Factors affecting eco-friendly hotel selection: A Robo-Advisor on customer's perception

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Abstract.

Introduction: Tourism is a powerful driving force for a nation's economic growth. Tourism can create considerable numbers of jobs for both skilled and unskilled employees. Traditional tourism has evolved in the modern-day. As Tourist around the world wants to stay near nature so they prefer Eco Friendly Hotels. It is possible of Robo Advisor and Online search engine which helps tourist to book online variety of options among "Home Stay, Eco friendly Hotels and Farm Stays.

Purpose: Farm tourism is an emerging sub-sector of tourism. Tourism marketing would benefit the public in several ways. It is a revolutionary agricultural practice that fuses features of tourism and agriculture. It contributes to the betterment and flourishing of the rural landscape. Punjab has a lot of potential for rural tourism. Due to ongoing promotions towards suitability and eco-friendly practice it has changed customer's perception towards hotel selection.

Methodology: This article explores which amenities/services (such as accommodation, food and drinks, and transportation are few examples) should make available for customers to entice them and help Punjab establish sustainable recreation and tourism for visitors This survey was conducted with a Likert scale point 5 and included 14 items on a range of 1 to 5: 5=Strongly Agree, 4=Agree, 3=Neutral, 2=Disagree, and 1=Strongly Disagree. 100 respondents (n=100) responded in total.

Keywords: Tourism Industry, Consumer decision- making process, Online Hotel Selection, Eco-Hotels..

1   Introduction

According to investigates tourists visits have climbed from 25 million in 1950 to almost 1.5 billion in 2019. In the UNWTO's projection, foreign and domestic tourists' visits will reach 17 billion by 2030. By the year 2030, the transport-related emissions created by the tourism industry are expected to rise by 25 percent [2].Tourism includes several industries, including transportation, building and construction, cuisine, and waste management. Tourists account for about 75% of all emissions caused by the tourist industry, accounting for 5% of all non-conventional emissions and 20% of all transport-related emissions [3]. Tourism-related emissions are more quantifiable and measurable, Transportation-related emissions, including tourism, account for roughly 4.3 billion metric tonnes annually, according to 2018 research [4]. Sustainable practices from other industries, such as tourism, will help overall sustainability. Clean energy, green architecture, and sustainable waste management also show up in tourism. As customer demand grows for sustainable practices, tourism must adjust. Consumers are tough

to predict in this industry. Businesses should thus continue to be involved in this industry in the future. To summarize, the business cannot get its environmental impacts on time. These developments are critical to us moving to a more sustainable economy. Additionally, technology to detect and monitor CO_2 emissions from the sector's activities is required to evaluate the effect and urge players to offer clear and measurable indicators to assist achieve the SDGs [3]. Also, travel-related transportation is a large part of the tourist industry. Green infrastructure and green tourism may provide substantial possibilities for those engaged. Finally, innovations that boost resource efficiency can assist the tourist sector greatly. Resources relevant to recycling and reuse in plastic packaging and garbage are a few of the technologies the industry requires
.

2   Literature Review

2.1   Indian Tourism Industry

The Travel & Tourism Competitiveness Index put India as 34th in the world. The World Economic Forum rated India as the fifth-best natural heritage destination in the world. A 6.7% increase in travel and tourism-driven capital investment is anticipated between 2018 and 2028.77 Swadesh Darshan projects are allocating 6,035.70 crores rupees (US$ 863.60 million).Between 2018 and 2028, tourist exports are estimated to provide 5.5% of total exports. By 2028, worldwide visitor visits are expected to surpass 30.5 billion, producing an income of more than US $ 59 billion. The Administration of India's introduction of electronic visitor authorizations, dubbed e-Tourist Visas, led to a rise in visitor visas issued in the country. As of March 2021, the ability is open to inhabitants of 171 countries. In 2019, 2,928,303 visitors entered using e-Tourist Visa, a 23.6 percent increase over 2018 [4].

2.2   Landscape

Punjab is located in northern India, with coordinates of 29.30° to 32.32° North and 73.55° to 76.50° east. Punjab provides accommodation to tourists thanks to its significant historical legacies, forts, religious structures, wetlands, arts, and handicrafts [5].

Farm life Tourists may participate in various agricultural activities, including riding and driving a tractor, strolling and cycling around the fields, sitting in the shadow of a tree, plucking fruits, milking cows and buffaloes, and working in the area. In waterways adjoining Farm Stays/Hotels, tourists may go fishing and angling. Visiting a Eco Hotels is the most significant way to see why Punjab's agriculturalists have established a status for entrepreneurial spirit and hard labour. Fresh produce from the farm Punjab also holds a special place in the gastronomic geography of the country. Tourists may get fresh and wholehearted meals served with spoons of butter and ghee across the state. Leisure industry encompasses travel to a specific location and the activities and experiences that occur throughout the stay [6]. In Punjab there are 38 Farm Stays/Eco-friendly Hotels option for Visitors (Figure 1).

Fig. 1. Eco-friendly Hotels/Farm Stays in Punjab

Brining old days

A visitor also appreciates the foodstuff provided at farmhouse stays and hotels. Food is meant to have a deeper cultural impact. The cuisine embodies the unique character and image of the place. A large portion of the delicious, freshly prepared, and home-cooked food served during Farm Stays and Hotels is sourced straight from the fields. Delicious dishes.Specific Homestead Stays/Hotels host bonfires and grills in the fields at night, accompanied by dancing performances of Punjabi folk dances like giddha and bhangra. The focus on farm tourism also helps Indian Punjabi families who are not residents get back in touch.

Guidelines for Registering Hotel

Guidelines for registering agricultural stays under Punjab's agricultural tourism plan A farmhouse owner serves as host and guides tourists under the program. Those who participate in the scheme agree to create a clean, sanitary atmosphere equipped with contemporary amenities that fulfill the Punjab Heritage and Tourism Promotion Board's criteria.Proprietor of the farm serves home-cooked meals, provides pleasant lodging, and educates tourists about local agricultural activities such as floriculture, honey harvesting, beekeeping, and dairying. Apart from the farming experience, guests are exposed to local festivals and weddings. The district administration and the tourist department inspect the quality of services provided by farm owners.

The organization also mandates mandatory technical know-how and training for farm owners. Only farmhouses with a least of double rooms are listed, and farms with agricultural land are given precedence. The initial validity of farm buildings registered under this programme is five years, and they are subject to recurring inspections by a committee that the PHTPB appoints. In the event of a thoughtful and legitimate grievance of any kind, including but not limited to concerns about service, cleanliness, politeness, and the quality of food offered, the Punjab Heritage and Tourism Promotion Board maintains the right to cancel registration. The approved

farm houses are only allowed to be used for tourism. Reasons for starting farm stays and hotels for several reasons, Punjabi farmers are turning to farm tourism: maximizing land utilization; self-interest in ranch house tourism; protecting the environment and land; spreading their agricultural occupational; creating a new source of income; revitalizing the rich traditional culture; and becoming creative entrepreneurs.

Robo Advisor impact on consumer perception

The advent of digital technologies has significantly transformed the landscape of the hospitality industry, particularly in the realm of online hotel booking. In this dynamic environment, the integration of Robo-advisors has emerged as a pivotal element, reshaping the way customers interact with and perceive hotel reservation processes. The synergy between Robo-advisory services and customer preferences is an evolving intersection that warrants a comprehensive exploration, especially within the context of online hotel booking.

Robo-advisors, leveraging artificial intelligence and advanced algorithms, play a pivotal role in assisting customers with decision-making processes related to hotel accommodations. The multifaceted nature of customer perceptions in this domain encompasses considerations of accuracy, user experience, trust, and personalization, among other factors. Understanding how customers perceive and interact with robo-advisors in the realm of online hotel booking is not only crucial for the stakeholders within the hospitality industry but also offers valuable insights into the broader landscape of human-machine interactions and automated decision-making .

This literature review seeks to delve into the existing body of research, articles, and scholarly works that collectively illuminate the complex interplay between robo-advisors and customer perceptions in the context of online hotel booking. By synthesizing and analyzing this wealth of knowledge, we aim to discern patterns, identify challenges, and uncover opportunities within this evolving intersection. The insights derived from this exploration will subsidize to a profounder accepting of the factors shaping customer perceptions, ultimately guiding the future development and implementation of robo-advisory services in the ever-evolving landscape of online hotel reservations.

3   Research Objectives

- To conduct a gender based comparison of factor weightage in the selection of Farm Stays/Eco-Hotels.
- To conduct an occupation based comparison of factor weightage in the selection of Farm Stays/Hotels

Hypothesis
- There is no significance difference between factor considered by male and female for making choices of Farm Stays/Hotels
- There is no significance difference between factor considered by working and non-working people for making choices of Farm Stays/Eco-Hotels
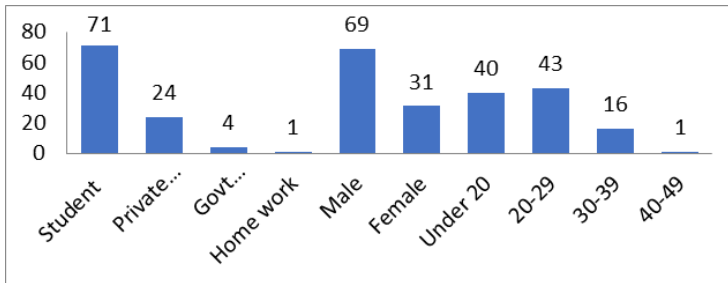
Fig. 2. Demographic Information

Fig .2. Shows the overall number of male and female survey respondents as well as the major age groups and professional categories, the largest group of respondents, 71, was college students. Of the professional respondents, 24 worked in the commercial sector, 4 in the public sector, and 1 from home. There were 69 men and 31 women in the ratio, for a total of 100 responders. When it comes to age, the bulk of respondents (40) were below the age of 20, followed by respondents (20–29) (43), respondents (30–39) (16), and respondents (one) in the 40–49 age range. This results in a total of 100 respondents.

4   Material and Methods

The methodology used in this study was an online survey to assess the given hypotheses. The online survey instrument was constructed using validated and reliable questions from previous studies. To substantiate the suggested model, empirical data were gathered from Indian respondents with prior experience of Farm Stays/Eco-friendly Hotels. A pilot test with 30 part-time Hotel Management students at a private institution in Chandigarh, India was done to ensure the content validity and reliability of the questions. The survey's setting can influence meaning. Authors conducted a pilot test to ensure that the survey questions functioned adequately and verify the format, readability, and clarity of the survey questions. 14 questions were included in the final survey. An online survey was available between 15 April and 15 May 2023. 100 respondents were notified of their voluntary participation in the study by mobile or email message, including participation instructions and a link to the online survey. All questions employed a five-point Likert scale, with respondents evaluating issues on a range of 1 (Strongly disagree) to 5 (Strongly agree). Based on an earlier study, we've included our measurement items in Table 2. Each of the four components was developed using previously published price and quality scales. See Table 2 for Measure Scale.

Table 1. Measurement Scales

Category	Question	References
Brand Image	Star Rating	[1]
	Reviews of old guests	[2]
	Location and its environment	[3]
	Food & Drinks	[4]
Room	Uninterrupted Internet	[5]
	Television in-built system	[6]
	Size of room & amenities	[6]
	Comfort of bed	[7]
Services	Welcome activity	[8]
	Transportation	[9]
	Communication emails	[10]
Value/ Price	Value for money	[11]
	Online self-bookings	[12]
	Electronic service point "Kiosks"	[13]

Table 1. Depicts questionnaire for the survey has many areas that explore distinct facets of the hotel experience with the goal of capturing the wide range of preferences and viewpoints of participants. Respondents were probably requested to share their opinions on the overall quality and rating of the hotel in the "Star Rating" area. "Brand Image" was assessed by asking questions on the effect of the hotel's recognition and reputation, which could be determined by looking for identifiable trademarks or brands. "Reviews of old guests" asked for comments on past customers' experiences, offering perceptions on the standing and reliability of the business. The "Location and its environment" category probably looked at how respondents felt about the hotel's surroundings, taking accessibility, security, and general ambience into account. "Food & Drinks" probably addressed the calibre and range of food options, assessing how important eating out is in determining overall contentment.

Under the "Services" category, "Uninterrupted Internet" evaluates the significance of a dependable and effective internet connection. The "Size of room & amenities" and "Television in-built system" questions focus on the comfort and in-room amenities, which enhances the entire visitor experience.

The "Comfort of bed" question focuses on the critical element of sleeping comfort, which is important for visitor pleasure and restful sleep. "Welcome activity" probably looks at how well greeting gestures or activities might improve a guest's first impression and level of comfort.

Within the "Services" area, "Transportation" assesses how easily accessible and convenient the hotel's transportation alternatives are. "Communication emails" probably looks at how well email channels work for answering questions or issues from visitors.

Under the "Value/Price" category, the "Value for money" question determines if visitors feel they are getting a good deal given the cost of their stay. In order to improve the entire visitor

experience, "online self-bookings" and "Electronic service point 'Kiosks'" probably investigate the effectiveness and user-friendliness of self-service choices for booking and other electronic services. Taken as a whole, these categories and the questions that go along with them offer a thorough accepting of the several aspects affecting visitors' opinions and contentment in the context of hospitality.

5   Data Analysis and Results

Source	SS	DF	MS	F		
Treatments	SST	k−1	SST/(k−1)	MST/MSE (1)		
Error	SSE	N−k	SSE/(N−k)		(2)	
Total (corrected)	SS	N−1			(3)	

1. H0 hypothesis
Since p-value < α, H0 is accepted.
The sample standard deviation (S) of the Working population is not equal to the sample standard deviation (S) of the non-working population.
In other words, the difference between the sample standard deviation (S) of the working and none working populations is big enough to be statistically significant.
2. P-value
The p−value equals 5.551e−15, (p(x≤F) = 1). It means that the chance of type I error (rejecting a correct H0) is small: 5.551e−15 (5.6e−13%).
The minor the p-value, the more it supports H1.
3. The statistics
The test statistic F equals 1.713, not in the 95% acceptance region: [0.8636: 1.15].
S1/S2=1.31, is not in the 95% region of acceptance: [0.9293 : 1.0724].
The 95% confidence interval of σ12/σ22 is: [1.95 , 1.9835].
The above analysis depicts that both classes of working as well non working have similar set of preferences. Hence Null hypothesis is accepted

Table 2. Analysis of Responses given by Male and Female

Summary of Data			
	Treatments		
	1	2	Total
N	276	75	351
$\sum X$	1187	314	1501
Mean	4.3007	4.1867	4.276
$\sum X^2$	5433	1408	6841
Std.Dev.	1.0922	1.1234	1.0983

Table 3. Results of Hypothesis

Result Details				
Source	*SS*	*df*	*MS*	
Between-treatments	0.7672	1	0.7672	$F = 0.63536$
Within-treatments	421.427	349	1.2075	
Total	422.194	350		

Data analysis done in Table 3 and 4, shows there is no significance in factor preferences of male and female. Hence Null Hypothesis is accepted

Table 4 Percentage Analysais of Respones in each construct

Questionnaire	Strongly Agree %age	Agree %age	Neutral %age	Disagree %age	Strongly Disagree % age	Total %age
Comfort of bed	58	23	10	6	3	100
Communication emails	40	31	21	5	3	100
Electronic service point	48	29	15	4	4	100
Food & Drinks	56	28	11	3	2	100
Location and its environment	60	23	11	4	2	100
Online self-bookings	56	23	17	2	2	100
Reviews of old guests	43	33	18	4	2	100
Size of room & amenities	51	31	9	6	3	100
Star Rating	50	32	14	2	2	100
Television in-built system	41	28	23	6	2	100
Transportation	44	36	14	3	3	100
Uninterrupted Internet	52	27	17	2	2	100
Value for money	52	28	13	5	2	100
Welcome activity	38	25	24	9	4	100

Final Results as shown in Table 4 Customer would love to stay in Hotels/Farm Stays if basis Services are fulfilled. This will directly help Farmers, Tourism of Punjab. By doing it Punjab

Tourism can entice recreation and ecological tourism. The purpose of the learning was to determine how consumers felt about different parts of their hotel stay, as shown in the attached figure. The respondents were requested to provide their thoughts on a Likert scale that went from "Strongly Disagree" to "Strongly Agree." The distribution of replies for each category is shown by the percentages.

Positive response about the comfort of the bed was obtained; 23% agreed and 58% strongly agreed, showing a high degree of satisfaction. Positive feedback was also received for email and electronic service point communication, with 40% and 48% strongly agreeing, respectively. High marks were given to the setting and its surroundings, with 60% strongly approving. Both past visitor evaluations and online self-bookings were well appreciated, receiving 56% of the total points possible in the "Strongly Agree" and "Agree" categories.

6   Conclusion

Customers will remain at Farm Stays/Hotels if they have Amenities/Services described in the Result analysis. Punjab will also draw visitors to showcase how to cultivate organic food, Ritual. This will assist in generating sustainable tourism. In addition, farmers can generate more income through farm tourism, even if they lack many commercial necessities to succeed and grow. Thus, farm training and farm tourism support must be strengthened. The government must support farm tourism. These findings might significantly affect the rural workforce and revenue-generating. Relevant government authorities should help farm owners. Alternatively, farmers should be familiar with money, accounting, and budgeting. Farm owners should be educated on daily, self-and time management. Incentives may be provided to farmers so that they engage in such endeavors. A governing body with good intentions must offer infrastructures like large highways, accessible transit channels, and bus stations. The area needs government help. Reduce administrative procedures can help. Grading and promotion should be given precedence. Farm laborers deserve training and comforts. Ground-level service and hospitality will be offered. Personalized language courses are required.

7   References

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