which may influence their risk management strategies and microinsurance demand.

4.2. Partial Least Squares Structural Equation Modeling (PLS -SEM) results

The relationships between institutional factors, trust and microinsurance demand among paddy farmers was evaluated using Partial Least Squares

Structural Equation Modeling (PLS-SEM) in SmartPLS 3, following the standard two-step procedure: (1) assessment of the measurement model to evaluate the reliability and validity of the constructs, and (2) evaluation of the structural model to test the hypothesized relationships.

4.2.1. Measurement model assessment

The conceptual model of the study included both reflective and formative constructs. Therefore the measurement model was assessed for both reflective and formative constructs. According to the model trust and microinsurance demand are reflective constructs and reliability was confirmed through Cronbach’s alpha and composite reliability, both exceeding 0.7. Convergent validity of reflective constructs was supported with AVE values above 0.50 while discriminant validity was established using the HTMT ratio, confirming distinctiveness. For the formative constructs of effectiveness of government insurance schemes, and regulatory frameworks, multicollinearity was assessed using VIF, with values below 5, and the significance of indicators was confirmed through outer weights and bootstrapping. The results confirmed the reliability and validity of both reflective and formative constructs, ensuring a robust measurement model.

Table 1: Measurement Model Assessment Results

Reflective Constructs							
Latent Variable	Indicators	Convergent Validity			Internal Consistency Reliability		Discriminant validity
		Loadings	Indicator reliability	AVE	α	CR	HTMT
		> 0.70	> 0.50	> 0.50	0.70 - 0.90	0.70 - 0.90	< 0.85
Trust	Trust in Product	0.706	0.500	0.597	0.773	0.855	0.842
	Trust in Provider	0.865	0.748				
	Trust in Regulatory Authorities	0.732	0.536				
	Community-Based Trust	0.791	0.626				
MI Demand	Purchase Intention	0.881	0.776	0.757	0.841	0.903	-
	Perceived Benefits	0.813	0.661				
	Preference for Tailored Products	0.912	0.832				

Formative Constructs			
Latent Variable	Indicators	Collinearity of Indicators	Significance
		VIF	p value
		< 5	< 0.05
Effectiveness of Gov. Ins Schemes	Accessibility	1.200	0.000
	Adequacy of coverage	1.205	0.000
	Transparency and Fairness	1.115	0.000
Regulatory Framework	Reliability and Trustworthiness	1.147	0.039
	Consumer protection	1.253	0.004
	Influence on purchase decision	1.399	0.000

Source: Author’s own computation using SmartPLS 3 (2025)

4.2.2. Structural model assessment

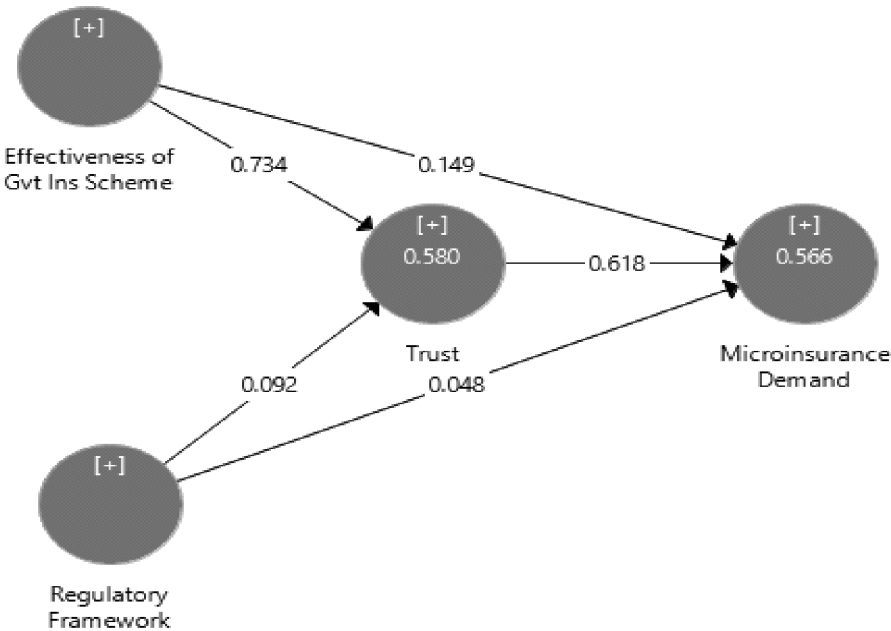


Fig. 2: Structural Model of the Study

Source: Developed by the author using SmartPLS 3 (2025)

The structural model was assessed by examining path coefficients (β), significance levels (p-values), effect sizes (f^2), multicollinearity (VIF), the coefficient of determination (R^2), and predictive relevance (Q^2). As shown in

Table 02, perceived effectiveness of government insurance schemes (EGIS) had a strong and statistically significant positive effect on trust ($\beta = 0.734$, $p < 0.001$), with a large effect size ($f^2 = 1.202$). Additionally, the regulatory framework (RF) also significantly influenced trust, though the effect was weaker ($\beta = 0.092$, $p = 0.040$, $f^2 = 0.019$). Trust, in turn, had a strong and significant positive impact on microinsurance demand (MID) ($\beta = 0.618$, $p < 0.001$), with a large effect size ($f^2 = 0.370$). The direct effect of EGIS on MID was also significant ($\beta = 0.149$, $p = 0.014$, $f^2 = 0.022$), while the direct effect of RF on MID was not significant ($\beta = 0.048$, $p = 0.268$, $f^2 = 0.005$). The model explained 58.0% of the variance in trust ($R^2 = 0.580$) and 56.6% of the variance in microinsurance demand ($R^2 = 0.566$), indicating substantial explanatory power. Furthermore, predictive relevance values (Q^2) for trust and MID were 0.340 and 0.398 respectively, confirming the model's predictive capability. All variance inflation factor (VIF) values were below 5, indicating that no multicollinearity issues.

Table 2: Structural Model Assessment Results

Path	Coefficient (β)	p-value	f^2 (Effect Size)	VIF	R^2 (Endogenous)	Q^2 (Predictive Relevance)
EGIS → Trust	0.734	0.000	1.202	1.066	0.580 (for Trust)	0.340 (for Trust)
RF → Trust	0.092	0.040	0.019	1.066		
Trust → MID	0.618	0.000	0.370	2.381	0.566 (for MID)	0.398 (for MID)
EGIS → MID	0.149	0.014	0.022	2.347		
RF → MID	0.048	0.268	0.005	1.086		

Source: Author’s own computation using SmartPLS 3 (2025)

4.2.3. Model fit assessment

The overall model fit was assessed using indices recommended for Partial Least Squares Structural Equation Modeling (PLS-SEM). The Standardized Root Mean Square Residual (SRMR) was 0.108, which is acceptable for exploratory models because threshold values for PLS-SEM are unknown (Henseler *et al.*, 2014; Hair *et al.*, 2021). The d_ULS (Unweighted Least Squares discrepancy) 1.064, and the d_G (Geodesic discrepancy) 0.520, also suggest acceptable fit levels, even though no fixed cut-off values are available for these metrics. These results indicate that the structural model demonstrates an acceptable overall fit and is appropriate for hypothesis testing.

4.3. Mediation analysis

This section examines mediating role of trust in the relationship between institutional factors (Effectiveness of Government Insurance Schemes, and Regulatory Framework) and Microinsurance Demand. Bootstrapping with 5,000 resamples was used to test the significance of indirect effects and assess mediation in the PLS-SEM model using Smart PLS 3.

Table 3: Mediation Analysis Results

Path	Indirect Effect (β)	p-value	Direct Effect (β)	p-value	Total Effect	VAF (%)	Mediation Type
EGIS $\rightarrow$ Trust $\rightarrow$ MID	0.454	0.000	0.149	0.014	0.603	75.3%	Complementary
RF $\rightarrow$ Trust $\rightarrow$ MID	0.057	0.049	0.048	0.268	0.105	54.3%	Indirect-only mediation

Source: Author’s own computation using SmartPLS 3 (2025)

For the path EGIS $\rightarrow$ Trust $\rightarrow$ MID, the indirect effect was significant ($\beta = 0.454$, $p = 0.000$), and the direct effect was also significant ($\beta = 0.149$, $p = 0.014$), resulting in a total effect of 0.603. The VAF was 75.3%, indicating complementary mediation, where both the direct and indirect effects exist in the same direction.

For the path RF $\rightarrow$ Trust $\rightarrow$ MID, the indirect effect was significant ($\beta = 0.057$, $p = 0.049$), but the direct effect was not significant ($\beta = 0.048$, $p = 0.268$). The total effect was 0.105, and the VAF was 54.3%, which indicates indirect-only mediation, meaning that the influence of the regulatory framework on microinsurance demand operates entirely through trust.

These findings highlight the critical mediating role of trust in translating institutional factors into actual demand for microinsurance among paddy farmers.

4.4. Summary of hypothesis testing results

The hypothesis developed for this study were tested using PLS-SEM with a bootstrapping procedure with a resample of 5000.

As shown in Table 02, the effectiveness of government insurance schemes had a strong and statistically significant positive effect on trust ($\beta = 0.734$, $p <$

0.05) and a significant positive effect on microinsurance demand ($\beta = 0.149$, $p < 0.05$). The regulatory framework also had a significant positive impact on trust ($\beta = 0.092$, $p < 0.05$); however, its direct effect on microinsurance demand was not statistically significant. Moreover, trust had a strong and significant positive effect on microinsurance demand ($\beta = 0.618$, $p < 0.05$). As indicated in Table 03, the indirect effects were also significant for both the effectiveness of government insurance schemes ($\beta = 0.454$, $p < 0.05$) and the regulatory framework ($\beta = 0.057$, $p < 0.05$). Based on these results, all hypotheses (H1, H2, H4, H5, H5a, and H5b) were supported, while H3 was not supported. A summary of hypothesis testing results is presented in Table 04.

Table 4: Hypothesis Testing Results

<i>Hypothesis</i>	<i>Statement</i>	<i>Result</i>
H1	Effectiveness of government insurance schemes has a positive effect on microinsurance demand.	Supported
H2	Effectiveness of government insurance schemes has a positive effect on trust.	Supported
H3	A supportive regulatory framework positively influences microinsurance demand.	Not Supported
H4	A supportive regulatory framework positively influences trust.	Supported
H5	Trust has a significant positive effect on microinsurance demand.	Supported
H5a	Trust mediates the relationship between the effectiveness of government insurance schemes and microinsurance demand.	Supported
H5b	Trust mediates the relationship between the regulatory framework and microinsurance demand.	Supported

5. CONCLUSION

Using Partial Least Squares Structural Equation Modeling (PLS-SEM) this study investigated the mediating role of trust in the relationship between institutional factors namely, the effectiveness of government insurance schemes and the regulatory framework and microinsurance demand among paddy farmers in Sri Lanka. According to the findings effectiveness of government insurance scheme has a significant positive impact on both trust and microinsurance demand, highlighting the importance of a well designed government insurance scheme in encouraging farmer participation. The regulatory framework significantly impacts trust, but it did not directly affect microinsurance demand. It means that regulations can influence the farmers participation for microinsurance

through institutional legitimacy. Highlighting its significant role as key determinant in the insurance system, trust demonstrated a strong and direct positive effect on microinsurance demand. Further it fully mediates the effect of the regulatory framework and partially mediates the impact of effectiveness of government insurance scheme on microinsurance demand.

According to the findings of the study it is essential to build and maintain trust for successful participation of microinsurance products. Policies, rules, regulations and supervision are not enough without translating them into trust enhancing experiences for farmers. Therefore, it is important to focus on enhancement of trust among farming community when preparing rules, regulations and policies. As well need to strengthen the credibility of existing government insurance schemes by improving the accessibility, providing adequate benefits, and enhancing transparency in their operations. Further, regulatory bodies need to implement clear, farmer-friendly policies and enforce consumer protection measures to reinforce trust in institutional processes. Moreover, community based initiatives such as awareness campaigns and the involvement of trusted persons within farming communities can be used to foster trust and encourage microinsurance uptake.

This study empirically validating trust as a mediator between institutional factors and behavioral response in the context of microinsurance by providing contribution to the theoretical understanding. Prior studies identified trust as a key factor but not demonstrate the mediating pathway. In this study by using PLS-SEM framework, demonstrating that trust operates both as a direct predictor and as a mediating pathway. Accordingly this findings provide a strong foundation for future research exploring trust as both a mediating and direct variable. As well highlighting critical role of institutional factors in shaping individual decision making. Future researches can investigate the direct and mediating impact of financial literacy to boost the demand and uptake of microinsurance.

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