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Economic Impact Of Farm Tourism On The Local Communities In Munnar

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ABSTRACT:

Munnar region of Kerala popularly known as 'Kashmir of South' well known for its green vegetation, scenic beauty and pleasant climate. The location of the region is away from the busy cities. It attracts a lot of tourist from different parts of the country and also from abroad. The major tourism activities of the region are exploring the tea plantations, visiting the agricultural farms, visiting the tea museum, trekking, boating and enjoying the beauty of waterfalls. The winter season vegetable farms are the major source of income for the farmers of the region. They can raise an additional source of income by integrating tourism in to their farms without making much additional investment. Local community of the region is also benefited from the farm tourism activities in the locality as it provides employment, income and reduce the need for migration. This paper aims to explore the economic impact of farm tourism on the local communities in Munnar.

Key words: Farm tourism, Economic impact, Employment, Local community, Farms.

INTRODUCTION:

Now a days world is actively talking about the concept of sustainable development. Tourism sector is not an exception. It is passing through a transition stage as more focus is given to environment friendly tourism. In this context farm tourism gained more importance as the environmentally conscious tourists seeking for nature friendly tourism destinations. Moreover the hustles of urban lifestyle forcing people for enjoying rural way of life at weekends or holidays. There is no clear definition of the farm tourism. However the term farm tourism, agri tourism or agro tourism is used interchangeably. American Farm Bureau Federation (2004) define agri tourism as " Agri tourism refers to an enterprise at a working farm, ranch or agricultural plant conducted for the enjoyment of visitors that generate income for the owner. Agricultural tourism refers to the act of visiting a working farm or horticultural or agricultural operation for the purpose of enjoyment, education or active involvement in the activities of the farm or operation that also adds to economic viability to the site"." Any practice developed on a working farm with the purpose of attracting visitors".(Barbieri & Mshenga,2008).

Munnar region of south often called the Kashmir of south popular for the winter season vegetables like carrot, cabbage, green peace and fruits like strawberry, blue berry, apple and orange. The photogenic beauty of the farms and the pleasant climate even in the peak of the summer attract a large number of tourists to the location. Major farm tourism activities in the location are farm visit, farm stay,

participation in farming activities, consuming the fresh food from the farm and live chocolate making. Farmers of the region are getting an additional source of income from incorporating tourism in to their farms without making much investment. Local communities in the region also getting benefited from farm tourism through the selling of organic products, production and sale of handicraft, serving traditional food, guide services, hospitality staff, and through transportation services. Existence of better employment opportunities and improved standard of living in the area help to prevent the migration of rural youth.

LITERATURE REVIEW:

According to the literature survey,agri tourism started in early 1800s in United State of America (Karabati et al., 2009). World tourism sector is going through a transformational stagewhere the focus is shifted to green based tourism. In asian region Thailand is a prominent country to integrate farm tourism in their tourism sector. In Thailand farm tourism is stated in 2002 but created a greate impact by attracting more than half a million touriststst through a national scheme(Taemsaran,2005). In Malaysia farm tourism created a major portion of the revenue through farm tourisdm.(Tiraieyari & Hamzah, 2012). Agri tourism leads to the economic diversification in the countrythrough the better utilization of natural resources and all these activities leads to the increase in the economic prosperity of the local community. In African region agri tourism is still in the infantry stage. In south Africa agri tourism leads to the rural development through improving economic performance and employment generation(Iakovidou,1997).

Agri tourism in India started in 2004 in Baramati Agri Tourism Center in Maharashtra under the guidance of Pandurang Taware who received national tourism award for the same. There is an emerging popularity for the farm tourism in India .Through the adoption of scientific and sustainable practices farms can gain the benefit.(Soumi Chatterjee and Durga Prasad,2019) Agri tourism enable the tourist to experience the rural way of lifeand taste the authentic food of the region. It facilitate the economic development of the rural India by providing additional income to the local farming community(Vikas Dangi, 2018). Agri tourism can be utilized for the risk reduction in agricultural sector by offering value added services to the tourists, resulting in an additional source of income to the farmers to mitigate the agricultural risk(Rohana,2016).Moreover agri tourism offer an investment opportunity in rural areas. (J.N.Kiran et al.,2014). Agri tourism improve the economic welfare of the small scale farmers(Joo et al., 2013). The tourists now a days prefer for farm tourism because they can get close to the nature and affordable in terms of money(Gomatinayagam,2023).If properly used farm tourism can be a profitable economic avenue for the rural youth(Jai et al.,2023) and also for accelerating the speed of rural development(Krishna et al.,2020). In the context of Kerala,havig different terrains from below sea level paddy field to the mountains of high range farm tourism has a wide scope through the geographical features. But the main problem is that we are adopting the farm tourism models from other countries without making a feasibility study(George & Babu, 2022).

RESEARCH GAP:

From the literature survey, it has been found that even though farm tourism is an emerging tourism avenue in the era of sustainable development, studies are conducting actively in different parts of the world, the concept of farm tourism as a research area did not get much importance in India, especially in Kerala. So there is a gap existing in the literature to study the economic impact of farm tourism to the local community.

SIGNIFICANCE OF THE STUDY:

Munnar region of the Kerala popular for the pleasant climate and lush green vegetation is an important farm tourism destinationin Kerala. A considerable number of foreign as well as domestic tourists the region every year. Approximately one out of the five families in the region getting the benefit of tourism. Farm tourism activities in the region offers a potential avenue for economic diversification, creating a new stream of revenue reducing the dependence on agriculture only. Therefore it is significant to study the economic impact of farm tourism on the local communities in Munnar.

STATEMENT OF THE PROBLEM:

This study addresses the question of how effectively farm tourism contributes to the economic development of the local communities in Munnar. It attempts to investigate whether farm tourism serve as a viable strategy for enhancing income, creating employment and improving the standard of living beyond the traditional agriculture. So the problem is stated as the economic impact of farm tourism on the local communities in Munnar.

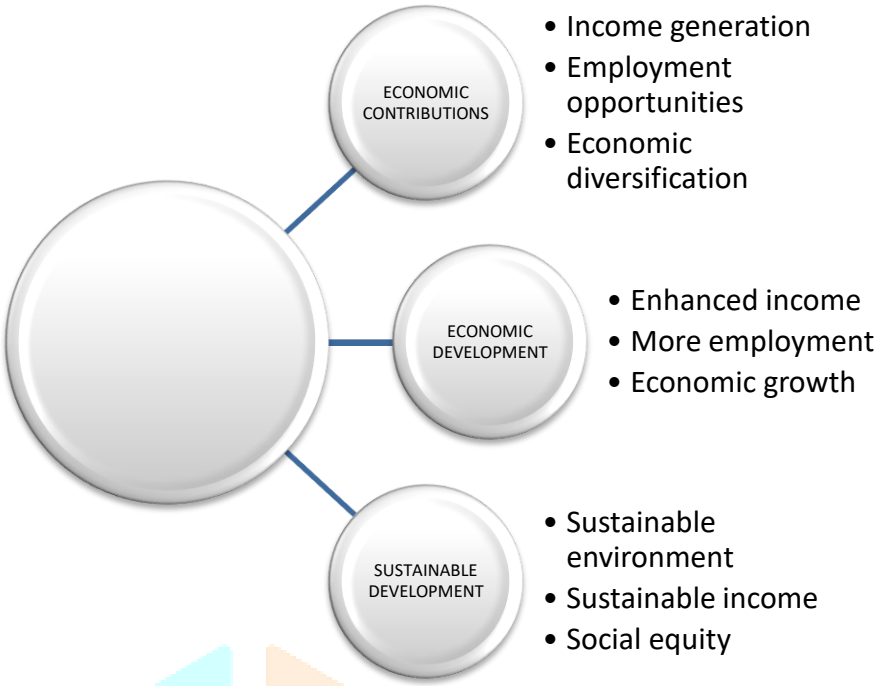
OBJECTIVES OF THE STUDY:

1. To identify the economic impact of farm tourism to the local communities in Munnar.
2. To evaluate the effectiveness of farm tourism in promoting sustainable economic development in Munnar.
3. To analyze the role of farm tourism in promoting sustainable economic development in Munnar.

HYPOTHESES FOR THE STUDY:

1. Farm tourism activities in Munnar have a significant positive impact on the income of the local community.
2. Farm tourism in Munnar generates new employment opportunities for the local residents.
3. Farm tourism activities lead to economic diversification, reducing the reliance on agriculture only.
4. Increased tourists spending have a multiplier effect on the local economy.
5. Farm tourism provides high average income for farmers as compared to traditional agriculture.
6. Farm tourism positively influence the growth and development of ancillary business
7. Farm tourism creates diverse employment opportunities as compared to traditional agriculture.
8. Farm tourism activities leads to high rate of economic growth.
9. Farm tourism leads to high rate of investment in infrastructure as compared to areas without farm tourism
10. Farm tourism is effective in attracting the external investment to the area
11. Farm tourism provides increased income and employment without compromising the environmental sustainability
12. Farm tourism activities leads to sustainable agricultural practices.
13. There is an equitable distribution of benefit of farm tourism among the local communities in Munnar

CONCEPTUAL MODEL FOR THE STUDY:



OPERATIONAL DEFINITIONS:

1. Farm tourism: Activities in a working farm whether agricultural or animal rearing allowing the tourist visit for a consideration in terms of money providing education or recreation or enjoyment or accommodation to the tourists.
2. Local communities: All the residents of the locality of the farm tourism center may or may not associated with farm tourism activities.

ANALYSIS AND INTERPRETATION:

Sampling:

Data is collected from 50 respondents using the convenient sampling technique from Munnar region.

Reliability of the sample:

Reliability of the data collected from the sample is tested using the SPSS software and it gives the following result:

Case Processing Summary			
		N	%
Cases	Valid	50	100.0
	Excluded[a]	0	0.0
	Total	50	100.0

Reliability Statistics	
Cronbach's Alpha	N of Items
0.803	17

Cronbach's Alpha of 0.803 indicates that the scale has **good** internal consistency. This means that the 17 items in the scale are measuring a similar construct and that the scale is reliable.

HYPOTHESIS 1: Farm tourism activities in Munnar have a significant positive impact on the income of the local community.

To study this hypothesis linear regression is used and Influence of farm tourism on average income is the dependent variable and the independent variables are type of employment created by the farm tourism, multiplier effect of tourists spending, growth of ancillary business and equitable distribution of benefit of farm tourism. These variables will help you to comprehensively assess the relationship between farm tourism activities and the income of the local community in Munnar. It privides the following result:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.589[a]	0.347	0.289	0.42547

a. Predictors: (Constant), Equitable distribution of economic benefit of farm tourism, Growth of ancillary business, Type of employment created by farm tourism, Multiplier effect of tourists spending

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.334	4	1.084	5.985	.001[b]
	Residual	8.146	45	0.181		
	Total	12.480	49			

a. Dependent Variable: Influence of farm tourism on avg income

b. Predictors: (Constant), Equitable distribution of economic benefit of farm tourism, Growth of ancillary business, Type of employment created by farm tourism, Multiplier effect of tourists spending

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.949	0.826		1.149	0.257
	Type of employment created by farm tourism	-0.068	0.046	-0.259	-1.470	0.148
	Multiplier effect of tourists spending	-0.062	0.112	-0.120	-0.554	0.582
	Growth of ancillary business	0.642	0.198	0.532	3.238	0.002
	Equitable distribution of economic benefit of farm tourism	0.246	0.134	0.402	1.839	0.073

The equitable distribution of economic benefits has a moderate positive relationship with the dependent variable, explaining about 28.9% of its variance. **Growth of ancillary business:** This variable has a statistically significant positive impact on the influence of farm tourism on average income (B = 0.642, Sig. = 0.002). This means that as the growth of ancillary businesses increases, the positive influence of farm tourism on average income also significantly increases. **Equitable distribution of economic benefit of farm tourism:** This variable shows a positive relationship with the influence of farm tourism on average income (B = 0.246), but it is not statistically significant (Sig. = 0.073). While the trend suggests that a more equitable distribution might lead to a greater positive influence on income, this result does not meet the conventional significance level of 0.05.**Type of employment created by farm tourism** and **Multiplier effect of tourists spending:** These variables do not have a statistically significant impact on the influence of farm tourism on average income (Sig. = 0.148 and 0.582, respectively).The analysis provides evidence to support the hypothesis that farm tourism activities in Munnar have a significant positive impact on the income of the local community, specifically through the growth of ancillary businesses. The equitable distribution of economic benefits shows a positive trend, but it is not statistically significant.

HYPOTHESIS 2: Farm tourism in Munnar generates new employment opportunities for the local residents.

Linear regression analysis is used to test this hypothesis and type of employment created by farm tourism is the dependent variable and multiplier effect of tourist spending is the dependent variable.It provides the following result:

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.524[a]	0.275	0.260	1.64901	
a. Predictors: (Constant), Multiplier effect of tourists spending					

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	49.477	1	49.477	18.195	.000[b]
	Residual	130.523	48	2.719		
	Total	180.000	49			
a. Dependent Variable: Type of employment created by farm tourism						
b. Predictors: (Constant), Multiplier effect of tourists spending						

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.094	0.899		1.217	0.230
	Multiplier effect of tourists spending	1.035	0.243	0.524	4.266	0.000
a. Dependent Variable: Type of employment created by farm tourism						

R (0.524): This is the correlation coefficient. It tells us that there's a moderate positive relationship between the "Multiplier effect of tourists spending" and the variable we're trying to predict. The relationship is not very strong, but it's not negligible either. **R Square (0.275):** This value means that 27.5% of the variation in the outcome variable is explained by the "Multiplier effect of tourists spending". This indicates that the multiplier effect has a noticeable influence on the outcome variable, but there are other factors at play that this model doesn't include. **Adjusted R Square (0.260):** This is a more conservative estimate of the variance explained. It's adjusted for the number of predictors in the model (in this case, just one). The fact that it's close to the R square suggests that the model is not overly complex. **Std. Error of the Estimate (1.64901):** This represents the average amount that the actual values of the outcome variable differ from the values predicted by the model. There is a statistically significant relationship between the multiplier effect of tourist spending and the type of employment

created by farm tourism. Specifically, this result suggests that changes in the multiplier effect of tourist spending are associated with changes in the type of employment opportunities generated by farm tourism. A larger multiplier effect is associated with significant differences in the types of employment created by farm tourism. **B (Unstandardized Coefficient):** 1.035This means that for every one-unit increase in the "Multiplier effect of tourists spending," the "Type of employment created by farm tourism" is predicted to increase by 1.035 units. In simpler terms, as the multiplier effect goes up, so does the level of new employment. **Sig. (Significance):** 0.000This is the p-value. It's very small (less than 0.05), which means that this result is statistically significant. The relationship between the Multiplier effect of tourists spending and the Type of employment created by farm tourism is highly unlikely to have occurred by chance. The Multiplier effect of tourists spending has a significant positive effect on the Type of employment created by farm tourism. When the multiplier effect of tourist spending increases, it leads to a significant increase in the new employment opportunities created by farm tourism. So we accept the hypothesis.

HYPOTHESIS 3: Farm tourism activities lead to economic diversification, reducing the reliance on agriculture only.

Linear regression analysis is used to test this hypothesis considering economic diversification as the dependent variable and multiplier effect of tourist spending as the independent variable. It provides the following result.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.430[a]	0.185	0.168	1.08085

a. Predictors: (Constant), Multiplier effect of tourists spending

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.745	1	12.745	10.909	.002[b]
	Residual	56.075	48	1.168		
	Total	68.820	49			

a. Dependent Variable: Economic diversification

b. Predictors: (Constant), Multiplier effect of tourists spending

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.179	0.590		3.696	0.001
	Multiplier effect of tourists spending	0.525	0.159	0.430	3.303	0.002

a: dependent variable- economic diversification

The analysis focuses on the relationship between the "Multiplier effect of tourists spending" and "Economic diversification."**Model Summary:** The R value of 0.430 indicates a moderate positive correlation between the multiplier effect of tourist spending and economic diversification. This suggests that as tourist spending has a larger multiplier effect in the local economy, there is a tendency for the economy to become more diversified. However, the R-squared value of 0.185 tells us that only 18.5% of the variance in economic diversification is explained by the multiplier effect of tourist spending. This implies that while there is a relationship, other factors also play a significant role in economic diversification. **ANOVA:** The ANOVA table shows that the relationship between the multiplier effect and economic diversification is statistically significant (p-value = 0.002). This means that the observed relationship is unlikely to have occurred by chance. **Coefficients:** The coefficient for "Multiplier effect of tourists spending" is 0.525. This indicates that for every one-unit increase in the multiplier effect, economic diversification is predicted to increase by 0.525 units. This confirms the positive relationship between the two variables. Farm tourism activities, through the multiplier effect of tourist spending, have a statistically significant positive impact on economic diversification in Munnar. This implies that as tourists spend money in the local economy, it stimulates various sectors beyond agriculture, contributing to a more diversified economic base. So we accept the hypothesis.

HYPOTHESIS 4: Increased tourists spending have a multiplier effect on the local economy.

To test this hypothesis linear regression is used taking multiplier effect of tourist spending as the independent variable and influence of farm tourism on average income as the dependent variable. It provides the following result:

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.212[a]	0.045	0.025	0.49836
a. Predictors: (Constant), Multiplier effect of tourists spending				

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.559	1	0.559	2.250	.140[b]
	Residual	11.921	48	0.248		
	Total	12.480	49			

a. Dependent Variable: Influence of farm tourism on avg income

b. Predictors: (Constant), Multiplier effect of tourists spending

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.086	0.272		15.032	0.000
	Multiplier effect of tourists spending	0.110	0.073	0.212	1.500	0.140

The analysis examined the relationship between the "Multiplier effect of tourists spending" (as the predictor) and the "Influence of farm tourism on average income" (as the outcome variable).**Model Summary:** The R value of 0.212 indicates a weak positive correlation between the multiplier effect of tourist spending and the influence of farm tourism on average income. This suggests a slight tendency for a larger multiplier effect to be associated with a greater positive influence on average income. However, the low R-squared value of 0.045 indicates that only 4.5% of the variance in the influence on average income is explained by the multiplier effect. This suggests that the multiplier effect, as measured here, has a limited direct explanatory power for the perceived influence on average income. **ANOVA:** The ANOVA table shows that the relationship between the multiplier effect and the influence on average income is not statistically significant (p-value = 0.140). This means that we cannot confidently conclude that the observed relationship in the data is anything more than what might occur by random chance. **Coefficients:** The coefficient for the "Multiplier effect of tourists spending" is 0.110, indicating a positive direction of the relationship (as the multiplier effect increases, the influence on average income tends to increase slightly). However, the associated p-value of 0.140 confirms that this positive relationship is not statistically significant at the conventional 0.05 level. So we failed to accept the hypothesis.

HYPOTHESIS 5: Farm tourism provides high average income for farmers as compared to traditional agriculture.

Independent t – test is used to test this hypothesis and the result is:

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Comparision of income from arm tourism and traditional agriculture	Equal variances assumed	5.691	0.021	2.076	48	0.043	0.28699	0.13827	0.00899	0.56499
	Equal variances not assumed			1.966	28.062	0.059	0.28699	0.14598	-0.01201	0.58598

t-test for Equality of Means (Equal variances not assumed):t = 1.966, df = 28.062,Sig. (2-tailed) = 0.059The p-value (Sig. 2-tailed) is 0.059.This p-value is greater than the conventional significance level of 0.05.**Conclusion:**Since the p-value (0.059) > 0.05.This means we do not have enough statistical evidence to conclude that there's a significant difference in average income between farm tourism farmers and traditional agriculture farmers.Based on this analysis, we cannot say that farm tourism farmers earn significantly more than traditional agriculture farmers. , we fail to accept the hypothesis.

HYPOTHESIS 6: Farm tourism positively influence the growth and development of ancillary business

To test the hypothesis, linear regression is used considering multiplier effect of tourist spending as the independent variable and growth of ancillary business the dependent variable. The result is:

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.270[a]	0.073	0.054	0.40705
a. Predictors: (Constant), Multiplier effect of tourists spending				

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.627	1	0.627	3.783	.058[b]
	Residual	7.953	48	0.166		
	Total	8.580	49			

a: dependent variable:growth of ancillary business

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.363	0.222		19.650	0.000
	Multiplier effect of tourists spending	0.117	0.060	0.270	1.945	0.058

The analysis examines the relationship between the "Multiplier effect of tourists spending" and the "Growth of ancillary business."**Model Summary:** The R value of 0.270 indicates a weak positive correlation between the multiplier effect of tourist spending and the growth of ancillary businesses. This suggests that as tourist spending increases, there is a slight tendency for ancillary businesses to grow. However, the R-squared value of 0.073 implies that only 7.3% of the variance in ancillary business growth is explained by the multiplier effect, indicating that other factors are more influential.**ANOVA:** The ANOVA table shows that the relationship between the multiplier effect and the growth of ancillary businesses is not statistically significant (p-value = 0.058**Coefficients:** The coefficient for the "Multiplier effect of tourists spending" is 0.117, indicating a positive relationship. However, the p-value of 0.058 again indicates that this positive relationship is not statistically significant.We failed to accept the hypothesis that the farm tourism activities positively influence the growth and development of ancillary business because the growth is not statistically significant.

HYPOTHESIS 7: Farm tourism creates diverse employment opportunities as compared to traditional agriculture.

Independent sample t test is used to test the hypothesis considering type of employment as the test variable and involvement in farm tourism as the grouping variable. It provides the following result:

Group Statistics					
Involvement in farm tourism activities		N	Mean	Std. Deviation	Std. Error Mean
Type of employment created by farm tourism	tourism farmer	33	5.1212	1.76348	0.30698
	traditional farmer	17	4.1765	2.09867	0.50900

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Type of employment created by farm tourism	Equal variances assumed	2.048	0.159	1.682	48	0.099	0.94474	0.56181	-0.18485	2.07434
	Equal variances not assumed			1.589	27.910	0.123	0.94474	0.59441	-0.27302	2.16251

t-test for Equality of Means: Looking at the "Equal variances assumed" row, we find: t = 1.682, df = 48, Sig. (2-tailed) = 0.099,The p-value (Sig. 2-tailed) is 0.099.This p-value (0.099) is greater than the conventional significance level of 0.05.Since the p-value (0.099) is greater than 0.05, we fail to accept the hypothesis that farm tourism create more diverse employment opportunities as compared to the traditional agriculture. This means that, based on this data, there is not enough statistical evidence to conclude that farm tourism creates significantly more diverse employment opportunities compared to traditional agriculture.

HYPOTHESIS 8: Farm tourism activities leads to high rate of economic growth.

Linear regression is used to test the hypothesis considering comparison of income from arm tourism and traditional agriculture as the dependent variable and Increase income and employment without compromising sustainability, Economic diversification, Involvement in farm tourism activities, Multiplier effect of tourists spending, Growth of ancillary business are the grouping variables. It provides the following result:

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.737[a]	0.544	0.492	0.34116

a. Predictors: (Constant), Increase income and employment without compromising sustainability, Economic diversification, Involvement in farm tourism activities, Multiplier effect of tourists spending, Growth of ancillary business

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.099	5	1.220	10.480	.000[b]
	Residual	5.121	44	0.116		
	Total	11.220	49			

a. Dependent Variable: Comparision of income from arm tourism and traditional agriculture

b. Predictors: (Constant), Increase income and employment without compromising sustainability, Economic diversification, Involvement in farm tourism activities, Multiplier effect of tourists spending, Growth of ancillary business

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.875	0.684		2.742	0.009
	Involvement in farm tourism activities	-0.140	0.112	-0.140	-1.248	0.219
	Multiplier effect of tourists spending	0.138	0.060	0.281	2.312	0.026
	Growth of ancillary business	0.622	0.163	0.544	3.821	0.000
	Economic diversification	0.075	0.051	0.185	1.462	0.151
	Increase income and employment without compromising sustainability	-0.174	0.124	-0.194	-1.405	0.167

a. Dependent Variable: Comparision of income from arm tourism and traditional agriculture

The analysis examines the factors influencing the "Comparison of economic growth in farm tourism and traditional areas."**Model Summary:** The R value of 0.737 indicates a strong positive correlation between the independent variables (including "Increase income and employment without compromising sustainability") and the comparison of economic growth. This suggests that higher levels of the independent variables are associated with a higher rate of economic growth in farm tourism areas

compared to traditional areas. The R-squared value of 0.544 means that 54.4% of the variance in economic growth differences is explained by the independent variables. **ANOVA:** The ANOVA table shows that the independent variables, taken together, have a statistically significant effect on the comparison of economic growth (p-value = 0.000). This indicates that the model as a whole is a good fit for the data and that the relationship between the independent variables and economic growth is unlikely to be due to chance. **Coefficients:** The coefficients table provides a more detailed look at the individual relationships. The growth of ancillary business (B = 0.622, Sig. = 0.000) and Multiplier effect of tourists spending (B = 0.138, Sig. = 0.026) have statistically significant positive effects on the comparison of economic growth. This suggests that farm tourism activities, through the growth of ancillary businesses and the multiplier effect of tourist spending, contribute to a higher rate of economic growth. The results suggest that farm tourism activities, particularly through the growth of ancillary businesses and the multiplier effect of tourist spending, are associated with a higher rate of economic growth compared to traditional agricultural areas. So we accept the hypothesis that farm tourism leads to a high rate of economic growth.

HYPOTHESIS 9: Farm tourism leads to high rate of investment in infrastructure as compared to areas without farm tourism.

To test the hypothesis independent sample t test is used considering the involvement in farm tourism as the grouping variable and rate of investment in infrastructure as the test variable. It provides the following result:

Group Statistics

Involvement in farm tourism activities		N	Mean	Std. Deviation	Std. Error Mean
Rate of investment in infrastructure in farm tourism areas	tourism farmer	33	4.8182	0.39167	0.06818
	traditional farmer	17	4.5294	0.51450	0.12478

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Rate of investment in infrastructure in farm tourism areas	Equal variances assumed	10.838	0.002	2.216	48	0.031	0.28877	0.13030	0.02677	0.55077
	Equal variances not assum			2.031	25.829	0.053	0.28877	0.14220	-0.00361	0.58115

	ed									

Since the p-value (0.053) is greater than the conventional significance level of 0.05, we **fail to accept the null hypothesis**. This means that based on this statistical analysis, there is **not enough statistically significant evidence** to conclude that areas with farm tourism have a significantly higher rate of investment in infrastructure compared to areas without significant farm tourism .While the descriptive statistics show a slightly higher average in farm tourism areas, the t-test indicates that this difference is not statistically significant at the 0.05 level, especially considering the unequal variances between the groups. So we failed to accept the hypothesis.

HYPOTHESIS 10: Farm tourism is effective in attracting the external investment to the area

Linear regression is used to test this hypothesis considering Effect of farm tourism in attracting external investment as the dependent variable and Involvement in farm tourism activities, Multiplier effect of tourists spending, Rate of investment in infrastructure in farm tourism areas, Growth of ancillary business as the independent variables.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.924[a]	0.853	0.840	0.18144

a. Predictors: (Constant), Growth of ancillary business, Multiplier effect of tourists spending, Involvement in farm tourism activities, Rate of investment in infrastructure in farm tourism areas

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.599	4	2.150	65.295	.000[b]
	Residual	1.481	45	0.033		
	Total	10.080	49			

a. Dependent Variable: Effect of farm tourism in attracting external investment

b. Predictors: (Constant), Growth of ancillary business, Multiplier effect of tourists spending, Involvement in farm tourism activities, Rate of investment in infrastructure in farm tourism areas

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	0.461	0.351		1.316	0.195
	Involvement in farm tourism activities	-0.115	0.058	-0.122	-1.998	0.052
	Multiplier effect of tourists spending	0.031	0.028	0.065	1.097	0.279
	Rate of investment in infrastructure in farm tourism areas	0.628	0.109	0.628	5.749	0.000
	Growth of ancillary business	0.281	0.121	0.259	2.324	0.025

The analysis examines the factors influencing the "Effect of farm tourism in attracting external investment."**Model Summary:** The R value of 0.924 indicates a very strong positive correlation between the independent variables (Growth of ancillary business, Multiplier effect of tourists spending, and Involvement in farm tourism activities) and the effect of farm tourism in attracting external investment. The R-squared value of 0.853 suggests that these independent variables explain a substantial 85.3% of the variance in external investment. **NOVA:** The ANOVA table confirms that the independent variables, taken together, have a statistically significant effect on the effect of farm tourism in attracting external investment ($p < 0.001$). This indicates that the model as a whole is a very good fit for the data. **Coefficients:** The coefficients table reveals the individual relationships: The rate of investment in infrastructure in farm tourism areas ($B = 0.628$, $p < 0.001$) has a strong, statistically significant positive effect on attracting external investment. Growth of ancillary business ($B = 0.281$, $p = 0.025$) also has a statistically significant positive effect. Involvement in farm tourism activities has a marginally significant negative effect ($B = -0.115$, $p = 0.052$).The multiplier effect of tourists spending does not have a statistically significant effect ($p = 0.279$).The analysis provides strong evidence to support the hypothesis that farm tourism is effective in attracting external investment. Specifically, the rate of investment in infrastructure and the growth of ancillary businesses in farm tourism areas are significant drivers of external investment. So we accept the hypothesis.

HYPOTHESIS 11: Farm tourism provides increased income and employment without compromising the environmental sustainability

Descriptive Statistics			
	Mean	Std. Deviation	N
Effect of farm tourism in the promotion of sustainable agricultural practices	4.5000	0.64681	50
Influence of farm tourism on avg income	4.4800	0.50467	50

Correlations			
		Effect of farm tourism in the promotion of sustainable agricultural practices	Influence of farm tourism on avg income
Effect of farm tourism in the promotion of sustainable agricultural practices	Pearson Correlation	1	.438**
	Sig. (2-tailed)		0.001
	N	50	50
Influence of farm tourism on avg income	Pearson Correlation	.438**	1
	Sig. (2-tailed)	0.001	
	N	50	50

Correlation Coefficient: The Pearson Correlation coefficient is 0.438. This indicates a moderate positive correlation between the two variables. There is a statistically significant, moderately positive relationship between the effect of farm tourism in promoting sustainable agricultural practices and the influence of farm tourism on average income. This suggests that as the perception of farm tourism's positive influence on average income increases, the perception of farm tourism's positive effect on promoting sustainable agricultural practices also tends to increase. So we accept the hypothesis.

HYPOTHESIS 12: Farm tourism activities leads to sustainable agricultural practices

To test this hypothesis, we use the correlation between the variables involvement in farm tourism and effect of farm tourism on sustainable development. It provides the following result:

Descriptive Statistics			
	Mean	Std. Deviation	N
Effect of farm tourism in the promotion of sustainable agricultural practices	4.5000	0.64681	50
Involvement in farm tourism activities	1.3400	0.47852	50

Correlations			
		Effect of farm tourism in the promotion of sustainable agricultural practices	Involvement in farm tourism activities
Effect of farm tourism in the promotion of sustainable agricultural practices	Pearson Correlation	1	-.297*
	Sig. (2-tailed)		0.036
	N	50	50
Involvement in farm tourism activities	Pearson Correlation	-.297*	1
	Sig. (2-tailed)	0.036	
	N	50	50

Correlation Coefficient: The Pearson Correlation coefficient is -0.297. This indicates a negative correlation between the two variables. Involvement in farm tourism activities" increases, "Effect of farm tourism in the promotion of sustainable agricultural practices" tends to decrease, and vice-versa. So we failed to accept the hypothesis.

HYPOTHESIS 13: There is an equitable distribution of benefit of farm tourism among the local communities in Munnar

To test this hypothesis, one-way ANOVA tests, with Equitable distribution of economic benefit of farm tourism as the dependent variable and three different independent variables: Gender, Age, and Education.It provides the following result:

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Gender	Between Groups	0.751	3	0.250	0.995	0.404
	Within Groups	11.569	46	0.252		
	Total	12.320	49			
Age	Between Groups	3.972	3	1.324	1.104	0.357
	Within Groups	55.148	46	1.199		
	Total	59.120	49			
Education	Between Groups	5.621	3	1.874	1.820	0.157
	Within Groups	47.359	46	1.030		
	Total	52.980	49			

For gender, The p-value of 0.404 is greater than the significance level of 0.05. This means that there is no statistically significant difference in the equitable distribution of farm tourism benefits between different gender groups. For different age groups, The p-value of 0.357 is greater than 0.05. This indicates that there is no statistically significant difference in the equitable distribution of farm tourism benefits among different age groups. For different education group, The p-value of 0.157 is also greater than 0.05. This suggests that there is no statistically significant difference in the equitable distribution of farm tourism benefits across different education levels. There is no statistically significant evidence to suggest that the equitable distribution of farm tourism benefits varies across different gender, age, or education groups within the local communities in Munnar. So we failed to accept the hypothesis.

FINDINGS:

1. Farm tourism activities in Munnar have a significant positive impact on the income of the local community.
2. Farm tourism in Munnar generate new employment opportunities for the local residents.
3. Farm tourism activities lead to economic diversification, reducing the reliance on agriculture only.
4. Increased tourists spending have no significant multiplier effect on the local economy.
5. The average income of the farm tourism farmers are not significantly higher than that of traditional farmers.
6. Farm tourism activities positively influence the growth and development of ancillary business because the growth is not statistically significant.
7. Farm tourism failed to creates significantly more diverse employment opportunities .
8. Farm tourism leads to a high rate of economic growth.
9. Farm tourism in the locality does not affect investment in infrastructure in the locality.
10. Farm tourism is effective in attracting the external investment to the area.
11. Farm tourism provides increased income and employment to the local people without compromising the environmental sustainability.
12. Farm tourism activities have no significant effect on the sustainable agricultural practices of the locality.

13. Economic benefit of the farm tourism activities are not equitably distributed across different gender, age and education groups.

CONCLUSION:

On the basis of the above study it has been concluded that farm tourism significantly boosts local community income and generates new employment. It contributes to economic diversification, reducing the area's over-reliance on traditional agriculture. Farm tourism is effective in attracting external investment. But certain areas needed to be improved such as the activities of the farm tourism need to be more environmentally sustainable. Similarly, ancillary business associated with the farm tourism is not able to grow significantly, they have to identify the needs of the tourists and present their products and services accordingly. The benefit of the farm tourism is not equitably distributed among different sections of the society. Farm tourism should provide diverse employment opportunities for the locals so as to reduce the problem of migration. The infrastructure investment is not significantly influenced by the farm tourism activities in the locality.

SUGGESTIONS:

1. Ancillary business associated with the farm tourism should develop appropriate strategies for getting the benefit of tourism.
2. Farm owners should focus more on sustainable agricultural practices.
3. Local authorities should focus more on the infrastructure development to the farm tourism intense areas.
4. Local authorities should evolve strategies to ensure the equitable distribution of benefit of farm tourism among all sections of the community.
5. Tourism department should provide adequate training and skill development programmes for the rural youth for getting diverse employment opportunities associated with tourism.

LIMITATIONS OF THE STUDY

1. Data is collected within a short span of time
2. Chances for the personal bias of the respondents
3. Data is collected from 50 respondents only.

RESEARCH GAP FOR FURTHER STUDIES:

1. **Investigate the leakage effect:** Future research should examine why increased tourist spending does not translate into a more substantial multiplier effect. This could involve analyzing where tourists spend their money (local vs. outside the community) and how much revenue remains within the local economy.
2. **Analyze farmer income:** Further studies are needed to understand why farm tourism farmers do not significantly out-earn traditional farmers. Research could explore the costs associated with farm tourism, pricing strategies, and market access.
3. **Examine ancillary business growth:** Future research should explore the factors limiting the growth of ancillary businesses and identify strategies to promote their development.

APPENDIX

QUESTIONNAIRE

1. Gender

2. Age: 18-35 ☐ 36-50 ☐ 51-65 ☐ Above 65 ☐

3. Education: Below secondary ☐ Secondary ☐ Higher secondary ☐

Graduation and above ☐ Others ☐

4. How does the farm tourism influenced your annual income?

Decreased significantly ☐ Decreased slightly ☐ Not affected ☐

Increased slightly ☐ Increased significantly ☐

5.What type of employment opportunities created by farm tourism for local people?

Farm labour ☐ Guide service ☐ Hospitality staff ☐ Transportation ☐

Production and sale of handicraft ☐ Local food shop ☐ organic product shop ☐

Others ☐

6.To what extent farm tourism contribute to the diversification of the local economy?

Not at all ☐ To some extent ☐ Moderately ☐ Significantly ☐

Very significantly ☐

7.What is the multiplier effect of tourists spending on the local economy?

Less than 1x ☐ Equal to 1x ☐ 2x ☐ More than 2x ☐

How the farm tourism influence the growth of ancillary business?

Negatively ☐ No impact ☐ Slightly positively ☐ Highly positively ☐

9.How does the average annual income from farm tourism vary with the income from traditional farming?

Significantly lower ☐ Slightly lower ☐ Almost same ☐ Slightly higher ☐

Significantly higher ☐

10.What is the range of employment opportunities offered by farm tourism as compared to traditional farming?

Not diverse ☐ Slightly diverse ☐ Al most same ☐ Slightly more diverse ☐

Much more diverse ☐

11.What is the approximate rate of economic growth in farm tourism intense areas?

Very low ☐ Slightly low ☐ Almost same ☐ Slightly fast ☐ very fast ☐

12What is the rate of investment in infrastructure in farm tourism focused areas as compared to traditional farming areas?

Less investment ☐ Slightly less investment ☐ No effectof farm tourism ☐

Slightly high investment ☐ Significant investment ☐

13.How effective is farm tourism in attracting the external investment to the locality?

uch less effective ☐ Less effective ☐ No effect ☐ Slightly effective ☐

Significantly effective ☐

14.To what extent farm tourism in Munnar create more income and employment without compromising sustainability of agriculture?

☐ Significantly compromise the sustainability of agriculture

☐ Slightly the sustainability of agriculture

☐ No effect

☐ Slightly enhances the sustainability of agriculture

☐ Significantly enhances the sustainability of agriculture

15.How does the farm tourism in Munnar promote sustainable agricultural practices?

Not at all ☐ To a small extent ☐ To some extent ☐ To a moderate extent ☐ To a greate extent ☐

16.How equitably economic benefit of farm tourism is distributed among the local communities?

Very inequitably ☐ Inequitably ☐☐ Equitably to some extent ☐ Equitably ☐ Very equitably ☐

REFERENCES:

1. *american farm bureau federation annual meeting highlight 2004 definition on farm tourism— Yahoo Search Results*. (n.d.).
2. Barbieri, C., & Mshenga, P. M. (2008). The Role of the Firm and Owner Characteristics on the Performance of Agritourism Farms. *Sociologia Ruralis*, *48*(2), 166–183.
3. D.K Krishna, D.U.M Rao, N,V. Kumbhare, & Nilajan Ray. (2020). Impact of Agritourism as Perceived by Multiple Stakeholders. *International Journal of Current Microbiology and Applied Sciences*, *9*(7), 2499–2508.

4. George, J., & Babu, S. R. (2022). *PROBLEMS AND PROSPECTS OF FARM TOURISM IN KERALA* [Ph.D Thesis, University of Kannur]. https://shodhganga.inflibnet.ac.in/bitstream/10603/444545/10/10_chapter%206.pdf
5. Gomathinayagam Subhramanian. (2023). Opinion regarding Agri-tourism: Relationship between socio-personal characteristics and opinion. *Magna Scientia Advanced Research and Reviews*, *8*(1), 161–166. https://doi.org/10.30574/msarr.2023.8.1.0082
6. Iakovdou.O. (n.d.). Agro-tourism in Greece: The case of women agro-tourism co-operatives of Ambelakia. *1997*.
7. Jai Chand Rana & Ishwari Singh Bisht. (2023). Reviving Smallholder Hill Farming by Involving Rural Youth in Food System Transformation and Promoting Community-Based Agri-Ecotourism: A Case of Uttarakhand State in North-Western India. *Sustainability*, *15*(11), 8816. https://doi.org/10.3390/su15118816
8. J.N. Kiran, V. Lakshmi Prasad, C. Kvya, & G.N Nagaraja. (2014). Investment opportunities in agri-tourism in India. .. .. *International Journal of Commerce and Business Management*, *7*(2), 400–405. https://doi.org/10.15740/HAS/IJCBM/7.2/400-405
9. Joo, H., Khanal, Aditya. R., & Mishra, Ashok. K. (2013). Farmers participation in agri tourism: Does it affect bottom line? *Agricultural and Resource Economics Review*, *42*(3), 471–490.
10. Karabati, S., Dogan, E., Pinar, M., & Lale, M. C. (2009). Socio-Economic Effects of Agri-Tourism on Local Communities in Turkey: The Case of Aglasun. *International Journal of Hospitality & Tourism Administration*, *10*(2), 129–142.
11. Sosnowski J & Ciepiela G.A. (n.d.). The surface area of inclosure facilities as well as the technical fittings of agrotourist farms in Siedlce region. *2012*.
12. Soumi, Chatterjee., M., V., Durga, Prasad. (2019). *The Evolution of Agri-Tourism practices in India: Some Success Stories*. *10*(1), 19–24. https://doi.org/10.18689/MJAES-1000104
13. Taemsaran J. (2005). Tourists Rural Exodus. *Bangkok Post, Asia Africa, Intelligence Wire.*
14. Tiraieyari, N., & Hamzah, A. (2012). Agri-tourism: Potential opportunities for farmers and local communities in Malaysia. *African Journal of Agricultural Research*, *6*(31), 4357–4361.
15. Vikas Dangi. (2018). *The Scenario of Agro—Tourism in India: An Overview*. *5*(5), 796–801.