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ASSESSING THE SIGNIFICANCE OF RESERVATION SYSTEMS IN HOTELS OF DELHI: A COMPARATIVE ANALYSIS OF HOTEL'S OWN AND THIRD-PARTY PLATFORMS

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ABSTRACT:
Reservation system is a software application utilized in the hotel sector to efficiently oversee room availability, pricing, and reservations. This study examines the significance of reservation systems in hotels located in Delhi, India, with a focus on both hotel-owned and third-party platforms. The objective is to assess the effectiveness of these systems in various dimensions of guest satisfaction and operational efficiency. A one-sample t-test analysis, utilizing IBM SPSS software version 26, was conducted to evaluate five key factors: Technological Innovation and Guest Engagement, Guest Satisfaction and Loyalty Enhancement, Efficient and Reliable Reservation Management, Comprehensive Customer Experience Enhancement, and Flexible Booking and Refund Policy. Through sample size of 110 front desk managers from 32 Ministry of Tourism-approved hotels participated in the study, providing insights into the performance of hotel websites and third-party reservation systems (OTAs) Online travel agencies. Data collection employed a convenience sampling method, targeting guests from Ministry of Tourism-approved 4-star, 5-star, and 5-star deluxe hotels in Delhi. Study revealed significant findings across most factors, highlighting the importance of reservation systems in enhancing guest experiences and hotel operations. However, specific variables within hotel-owned and third-party platforms were found to be non-significant, suggesting areas for potential improvement or reconsideration. For hotel-own reservation systems, variables related to guest engagement, navigation facilities, cancellation policies, and multilingual options were identified as non-significant. Similarly, certain variables within third-party reservation systems, such as HD visual effects, special packages for repeat guests, guest grievance handling, and multilingual options, were deemed non-significant. Overall, the study underscores the critical role of reservation systems in driving guest satisfaction, loyalty, and operational efficiency within the hotel industry. By identifying significant factors and areas for improvement, hoteliers can optimize their reservation systems to meet guest expectations and maintain competitiveness in the market.

KEYWORDS: Significance, Reservation system, Hotel website, Third–party, Delhi

INTRODUCTION:
In hotels, Reservation system is a software application designed to streamline the process of managing room bookings, availability, and guest information in hotels and other accommodation establishments. These systems help hoteliers efficiently handle reservations, optimize room inventory, and provide

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superior guest experiences. **(Richard, Akwasi, 2014)** They noted that the primary objective of a hotel's official website is to provide information about the hotel and offer an online reservation system. On the hotel's website, visitors can access comprehensive hotel information, including hotel location, prices, promotions, descriptions, photo galleries, and other hotel services. In addition, they can partake in a virtual tour of the property. The virtual tour encompasses the following areas: lobby, guest rooms, event spaces, recreational facilities, restaurants, and bars. The hotel's navigation bar is on the page's left side. Every visitor must install a Java application to access the virtual tour application. The website offers a "meeting planner" feature for business professionals to help them organize their meetings. Guests are required to complete a form with their reservation data in order to reserve a room. Guests can complete an additional form to make specific requests for their lodging reservation. In their study, **(Rex and Peter, 2011)** discuss hotels' various options for selling rooms, such as online travel agents (OTAs) or third-party websites. However, they also highlight the significant cost associated with using these intermediaries. The study examines methods for hotels to optimize the sale of available rooms to maximize net room revenues. This is achieved by encouraging clients to book directly through the hotel's websites rather than online travel agencies (OTAs). Hotels strongly prefer to sell rooms through their channels, yet they substantially depend on efficient and convenient online travel agencies (OTAs) to sell rooms.

LITERATURE REVIEW:

Whether hotel-owned or third-party, room reservation systems are crucial in streamlining hotel operations and enhancing efficiency. These systems automate the booking process and allow guests to reserve rooms online, which reduces the need for manual intervention and paperwork. **(Agag and El-Masry, 2016)** highlight the importance of such systems in improving operational efficiency and reducing administrative burdens. Room reservation systems enable hotels to expand their reach and attract a wider audience, leading to increased revenue generation. By offering real-time availability and pricing information, these systems capitalize on demand fluctuations and optimize room rates to maximize revenue.

According to **(Luckett and Ainscough, 1996)**, the Internet is an exceptionally effective tool for discovering, allocating, and structuring information. Using the Internet, data may be transmitted to any location on the planet within a few seconds. Furthermore, the content can be quickly modified, expanded, and altered without incurring charges. According to (Breitenbach and Van Doren, 1998), websites are deemed virtual because they do not have any physical representations. Hence, a website with Internet connectivity is available to everyone at any time and location. Numerous competing websites pose an additional disadvantage for Internet sites in attracting visitors. (Hui-Lin Chiu, 1995) asserts that several criteria, including the type of hotel, its regulations regarding occupancy rates, overbooking, guaranteed no-shows, hotel size, room rates, and favored guest categories, influence the choice of reservation technique or methods.

(Beritelli, 2011) provided data about the selection of cooperative players in tourism destinations and highlighted the significant involvement of third parties in the marketing of hotel rooms. Nevertheless, hotels have a significant challenge in terms of client acquisition due to intense competition from third-party websites, resulting in a dispute about distribution channels. In their 2013 study, (Birgul et al.) emphasized the importance of online travel agencies (OTAs) and hotels to understand the need for forming partnerships and capitalizing on the current situation. (Ogirima et al., Adeosun et al., 2014) Suggested using an online hotel management system (HMS) over traditional manual hotel processing. When choosing, users evaluate several essential variables that can influence their selection. These factors include privacy, mobility and ease of use, security, and cost. Mainly, lodging providers who operate independently are becoming more reliant on particular online platforms. For instance, hotels

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have reported selling as much as 80% of their available rooms through Booking.com (Gössling & Lane, 2015). Direct booking refers to booking a room directly through the hotel's official website. Nevertheless, hotels should not overlook the importance of traditional and electronic intermediaries due to their challenges regarding website accessibility and their aspiration to maintain global recognition. The study by (Qi et al., 2013) demonstrates that hotel websites are the preferred information search route for most online users, particularly among younger individuals. Nevertheless, e-distributor websites exhibit superior user-friendliness and navigability compared to hotel websites (Morosan & Jeong, 2008).

Conversely, several independent hotel websites often fail to prioritize investing in information technology and instead rely on messaging or emailing methods for handling online reservations. As a result, they only partially satisfy and meet the needs of society. (Ahmad Hassan, 2020) created and implemented a mobile application for online hotel reservations for hotels that will replace the manual method of booking hotel rooms and give users the option to search for nearby hotels when making reservations. This will prevent users from becoming stranded in their search for a place to stay the night if they have yet to make adequate preparations under the current system, and it will also increase the efficiency of hotel managers and their profit margin once they have better and better facilities. (Gozzali & Kristanti, 2013), They are focused on convenience, dependability, speed, information, pricing, and incentives to prove their essential considerations while booking hotels online. Digital marketing is becoming increasingly crucial for the hotel company sector's success in the competition. The capacity of digital marketing to reach customers worldwide has no restrictions on time or location, giving businesses the chance to acquire as many clients as possible. Online customer reviews and reservation systems play a significant part in the digital marketing of the hotel sector. Findings from several earlier types of research suggest that these two factors significantly influence travelers' decisions to book hotels.

In their research, (Guillet et al. 2013) investigated the agency relationship between the hotel industry and OTAs. They identified eight themes in three categories: the background of the feud (including the features of the hotel sector, the current business environment, and Expedia's business practices), the opinions of hospitality industry professionals on the feud (such as the wake-up call for hoteliers and Choice Hotels' decision), and expectations regarding the nature of the relationship between hotels and OTAs (including predictions of a symbiotic relationship, experiences with guests who book through OTAs and Expedia, and recommendations for hotels). (Lee et al., 2013) illustrated that there is a significant power imbalance between suppliers and online travel agencies. However, they can negotiate more favorably because these agencies have a wider audience thanks to the Internet and a better grasp of what consumers want regarding purchases than the actual suppliers do. (Guo et al., 2013) establishes the relationship between room rates and overbooking levels in the context of room reservation services. They also established the commission rates to be paid to third-party websites based on a percentage of the room rate. Later on, the third-party websites assessed their sales performance based on the commission rates. This was done to analyze the competitive dynamics amongst members acting simultaneously and determine the effort levels of multiple websites competing for limited room capacity.

(Inversini et al., 2014) conducted a study investigating the rationale behind hoteliers' decision to employ online travel agents (OTAs) and social media platforms for sales purposes. The investigation also investigated the technological and human factors linked to these practices. The researchers also devised a robust method for analyzing ordered categorical variables, which allowed them to accurately estimate the factors that influence the significance of social media and OTA for online sales and the corresponding marginal effects. (Narayan et al.,2014) explained that travel businesses in India are

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making significant efforts to utilize emerging technology to acquire a competitive edge and keep up with the quickly evolving business environment.
(Richard et al. 2014) Assert that the Online Hotel Reservation System was created to replace the traditional method of manually booking hotel rooms or other hotel facilities. The outdated system needs to effectively cater to the client's needs and instead exposes customer data to potential risks. The new system maintains accurate consumer data for emergency and security needs. The hotel's advertising campaign now includes a virtual tour generated using the system. (Zhang et al. 2019) explore revenue management strategies and pricing optimization techniques employed in hotel reservation systems. Both hotel-owned and third-party room reservation systems enhance the guest experience by providing convenient booking options and personalized services. Guests can easily browse available room types, amenities, and special offers, leading to a more satisfying booking experience.
(Chen et al.2018) explore using augmented reality in hotel reservation systems to enhance flexibility and adaptability. Room reservation systems play a pivotal role in hotel inventory management and optimization. By providing real-time updates on room availability and occupancy, these systems help hotels efficiently manage their inventory and maximize room utilization. (Li et al. 2020) delve into the use of data analytics and business intelligence for decision-making in hotel room reservation systems, highlighting the importance of inventory optimization. Room reservation systems contribute to brand visibility and customer engagement by providing a platform for hotels to showcase their properties and interact with prospective visitors. Hotels can build brand recognition and foster long-term customer relationships using aesthetically pleasing user interfaces and personalized communication channels. (Park et al.2019) explore virtual tours and 360-degree imaging for room visualization in hotel reservation systems, highlighting their impact on brand visibility and customer engagement. Room reservation systems provide hotels with scalability and adaptability to respond to changing market trends and consumer preferences. Whether scaling up during peak seasons or adapting to emerging travel trends, these systems allow hotels to adjust their offerings and pricing strategies dynamically. (Chen et al.2019) discuss the importance of scalability in hotel room reservation systems and its impact on revenue management. Room reservation systems help hotels mitigate risks and prevent fraud through robust security measures and authentication protocols. By implementing secure payment gateways, encryption technologies, and fraud detection algorithms, hotels can safeguard sensitive guest information and prevent unauthorized access.

OBJECTIVE OF THE STUDY:

The primary objective of the study was “To access the significance of reservation systems (Own and Third-party) in hotels of Delhi”.

METHODOLOGY:

This study was conducted on 4-star, 5-star and 5-star deluxe hotels of Delhi approved by Ministry of tourism. A one sample t-test was applied on 16 attributes of reservation systems provided to front desk managers used in room reservation in hotels. The analysis and the results of the test applied with its interpretation are presented below. The study was based on primary data and the data collection was done through the survey questionnaire with close ended questions. The questionnaire was framed in English language having significance features of reservation systems as research variables along with the questions that were framed to determine the level of significance accordingly. The target population for the study involved 110 front desk mangers (52 referred hotel website and 58 referred third-party) from 32 hotels which were Ministry of tourism approved in Delhi. The sampling technique applied was a convenience sampling technique.

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The survey questionnaire was collected from 32 hotels in total. It was found that 7 out of 39 hotels completed questionnaires had been mistaken when they were all checked for missing data, incompleteness, or inaccurate completion. Such questionnaires were not used in the study to assure the accuracy and significance of the findings. So, a final sample size of 110 from 32 hotels was used and after organizing was entered into IBM SPSS software version 26 for subsequent analysis. The tests applied were one sample t-test paired t-test, and GAP analysis.

To measure the significance of reservation systems (own and third- party) in hotels of Delhi and to achieve the objective, "To access the significance of reservation systems (Own and Third party) in hotels of Delhi", null hypothesis H_0:- "There is no significance of reservation systems (Own and Third party) in hotels of Delhi" and alternative hypothesis H_a:- "There is significance of reservation systems (Own and Third party) in hotels of Delhi" was formulated and tested. Initially, the complete data was segregated on the behalf of the front desk managers with regards to hotel own & third-party reservation systems. Initially factor analysis was applied.

FACTOR ANALYSIS

Table 1 KMO and Bartlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.622
Bartlett's Test of Sphericity	**Approx. Chi-Square**	760.554
	Df	190
	Sig.	.000

Table 2 Total variance explained reservation system's significance

	Initial Eigen values			**Extraction Sums of Squared Loadings**			**Rotation Sums of Squared Loadings**		
Component	**Total**	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	3.993	19.965	19.965	3.993	19.965	19.965	2.593	12.963	12.963
2	2.783	13.916	33.881	2.783	13.916	33.881	2.465	12.325	25.289
3	1.823	9.113	42.994	1.823	9.113	42.994	2.429	12.143	37.432
4	1.456	7.282	50.275	1.456	7.282	50.275	2.379	11.895	49.326
5	1.359	6.797	57.072	1.359	6.797	57.072	1.549	7.746	57.072

Table 3 Factor loadings

	FACTORS				
VARIABLES	**1**	**2**	**3**	**4**	**5**
Provide HD visual effects to attract customers	.729				
Reservation system provides real times chat box facility for reservation queries	.776				
Facilitate guests with latest Hi-tech features	.460				
Offer special packages for group booking	.471				
Strictly focus on guest's grievance and complaints		.804			
Provide better packages to repeat guests		.807			
Reservation system is worthy for hotels			.777		
Reservation synchronization avoids overbooking			.762		
Provide real time booking			.748		
Reservation system always have alternative for server or network issues while reservation stuck off during processing			.405		
Making review action ability pattern				.660	

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Provide different languages option to target customers				.418	
Navigation facility is provided to reach hotel easily				.547	
Avails reward system for customers				.727	
Provide easy cancellation and refund money pattern instantly					.601
Provide last minute cancellation and amendment of booking					.687

The factor analysis generated five new factors (table 3) with Eigen values greater than one that represented 57.072% of the variance between the variables (table 2), as indicated by the data previously described (table 3). These five new factors were named as:
Factor 1: "Technological Innovation and Guest Engagement"
Factor 2: "Guest Satisfaction and Loyalty Enhancement"
Factor 3: "Efficient and Reliable Reservation Management"
Factor 4: "Comprehensive Customer Experience Enhancement"
Factor 5: "Flexible Booking and Refund Policy"

TO ACCESS THE SIGNIFICANT HOTELS OWN RESERVATION SYSTEM

The responses were collected from the front desk managers in the context of the hotel's reservation systems (n = 52). Then, one sample t-test was applied to each segment separately and analyzed among all five factors, with 16 variables of reservation systems to assess their positive significance in hotels.

Table 4 One – sample t-test for significance of Hotels own reservation system (hotel website)

Variables	N	Mean	Std dev.	T	Significance (2-tailed)	Mean difference
Technological Innovation and Guest Engagement						
Provide HD visual effects to attract customers	52	4.02	.828	4.521	.000	.519
Reservation system provides real times chat box facility for reservation queries	52	4.08	.860	4.839	.000	.577
Offer special packages for group booking	52	4.25	.711	7.611	.000	.750
Facilitate guests with latest Hi-tech features	52	4.10	.869	4.947	.000	.596
Guest Satisfaction and Loyalty Enhancement						
Provide better packages to repeat guests	52	4.40	.569	11.452	.000	.904
Strictly focus on guest's grievance and complaints	52	4.52	.505	14.568	.000	1.019
Efficient and Reliable Reservation Management						
Provide real time booking	52	4.25	.711	7.611	.000	.750
Reservation system is worthy for hotels	52	4.31	.755	7.714	.000	.808
Reservation synchronization avoids overbooking	52	4.46	.609	11.383	.000	.962
Reservation system always have alternative for server or network issues while reservation stuck off during processing	52	2.35	1.203	-6.918	.000	-1.154

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Comprehensive Customer Experience Enhancement						
Avails reward system for customers	52	3.79	.893	2.329	.024	.288
Making review action ability pattern	52	3.56	1.110	.375	.709	.058
Navigation facility is provided to reach hotel easily	52	3.25	1.203	-1.499	.140	-.250
Provide different languages option to target customers	52	3.38	.911	-.914	.365	-.115
Flexible Booking and Refund Policy						
Provide easy cancellation and refund money pattern instantly	52	3.23	1.215	-1.599	.116	-.269
Provide last minute cancellation and amendment of booking	52	3.48	1.146	-.121	.904	-.019

TO ASSESS THE SIGNIFICANCE OF THIRD PARTY RESERVATION SYSTEM

The responses were collected from the front desk managers in the context of third-party reservation systems (n = 58). Then, one sample t-test was applied to each segment separately and analyzed among all five factors, with 16 variables of reservation systems to assess their positive significance in hotels.

Table 5 One sample t-test for the significance of Third party reservation system (OTA's)

Variables	N	Mean	Std dev.	T	Significance (2-tailed)	Mean difference
Technological Innovation and Guest Engagement						
Provide HD visual effects to attract customers	58	3.47	.922	-.285	.777	-.034
Reservation system provides real times chat box facility for reservation queries	58	3.78	.879	2.389	.020	.276
Offer special packages for group booking	58	2.57	1.326	-5.347	.000	-.931
Facilitate guests with latest Hi-tech features	58	3.97	.816	4.346	.000	.466
Guest Satisfaction and Loyalty Enhancement						
Provide better packages to repeat guests	58	3.59	1.077	.610	.544	.086
Strictly focus on guest's grievance and complaints	58	3.59	1.140	.576	.567	.086
Efficient and Reliable Reservation Management						
Provide real time booking	58	4.38	.557	12.033	.000	.879
Reservation system is worthy for hotels	58	4.48	.504	14.848	.000	.983
Reservation synchronization avoids overbooking	58	4.55	.567	14.119	.000	1.052
Reservation system always have alternative for server or network issues while reservation stuck off during processing	58	4.05	.867	4.846	.000	.552

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Comprehensive Customer Experience Enhancement						
Avails reward system for customers	58	4.34	.608	10.574	.000	.845
Making review action ability pattern	58	4.31	.467	13.224	.000	.810
Navigation facility is provided to reach hotel easily	58	4.26	.807	7.159	.000	.759
Provide different languages option to target customers	58	3.26	1.148	-1.601	.115	-.241
Flexible Booking and Refund Policy						
Provide easy cancellation and refund money pattern instantly	58	4.55	.567	-2.421	.019	-.414
Provide last minute cancellation and amendment of booking	58	4.05	.711	5.907	.000	.552

DATA ANALYSIS

Hotels' Own Reservation System

The exploratory factor analysis (EFA) as per table 3, was conducted on the data collected from front desk managers regarding hotels' own reservation systems, involving 20 attributes to gauge their significance. Using principal component analysis with varimax rotation and Kaiser normalization, the analysis revealed a KMO test value of 0.622, indicating fair to moderate sampling adequacy according to Gie Yong A and Pearce S (2013). Bartlett's test of sphericity yielded a p-value of less than 0.05, suggesting significant correlations among the data. Five factors emerged from this analysis: Technological Innovation and Guest Engagement, Guest Satisfaction and Loyalty Enhancement, Efficient and Reliable Reservation Management, Comprehensive Customer Experience Enhancement, and Flexible Booking and Refund Policy.

Subsequent one-sample t-tests applied to each segment separately yielded insightful results as per table 4, in the realm of Technological Innovation and Guest Engagement, HD visual effects ($t(52) = 4.521$, $p = 0.000$) and real-time chat ($t(52) = 4.839$, $p = 0.000$) were viewed significantly positively by respondents. Conversely, offering special packages ($t(52) = -7.611$, $p = 0.000$) was perceived negatively. Facilitating guests with high-tech features also received positive feedback ($t(52) = 4.947$, $p = 0.000$). Mean scores for this factor ranged from 4.02 to 4.25, with standard deviations between 0.711 and 0.869, indicating relatively low response variability. For Guest Satisfaction and Loyalty Enhancement, providing better packages ($t(52) = 11.452$, $p = 0.000$) and focusing on guest grievances ($t(52) = 14.568$, $p = 0.000$) were highly rated, with mean scores between 4.40 and 4.52 and standard deviations from 0.505 to 0.569. Efficient and Reliable Reservation Management also received strong positive feedback, with real-time booking ($t(52) = 7.611$, $p = 0.000$), system worthiness ($t(52) = 7.714$, $p = 0.000$), and synchronization ($t(52) = 11.383$, $p = 0.000$) all showing significant positive differences. Interestingly, providing an alternative for issues was viewed negatively ($t(52) = -6.918$, $p = 0.000$). Mean scores for this factor were high, ranging from 4.25 to 4.46, with standard deviations between 0.609 and 0.755. Regarding Comprehensive Customer Experience Enhancement, providing a reward system was seen positively ($t(52) = 2.329$, $p = 0.024$), while review action ability ($t(52) = 0.375$, $p = 0.709$), navigation facility ($t(52) = -1.499$, $p = 0.140$), and language options ($t(52) = -0.914$, $p = 0.365$) did not show significant differences. Mean scores for this factor ranged from 3.25 to 3.79, with moderate response variability indicated by standard deviations from 0.893 to 1.110. The Flexible Booking and Refund Policy factor showed no significant positive differences, with easy cancellation ($t(52) = -1.599$, $p = 0.116$) and last-minute cancellation ($t(52) = -0.121$, $p = 0.904$) both failing to

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achieve significance. The mean scores for this factor were moderate, ranging from 3.23 to 3.48, with standard deviations between 1.146 and 1.215, indicating moderate variability in responses.

Hence it was evident from the results of the statistics test that for 11 variables out of total 16 were having significance value ($p < 0.05$), so for these 11 variables - (Reservation system provides real times chat box facility for reservation queries, Offer special packages for group booking, Facilitate guests with latest Hi-tech features, Provide real time booking, Reservation system is worthy for hotels, Reservation synchronization avoids overbooking, Reservation system always have alternative for server or network issues while reservation stuck off during processing, Avails reward system for customers, Provide HD visual effects to attract customers, Provide better packages to repeat guests, Strictly focus on guest's grievance and complaints) null hypothesis H_0:- "There is no significance of reservation systems (Own and Third party) in hotels of Delhi" was rejected and alternative hypothesis H_a:- "There is significance of reservation systems (Own and Third party) in hotels of Delhi" was accepted. For remaining 5 variables - (Making review action ability pattern, Navigation facility is provided to reach hotel easily, Provide easy cancellation and refund money pattern instantly, Provide last minute cancellation and amendment of booking, Provide different languages option to target customers) null hypothesis H_0:- "There is no significance of reservation systems (Own and Third party) in hotels of Delhi" was accepted.

Third-Party Reservation System

The assessment of third-party reservation systems from the perspective of front desk managers ($n = 58$) involved similar analytical methods. One-sample t-tests conducted on various segments revealed differing levels of significance across the factors. As per table 5, for Technological Innovation and Guest Engagement, the provision of HD visual effects did not show a significant difference from the test value ($t(58) = -0.285$, $p = 0.777$). However, features like real-time chat ($t(58) = 2.389$, $p = 0.020$) and high-tech facilities ($t(58) = 4.346$, $p = 0.000$) were positively viewed. Conversely, offering special packages showed a significant negative difference ($t(58) = -5.347$, $p = 0.000$). The mean scores for this factor ranged from 2.57 to 3.97, with standard deviations from 0.816 to 1.326, indicating considerable variability in responses. Guest Satisfaction and Loyalty Enhancement measures such as providing better packages ($t(58) = 0.610$, $p = 0.544$) and focusing on guest grievances ($t(58) = 0.576$, $p = 0.567$) did not show significant differences. The mean scores ranged from 3.59 to 3.97, with standard deviations between 1.077 and 1.140, suggesting moderate satisfaction levels. For Efficient and Reliable Reservation Management, aspects like real-time booking ($t(58) = 12.033$, $p = 0.000$), system worthiness ($t(58) = 14.848$, $p = 0.000$), and reservation synchronization ($t(58) = 14.119$, $p = 0.000$) all showed significant positive differences. Providing an alternative for issues was also positively received ($t(58) = 4.846$, $p = 0.000$). The mean scores for this factor were high, ranging from 4.05 to 4.48, with standard deviations between 0.504 and 0.867, indicating relatively low variability in responses. Comprehensive Customer Experience Enhancement saw positive feedback for a reward system ($t(58) = 10.574$, $p = 0.000$), making review actionability pattern ($t(58) = 13.224$, $p = 0.000$), and providing navigation facilities ($t(58) = 7.159$, $p = 0.000$). However, providing different language options did not show significant differences ($t(58) = -1.601$, $p = 0.115$). The mean scores for this factor ranged from 3.26 to 4.34, with standard deviations from 0.467 to 1.148, indicating variability in responses. Lastly, the Flexible Booking and Refund Policy factor showed a significant negative difference for easy cancellation ($t(58) = -2.421$, $p = 0.019$), while last-minute cancellation showed a significant positive difference ($t(58) = 5.907$, $p = 0.000$). The mean scores for this factor were relatively high, ranging from 4.05 to 4.55, with standard deviations between 0.567 and 0.711, indicating relatively low variability in responses.

Hence it was evident from the results of the statistics test that for 12 variables out of total 16 were

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having significance value ($p < 0.05$), so for these 12 variables - (Reservation system provides real times chat box facility for reservation queries, Offer special packages for group booking, Facilitate guests with latest Hi-tech features, Provide real time booking, Reservation system is worthy for hotels, Reservation synchronization avoids overbooking, Reservation system always have alternative for server or network issues while reservation stuck off during processing, Avails reward system for customers, Making review action ability pattern, Navigation facility is provided to reach hotel easily, Provide easy cancellation and refund money pattern instantly, Provide last minute cancellation and amendment of booking) null hypothesis H_0:- "There is no significance of reservation systems (Own and Third party) in hotels of Delhi" was rejected and alternative hypothesis H_a:- "There is significance of reservation systems (Own and Third party) in hotels of Delhi" was accepted. For remaining 4 variables - (Provide HD visual effects to attract customers, Provide better packages to repeat guests, Strictly focus on guest's grievance and complaints, Provide different languages option to target customers) null hypothesis H_0:- "There is no significance of reservation systems (Own and Third party) in hotels of Delhi" was accepted.

RESULTS:

The exploratory factor analysis (EFA) and subsequent t-tests provide a comparative assessment of the significance of hotel-owned reservation systems versus third-party platforms in hotels of Delhi. For hotel-owned systems, the analysis revealed five key factors: Technological Innovation and Guest Engagement, Guest Satisfaction and Loyalty Enhancement, Efficient and Reliable Reservation Management, Comprehensive Customer Experience Enhancement, and Flexible Booking and Refund Policy.

Hotel-Own Reservation Systems: Hotel-owned systems were highly rated for features such as HD visual effects, real-time chat, and high-tech features, indicating strong Technological Innovation and Guest Engagement. Guest Satisfaction and Loyalty Enhancement were also positively perceived, particularly for offering better packages and addressing guest grievances. Efficient and Reliable Reservation Management scored well, with significant positive feedback for real-time booking, system worthiness, and synchronization. However, offering special packages and providing alternatives for issues were viewed negatively. Comprehensive Customer Experience Enhancement received mixed responses, with positive feedback for reward systems but insignificant results for review actionability, navigation facilities, and language options. The Flexible Booking and Refund Policy factor showed moderate scores, with no significant positive differences for easy or last-minute cancellations.

Third-Party Reservation Systems: In contrast, third-party platforms demonstrated a stronger performance in several areas. While HD visual effects did not show significant differences, features like real-time chat and high-tech facilities were positively received under Technological Innovation and Guest Engagement. Offering special packages, however, was perceived negatively. Guest Satisfaction and Loyalty Enhancement measures, such as providing better packages and addressing guest grievances, did not show significant differences, indicating moderate satisfaction levels. Third-party systems excelled in Efficient and Reliable Reservation Management, with high positive feedback for real-time booking, system worthiness, synchronization, and providing alternatives for issues. Comprehensive Customer Experience Enhancement was highly rated for reward systems, review actionability, and navigation facilities, though language options did not achieve significance. Flexible Booking and Refund Policy presented a mixed picture, with easy cancellation viewed negatively but last-minute cancellation positively.

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Comparison:
Comparing the two, third-party reservation systems generally outperformed hotel-owned systems in areas of real-time capabilities, technological innovation, and comprehensive customer experience features. Hotel-owned systems showed strength in engaging guests through technological features and ensuring efficient reservation management but lagged in flexibility and consistency across customer experience enhancements. Third-party platforms offered more robust and reliable reservation management and were better received for comprehensive customer experience enhancement, highlighting the need for hotel-owned systems to improve their technological offerings and flexibility to better compete.

CONCLUSION

The analysis provides a comprehensive understanding of front desk managers' perspectives on the significance of both hotels' own and third-party reservation systems. For hotels' own reservation systems, technological innovation and guest engagement are highly valued, particularly real-time chat and high-tech features, though offering special packages is viewed negatively. Guest satisfaction and loyalty enhancement measures are strongly positive, especially regarding guest grievances and better packages. Efficient and reliable reservation management is also highly rated, though alternative issue resolution needs improvement. Comprehensive customer experience enhancement measures are mixed, with some areas like reward systems being positively perceived, while others like language options need attention. Flexible booking and refund policies are moderately rated, with areas for improvement in easy and last-minute cancellations.
For third-party reservation systems, technological innovation features such as real-time chat and high-tech facilities are positively viewed, though special packages receive negative feedback. Guest satisfaction and loyalty enhancement measures are moderately perceived, with no significant positive differences noted. Efficient and reliable reservation management features are highly rated, indicating strong performance in this area. Comprehensive customer experience enhancement measures show positive feedback for reward systems and navigation facilities, though language options are a weak point. Flexible booking and refund policies show a mix of positive and negative perceptions, with easy cancellation viewed negatively and last-minute cancellation positively.
Overall, the findings highlight the importance of continuous enhancement in technological innovation, efficient management, and comprehensive customer experience to meet front desk managers' expectations and improve the perceived value of reservation systems.

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