Exploring the Relationship between Tourist Expenditures and Cultural Heritage Site Visits

Ayaan Faiz[1], Dr. Smita Mishra[2], Dr. Roopa Traisa[3], Pancham Cajla[4], Axita Thakkar[5], Shobhit Goyal[6], Hemal Thakker[7]

[1]Chitkara Centre for Research and Development, Chitkara University, Himachal Pradesh, India. ayaan.faiz.orp@hcitkara.edu.in

[2]Professor, Maharishi School of Business Management, Maharishi University of Information Technology, India, smita.mishra@muit.in

[3]Associate Professor & Hod, Department of Management, School of Mangement - UG, JAIN (Deemed to be University), India, roopa@cms.ac.in

[4]Centre of Research Impact and Outcome, Chitkara University, Rajpura, Punjab, India, pancham.cajla.orp@chitkara.edu.in

[5]Assistant Professor, Parul Institute of Management and Research-MBA, Parul University, India, axita.thakkar77775@paruluniversity.ac.in

[6]Quantum University Research Center, Quantum University, India. shobhit.goyal@quantumeducation.in

[7]Assitant Professor, Department of ISME, ATLAS SkillTech University, India, hemal.thakker@atlasuniversity.edu.in

Abstracts

The connection between cultural heritage site visits and expenditures usually shows that improved visits to cultural sites lead to higher tourist spending, as these sites regularly appeal to extra prosperous or culturally engaged traffic. Additionally, properly preserved and promoted cultural history sites can enhance local economies by way of illustrating more travelers who spend on diverse services like accommodation, food, and entry fees. Therefore, investment in cultural heritage maintenance and merchandising can drastically enhance tourism revenues.In this paper, it used data from 138 visitors to analyze the connection between their tourist expenditures and visits to cultural heritage sites. 40 questions were distributed to the visitors to collect their experience and data, including age, gender, and income level. Then evaluate the factors and their willingness to visit using the Pearson correlation, descriptive analysis, and ANOVA test. Additionally, we assessed the main reasons for unwillingness and detailed total expenditures. As a result, we found that visitors had a high willingness to spend more on expenditures.

Keywords: Cultural heritage site, expenditures, visitors, willingness, income level, and tourism.

Introduction

Cultural heritage sites afford precious insights into how tourism impacts both the economic system and the preservation of cultural property. This connection is huge due to the fact that cultural history sites frequently represent the crucial factors of a region's tourism attraction, and acknowledging this connection enables crafting techniques to enhance both tourist satisfaction and the sustainability of these sites [16]. Tourist expenditures refer to the amount of cash that site visitors spend during their journey. It consists of spending on accommodation, meals, transportation, enjoyment, and entrance costs to kind of interest. For cultural history sites, expenditures may be a crucial indicator of the site's reputation and the economic benefit brings to the local people [9]. A high level of spending can contribute to the neighborhood financial system by creating jobs, helping local companies, and producing revenue that can be reinvested into site protection and maintenance.

It surrounds ancient landmarks, monuments, museums, and different places of cultural significance. These sites are often key sights for visitors in search of experience and learn about the history, art, and traditions of a region [6]. The attraction of these sites can drive tourism and have an impact on visitors spend during the visit. The maintenance and management of those sites are vital for maintaining their ancient value and ensuring that future generations can also experience them.

The economic effect of cultural heritage tourism may be significant. Increased visitor expenditures can lead to superior funding for the conservation and preservation of heritage sites. Financial support is essential for preserving the physical and cultural integrity of these sites [7]. Additionally, tourism can stimulate a financial increase in surrounding areas by promoting local agencies and creating employment possibilities.

Understanding visitor behavior is essential in analyzing the relationship between expenditures and site visits. Factors including the perceived value of the cultural experience, accessibility, and marketing efforts can have an effect on travelers are inclined to spend [17]. Research often involves surveying tourists about their spending patterns, alternatives, and the factors have an effect on their choices to visit cultural heritage sites. There are challenges associated with balancing tourism and maintenance. High tourist numbers can cause overcrowding, which can harm heritage sites and decrease the visitor experience [11]. Conversely, too few visitors can bring about inadequate investment and site upkeep. Effective management techniques, together with visitor limits and targeted marketing campaigns, can help to deal with these issues by using the fact that tourism benefits the local economic system without compromising the integrity of cultural sites.

The purpose of this paper is to analyze the relationship between the cultural heritage sites and the expenditure of the visitors.

The remaining components of the research are arranged as follows: Part 2 contains related work, the methodology is described in Part 3, the results and discussion presented in Part 4 and the conclusion of this paper is discussed in Part 5.

Related work

An article [5] to examine the relationship between tourism for cultural reasons and regional economic growth. Using data from Italian provinces (NUTS3), a structural regression model was used to simultaneously detect the direct and potentially contentious effects of cultural tourism on economic conditions. In concert, the connection between tourism, economic growth, and material cultural heritage was investigated by research [12]. Based on the notion that material manifestations of cultural heritage were essential resources that may be able to support local economic development via the tourism industry's mediation role, a structural equation model was implemented in European regions to determine whether tourism serves as a reliable and significant channel among potentially numerous others for the operation of the mechanism.

Research [1] evaluated the features of the views of tourism as both a help and an opportunity to the region's economic and cultural assets. According to the findings, residents in areas with a high concentration of cultural attractions, those with greater levels of education, and those from higher socioeconomic classes were more inclined to believe that tourism both threatens cultural heritage and improves the local economy.

The function of cultural heritage and museums in local development, emphasizing their capacity to attract visitors, produce income, and encourage inclusivity and cultural variety was examined by research [8]. Conventional economic theory holds that cultural heritage upholds sustainability principles while producing positive externalities that increase employment and improve both human and social capital. Three homogeneous sustainability statuses were identified by the data for Italian museums.

An article [3] offered a conceptual model by identifying numerous variables that affected the growth of historical and cultural tourism globally. It had been determined that the development of legacy tourism was mostly dependent on the improvement of the brand's value, guest experience, promotional activities, destination reputation, and advertising efforts. The experimental findings improved these to open up opportunities for heritage tourism to grow.

The current financial and health-related challenges that affected traveler profiles, traveler purposes, and spending habits were focused in research [14]. Travelers' susceptibility varies in both short and long-haul markets prior to visits, and following crises, according to the findings. Age is the reason for the visit, and traveler spending habits are all show the disparity. They discovered that the types and stages of crises do not always affect travelers.

An article [18] investigated the structural relationships between the impression of the location, satisfaction, willingness to visit again, and word-of-mouth (WOM) transmission to find out how user-generated content (UGC) affected adherence to visitor behavior. It shows that by affecting travelers' perceptions and levels of pleasure, UGC indirectly influences their loyalty. The findings also showed that tourists' perceptions of the destination's value were positively impacted by both factual and emotional user-generated content, with emotional content having a larger impact.

A paradigm for jointly estimating the daily personal expenses and duration of stay of visitors was suggested by research [2]. In order to accurately represent the influence of trade in markets

after the trip decision and related choices were made. The results shows that several exogenous characteristics, such as gender, wealth, and motivations, have no immediate effect on total expenditure, instead, their effects were totally filtered within the degree of intensity and flexibility components. An article [15] investigated the way visitor spending and arrivals affect economic growth. It suggested that spending by tourists contributes positively to economic expansion. Additionally, the findings demonstrated that visitor arrivals have no discernible impact on economic expansion. The causality's direction demonstrated the bidirectional causal relationship between tourism spending and economic expansion.

Methodology

The comprehensive explanation of the dataset, variables, and statistical analysis are described in this section.

Dataset

The data collected 138 visitors to cultural heritage sites, including information on their gender, age, and income level. Table I represents the demographic details.

Table I Demographic details

Category	Option	Count
Age	Less than 10	23
	10-20	35
	20-40	42
	Above 40	38
Gender	Male	76
	Female	62
Marital status	Married	78
	Single	60
Educational level	Primary school	23
	High school	30
	Collage	35
	Any degree	50
Income level (monthly)	15,000-25,000	30
	25,000-35,000	34
	35,000-50,000	39
	Above 50,000	35
Visitor type	Alone	30
	Group with friends	43
	Family	65

We distributed 40 questions to each visitor to analyze the connection between the sites and their expenditure. We analyze the findings based on the responses from the visitors. Here are sample questions.

- What is your age and gender?
- What is your monthly income?
- Have you ever visited any cultural heritage sites, or will this be your first trip?

- During your current trip, how many cultural heritage places have you visited?
- How often do you like to visit cultural heritage sites?
- How much time do you spend at each cultural heritage site on average?
- How much will you spend in total during this trip on visiting cultural heritage sites (tickets, transportation, and food)?
- In the future, how willing are you to spend more on trips to cultural heritage sites?
- To what extent do you think you'll return to cultural heritage places in the future?
- If you are not willing, what are the primary reasons you do not visit more sites of cultural heritage?

Variables

The dependent variable is tourist expenditures, which are prompted by numerous independent variables. These independent variables include age, gender, marital status, income level, educational level, and visitor type. By integrating these elements to analyze the connection between the cultural heritage site visits and visitor's expenditure.

Statistical analysis

The Pearson correlation coefficient, ANOVA was used and multilayer regression to evaluate the relationship between the cultural heritage sites and expenditure.

- Pearson correlation coefficient

It measures the linear relationship between two variables and quantifies how strongly the variables. A high-quality correlation suggests that as one variable increases, the substitute also has a tendency to rise appropriately.

- Analyzing descriptively

It is a statistical technique for enumerating and characterizing a dataset's key attributes. It allows to discover styles, developments, and relationships within the data, providing insights into the overall characteristics and behaviors of the sample.

- ANOVA

Analysis of Variance (ANOVA) is used to evaluate mean variations among more than one factor. It facilitates determining if significant variations exist in variables; by evaluating those variations, researchers can discover factors that impact visitors' outcomes and tailor interventions for that reason.

Result and discussion

In this section, 5 responses were used and evaluated the correlational analysis, descriptive statistics, and ANOVA. Table II represents the sample responses.

Table II Sample responses

visitors	Expenditure	Number of sites	Frequency of visits	Duration of stays	Age	Gender	Income level
1	8500	5	2	3	10-20	Male	15,000-25,000
2	13,000	7	3	4	20-40	Female	35,000-50,000
3	10,000	6	2	3	Above 40	Male	35,000-50,000
4	14,500	8	4	5	20-40	Male	Above 50,000
5	9000	5	3	3	Above 40	Female	35,000-50,000

Correlational analysis

The Pearson correlation coefficient used to evaluate the relationship between total expenditure vs number of sites, frequency of visits for 1 year, and duration of stays. And consider the responses from 5 visitors and calculate the Pearson correlation coefficient for each aspect with total expenditure. Table III represents the outcomes of the Pearson correlation coefficient. According to the findings, if any of these factors increase, the expenditure also has a tendency to rise significantly, with the duration of stay and frequent visits indicating a very strong connection with expenditure.

Table III Outcomes of Pearson correlation coefficient

Factors	Pearson correlation coefficient
Total expenditure vs duration of stay	0.91 (very strong correlation)
Total expenditure vs number of sites	0.87 (strong correlation)
Total expenditure vs frequent visits	0.90 (very strong correlation)

To evaluate the expenditure factors, including entry fees, travel costs, food, shopping, guide tours, and accommodation in total expenditure. Fig 1 represents the factors of total expenditures. Based on the findings, entry costs represent the biggest element at 25%, reflecting the cost of admission. Travel costs and accommodation are 20%, highlighting the big charges associated with attaining and staying on the sites. Food, shopping, and guided tours make a contribution of 15%, 10%, and 10% respectively, showing their roles in the overall spending experience.

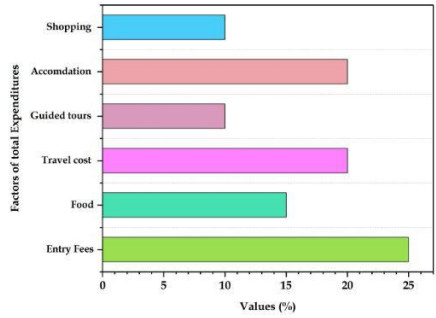

Fig 1Factors of total expenditures

Descriptive statistics

The willingness and unwillingness were calculatedto visit the cultural heritage based on the questions. Table IV represents the demographic characteristics of visitors who are willing and unwilling to travel. In age, visitors in the 20-40 range have a higher willingness than other age groups. Malesdemonstrate higher willingness than females. Married visitors show greater willingness than singles. Those with degrees have higher willingness than students. Visitors with an income level of 35,000-45,000 express the highest willingness. Family visitors also have thehighest level of willingnessamong others.

Table IV Demographic characteristics of visitors who are willing and unwilling to travel

Characteristics (n =138)	Willing	Unwilling
Age		
Less than 10 (23)	13	10
10-20 (35)	20	15
20-40 (42)	30	12
Above (38)	25	13
Gender		
Male (76)	62	14
Female (62)	40	22
Marital status		
Married (78)	65	13
Single (60)	50	10
Educational level		
Primary school (23)	13	10
High school (30)	20	10
Collage (35)	23	12
Any degree (50)	39	11
Income level (monthly)		
15,000-25,000 (30)	20	10
25,000-35,000 (34)	21	13
35,000-50,000 (39)	30	9

Above 50,000 (35)	24	11
Visitor type		
Alone (30)	16	14
Group with friends (43)	23	20
Family (65)	50	15

Based on the responses, we evaluate the reason for unwillingness to visit the cultural heritage sites. The most frequent reasons for unwillingness as shown in Fig 2. In Figure, the most frequent reasons include lack of time (50%), high cost (40%), and lack of interest (30%).

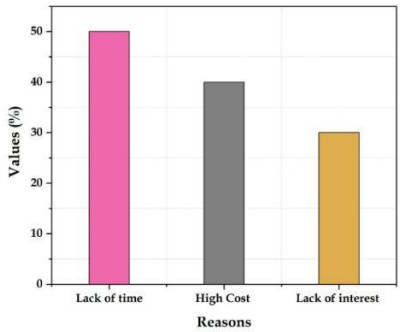

Fig 2Most frequent reasons for unwillingness

ANOVA

Age, gender, and income level. For every variable, the Between Groups phase indicates the variation between different groups,with the corresponding sumof squares (SS), p-value (<0.05), degree of freedom (df), F-value and mean square. For Age, a p-value of0.02 with the F-value is 7.00, indicates significant differences between age groups. For gender, the F-value is 6.00 with a p-value of 0.04, suggesting that gender differences also significantly affect the outcome. Lastly, for income level, the F-value is 8.00 with a p-value of 0.01, reflecting a significant high impact of income level on the variable. Table V displays the outcomes of ANOVA.

Table V ANOVA

Variables	Variation of source	SS	df	Mean square	F-value	p-value
Age	Between group	42,000	2	21,000	7.00	0.02
	Within group	60,000	7	8,571		
Gender	Between group	15,000	1	15,000	6.00	0.04
	Within group	60,000	8	7,500		
Income level	Between group	35,000	2	17,500	8.00	0.01

Within group	70,000	7	10,000

Discussion

The elements influencing tourists' everyday spending in 14 rising urban-cultural destinations based on data collected from questionnaires. The findings support the hypothesis that a variety of factors pertaining to the traveler's demographic profile, trip features, activities while at their final destination, and level of pleasure with the location, all contributes to the explanation of tourist expenditure [13]. Statistics that helps to increase tourism revenue in places with low per-visit spending were investigated. The amount that tourists spend on souvenirs was focused on for a reason. The experimental findings indicated that attempts to turn goods into brands that reflect their ecological, historical, and cultural richness thereby broadening the variety of locally produced goods were crucial in driving up souvenir consumption [10]. However, it has become clear how important it is to target affluent travelers and increase the number of skilled individuals employed in the field of tourism. An evaluation of 200 visitors was carried out specifically. A cluster analysis was used to analyze the survey responses using descriptive statistics. The demand for tourism-related goods and services in the destination area can be profiled by combining visitor costs with other characteristics. Six major categories representing a typical trip budget are used to organize the precise data on the daily spending of visitors that the survey gives. They were able to determine and examine the tourists' daily expenses by using data mining cluster analysis, taking into account the reason for their visit [4].

5 different responses were used to analyze the findings based on the dependent variable (expenditure), and independent variables, including gender, income level, and age group. The visitors had visited a maximum of 8 sites. Using the pearson correlation coefficient, the evaluated connection between the number of sites, frequent visits, and duration of stay with the total expenditures. Then assessed the willingness and unwillingness to visit, based on the visitor data and observed the main three reasons for unwillingness. Using ANOVA, the difference between the independent and dependent variables was analyzed. As a result, the duration of stay and frequent visits showed a strong correlation. The 20-40 age group, income level 35,000-50,000, and most males were more willing to visit the cultural heritage. The lack of interest, lack of time, and high cost are the most important reasons for unwillingness based on the visitor responses. Entry fees are the highest spending factor in the total expenditures. According to these findings, concluded with most willing visitors spend more money to visit the cultural heritage sites.

Conclusion

Study investigated the connection between tourist expenditures and cultural heritage site visits using data from 138 visitors. The dataset were collected and their experience through a 40-question survey. After gathering their responses, we evaluated the expenditure details and their willingness to visit using Pearson correlation, ANOVA, and descriptive analysis. The main independent variables, such as age, gender, and income level were assessed. According to the findings, the 20-40 age group people, males, andthose with an income level of 35,000-50,000 are more willing to visit and spend more on the cultural heritage. Entry fees are the highest cost compared the other expenditures, including shopping, food, and accommodation. The lack of

time, high cost, and lack of interest are the main three reasons for unwillingness based on the analysis. The sample size may be fully consultant of the broader tourist population, certainly limiting the generalizability of the findings. Future research could enlarge the sample size and discover the impact of different types of cultural historical sites on tourist expenditures across various regions. Additionally, incorporating an extra diverse demographic ought to offer a deeper expertise into visitors' behaviors. Extensive research can also help to improve the developments and changes in visitor costs through the years.

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