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Tourism treasures and economic tides: A regional study of Dindigul district

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Abstract

This study explores the regional economic and employment impacts of tourism in Kodaikanal and Palani, Tamil Nadu, focusing on local business growth, employment generation, and the role of vendors in the tourism economy. The objectives include assessing the economic contributions of tourism and examining vendor income patterns. A mixed-method approach was employed, incorporating structured questionnaires, semi-structured interviews, and secondary data from government reports and economic surveys. Data were analyzed using Chi-Square tests and thematic analysis. The results show a significant relationship between tourism and increased sales revenue for vendors, especially in Kodaikanal. Employment opportunities were found to be higher during peak and mid-seasons, though seasonal fluctuations did not show a statistically significant impact on employment. A comparison between Kodaikanal and Palani reveals differences in tourist spending behavior and vendor challenges, with Palani vendors experiencing greater instability in spending patterns. The study supports the hypothesis that tourism positively impacts local sales and employment but suggests a need for further research into the factors influencing vendor challenges and regional economic disparities. The findings have implications for policy development aimed at improving the sustainability of tourism's economic impact in these regions.

Keywords: Tourism; Economic Impact; Employment Generation; Vendor Income; Seasonal Fluctuations.

1. Introduction

Tourism has been a leading source of regional economic growth, generating employment, distribution of income, and infrastructure development (Karthikeyan, 2025). The Dindigul district in the state of Tamil Nadu, which has two top tourist centers are Kodaikanal, a popular hill station, and Palani, a pilgrim site is witnessed enhanced growth of tourism activities (Ashokkumar & Sangeetha, 2025). Kodaikanal is favored by nature lovers and ecotourists (Premalatha, 2017), whereas Palani is a prominent pilgrim site on account of the Arulmigu Dhandayuthapani Swamy Temple (Kumar & Thyagaraju, 2024). This current study aims to understand the economic impact of tourism in these two locations through a study of tourists and local vendors perspectives. This research also examines how tourism drives economic development within the regions while considering the challenges involved and possible solutions toward the development of sustainable tourism.

Objectives

The research has been designed on the following objectives:

- To determine the economic contribution of tourism in Kodaikanal and Palani, with a specific focus on its impact on local business development and job creation; and

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- To analyze the contribution of local vendors to the tourism economy based on their income trends.

1.1. Hypothesis

- **Hypothesis 1:** Economic Impact on Sales
    - **H_1:** There is no significant relationship between tourists and sales revenue in Kodaikanal and Palani.
    - **Alternative Hypothesis (H_0):** There is a substantial correlation between tourism and the improvement of the sales revenue of native vendors at Kodaikanal and Palani.
- **Hypothesis 2:** Generation of Employment
    - **H_2:** There is no substantial generation of employment opportunities in peak seasons at Kodaikanal and Palani.
    - **Alternative Hypothesis (H_0):** There is a substantial generation of employment opportunities for native businesses during peak tourist times at Kodaikanal and Palani.
- **Hypothesis 3:** Variation in the Region
    - **H_3:** There is a substantial difference between the economic effect of tourism on tourists' expenditure pattern and vendors' revenue streams between Palani and Kodaikanal.
    - **Null Hypothesis (H_0):** There is no substantial difference between the economic effect of tourism on tourists' expenditure pattern and vendors' revenue streams between Palani and Kodaikanal.

2. Methodology

The present study employs a mixed-method research strategy using primary and secondary sources of data for critical appraisal of the economic dynamics of Kodaikanal and Palani tourism. The primary data is collected through structured questionnaires and semi-structured interviews were administered to collect quantitative and qualitative data on vendor income, tourist expenditures, and associated challenges. The study conducted from January 2024 to April 2024. Target Populations are local vendors and tourists in Kodaikanal and Palani. The Sampling Method of the study is stratified random sampling was employed to ensure diverse representation across various types of vendors and tourists. And the secondary data is collected from the various sources of Government tourism reports, district economic surveys, and academic literature were reviewed to provide contextual insights and triangulate the findings from primary data.

2.1. Data Analysis

Quantitative data were analyzed using statistical tools to identify patterns and correlations by using independent frequence test of Chi-Square, while qualitative data were thematically analyzed to uncover underlying trends and challenges faced by stakeholders.

3. Results and discussion

Tourism in Kodaikanal and Palani significantly bolsters the local economy, contributing to various sectors, including hospitality, retail, transportation, and religious services(Maheshkumar & Soundarapandian, 2024).

3.1. Demographic profile

The demographic profile of tourists visiting Kodaikanal and Palani demonstrates diverse characteristics, with notable variations across age, gender, marital status, occupation, educational qualification, and purpose of visit.

Table 1 Tourists distributed by Age and Gender

Age	Gender	Kodaikanal	Palani
26-35	Female	56	12
	Male	32	9
	Others	0	12
18-25	Female	44	39
	Male	20	21

	Others	0	21
36-45	Female	16	15
	Male	28	12
	Others	4	3
Above 45	Female	0	9
	Male	8	3
	Others	0	3
Under 18	Female	4	9
	Male	12	9
	Others	0	6
Total		224	183

Source: Primary data

Table 1 represent the age group of 18–25 dominates tourist demographics in both Kodaikanal and Palani, with females representing the majority across locations. The age group 26–35 shows more significant representation in Kodaikanal, particularly among females, while Palani records a unique representation of "Others" across several age categories. Tourists above 45 are the least represented in both areas. Gender distribution indicates that females outnumber males in most categories, underscoring a gendered preference for these tourist spots.

Table 2 Tourists distributed as Marital Status and Companion

Marital Status	**Companion**	**Kodaikanal**	**Palani**
Married	Spouse	20	12
	Friends	40	12
	Co-Workers	20	3
	Relatives	16	9
	Alone	8	18
Unmarried	Spouse	0	0
	Friends	69	33
	Co-Workers	4	12
	Relatives	31	36
	Alone	8	9
Living Together	Spouse	0	0
	Friends	5	18
	Co-Workers	2	12
	Relatives	1	9
	Alone	0	0
Total		224	183

Source: Primary data

Table 2 reveals unmarried tourists traveling with friends form the largest group in both Kodaikanal and Palani, reflecting their preference for group travel. Married tourists predominantly travel with their spouses or friends, with Kodaikanal having a slightly higher proportion of such visitors. Palani records a significant number of tourists traveling

alone, notably among the married group. Living-together individuals are sparsely represented, with "Friends" as the most common travel companion. Overall, Kodaikanal attracts more friend groups, while Palani sees more solo travelers.

Table 3 Tourists distributed as Occupation and Educational Qualification

Occupation	Educational Qualification	Kodaikanal	Palani
Student	UG	28	25
	PG	32	19
	School	16	13
	More	4	0
	PhD	4	9
Working Professionals	UG	12	14
	PG	16	14
	School	0	0
	More	80	27
	PhD	8	8
Business Owner	UG	4	6
	PG	0	6
	School	4	6
	More	8	0
	PhD	4	3
Homemaker	School	0	0
	UG	0	0
	PG	0	13
	More	0	9
	PhD	0	2
Retired	UG	0	3
	PG	0	0
	School	0	0
	More	4	3
	PhD	0	3
Total		224	183

Source: Primary data

Table 3 insights the students are the most prominent group in both destinations, with undergraduates and postgraduates forming the majority. Working professionals visiting Kodaikanal often hold advanced qualifications, while Palani attracts more professionals with basic education. Business owners and retirees show limited representation, with a preference for Kodaikanal among retirees holding higher qualifications. Homemakers and those with doctoral qualifications exhibit distinct travel patterns, with Palani receiving a notable share of homemakers.

Table 4 Tourists at peak season

Visited Season	Purpose of visit	Kodaikanal	Palani
Off Season	Climate	16	3
	Leisure/Peace time	8	12
	Adventure/Sports	28	0
	Sightseeing	4	12
	Business	16	12
	Pilgrimage (Spiritual)	4	21
	Health/Wellness	4	9
	Educational (Conference, Workshops, Seminars, etc..,)	20	6
	Honey Moon	8	0
Mid-Season	Climate	8	3
	Leisure/Peace time	8	0
	Adventure/Sports	4	0
	Sightseeing	4	3
	Business	0	12
	Pilgrimage (Spiritual)	0	24
	Health/Wellness	8	3
	Educational (Conference, Workshops, Seminars, etc..,)	4	0
	Honey Moon	0	0
Peak Season	Climate	24	0
	Leisure/Peace time	4	1
	Adventure/Sports	24	0
	Sightseeing	0	0
	Business	4	19
	Pilgrimage (Spiritual)	4	40
	Health/Wellness	4	3
	Educational (Conference, Workshops, Seminars, etc..,)	8	0
	Honey Moon	8	0
Total		224	183

Source: Primary data

Table 4 reveals kodaikanal attracts more tourists during the peak season for leisure, adventure, and climate-related visits, while Palani sees a larger influx of pilgrims and business travelers during the same period. Off-season travel is more diverse in Kodaikanal, covering purposes like education, health, and adventure, whereas Palani primarily serves pilgrims and business visitors. Mid-season visits are relatively sparse for both locations, with Palani maintaining a consistent flow of spiritual tourists. The data indicates a strong seasonal and purpose-based differentiation between the two destinations.

Table 5 Respondents of the study

Respondents	Region		Total
	Palani	Kodaikanal	
Tourists	183	224	407
Vendors	81	111	192
Total No. Of. Respondent			599

Source: Primary data

Table 5 represents the study incorporates data from a total of 599 respondents, including tourists and vendors from Palani and Kodaikanal. Tourists make up the majority of respondents, with a higher representation from Kodaikanal (224) compared to Palani (183). Vendors are also a significant group, with Kodaikanal having more vendor respondents (111) than Palani (81). Overall, tourists constitute the larger portion of the sample, reflecting the study's focus on understanding tourism dynamics.

3.2. Economic contributions of tourism

The analysis consists of Chi-square tests, and contingency coefficient calculations to examine the relationship between tourist contributions and sales fluctuations in Palani and Kodaikanal, based on responses from local vendors. The goal is to test **Hypothesis 1**, which suggests that higher tourist contributions lead to greater seasonal fluctuations in sales. By comparing the two regions, the findings will assess the significance and strength of this relationship, offering insights into how tourism influences sales patterns for vendors in both areas.

Table 6 Tourists Contributions and Sales Fluctuations

χ^2 Tests					Contingency coefficient
Region		Value	df	p	Nominal Value
Palani	χ^2	14.7	4	0.005	0.392
	N	81			
Kodaikanal	χ^2	38.6	4	< .001	0.508
	N	111			
Total	χ^2	25.2	4	< .001	0.34
	N	192			

Source: Primary data

Table 6 provides evidence to supports the hypothesis 1. The χ^2 values for Palani (14.7, $p = 0.005$) and Kodaikanal (38.6, $p < 0.001$) indicate significant associations between the two variables, with contingency coefficients of 0.392 and 0.508, respectively, reflecting moderate strength of association in both regions. The total χ^2 value (25.2, $p < 0.001$) confirms a significant overall relationship, although the contingency coefficient of 0.34 suggests a weaker association when considering both regions together. These results indicate that **tourist contributions significantly impact sales fluctuations,** with a stronger effect observed in Kodaikanal. Therefore, **Hypothesis 1 is accepted.**

3.3. Employment opportunities across seasons

In this segment, explores the relationship between seasonal tourism fluctuations and employment opportunities in Palani and Kodaikanal of hypothesis 2, identifying how peak, mid, and off-seasons impact local job availability. The analysis aims to determine if tourist seasonality influences employment rates in these regions.

Table 7 Employment Opportunities Across Seasons

Employment Opportunities	**Seasonal Visits**			**Total**
	Mid-Season	Peak Season	Off Season	
Yes	15.6 %	20.8 %	14.6 %	51.0 %
No	6.8 %	12.5 %	29.7 %	49.0 %
Total	22.4%	33.3%	44.3%	100.0 %

Source: Primary data

Table 7 presents the distribution of employment opportunities across different seasons of Kodaikanal and Palani, highlighting a higher percentage of employment during the peak season (20.8%) and mid-season (15.6%), while the off-season shows a noticeable drop (14.6%). The overall trend suggests that employment opportunities are more significantly impacted during peak and mid-seasons. A suggestion for future research would be to explore how these fluctuations align with tourist activity in these periods.

Table 8 Testing Hypothesis 2

χ^2 Tests				**Contingency coefficient**
Region	Value	df	p	Nominal Value
Palani	2.341	2	0.31	0.1676
Kodaikanal	0.887	2	0.642	0.0891
Total	0.663	2	0.718	0.0587

Source: Primary data

Table 8 provides the results of the Chi-Square Tests and contingency coefficients for the relationship between employment opportunities and seasonal visits in both Palani and Kodaikanal. The Chi-Square values for both regions are relatively moderate in all seasons, with Palani showing a value of 2.341 (p = 0.31) and Kodaikanal showing a value of 0.887 (p = 0.642), both indicating a lack of significant association between the availability of employment opportunities and seasonal visits. Both areas' contingency coefficients (Palani: 0.1676; Kodaikanal: 0.0891) indicate that the connection between season visit and employment is average in all four seasons. Finally, these findings indicate that employment prospects in both areas are significantly affected by the seasonal tourist visits depicted in table 4 and that the hypothesis that the availability of employment is significantly affected by seasonality in both areas is valid.

3.4. Tourist expenditure and its impact on vendor revenue

This part of the analysis discusses Hypothesis 3, which tests the connection between tourist expenditure and vendor income. It seeks to know how variations in tourist expenditure affect vendor income and sets up possible patterns of financial effect by tourist season.

Table 9 Vendors Income and Tourist Spending

χ^2 Tests			**Contingency coefficient**
Region	Value	p	Nominal Value
Total	6.97	0.997	0.187

Source: Primary data

Table 9 reports the χ^2 test results for the overall association between the variables in Hypothesis 3. With a χ^2 value of 6.97, a high *p*-value (0.997), and a low contingency coefficient (0.187), the results indicate no significant relationship between the variables. As the *p*-value exceeds the significance threshold, the null hypothesis is accepted, suggesting that the examined factors do not exhibit a statistically significant association. Further investigation into alternative influencing variables is recommended.

3.5. Tourist spending pattern and vendor challenges

This segment employs Chi-Square analysis to explore the relationship between **spending patterns of tourists** and the **challenges faced by vendors** in Palani and Kodaikanal. The analysis aims to assess how variations in tourist spending influence the difficulties encountered by vendors in these two regions.

Table 10 Tourist Spending Pattern and Vendor Challenges

χ^2 Tests					**Contingency coefficient**
Region		Value	df	p	Nominal Value
Palani	χ^2	15.68	4	0.003	0.403
	N	81			
Kodaikanal	χ^2	2.68	4	0.613	0.154
	N	111			
Total	χ^2	10.61	4	0.031	0.229
	N	192			

Source: Primary data

Table 10 reveals a significant association between spending patterns and challenges faced by vendors in Palani (χ^2 = 15.68, p = 0.003), with a contingency coefficient of 0.403, indicating a moderate strength of association. In contrast, Kodaikanal shows a weak and non-significant relationship (χ^2 = 2.68, p = 0.613), with a low contingency coefficient of 0.154. When considering both regions vendors combined, the overall chi-square value (χ^2 = 10.61, p = 0.031) suggests a statistically significant but weaker association, reflected by a contingency coefficient of 0.229. These analyses suggest that spending patterns significantly influence vendor challenges in Palani, while the impact is negligible in Kodaikanal.

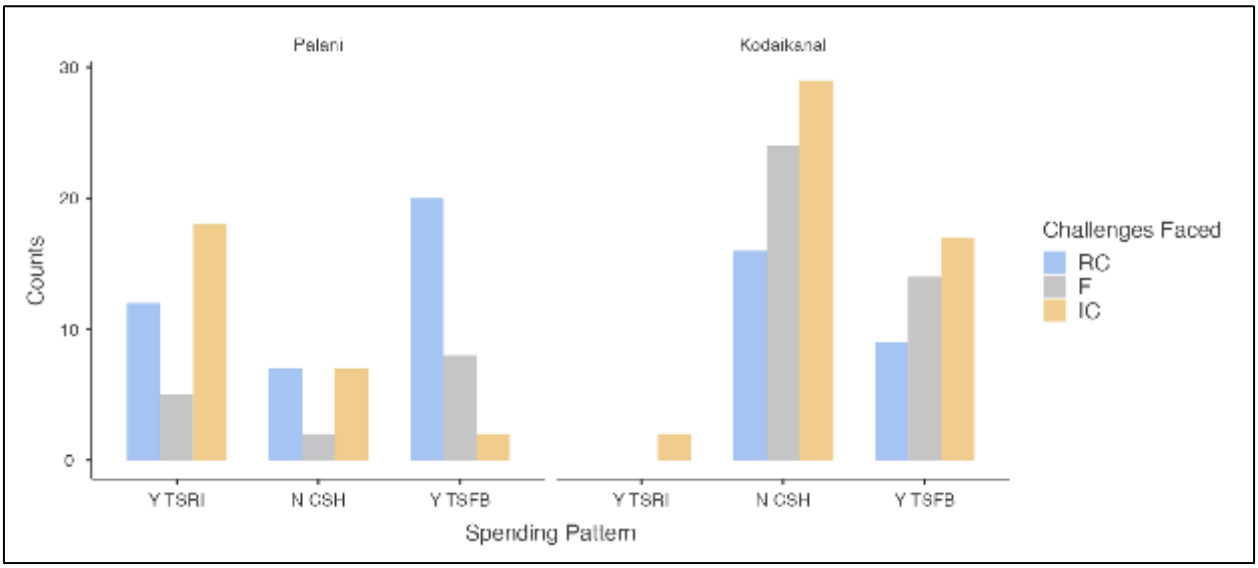

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Figure 1 Tourist Spending Pattern and Vendor Challenges

Figure 1 highlights the challenges faced by vendors across spending patterns in Palani and Kodaikanal. In Palani, the majority of challenges arise from irregular (43.2%) and fluctuating spending patterns (37.0%). In Kodaikanal, challenges are predominantly associated with consistent spending (62.2%), indicating structural issues. Overall, Palani vendors face instability in spending patterns, while Kodaikanal vendors experience challenges despite spending consistency, suggesting a need for targeted interventions to address these region-specific concerns.

3.6. Hypothesis 1: Economic Contributions of Tourism and Sales Fluctuations

The analysis in Table 2 examines the relationship between tourist contributions and sales fluctuations, testing Hypothesis 1, which posits that higher tourist contributions lead to greater seasonal fluctuations in sales. The Chi-Square tests for both Palani ($\chi^2 = 14.7$, $p = 0.005$) and Kodaikanal ($\chi^2 = 38.6$, $p < 0.001$) reveal significant associations between tourist contributions and sales fluctuations, with contingency coefficients of 0.392 and 0.508, respectively. These results support the hypothesis that higher tourist contributions are associated with increased sales fluctuations, with a stronger effect observed in Kodaikanal. The total Chi-Square value of 25.2 ($p < 0.001$) confirms a significant overall relationship, although the contingency coefficient of 0.34 suggests a moderate association when considering both regions together. Therefore, Hypothesis 1 is accepted, indicating that tourism significantly impacts sales fluctuations in both regions, particularly in Kodaikanal.

3.7. Hypothesis 2: Employment Opportunities Across Seasons

Hypothesis 2 explores the relationship between seasonal tourism fluctuations and employment opportunities in Palani and Kodaikanal. The Chi-Square tests in Table 4 show relatively moderate values, with Palani ($\chi^2 = 2.341$, $p = 0.31$) and Kodaikanal ($\chi^2 = 0.887$, $p = 0.642$), indicating no significant association between employment opportunities and seasonal visits. Although the contingency coefficients suggest a weak relationship (Palani: 0.1676; Kodaikanal: 0.0891), the overall trend in the data reveals that employment opportunities are more available during the peak and mid-seasons. These results suggest that seasonal tourism fluctuations have some impact on employment availability, though the associations are not statistically significant. As the p-values exceed the significance threshold, Hypothesis 2 is rejected, indicating that seasonal fluctuations in tourism do not significantly influence employment opportunities in these regions.

3.8. Hypothesis 3: Vendors' Income and Tourist Spending

In Table 5, the results of the Chi-Square test for Hypothesis 3 show no significant relationship between vendor income and tourist spending. With a χ^2 value of 6.97, a p-value of 0.997, and a low contingency coefficient of 0.187, the analysis suggests that variations in tourist spending do not significantly impact vendor income. Given the high p-value, the null hypothesis is accepted, indicating that no statistically significant association exists between tourist spending and vendor earnings. These results have the implication that other variables which perhaps impact vendor revenues more than tourist expenditure per se exist. Hypothesis 3 is therefore rejected and future research on other determining variables of vendor revenues is needed.

3.9. Implications and recommendations

The results indicate that Kodaikanal vendors experience heavy tourism-related sales seasonality with severe reliance on peak seasons. This stands in opposition to Palani, whose sales patterns are relatively determined by pilgrim traffic all year round, which translates to relatively levelled sales in different seasons. From here, Kodaikanal vendors can apply measures for maximizing revenue during off-tourist periods such as increased promotional activity, flexible pricing, and tighter inventory control(Maheshkumar S & Soundarapandian M, 2024a). Conversely, Palani vendors can make the business more resistant to the off-season and have regular flows of visitors all year round by diversifying products and promotion. Alignment of the business with such local features will allow vendors from the two locations to optimize tourism by balancing the possibilities during peak season and the power of the off-season(Maheshkumar S & Soundarapandian M, 2024b).

3.10. Challenges facing vendors

Notwithstanding the economic gain being assured, vendors face several challenges such as:

- Seasonal Revenue Fluctuations: Relying on peak season translates into uncertain revenue in off-season.
- Poor Infrastructure: Poor parking, sanitation, and public transport discourage potential visitors and limits vendor business opportunities.
- Regulatory Barriers: Vendors complained about licensure problems, taxation, and competition from unlicensed vendors, impacting business sustainability.

3.11. Suggestions

- Economic Contributions and Local Business Development: Tourism is a primary economic contributor to the growth of Kodaikanal and Palani, significantly influencing local business and job opportunities. Kodaikanal, by attracting adventure and recreation enthusiasts, and Palani, by attracting spiritual enthusiasts, both contribute uniquely to the local economy. Greater breakdown of tourists' expenditures, especially for the off-peak and peak seasons, would provide an accurate indication of the economic role of tourism.

- Labour Resilience and Seasonal Work: It is a seasonal work pattern with opportunities reaching a peak with tourist arrivals. But off-seasons are economically challenging. Processes like the introduction of vocational courses, skill camps, and diversification of resident vendor livelihood activities need to be pursued to reduce these seasonal fluctuations and achieve sustainable livelihood.

- Vendor Income and Economic Sustainability Challenges: Local vendors experience a range of challenges, from price sensitivity to predatory competition and poor infrastructure. These challenges need to be solved by some interventions, such as the development of tourism infrastructure, product diversification in tourism, and financial assistance through microcredit programs. These interventions will make small-scale enterprise viable and increase more stable sources of income for local vendors.

- Directions for Future Research: The future research should consider sustainable tourism strategies which are able to yield economic benefits round-the-year, minimizing the over-dependence on seasonal tourism(Maheshkumar S & Soundarapandian M, 2025). Moreover, efforts to diversify tourist destinations in Palani and Kodaikanal would also evoke regular streams of tourists. A consideration of gender dynamics of tourist participation and an encouragement of tourism return more evenly spread across all segments of society would also serve the cause of inclusive growth.

4. Conclusion

This research recommends that the government increase and develop its tours and travels programs, specifically by the Tamil Nadu Tourism Development Corporation (TTDC), to further enhance tourism in Kodaikanal and Palani. Targeted infrastructure development coupled with encouragement of sustainable tourism will be able to bring in more tourists throughout the year, offering regular income for local stores and generating increased employment opportunities. The government should accord vendor support high priority so that they can adapt to seasonal fluctuations in tourist numbers. Enhancing coordination among local governments and tourism stakeholders will overall improve the tourism experience, promote economic growth, and provide more opportunities for jobs in such regions.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

References

[1] Ashokkumar, P., & Sangeetha, C. P. (2025). Exploring the Socio-Cultural and Economic Impacts of Tourism on Rural Communities in Tamil Nadu. https://doi.org/10.31235/osf.io/7eqjh_v1

[2] Karthikeyan, T. M. (2025). Evaluating the Economic Benefits of Sustainable Tourism in Tamil Nadu: A Case Study of the Eco-Tourism Projects. Indian Scientific Journal Of Research In Engineering And Management, 09(08), 1–9. https://doi.org/10.55041/ijsrem51909

[3] Kumar, D. B., & Thyagaraju, M. (2024). A study on leisure and recreational tourism: Trends, impacts and opportunities in south India. Asian Journal of Multidimensional Research, 13(12), 12–25. https://doi.org/10.5958/2278-4853.2024.00022.8

[4] Maheshkumar, S., & Soundarapandian, M. (2024). Harmonizing indigenous knowledge systems to the Indian educational philosophiesfor quality education: A review study. World Journal of Advanced Research and Reviews, 21(03), 2177–2185. https://doi.org/10.30574/wjarr.2024.21.3.0940

[5] Maheshkumar S, & Soundarapandian M. (2024a). Stress level and stress management ability among the professionals of information technology in Chennai. International Journal of Science and Research Archive, 12(1), 795–799. https://doi.org/10.30574/ijsra.2024.12.1.0887

[6] Maheshkumar S, & Soundarapandian M. (2024b). Tourism Companies and Educational Institutions in Promoting Sustainable Development Goal Four (SDG 4) in Tamil Nadu. Journal of Inventive and Scientific Research Studies (JISRS), 2(2), 295–302. https://doi.org/10.5281/zenodo.18232923

[7] Maheshkumar S, & Soundarapandian M. (2025). Strengthening Employability and Human Development through NEP 2020 in Management Studies. The Indian Economic Journal, 5(158), 1357–1364. https://doi.org/10.5281/zenodo.18233788

[8] Premalatha, P. N. (2017). Kodaikanal an Emerging MICE Tourism Destination in Tamilnadu (India). IOSR Journal of Humanities and Social Science, 22(06), 101–105. https://doi.org/10.9790/0837-220602101105