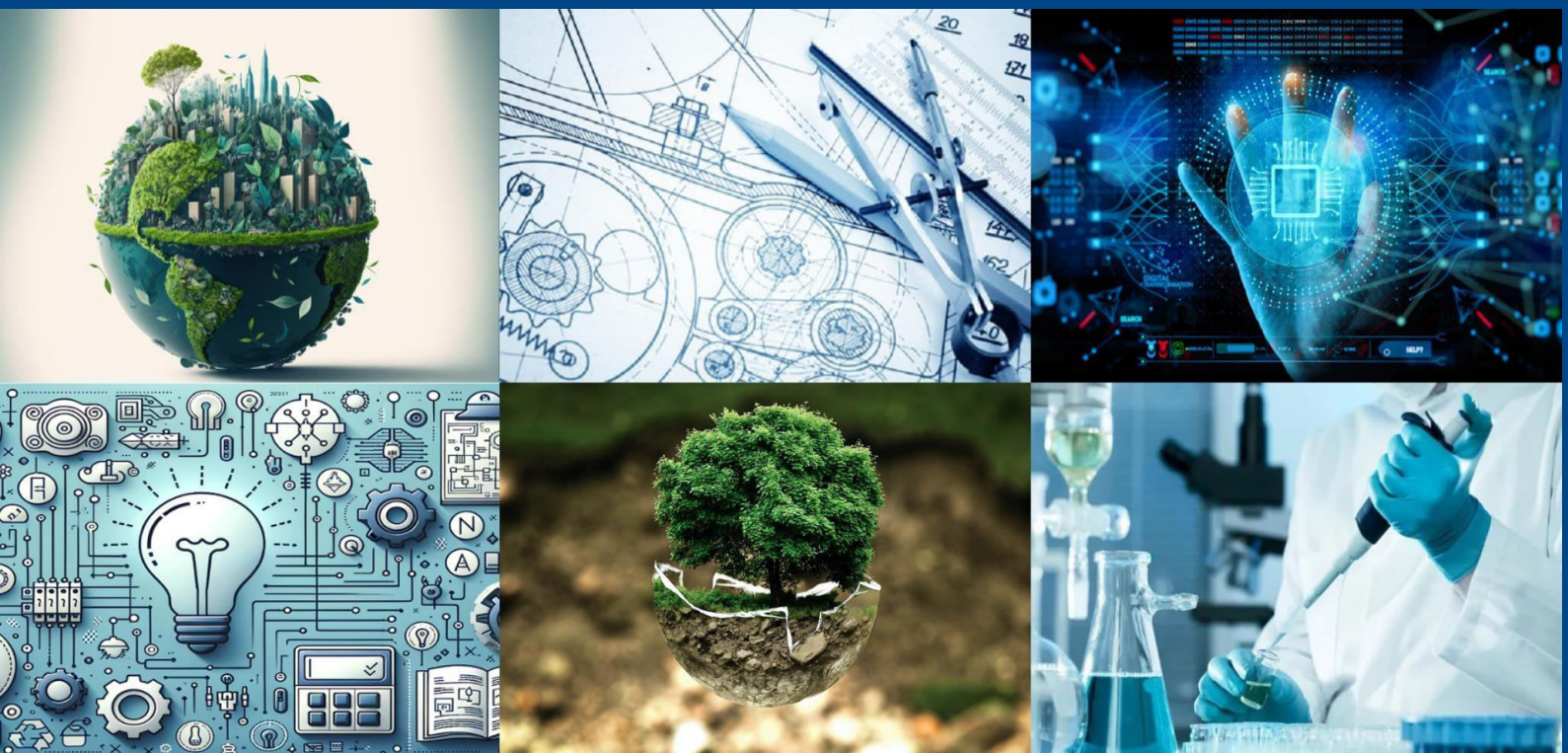




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The Study on Small-Scale Tea Industry Growth with Support for Upasi Special Reference with Nilgiris District

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ABSTRACT: This comprehensive research study focuses on the growth and development of the small-scale tea industry in the Nilgiris district of Tamil Nadu, India, with special reference to the crucial support provided by the United Planters Association of Southern India (UPASI). The Nilgiris district, known for its unique and favorable agro-climatic conditions, is a significant tea-producing area. The study examines the pivotal role of UPASI in enhancing productivity, ensuring sustainability, and promoting economic viability among small-scale tea growers, who constitute a major portion of the tea industry in the region. The study also explores the initiatives taken by UPASI to support small tea growers, such as providing research and technical guidance, market linkages, and policy advocacy.

KEYWORDS: Small-scale tea industry, Nilgiris district, UPASI, tea cultivation, sustainability, economic viability, small tea growers, agro-climatic conditions, productivity, market linkages, policy advocacy.

I. INTRODUCTION

The Nilgiris district, located in the Indian state of Tamil Nadu within the Western Ghats mountain chain, is a renowned tea-producing region. The district's economy is primarily agriculture-based, relying heavily on the success of plantation crops like tea and coffee. The unique climatic conditions and troposphere of the area make the Nilgiris an ideal place for tea cultivation in South India. This has led to extensive tea cultivation zones across the district. The tea industry in Nilgiris significantly contributes to the local economy and provides occupation to a major workforce, with the district accounting for about 9000 hectares of tea cultivation out of 172,000 hectares in South India, producing around 30 million kg of tea annually. The Nilgiris tea industry is supported by organizations like the Nilgiris Planters Association and the United Planters Association of South India (UPASI), which play crucial roles in guiding and advocating for tea growers, including small-scale farmers from local communities like the Badagas.

1.1 STATEMENT OF THE PROBLEM

The statement of the problem in this study aims to address is the identification and evaluation of the challenges faced by small-scale tea farmers in the UPASI tea farms. Specifically, it seeks to understand how these challenges impact their productivity, income, and long-term sustainability, and what strategies or interventions can be implemented to improve their overall success. By focusing on small-scale tea cultivation within the UPASI framework, this study will provide valuable insights into how small-scale tea farms can be supported to thrive amid the complexities of modern tea production. The Factors as limited access that are modern farming techniques, fluctuations in market prices, climate change, and insufficient infrastructure often hinder the growth potential of small-scale tea farms.

1.2 OBJECTIVES OF THE STUDY

- To analyse the role of UPASI in supporting small-scale tea growers in the Nilgiris District.
- To identify the services and initiatives offered by UPASI to small-scale tea farmers.
- To assess the impact of these resources on the productivity, sustainability, and economic outcomes of small-scale tea cultivation.
- To identify barriers and suggest strategies for enhancing the effectiveness of UPASI's support systems.



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1.3 SCOPE OF THE STUDY

This study focuses on small-scale tea growers operating in the Nilgiris District and their interactions with UPASI. It examines both the quantitative and qualitative aspects of tea farming, including yield, cost efficiency, environmental practices, and market access. The findings aim to provide recommendations for improving institutional support and empowering small-scale growers.

1.5 LIMITATIONS OF THE STUDY

- The study was based on limited sample of 210 respondents.
- The study covers only Nilgiris district.
- Due to Limitations of time and resources, the research was conducted within a limited period of three months.
- The responses given by the employers may be subjective in nature.

II. REVIEW OF LITERATURE

1. Mohan and Sara. (2018) conducted a comparative analysis of the tea export value chains in Sri Lanka, Nepal, and Kenya, aimed at analyzing the policy influences on up gradation of tea value chains. The study found that Kenya, emphasized on productivity and high-quality bulk export, but Sri Lanka encouraged competitiveness in value added packaged products.

2. Kumareswaran Thangaraj, V. K. D. K. A. S. (2018) This study delves into the dynamics of tea export in India, analyzing the factors that have influenced India's position in the global tea market. The paper evaluates export trends, major export destinations, the role of Indian tea in the international market, and the challenges faced by the Indian tea industry in maintaining its competitive edge.

3. Talukdar, U., & Hazarika, C. (2017) This research explores India's production and export of value-added tea and assesses its global competitiveness. The paper examines how processed and premium tea products such as flavored, organic, herbal, and specialty teas perform in the international market compared to bulk tea exports. The study emphasizes the importance of innovation and branding in improving India's standing in the global tea industry.

III. RESEARCH METHODOLOGY

Research Design - Descriptive research design.

Source of Data - Primary data & Secondary data.

Sampling Technique - Snowball sampling technique.

Sampling Size – 210 respondents.

Tools For Analysis

The research paper involved certain tools like

- Simple percentage analysis.
- One way ANOVA.
- Chi-square.
- Correlation analysis.
- Rank analysis.
- Weighted average method.

IV. DATA ANALYSIS & INTERPRETATION

4.1. SIMPLE PERCENTAGE

Simple percentage analysis is one of the basic statistical tools which is widely used in the analysis and interpretation of primary data. It deals with the number of respondents response to a particular question in percentage arrived from the total population selected for the study.

The simple percentage can be calculated by using the formula,

$$\text{Simple Percentage} = \frac{\text{Actual respondents}}{\text{Total number of respondents}} \times 100$$



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TABLE 4.1

Socio-economic Background		Percentage
Age of the respondents	Below 25	45.7
	25-35	25.2
	36-45	17.1
	Above 45	11.9
Sex	Male	47.4
	Female	52.6
Marital Status	Married	52.4
	Unmarried	47.6
Education qualification	High school	2.9
	Undergraduate	32.9
	Postgraduate	22.9
	Professional Qualification	41.4
Area of residency	Urban	39
	Semi-urban	41.4
	Rural	19.5
Occupational	Employed	23.3
	Self employed	49
	Retired	18.1
	Unemployed	6.7
	Student	2.9

Source: Primary Data, 2025

INTERPRETATION

The 2025 primary data reveals that a majority of respondents (59.5%) are below the age of 25, followed by 29.6% aged 25–35, indicating a predominantly young population. Females make up a slightly larger portion (52.6%) compared to males (47.4%). Most respondents are unmarried (67.8%), which aligns with the youthful age group. In terms of education, 48.3% are undergraduates, 34.3% postgraduates, and 13.5% hold professional qualifications, showing a highly educated group. Only 3.9% have completed only high school. Respondents come from varied backgrounds, with 39.1% from urban areas, 38.3% from rural, and 22.6% from semi-urban areas. Occupationally, 40% are employed and 35.7% are self-employed, showing strong workforce involvement. Students make up 10.9%, while 7.8% are unemployed and 5.7% retired. Overall, the sample reflects a young, educated, and economically active population.

4.2 ANOVA

Analysis of Variance (ANOVA) is a statistical formula used to compare variances across the means (or average) of different groups. A range of scenarios use it to determine if there is any difference between the means of different groups.

TABLE 4.2: ANOVA BETWEEN TRAINING EFFECTIVENESS AND JOB SATISFACTION

H_0 = There is no statistical difference between income and primary sources

H_1 = There is a statistical difference between income and primary sources

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	12.821	3	4.274	4.691	.003
Within Groups	187.660	206	.911		
Total	200.481	209			

Source: Primary Data, 2025



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INTERPRETATION

In the above table, with the agree of freedom 3 and f-value 4.691, sig. (3, 4.691) = .003 which is lesser than 0.05, so we conclude that there is significance difference between income and primary sources.

Thus, the null hypothesis (H₀) is rejected, and the alternative hypothesis (H₁) is accepted.

4.3 CHI- SQUARE TEST

A chi- square test, also written as χ^2 test is any test statistical hypothesis test where the sampling distribution of the test statistic is squared distribution when the null hypothesis is true, without other qualification, chi- square test is often used as short for Pearson's chi-square test.

The chi- square test is used to determine whether is a significant relationship between the expected frequencies and the observed frequencies is one or more categories.

TABLE 4.3: COMPARISON BETWEEN CURRENT ROLE AND PARTICIPATION IN TRAINING PROGRAM

H₀= There is no association between employment status and participation in training program H₁= There is an association between employment status and participation in training program

		How often do you participate in UPASI training program				Total
		Regularly	Occasionally	Rarely	Never	
Employment status	Employed	14	29	5	1	49
	Self Employed	18	75	5	5	103
	Retired	19	11	8	0	38
	Unemployed	3	7	2	2	14
	Student	2	3	1	0	6
Total		56	125	21	8	210

Source: Primary Data, 2025

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	34.965 ^a	12	.000
Likelihood Ratio	34.536	12	.001
Linear-by-Linear Association	.048	1	.827
N of Valid Cases	210		

INTERPRETATION

In the above table, with the degrees of freedom 12, sig. value (.001) which is lesser than significant value (0.05), so we conclude that there is an association between employment status and participation in training program. Thus, the null hypothesis (H₀) is rejected, and the alternative hypothesis (H₁) is accepted.

TABLE 4.4: INCOME STATUS AND CHALLENGES FACED....(check

H₀ = There is no association between income status and challenges faced

H₁ = There is an association between income status and challenges faced

		Major challenges facing in nilgiris district			
		Climate change	Soil degradation	Water scarcity	Others
Income status	Less than ₹15,000	3	8	3	0
	₹15,000- ₹35,000	20	16	14	4
					Total
					14
					54



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	₹35,000-₹50,000	40	13	12	6	71
	Above ₹50,000	39	4	25	3	71
Total		102	41	54	13	2

Chi-Square Tests			
Pearson Chi-Square	Value	df	Asymptotic Significance (2-sided)
Likelihood Ratio	31.878 ^a	9	.004
Linear-by-Linear Association	32.286	9	.004
N of Valid Cases	.700	1	.403
Pearson Chi-Square	210		

Source: Primary Data, 2025

INTERPRETATION

In the above table, with the degrees of freedom 9, sig .value (.004) which is lesser than significant value (0.05), so we conclude that there is an association between income status and challenges faced. Thus, the null hypothesis (H₀) is rejected, and the alternative hypothesis (H₁) is accepted.

4.4 CORRELATION

Correlation is a statistical measure that expresses the extent to which two variables are linearly related (meaning them together a constant rate). It's a common tool for describing simple relationships without making a statement about cause and effect.

TABLE 4.5: CORRELATION BETWEEN MONTHLY INCOME AND HOW LONG HAVE YOU EMPLOYED

H₀ = There is no relationship between performance appraisal and job satisfaction

H₁ = There is a relationship between performance appraisal and job satisfaction

Correlations			
		Monthly income	How long have you employed
Area	Pearson Correlation	1	.051
	Sig. (2-tailed)		.462
	N	210	210
How has upasi support impacted the overall quality of your tea produce	Pearson Correlation	.051	1
	Sig. (2-tailed)	.462	
	N	210	210

Source: Primary Data, 2025

INTERPRETATION

In the above table, the Sig.value (.462) which is greater than the significant value (0.05), so we can conclude there is no relationship between area and impact of overall quality. Thus, the null hypothesis (H₀) is rejected, and the alternative hypothesis (H₁) is accepted



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TABLE 4.6: AGE AND ANNUAL TEA PRODUCTION

H_0 = There is no relationship between age and annual tea production

H_1 = There is a relationship between age and annual tea production

Correlations			
		Area of residency	How long have you employed
Area	Pearson Correlation	1	.582
	Sig. (2-tailed)		.000
	N	210	210
Annual tea production	Pearson Correlation	.58	1
	Sig. (2-tailed)	.000	
	N	210	210

Source: Primary Data, 2025

INTERPRETATION

In the above table, the Sig. value (.000) which is lesser than the significant value (0.05), so we can conclude there is relationship between age and annual tea production. Thus, the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_1) is accepted

4.1.5 RANK ANALYSIS

Rank analysis is a statistical method used to compare and evaluate data by ranking values instead of using their absolute numbers. It helps in reducing the impact of outliers and it is widely used in fields like economics, psychology and decision-making process.

TABLE 4.7: SERVICES UTILIZED IN UPASI

STATEMENT	I	II	III	IV	V	TOTAL	RANK
Training and workshops	144 720	18 72	16 48	21 42	11 11	893	1
Technical assistance and advisor services	14 70	144 576	16 48	27 54	9 9	757	6
Access to high-quality planting materials	81 405	22 88	76 228	19 38	12 12	771	4
Financial support or subsidies	59 295	81 324	25 75	36 72	9 9	775	3
Market linkages and price stabilization	77 385	68 272	19 57	30 60	16 16	790	2
Sustainability and organic farming initiatives	64 320	62 248	40 120	33 66	11 11	765	5

Source: Primary Data, 2025

INTERPRETATION

From the above analysis of the UPASI services system the highest ranked factor is Training and workshops followed by Market linkages and price stabilization, financial support or subsidies, Access to high-quality planting materials, Sustainability and organic farming initiatives and technical assistance and advisor services Overall, the result highlights that UPASI services system reveals that the highest priority factors for stakeholders are Training and Workshops, followed by Market Linkages and Price Stabilization, indicating a strong focus on capacity building and market access. Financial support, access to quality planting materials, sustainability initiatives, and technical assistance also play crucial roles in supporting the tea industry.



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4.6 WEIGHTED AVERAGE METHOD

A weighted average is a calculation that takes into account the varying degree of importance of the numbers in a data set. In calculating a weighted average, each number in the data set is multiplied by predetermined weight before the final calculation.

TABLE 4.8: IMPACT OF TRAINING PROGRAM ON JOB SATISFACTION

STATEMENT	Satisfied	Highly Satisfied	Neutral	Dissatisfied	Highly Dissatisfied	TOTAL	Mean
Increase awareness about UPASI's services	149 745	30 120	91 273	84 168	82 82	436 1388	3.18
Provide more training programs	55 275	171 684	61 183	102 204	112 112	501 1458	2.19
Offer subsidies for tea cultivation	6 30	8 32	571 1713	20 40	11 11	616 1826	2.96
Improve market linkages	0 0	0 0	1 3	4 8	3 3	8 14	1.75
Enhance digital infrastructure for better communication	0 0	0 4	0 0	0 0	2 2	3 6	2
Increase funding for research and development in tea cultivation	0 0	0 0	0 0	0 0	0 0	0 0	0

Source: Primary Data, 2025

INTERPRETATION

The highest mean score is 3.18 (Increase awareness about UPASI's services), indicating that the majority of respondents are satisfied with UPASI's efforts to raise awareness. This is followed by 2.96 (Offer subsidies for tea cultivation) and 2.91 (Provide more training programs), suggesting a neutral to positive response towards these areas, with a desire for improvement in the availability of training and subsidies. A notable score is 2.0 (Enhance digital infrastructure for better communication), indicating a neutral to dissatisfied sentiment towards the current digital infrastructure. The lowest mean score is 1.75 (Improve market linkages), reflecting significant dissatisfaction and a clear need for stronger market connections. Overall, the findings suggest that while UPASI is performing well in raising awareness, there are areas such as market linkages, digital infrastructure, and training programs that require further attention to improve stakeholder satisfaction.

V. FINDINGS

1. Most respondents are young, unmarried, and well-educated, indicating a workforce that is open to learning and development
2. ANOVA shows a strong link between training effectiveness and job satisfaction
3. Chi-square results reveal the current role and participation in the training program
4. Correlation shows that longer employment leads to higher income, and shows how long have you employed
5. On-the-job training is rated most effective, and overall, impact of training program on job satisfaction and career growth



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VI. SUGGESTIONS

1. Enhance Training Programs
2. Strengthen Market Linkages
3. Increase Financial Support
4. Promote Climate Adaptation
5. Leverage Digital Tools

VII. CONCLUSIONS

This research project provides valuable insights into the utilization of UPASI's resources by small-scale tea growers in the Nilgiris district. The study highlights that the majority of respondents are young, self-employed individuals from semi-urban areas, with a significant portion holding professional qualifications. The research underscores the critical challenges faced by farmers, including climate change and soil degradation, and reveals strong correlations between income levels, employment status, and these challenges. Based on these findings, the study recommends enhancing training programs, improving market access, increasing financial support, promoting climate-resilient practices, and leveraging digital tools to better serve the farming community. By implementing these suggestions, UPASI can further strengthen its support for small-scale tea growers, ensuring sustainable growth and development in the Nilgiris tea industry. This research not only contributes to academic knowledge but also offers practical solutions to improve the livelihoods of tea growers and the overall efficiency of UPASI's initiatives.

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