

**RURAL RESILIENCE UNDER
ECONOMIC CRISIS:
MICROENTREPRENEURSHIP AND
HOUSEHOLD FOOD SECURITY IN
VAVUNIYA, SRI LANKA**

Sri Lanka Journal of
Economic Research
Volume 13(1) December 2025
SLJER 13.01.05: pp. 83-100
Sri Lanka Forum of
University Economists
DOI: <https://doi.org/10.4038/sljer.v13i1.254>

N Sathyaruban

A Abhayaratne



Abstract

This study investigates the role of micro-enterprise engagement in enhancing food security among rural households in Vavuniya, Sri Lanka, amid post-conflict vulnerabilities and the recent economic crisis. A comparative cross-sectional mixed-methods design was employed to compare 75 households engaged in micro-enterprises with 75 non-engaged households. Data were collected using structured questionnaires, semi-structured interviews, and focus group discussions. Household food security was assessed using the World Food Programme's Consolidated Approach for Reporting Indicators, complemented by logit regression and Pearson correlation analyses. The results show that 30 per cent of micro-enterprise households were food-secure, compared with 19 per cent of non-engaged households. The intervention group relied less on negative coping strategies and demonstrated higher income diversification and greater confidence in recovering from economic shocks. Logit regression results indicate that participation in micro-enterprises is the strongest predictor of food security. Other positive determinants include household income, education level, land ownership, access to credit, and asset holdings. A larger household size negatively affected food security. The findings highlight micro-enterprises as a critical pathway to strengthening rural resilience and improving food security in post-conflict settings.

JEL: E32, I32, L26, O11, Q18

Keywords: Economic Crisis, Household Food Security, Micro-entrepreneurship, Post-Conflict Recovery, Rural Resilience



N Sathyaruban (Corresponding Author)

*Postgraduate Institute of Humanities and Social Science,
University of Peradeniya, Sri Lanka
Email: sathya2975@gmail.com*

A Abhayaratne

*Faculty of Business and Law,
Esost University, Sri Lanka
Email: anoma.abhayaratne@esu.lk*

INTRODUCTION

Rural households in post-conflict areas of Sri Lanka continue to face long-lasting challenges in meeting their basic needs and ensuring food security after the conflict (Brounéus et al., 2024). It is in this context that the district of Vavuniya, in the Northern Province, exposed to three decades of civil conflict, has left the communities with fragile economic structures, weak trading ties and scarce opportunities for subsistence, as noted by Volkdal (2024). With the cessation of the hostilities in 2009, opening roads/pathways for reconstruction and development, nevertheless, the households continue to remain especially vulnerable to the economic and climatic crises of the district. The recent national economic crisis, characterised by growing inflation, currency depreciation and the stoppages of essential imports such as fuel and food items, has intensified these vulnerabilities even more (Gayathri et al., 2024). The rural families that already had struggled to assure stable revenue have experienced a decrease in purchasing power, reduced access to food and a dependency on unsustainable coping mechanisms. Food security, according to the Food and Agriculture Organisation of the United Nations (FAO), exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to satisfy the dietary necessities (needs) and the food preferences for an active and healthy life (FAO, 1996).

This multifaceted notion has been influenced by four key dimensions: availability, access, utilisation and stability (Gadiso et al., 2024). In rural areas of Sri Lanka, the availability of food is determined by the agricultural productivity and the supply at the market, whereas access to food depends largely on the revenue and the purchasing power of the households. The utilisation depends on the quality of the food, the health and the knowledge of nutrition, whereas the stability is threatened by recurrent shocks like climatic variability and the disruption of the market, among other political or economic crises (Samantha et al., 2024). In post-conflict areas like Vavuniya, these dimensions are interconnected with systemic barriers, deficient infrastructures, limited diversification of employment and uneven distribution of resources.

At the global level, the evidence suggests that the rural households that face economic and political crises often resort to a combination of survival strategies. This includes reducing the consumption of foods, requesting loans, migrating for work or selling assets, things that can have adverse impacts on the long-term resilience and the welfare (Barrett, 2010; Devereux, 2016). In South Asia, and particularly in the rural economies, the poor rural households depend disproportionately on activities of informal subsistence and small-scale activities to manage the risks and guarantee the daily survival (Ellis and Freeman, 2004). Sri Lanka is not an exception: when the opportunities for formal employment are scarce and the agricultural yields are uncertain, small-scale business activities emerge as a critical coping strategy.

The micro-enterprises, characterised by small companies managed locally, often of family property, are fundamental for the consolidation of rural resilience. This includes the small trade, the processing of foods, the craftsmanship, the kiosks and the agricultural activities of added value.

Micro-enterprises provide households with multiple sources of income, helping to reduce dependence on a single livelihood and increasing resilience during economic crises (Mead and Liedholm, 1998). These businesses also generate local employment, boost rural economies, and promote social capital. In Sri Lanka, micro-enterprises have been essential in fostering inclusive local development. They have played a role in empowering women economically, involving youth in productive activities, and strengthening household financial stability (Kahanawita & Lakmal, 2024).

The current economic crisis in Sri Lanka has made it self-evident that there is a need to understand the mechanisms of resilience that help to sustain poor households. The prices of foods almost doubled between 2021 and 2023, unemployment is high, and the crucial imports, like fertilisers and fuel, have increased the cost considerably, affecting the means of subsistence, both agricultural and non-agricultural, directly. In this context of fragility, the households of districts like Vavuniya have resorted increasingly to micro-entrepreneurship as a means to overcome economic instability and guarantee access to food. However, the systematic evidence on how micro-enterprises influence the food security of households in situations of crisis remains very limited in the regions that have suffered conflicts.

Therefore, this study analyses the role of micro-entrepreneurship in the improvement of the food security of households in Vavuniya during the recent economic recession of Sri Lanka. This study explores how the activities of micro-entrepreneurship contribute to the diversification of income and how the households implement strategies of mitigation to overcome food insecurity, as well as the extent to which the business activities can contribute to strengthening the resilience in rural contexts affected by conflict. The study uses quantitative and qualitative evidence to connect the experiences of the households with the wider political debates on rural development and the strengthening of resilience.

It is expected that the results of this study offer practical information to the policy makers, professionals in the development and humanitarian actors who work in fragile contexts. The study contributes to a deeper understanding of how rural households adapt to crises and how they can take advantage of micro-entrepreneurship to boost sustainable food security. Besides, the study will serve as a base for the endeavours underway to design inclusive livelihood programs, strengthen the rural economies and build community resilience in Sri Lanka in the aftermath of the conflict.

MATERIALS AND METHODS

Design of the Investigation

This study employed a comparative cross-sectional mixed methodology, integrating both quantitative and qualitative data. The comparative cross-sectional design allowed for the comparison of households that take part in micro-entrepreneurship (experimental group) with those that do not take part (control group). This design facilitated the evaluation of the impact of micro-enterprise activities on the food security of households in a context of economic difficulties.

Study Area and Sample

The study was carried out in selected rural areas of the Vavuniya district, a region that has suffered a conflict and that experiences economic instability. The population studied consisted of two groups of households:

1. Households that take part in activities of micro-enterprises, such as agriculture, trade and small services.
2. Households that do not take part in the activities of micro-enterprises.

This comparative approach allowed us to analyse the differences in the results of food security according to the strategies of subsistence.

Sampling Strategy

The selection of the respondents for this study was based on the criteria of economic vulnerability and the prevalence of micro-entrepreneurial activities in the district of Vavuniya, Sri Lanka. They defined as eligible households those that currently carried out micro-entrepreneurial activities or that had not taken part in said activities during the previous year. The responders gave their informed consent. The study had a high response rate of roughly 85%, which reflects solid community participation and the willingness to take part in investigations on food security and resilience. The study had the ethical approval of the University of Peradeniya, which guaranteed the fulfilment of the norms established for the investigation with human participants. It employed a method of stratified random sampling to select 150 households in the area of study. The sample was divided equally into two groups: micro-entrepreneurship as a source of additional income ($n = 75$) and households without participation in micro-entrepreneurship ($n = 75$). The stratification guaranteed the equitable representation of both groups, which allowed a transversal comparison with mixed methods that was very balanced. This approach improved the reliability of the findings on the role of micro-entrepreneurship in the strengthening of family resilience, the diversification of income and the improvement of food security in contexts of economic stress.

Compilation of Quantitative Data

Structured Questionnaires were used to collect quantitative data on the household's familiar demography, the patterns of income and costs, the activities of subsistence and the patterns of food consumption. To measure household food security, the study used the World Food Programme (WFP) - Consolidated Approach to Reporting Indicators of Food Security (CARI) (World Food Programme, 2010). This method evaluates multiple dimensions of food security, including household food access, dietary diversity, and the coping strategies employed by households to manage food shortages or economic stress.

Compilation of Qualitative Data

They collected qualitative data by means of semi-structured interviews with micro-entrepreneurs and members of the households, as well as by means of focus groups to explore the challenges, the opportunities and the strategies of adaptation employed by the households. This approach provided more detailed information on how the households sustain their means of life and maintain food security in conditions of economic difficulties, collecting perspectives and experiences that complemented the quantitative findings.

Data Analysis

The quantitative data were analysed by means of descriptive statistics and inferential methods to compare the results of food security among the treatment and control groups. The qualitative data were analysed thematically to identify patterns, challenges and strategies associated with micro-entrepreneurship and the resilience of the households. The integration of both types of data allowed a comprehensive understanding of the contribution of micro-entrepreneurship to the food security of the rural households.

Measuring Food Security

The food security status of households was measured using the World Food Programme's Consolidated Approach to Reporting Indicators of Food Security (CARI), which classifies households into four descriptive categories: food secure, marginally food secure, moderately food insecure, and severely food insecure. Food-secure households consistently have sufficient access to a diverse and nutritious diet, while marginally food-secure households may experience occasional shortages or adopt minimal coping strategies. For moderately food-insecure households, there is reduced or seasonally limited access to food, with reduced meal size or frequency. Severely food-insecure households face extreme difficulty in meeting basic food needs, requiring the use of emergency measures or external assistance.

CARI is a composite of four key indicators: the Food Consumption Score, the Food Expenditure Share, the Livelihood Coping Strategies Index, and the Reduced Coping Strategies Index (rCSI). FCS classifies households into poor ≤ 21 , borderline 21.5–35, or

acceptable >35 , while food expenditure share is categorized as low $<50\%$, medium 50–65%, high 65–75%, or very high $>75\%$. The LCSi reflects longer-term livelihood stress, crisis, and emergency coping strategies, whereas the rCSI captures short-term adjustments such as reducing portion sizes, skipping meals, or relying on less preferred foods. Based on the combined results of these indicators, households were assigned to one of the four CARI categories. For statistical analysis, the categories of food secure and marginally food secure were aggregated into a single food-secure group, while moderately and severely food-insecure households were combined into a single food-insecure group.

Table 1: CARI Framework: Indicator Thresholds and Food Security Status

CARI Category	Food Consumption Score (FCS)	Food Expenditure Share	Coping Strategies (rCSI / LCSi)	Household Food Security Status
Food Secure	Acceptable (>35)	Low ($<50\%$) or Medium (50–65%)	Little to no reliance on coping strategies	Adequate and stable access to sufficient, diverse food
Marginally Food Secure	Borderline (21.5–35) OR Acceptable with higher stress signals	Medium (50–65%)	Stress-level livelihood coping strategies, some use of rCSI	Vulnerable; can meet food needs but under pressure
Moderately Food Insecure	Borderline (21.5–35) with high expenditure share or Poor consumption patterns	High (65–75%)	Crisis-level coping strategies (e.g., selling productive assets)	Inadequate food access and unsustainable consumption
Severely Food Insecure	Poor (≤ 21.5)	Very High ($>75\%$)	Emergency-level coping strategies (e.g., selling land, migration, begging)	Severe consumption gaps; unable to maintain livelihoods

Source: World Food Programme (2010)

This categorisation allowed for a nuanced understanding of the degree of food insecurity among households and the relationship between engagement in micro-entrepreneurship and household food security outcomes.

Household Assets

The Household Assets Index was developed using the Sustainable Livelihoods Approach, capturing five types of capital: human, natural, physical, financial, and social (Chambers & Conway, 1992). Assets were identified from the survey and coded as 1 if present/accessible and 0 if absent. To reflect relative importance, a three-level weighting system was applied:

- High-value assets (weight = 3): critical for livelihood security or income generation (e.g., agricultural land, permanent housing, large livestock, machinery).
- Medium-value assets (weight = 2): moderately important but not directly income-generating (e.g., secondary education, small livestock, durable goods like refrigerators).
- Low-value assets (weight = 1): basic or common assets that contribute to well-being but have limited productive value (e.g., radio, utensils, group membership).

The weighted scores across all asset categories were summed to produce a raw household asset score, which was then standardised using z-scores:

$$\text{Asset Index}_i = \frac{A_i - \mu_A}{\sigma_A} \text{-----} (1)$$

where A_i is the raw asset score of the household, μ_A is the sample mean, and σ_A is the standard deviation.

Table 2: Asset Categories and Weighting

Capital Type	Indicators Used	Coding/Weighting
Human Capital	Years of schooling of household head (secondary or higher = 2), vocational training (2), tertiary education (3)	Weighted by education level
Natural Capital	Agricultural land (3), irrigated land (3), small livestock (2), large livestock (3)	Higher value for productive land/livestock
Physical Capital	Housing type (permanent = 3, semi-permanent = 2, temporary = 1), durable goods (TV = 1, fridge = 2, motorbike = 2, tractor = 3, sewing machine = 2)	Scaled by relative value/productivity
Financial Capital	Savings (2), access to credit (2), regular remittances (3)	Higher weight for stable financial sources
Social Capital	Membership in farmer cooperatives (2), women's groups (1), other community-based organisations (1)	Weighted by organisational type

Source: Survey Data (2025)

Logistic Regression Model

The logit model was employed to estimate the factors influencing household food security. It examines the relationship between the food security status variable Y_i and its determinants X_i , identifying how household and microenterprise characteristics affect the likelihood of achieving food security,

$$Y_i = \beta X_i + \mu_i \text{-----} (02)$$

Where;

$Y_i = 1$ if the household has food security, and

$Y_i = 0$ otherwise, for $i = 1, 2, 3 \dots n$

X_i is a vector of explanatory variables and β is the vector of parameters.

When the household has food security, the non-linear variable is one; otherwise, it is zero. The logit model uses this information to produce a maximum likelihood estimation of β .

$$FSs = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + U \text{ ----- (03)}$$

Where;

FSs = Food security status

β_0 = Constant

X_1 = Micro Enterprise (1 if household is engaged in a micro-enterprise; 0 otherwise)

X_2 = Household Income (monthly income in LKR)

X_3 = Household Size (number of members), expected

X_4 = Education Head (years of schooling of household head)

X_5 = Land Ownership (1 if household owns agricultural land; 0 otherwise)

X_6 = Access Credit (1 if household has access to credit/loans; 0 otherwise)

X_7 = Enterprise Type (type of micro-enterprise: agriculture, trade, services)

X_8 = Female Head (1 if household is female-headed; 0 otherwise)

X_9 = Assets Index (household asset ownership score)

U = Error term

This survey evidences that the micro-entrepreneurship improvement significantly improves the food security of the households in the rural district of Vavuniya. The households that take part in activities of micro-entrepreneurship have a higher probability of achieving food security, and the principal revenue, property of the earth, nurture, fit at the credit and active, productive harden even more their resilience. These households also showed greater food diversity, lower reliance on negative coping strategies, and stronger confidence in managing economic crises, which highlights the fundamental role of small enterprises in sustaining rural communities.

RESULTS AND DISCUSSION

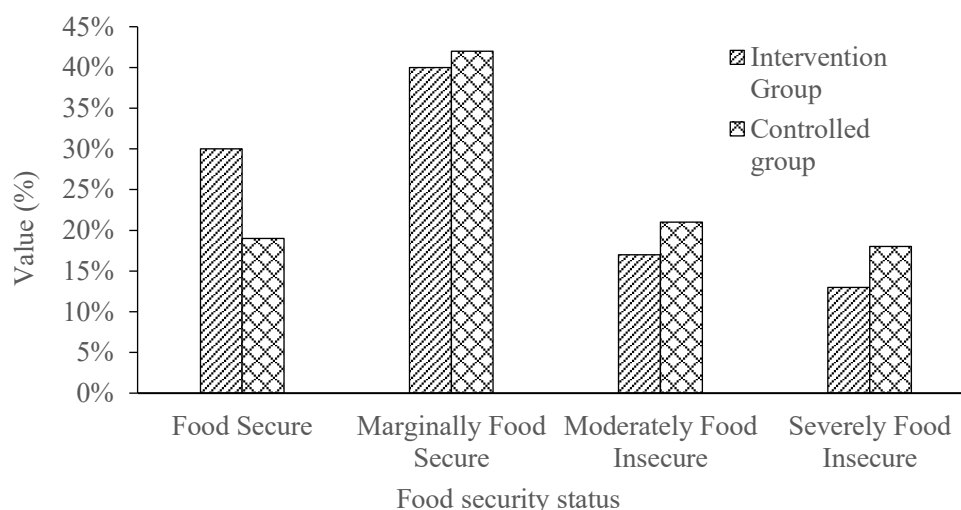
The findings underline the importance of promoting micro-enterprises in post-conflict and vulnerable zones. The complementary interventions, like a better fit at the credit and at the active productive, the empowerment of capacities at business abilities and fit at the markets, and the specific support at the most numerous households, can improve the

benefits for food security. Although the survey offers valuable information, this transversal design and this approach at only a district level limit the generalisation of the results. Future studies could adopt longitudinal approaches and include other regions in post-conflict settings to strengthen the evidence. In general, the integration of the promotion of the micro-enterprise with a wider support at the modes of subsistence represents a practical strategy to improve the rural resilience, the food security of the households and further a sustainable recovery after a conflict.

Household Food Security

The analysis of household food security revealed notable differences between intervention and control groups (Figure 1).

Figure 1: Comparison of Overall Food Security Status between Intervention and Controlled Groups



Source: Survey Data (2025)

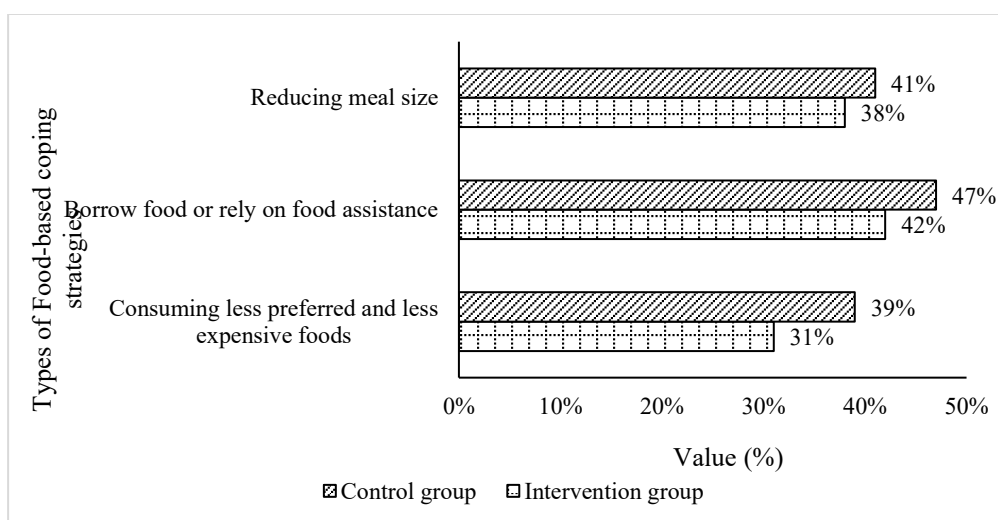
The results evidence that 30% of the intervention group achieved food security, a marked increase in comparison with the 19% in the control group. This disparity suggests that the activities of micro-enterprises can have a critical role in improving food security among the households' participants. This presents an important finding: although the improvement can be linked to the intervention, it can still achieve all the potential so that a substantial part of both bands is maintained at the limit of food security. This owes to the fact that the future interventions will have to centre on the factors that contribute to food security, marginal to reduce the number of vulnerable households at the transition to a state of food insecurity. Regarding moderate food insecurity, the band of intervention had a prevalence lower than that of 17%, in comparison with the band of control, which was 21%. This decrease in moderate food insecurity can be attributed to the economic benefits and the improvement of the modes of subsistence of the micro-enterprises. It has

been discovered that economic diversification enhances food security by means of the increase in the revenue of the households and the availability of food, as observed by Abdimomynova et al. (2019). Similarly, the rates of severe food insecurity were significantly lower for the band of intervention, with a 13% in comparison with the band of control, with an 18%. This finding suggests that the turnout of microampers not only facilitates the improvement of the level of food security but also protects against grave food insecurity. According to the literature, households with diversified sources of revenue, including micro-enterprises, are better positioned to protect against several types of economic perturbations, which further reduces the incidence of grave food insecurity (Barrett, 2010).

Coping Strategies

Figure 2 illustrates several coping strategies based on the foods, and now consume foods less preferred and less expensive, request foods loaned or depend on the food assistance, and reduce the size of the meals. These strategies were observed so much at the band of intervention and at the band of control; however, they were constantly less prevalent at the band of intervention. Specifically, 31% of intervention households consumed foods less preferred in comparison with the 39% of the control group, 42% borrowed foods, loaned or depended on aid in comparison with 47% of the band of control group, and 38% reduced the size of the meals in comparison with 41% of the band of control group.

Figure 2: Food-based Coping Strategies



Source: Survey Data (2025)

During periods of shortage of food, households often resort to a range of coping strategies in order to manage their limited resources and meet basic nutritional needs. These strategies, typically considered negative, include consuming less preferred and less expensive foods, borrowing food from neighbours or relatives, depending heavily on food

assistance programmes, and reducing meal sizes. The implications of these strategies have been explored in several surveys, which aid in illuminating the masters of behaviour that present households during the food crises.

The prevalence of strategies of negative coping during the shortage of food has been well documented. For example, Mehare et al. (2025) signalled that food insecurity obliges households to engage in the quality and diversity of their diets, augmenting the intake of cheap and low-value foods in Ethiopia. This used to be the case of the bands marginalised more often, since their lack of economic margin hampers their capacity to access better food options. The cut in the size of the meals is another common strategy. According to a survey of Nyambura et al. (2025), the cut of the size of the meals can ease the pressure of the shortage of foods temporarily but can have negative consequences for health if it is maintained over time, especially for vulnerable populations and now boys and big persons in Kenya.

Interestingly, the effectiveness of interventions in moderating these coping strategies has also been examined. In a present study, it was reported that households participating in intervention programmes utilised negative coping strategies less frequently than those in control groups. As an illustration, intervention households only used less preferred foods (31%) compared to control groups (39%). Likewise, intervention households borrowed food or requested aid (similar) 42% whereas the control group had 47%. The decrease in the meal sizes was also not so significant in the intervention households (38% versus 41% in the control group). These proofs indicate that specific interventions can be used to foster resilience and increase coping strategies during times of food shortages.

Household Resilience and Coping Strategies for Livelihoods

The households adopted multiple strategies to mitigate the economic crisis's linked impacts. Table 1 shows the comparison of coping strategies and support mechanisms between micro-enterprise and non-enterprise groups. Among intervention households with micro-enterprises, income diversification (52%), limiting non-essential costs (48%), borrowing money/food (39%) and asset selling (22%) were the most popular. Control households that have not engaged in micro-enterprise better depended on borrowing (45%) and aid of relatives, non-governmental organisations, or government programs (40%), and less diversified income (27%). These patterns indicate that there was more flexibility and more agency in micro-enterprise households to deal with economic shocks.

Table 3: Comparison of Coping Strategies and Support Mechanisms between Micro-Enterprise and Non-Enterprise Groups

Indicators	Intervention Group (Micro-Enterprise)	Control Group (Non-Enterprise)
<i>Coping Strategies Adopted</i>		
Diversify income	52%	27%
Reduce non-essential expenses	48%	33%
Borrow money/food	39%	45%
Sell assets	22%	28%
Support from relatives/friends	18%	40%
Use savings	25%	20%
NGO/Govt support	21%	38%
Other	5%	7%
<i>Effectiveness of Coping Strategies</i>		
Very effective	61%	32%
Somewhat effective	29%	41%
Not effective	10%	27%
<i>Temporary Migration</i>		
Yes	14%	22%
No	86%	78%
Average Duration (months)	2–4	3–5
Type of Work	Seasonal/agricultural labour	Seasonal/agricultural labour, casual labour
<i>Risk Planning</i>		
Always	24%	15%
Sometimes	43%	36%
Rarely/Never	33%	49%
<i>External Support Received</i>		
Yes	15%	38%
No	85%	62%
Type of Support	Financial aid (5%), Food aid (6%), Training (4%)	Financial aid (20%), Food aid (12%), Training (6%)
<i>Confidence in Recovery</i>		
Very confident	73%	45%
Somewhat confident	20%	35%
Not confident / Don't know	7%	20%

Source: Survey Data (2025)

Table 3 shows that there were clear differences in resilience and coping strategies between families involved in micro-enterprises and families not involved in such activities. There was greater diversification in the homes of intervention, and cut-off non-essential

expenses, whereas the homes of control depended even more on the debts, disposal of property, or help. Strategies of coping were seen to be more effective among micro-enterprise households (61% very effective and 32% in control). Temporary migration was less frequent among intervention households, suggesting greater local resilience. Risk planning was more proactive, and confidence in recovering from future shocks was substantially higher among micro-enterprise households (73% vs. 45%). Overall, these results indicate that micro-enterprise engagement strengthens both economic and psychological resilience, enabling households to better withstand and respond to economic shocks.

Microenterprise Management

The management and performance of microenterprises during economic shocks reflected both adaptive strategies and the challenges faced by enterprise owners. As shown in Table 2, nearly half of the enterprises (48%) adapted by reducing production costs, while 36% modified their products or services to meet changing market demands. Diversifying the customer base (33%) and seeking loans or external support (27%) were also important strategies for sustaining operations under economic stress.

Table 4: Overview of Business Strategies, Challenges, and Future Plans

Category	Indicator	Value (%)
Adaptation Strategies	Reduce production costs	48
	Change products or services	36
	Diversify customers	33
	Seek loans or external support	27
Key Challenges	Limited capital	42
	High input costs	38
	Constrained market access	34
	Competition	29
Benefits During Crises	Regular income	61
	Improved household food Security	53
	Asset investment	38
Future Plans	Product diversification	48
	Expand production	35
	Access new markets	29

Source: Survey Data (2025)

Table 4 shows that despite these adaptations, enterprises encountered significant obstacles. Limited capital (42%), high input costs (38%), constrained market access (34%), and competition (29%) were the most frequently reported challenges. These constraints highlight the structural and market-level barriers that microenterprises must navigate, especially during crises.

Participation in microenterprises, however, provided tangible benefits. A majority of enterprise households reported maintaining regular income (61%), improving household food security (53%), and investing in assets (38%). These outcomes suggest that, even under challenging conditions, microenterprises serve as a buffer against economic shocks, enhancing both household income and livelihood security.

Looking forward, enterprise owners are planning for sustainable growth. Strategies prioritised for the future include product diversification (48%), expanding production capacity (35%), and accessing new markets (29%). These plans indicate an ongoing focus on resilience and long-term viability. Table 4 underscores how effective microenterprise management—including adaptive strategies, overcoming challenges, and strategic planning—contributes to economic resilience and livelihood stability in vulnerable communities.

Logit Model Results

Table 5: Results of Logit Regression for the Determinants of Household Food Security in the Study Area

Variable	Intervention Group			Control Group		
	Coefficient	Std. Error	P-value	Coefficient	Std. Error	P-value
Family Size	-0.165	0.068	0.015*	0.145	0.077	0.316
Household Income	0.004	0.002	0.045*	0.003	0.003	0.318
Education Head	0.134	0.057	0.019*	0.112	0.065	0.421
Land Ownership	1.002	0.401	0.013*	0.875	0.442	0.135
Access to Credit	0.789	0.354	0.026*	0.652	0.398	0.102
Female Head	-0.310	0.443	0.484	-0.275	0.462	0.518
Assets Index	0.223	0.091	0.014*	0.187	0.105	0.211
Microenterprise	1.954	0.423	<0.001**	—	—	—
Constant	-2.912	0.879	0.001**	-1.876	1.021	0.066

Note: * $p < 0.05$, ** $p < 0.01$

Source: Survey Data (2025)

According to Table 5, the logistic regression analysis found some important factors in determining the food security of the household in the intervention and control groups. Homes with micro-enterprises were found to be significantly more food secure, with micro-enterprise engagements depicting the greatest positive association (Coefficient = 1.954, $p < 0.001$) in the intervention group. Other significant positive determinants included household income (Coefficient = 0.004, $p = 0.045$), education level of the household head (Coefficient = 0.134, $p = 0.019$), land ownership (Coefficient = 1.002, $p = 0.013$), access to credit (Coefficient = 0.789, $p = 0.026$), and the assets index (Coefficient = 0.223, $p = 0.014$). Conversely, larger family size was associated with slightly lower food security (Coefficient = -0.165, $p = 0.015$), while female-headed households did not show a significant associated effect. These results suggest that a combination of income-

generating activities, human capital, productive assets, and financial access enhances household resilience and food security.

For the control group, none of the variables reached statistical significance, although coefficients for income, education, land ownership, and assets were positive, and family size had a negative association. The lack of significance indicates that households without micro-enterprise engagement have weaker pathways to improve food security, and structural or economic factors alone may be insufficient to ensure resilience. Overall, the findings underscore the critical role of micro-enterprise participation in strengthening household food security, alongside other socioeconomic and asset-related factors, in vulnerable rural communities.

Pearson Correlation Analysis

To further explore the relationships among key variables and household food security, Pearson correlation coefficients were calculated for both intervention and control groups (Table 6). In the intervention group, food security was positively and significantly correlated with household income ($r = 0.42$, $p < 0.01$), education of the household head ($r = 0.36$, $p < 0.01$), land ownership ($r = 0.38$, $p < 0.01$), access to credit ($r = 0.31$, $p < 0.05$), assets index ($r = 0.39$, $p < 0.01$), and micro-enterprise income ($r = 0.52$, $p < 0.001$). Family size showed a negative correlation with food security ($r = -0.28$, $p < 0.05$), indicating that larger households were slightly more vulnerable to food insecurity. Female-headed households were not significantly correlated with food security ($r = -0.05$, $p > 0.05$).

As per Table 4, in the control group, correlations between food security and most socioeconomic variables were weaker and not statistically significant. Household income ($r = 0.19$, $p = 0.12$), education ($r = 0.15$, $p = 0.18$), land ownership ($r = 0.21$, $p = 0.09$), access to credit ($r = 0.17$, $p = 0.15$), and assets index ($r = 0.18$, $p = 0.11$) all had positive but non-significant associations with food security, while family size had a small negative correlation ($r = -0.12$, $p = 0.28$).

Table 6: Correlation Analysis of Socioeconomic Variables between Intervention and Control Groups

Variable	Intervention Group (r , p -value)	Control Group (r , p -value)
Household Income	0.42, $p < 0.01$	0.19, $p = 0.12$
Assets Index	0.39, $p < 0.01$	0.18, $p = 0.11$
Education of Household Head	0.36, $p < 0.01$	0.15, $p = 0.18$
Land Ownership (ha)	0.38, $p < 0.01$	0.21, $p = 0.09$
Access to Credit	0.31, $p < 0.05$	0.17, $p = 0.15$
Micro-Enterprise Income	0.52, $p < 0.001$	—
Family Size	-0.28, $p < 0.05$	-0.12, $p = 0.28$
Female-Headed Household	-0.05, $p = 0.64$	-0.08, $p = 0.51$

Source: Survey Data (2025)

These results are consistent with those of logistic regression, which support the idea that in intervention households, micro-enterprise involvement, and other socioeconomic aspects contribute powerfully to food security. Less developed households (that is, no micro-enterprises demonstrate weaker associations. The correlation analysis supports the conclusion that micro-enterprise participation is a key driver of household resilience and food security in post-conflict rural communities.

CONCLUSION

This study shows that micro-entrepreneurship improves the food security of households in the rural district of Vavuniya, Sri Lanka, significantly. The households that take part in activities of micro-entrepreneurship have a greater probability of achieving food security, and main income, property of the land, education, access to credit and productive assets strengthen their resilience even more. These households also showed a greater food diversity, lower dependency on strategies of negative coping and greater confidence in the management of the economic crises, which highlights the fundamental role of the small companies in the sustainability of the rural communities.

The findings underscore the importance of promoting micro-enterprises in post-conflict and economically vulnerable areas. Complementary interventions, such as improved access to credit and productive assets, capacity-building in business skills and market access, and targeted support for larger households, can amplify food security benefits. While the study provides valuable insights, its cross-sectional design and focus on a single district limit generalizability. Future research could adopt longitudinal approaches and include other post-conflict regions to strengthen evidence. Overall, integrating micro-entrepreneurship promotion with broader livelihood support presents a practical strategy to enhance rural resilience, improve household food security, and foster sustainable post-conflict recovery.

REFERENCES

- Abdimomynova, A., Kolpak, E., Daskaliyeva, B., Stepanova, D., & Prasolov, V. (2019). Agricultural diversification in low-and middle-income countries: Impact on food security. *Montenegrin Journal of Economics*, 15(3), 167-178. DOI: 10.14254/1800-5845/2019.15-3.12.
- Barrett, C. B. (2010). Measuring food insecurity. *Science*, 327(5967), 825–828. <https://doi.org/10.1126/science.1182768>.
- Brounéus, K., Forsberg, E., Bhattarai, P., de Mel, N., Lonergan, K., Peiris, P. Roy, G. Samarasinghe & Wanasinghe-Pasqual, M. (2024). Women, peace and insecurity: The risks of peacebuilding in everyday life for women in Sri Lanka and Nepal. *PLoS one*, 19(5), e0303023. <https://doi.org/10.1371/journal.pone.0303023>.

- Chambers, R. and Conway, G. R., 1992. *Sustainable rural livelihoods: Practical concepts for the 21st century*. Institute of Development Studies (IDS).
- Devereux, S. (2016). Social protection and safety nets in the Middle East and North Africa. Research Report, 80, Institute of Development Studies, Brighton, UK.
- Ellis, F., & Freeman, H. A. (2004). Rural livelihoods and poverty reduction policies. Routledge. Taylor & Francis Group. Pp. 63.
- FAO, (1996), World Food Summit: Rome Declaration on World Food Security and World Food Summit Plan of Action, Rome, 1996.
- Gadiso, W. J., Alemu, B. A., & Shete, M. (2024). Unpacking regional variations of multidimensional food security in rural Ethiopia: insights for policy. *International Journal of Social Economics*, 51(5), 585-603. DOI 10.1108/IJSE-02-2023-0139
- Gayathri, R., Vijayabanu, C., & Theresa, C. (2024). Economic Disruption and Global Obscurity—Insights and Challenges. In *Economic Uncertainty in the Post-Pandemic Era* (pp. 1-26). Routledge.
- Mead, D. C., & Liedholm, C. (1998). The dynamics of micro and small enterprises in developing countries. *World Development*, 26(1), 61-74. 0305-750X/98 \$19.00+0.00.
- Mehare, A., Abdisa, L. T., & Hundie, S. K. (2025). Food Price Changes, Household Food and Nutrition Security in Ethiopia: Evidence from Household Level Analysis Through a Gender Lens. *Food Science & Nutrition*, 13(7), e70685. <https://doi.org/10.1002/fsn3.70685>.
- Nyambura, M. A., Philomena, M., & Susan, M. (2025). Assessment of Food Shortage Coping Mechanisms Employed by Agro-pastoral Households in Sosian Ward, Laikipia North Sub-County, Kenya. *Data Plus*, 3(1), 39-50. <https://doi.org/10.62887/dataplus.003.01.0055>.
- Kahanawita, K.R.G.M.B. & Lakmal, W.A.I., 2024. The impact of micro finance services on women's economic empowerment: Evidence from Kurunegala District in Sri Lanka. Faculty of Business Studies and Finance, Wayamba University of Sri Lanka. DOI: 10.57075/jaf1112408.
- Samantha, N. P. G., Wijesinghe, P., Rambukwella, R., Vidanapathirana, R., Champika, J., Wijesooriya, N., Fernando, S. & Perera, M. D. D. (2024). Effect of Economic Crisis on Household Food Security in Sri Lanka. Research Report, Hector Kobbekaduwa Agrarian Research and Training Institute. Hector Kobbekaduwa Agrarian Research and Training Institute 114, Wijerama Mawatha, Colombo 07.

Volkdal, C. (2024). Advancing Emergency Operations in Sri Lanka through the Triple Nexus Framework. *The TRC Journal of Humanitarian Action*, 3(1), 27-58.
<https://doi.org/10.55280/trcjha.2024.3.1.0002>.

World Food Programme (WFP), 2010. Consolidated Approach to Reporting Indicators of Food Security (CARI). World Food Programme, Rome.