THE HOTEL SMART-PHONE APPLICATIONS: ITS AFTERMATH & THE PATRONS' DISCERNIBLE INTENT TO RE-EXPLORE

Atanu Bhattacharya¹* Kaushiki Dubey² Alok Prasad³ Rohit Singh Bisht⁴ Sharad Bajpai⁵

Abstract
In the recent times, the touch-free motif has set off to be a mammoth dare for the hospitality industry. Post pandemic, the hotel companies are being contrived to adapt shielded and secured measures and to endeavour to diminish the contact points. Smart-phone hotel applications have embellished itself as one of the cardinal channels for communication dispensed by the hotels for bookings and all other related services with the minimal staff contact. The intention of this study is to scrutinize a foundation model that blends the technology acceptance model with the progenitors of a consumer’s observable purpose to re-explore the hotel smart phone applications for the usage in hotel reservations and various other services. The propounded model has been examined employing the structure equation analysis model “SEM”. An explanatory statistic is gathered from 177 customers who have already used the hotel smart phone applications. Study analysis reveals that the perceived usefulness (PU) had a noteworthy thump on the memorable encounter (ME) with the customer towards the hotel smart-phone applications (HSA). To boot, the memorable encounter shoves the customer satisfaction which subsequently augments the patrons’ discernible intent (DI) resulting in the re exploration. The unearthing of the interpretation proceeds to the ballooning of the hotel smart phone applications as a delightful gadget for withholding the guests and a victorious marketing mix to lure the new patrons in a compact aggressive market. The research detection provides with very practical data for a varied number of stakeholders, including the General Managers and the IT Managers associated with the hospitality & tourism industry.

Keywords: Hotel smart-phone applications, memorable encounters, perceived usefulness, perceived ease of use, technology.

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Introduction
In the year 2020, when the COVID pandemic started spreading its paws, the maximum population started showing its concerns towards the hygiene, sanitation, cleanliness. It took time for the entire society to get habituated to people outside their own family circle. As the business trips started resuming and the family travels also, thoughts were evolved in the mind of the guests that how the hotels and the hospitality sector will react to the safety and security of the guests. There are plenty of ways which have been adapted newly and HSA has developed to be one of the vital modes of communication enabled by the hotels to support the contact-free service. Smart-phone application is the software system specifically designed for the mobile devices to operate from such platforms which would lengthen the aptness of the smart phones by permitting the users to perform definite functions. Hotel smart-phone applications (HSA) are being fabricated to meet some of the desired needs of the guests and can thrust the coherence of a variety of smart-phone operations.

The guest confrontation with the hotel application software can be used to ascertain whether the presumptions of the guest are met or not. It also acts as a very beneficial source of information for the hotel establishment to assess the priorities of the guests. These kinds of information are very instrumental form the business point of view for the companies. The guests in the hotel can engender the conjectures and the intuitions of quality of service for the products or services by taking a glimpse of the hotel rooms, the lobbies, the staircases, the outer colour, and appearance of the buildings and also getting the ingress to the variety of attributes through the smart-phone applications. The hotel smart-phone applications do play a very consequential character in contributing the guests the best procedure of amalgamating and customizing a digital macrocosm of individualization. By the application of the smart-phone software, the guests can also express their experience values in a common platform shared by many. This will turn out to be a boon to the hotels as the popularity will get increased and the mouth publicity will welcome much more revenues to the establishment.

The attitude of a guest while using an ingenious technology is regulated by the bunch of that specific technology which has two driving factors: discernible intent and perceived usefulness. According to research conducted in 2012, the perceived usefulness of the modern generation technologies drives a guest’s attitudes and the verdict of easiness and usefulness. It should be very transparently noted that the ascendancy of the external variables should be one of the major considerations linked to the new innovations in the field of technological advancement on the patron’s sapience and satisfaction.

The networked experience was discerned by the introduction of the pandemic as a very significant constituent of the authentic service confrontation. It is very crucial to consider the online experience as a real time appendage. Indelible experiences are very much considered as the genuine medium of the actual behaviour. A memorable encounter (ME) is considered as the potential of the clients to recollect the past experiences. Memorizing drives the satisfaction of the guest to a great extent. Popular hotel brands are getting re-visited as per the studies reveal. Consequently, subsidiary research is advised to acknowledge how HSA technologies will refine the memorable encounters and the satisfaction of the guests as the best clairvoyant of the subsequent behaviour. Hence, this research targets to prosper conceptual scaffold to explore the connection between the technology acceptance model (TAM), memorable encounter (ME), customer satisfaction and the discernible intent (DI) to re-explore.

The Conceptual Framework Technology Acceptance Model (TAM)
This theory and practical research design is based on the “Technology Acceptance Model (TAM)” by Davis, 1989. In the year 1986, he proposed that any two variables can elucidate a buyer’s impulse to scout new technologies. The first forebear is perceived usefulness (PU), which is narrated as the degree to which the prospective guests believe that the usage of technology will enhance the performance. Perceived ease of use (PEOU) cites the magnitude to which the prospective guests trust that the usage of the new technologies will be easier to use and involve least of the efforts. The final version of TAM consists of only “PU & PEOU” because they are more abbreviated. TAM is very much required for the hospitality division because it demonstrates the way people get educated to clutch and engage technology. It also proposed that when the guests are given the exposure of a new technology interface (such as hotel smart-phone applications), then the PEOU of that interface should also influence them whether to use it or not.

Hypothesis 1: PEOU and PU are directly proportional to each other.

Memorable Encounter (ME)
In spite of the research and studies mentioning the technical advancement, the doctrines and the impacts, the worth of the actual experience from the
guest encounters has always been given very little significance. However, if focused clearly, this would have shown lighter in the selection of hotels. Hence, to enrich the experience, the smart-phone applications can connect with other facilities and services. Hotels thus started operating single hub to the guests which is ready to use anytime. This research has come up with good results solving the dependency structures rather than just a mere satisfaction. Adding to this, research by Dickinson in 2014, proved that hotel applications enrich the customer experiences to a greater extent. Therefore, the acceptance and the usage of these applications has also increased from time to time. Memorable encounters are those which are recalled many times in the mind of the guest that created something different from the others. They are much cherished and shared among family members and other relatives and friends which is also a source of publicity for the hotel company in disguise. However, none of the previous research reviewed the mastery of the factors of TAM on guest satisfaction in HSA. Hence, the furthermore hypothesis were inducted.

Hypothesis 2: ME has a direct influence on the PEOU of HSA. Hypothesis 3: ME has a direct influence on the PU of HSA.

Guest Satisfaction
Experience/ encounters have a direct link with the satisfaction. This link is clearly established with the repeated business opportunities. Guest satisfaction is the linchpin in the hospitality sector which is derived by constantly focussing on the effectiveness and staunchness of the services. HSA revamps the service with the help of detailing, speed & personalization. Branded applications cut out any delay that the guest could experience. Study reveals that the guests who had a positive confrontation with the branded applications keep on exhibiting their loyalty towards the company with repeated business. Guest satisfaction is the key to a prolong business and profit continuity. Guest tends to compare their current encounters with the previous one and they try to realize whether the service have improved or not. Chen et al. (2012) depicted transparently that the perceptions of the real time encounters and satisfaction directly affects the presumptions. Hence, the next hypothesis was proposed.

Hypothesis 4: ME is directly proportional to the guest satisfaction.

Discernible Intent (DI)
The hospitality industry very distinctly portrayed a strong correspondence between satisfaction & discernible intent. Along with it, the chances of re-visit increases and the guest endures the price also. Research have proven that if the product lives up to the expectations, then the guests don’t hesitate in repurchasing. Chandralal & Valenzuela in (2013) studied the causes and consequences of ME. Their findings revealed that satisfactory ME affect the business in terms of referring to others. Unpleased and dissatisfied guests will spread negative remarks and will never tend to return to the same destination. On the contrary, satisfied guests will always return to give business opportunities and will also proliferate positive vibes. Similarly, guests who are dazzled with the branded applications, shall encourage the brand identification which in turn ensures to retain the guests. Thus, we could infer that the hotels with branded HSA will retain its guests more likely than others. The detections of the study showed that good brands in the hospitality sector could utilize the blessings of the technology of HSA in order to amplify the satisfaction measures and create the desire to use the HSA and re-visit. This study has come up with some very impactful comprehensions and the hotel/hospitality business could inaugurate a bond among encounters, guest behavior and the memories. Consequently, based on the above uncovering, the suggested postulations are.

Hypothesis 5: ME has a direct outcome on the guest DI to re-explore.

Hypothesis 6: DI and satisfaction, both are proportional to each other in terms of re-exploring.

Based on the previous indications, a theoretical substructure model is constructed in which ME, PEOU, PU & satisfaction drives the BI towards the use of HSA.
The Hotel Smart-Phone Applications: Its Aftermath & The Patrons’ Discernible Intent To Re-Explore

Section A - Research paper

Methodology

The research brings forward an assimilated model formed on TAM, memorable encounters and satisfaction into the theoretical framework demonstrating the guest discernible intent. This is a model designed to envisage the intent of the guests to re-explore the HSA based on the satisfaction, PU & PEOU. The objective of this model is to check what the guests’ experience while using the application and to analyse if the ME could influence the guest satisfaction and the discernible intent. In the year 1986, Davis has affirmed that guests’ trial to inventiveness for a second choice is generally driven by two factors: PU & PEOU. Later on, it was also pervaded that the PU is also advantageous to a person’s life or else the use stands meaningless. PEOU is described as the thought process of a guest where he would love to give a chance to a new technology to make the operations simpler than earlier. This model depicts how these different elements drive the guest satisfaction and the discernible intent.

Opinion Poll Build-Out

An online list of questions was developed with selected type of questions to investigate the supremacy of the HSA on the guest’s discernible intent. A Slider Scale with five points was deployed ranging from “Strongly Agree” (1) to “Strongly Disagree” (5) to quantify the ME, PU, PEOU, and the guest discernible intent.

While summing up, the theory of guest satisfaction was also gauged ranging from “Very Satisfied” (1) to “Very Dissatisfied” (5). The inclusions of the survey are as follows:

- Respondents were asked to mark whether their selected hotel was using HSA or not.
- Respondents were about their location of visit which would help to narrow down the current trends.
- Respondents were questioned about their ME, satisfactory level, and their intentions to come back again or not.
- Final stage proceeded with questioning related to the usefulness of the applications and the easiness of it. They were also asked for advocacy (if possible) to perform in a more a fashioned way in the nearest future.

A composite 212 people were our appellants out of which 177 turned out to be the potential ones which showed the yield of 83.5 % (approximately).

Data Collection Technique

The survey targeted those guests (national/international) who stayed in the star category hotels in India between the timeframe of September 2021-May 2022. Considerations were narrowed down to those guests who have checked-in and used the services rendered by the hotels through HSA. Not only chain hotels but standalone
hotels were also pondered for the study. The questionnaire was reformed a little extent and the results were not utilized in any other succeeding studies. The star category hotels which were generally in the frame of the study were namely Marriott, Radisson, Hilton, Leela, Oberoi, Ramada, Crowne Plaza.

Data Interpretation
The structural equation model (SEM) has been positioned to calculate the root, authority of the model and how adaptable it can become for the future market. A two-step technique was used based on Anderson et al. (1988) and the data was structured using IBM SPSS AMOS 23. The construct measures were tested for its soundness and solidness with the assistance of confirmatory factor analysis. The SEM was later installed in the examination of the theoretical bonding and the aptness of the structure.

Results Participants’ Attributes
The appellants are those who have used the HSA for reservation, check-in, food order, service bookings, check-out, etc. Out of the entire 177, the distribution is:

- Male - 104 (58.75%)
- Female - 73 (41.25%)

The age group distribution was also calculated which showed the following statistics:

- 20 to 35 years – 53 (29.94%)
- 35 to 50 years – 89 (50.28%)
- 50 & above – 35 (19.77%)

The educational qualification was also assessed with the below mentioned numbers:

- Graduate – 64 (36.15%)
- Under-graduate – 45 (25.42%)
- Master’s – 49 (27.68%)
- PhD – 19 (10.73%)

These were the general responses collected from the received answer sheets. It was also transparent that 138 (77.9%) of the respondents were using the HSA for once in a month and the rest for more than thrice a month.

Computation
To calculate the complete model fitness, a set of definite and comparable indices were used. The chi-square value to the degree of freedom was less than 3 (1.49 = 253.411, df = 170) which proved the importance of it. The Root Mean Square Error of Approximation (RMSEA) was 0.049, and this was much lower than the suggested limit of 0.08. The figure demonstrated below indicates the goodness of fit indicators such as the CFI (Comparative Fit Index) = 0.97, TLI (Tucker-Lewis Index) = 0.96, RFI (Relative Fit Index) = 0.90, IFI (Incremental Fit Index) = 0.97 and NFI (Normed Fit Index) = 0.92. All of these suggested that the model was satisfactory.
To gauge the dependability of the measurement scale, composite reliability was used. The table mentioned below shows the values above 0.70 indicating the support for the scale (Fornell & Larcker, 1981). The Maximum Shared Variance & Average Variance Extracted was also used to gain the clarity.

**Dependability Model**

<table>
<thead>
<tr>
<th>Constructions</th>
<th>Systematized Loadings</th>
<th>α</th>
<th>CR</th>
<th>AVE</th>
<th>MSV</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PU</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Effective Guest Loyalty Program Creation</td>
<td>0.914</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Staff Efficiency Escalation</td>
<td>0.891</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Long Check-In Queue Elimination</td>
<td>0.863</td>
<td>0.89</td>
<td>0.88</td>
<td>0.56</td>
<td>0.057</td>
</tr>
<tr>
<td>d. Minimal Human Errors</td>
<td>0.796</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Raised Guest Commitment</td>
<td>0.624</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Data Security</td>
<td>0.462</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PEOU</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. HSA interface is understandable</td>
<td>0.860</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. HSA is delightful</td>
<td>0.634</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. HSA is user-friendly</td>
<td>0.625</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. HSA options are easy to find</td>
<td>0.759</td>
<td>0.84</td>
<td>0.84</td>
<td>0.54</td>
<td>0.162</td>
</tr>
<tr>
<td>e. HSA is pliable for interaction</td>
<td>0.401</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ME</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Customized Guest Experience</td>
<td>0.989</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Responsive to the requirements</td>
<td>0.939</td>
<td>0.94</td>
<td>0.94</td>
<td>0.85</td>
<td>0.162</td>
</tr>
<tr>
<td>c. Easy Access to the Services</td>
<td>0.848</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Satisfaction</strong></td>
<td></td>
<td>0.513</td>
<td>0.73</td>
<td>0.76</td>
<td>0.54</td>
</tr>
<tr>
<td>a. HSA lives to the expectations</td>
<td></td>
<td>0.765</td>
<td>0.73</td>
<td>0.76</td>
<td>0.54</td>
</tr>
<tr>
<td>b. Communication Improvement Improved service quality</td>
<td>0.882</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. through HSA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DI</strong></td>
<td></td>
<td>0.769</td>
<td>0.79</td>
<td>0.80</td>
<td>0.52</td>
</tr>
<tr>
<td>a. I plan to use the HSA again upon my stay</td>
<td></td>
<td>0.769</td>
<td>0.79</td>
<td>0.80</td>
<td>0.52</td>
</tr>
<tr>
<td>b. Upsurge to the brand commitment &amp;brand loyalty</td>
<td>0.497</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Forming a strong brand connectivity</td>
<td>0.800</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Ease of booking &amp; reward points redemption</td>
<td>0.766</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In some extra efforts, the researchers checked the inter-correlation among the tested variables by using the square root of AVE in order to confirm the discriminant validity.

**Discriminant Validity**

<table>
<thead>
<tr>
<th></th>
<th>PU</th>
<th>PEOU</th>
<th>ME</th>
<th>Satisfaction</th>
<th>DI</th>
</tr>
</thead>
<tbody>
<tr>
<td>PU</td>
<td>0.746</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEOU</td>
<td>0.238**</td>
<td>0.732</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ME</td>
<td>0.114</td>
<td>0.403***</td>
<td>0.922</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td>0.041</td>
<td>-0.351***</td>
<td>0.229**</td>
<td>0.732</td>
<td></td>
</tr>
<tr>
<td>DI</td>
<td>0.081</td>
<td>0.231*</td>
<td>0.202*</td>
<td>0.135</td>
<td>0.718</td>
</tr>
</tbody>
</table>

The value of AVE is ranging from 0.52 to 0.85 which is more than 0.50 which was recommended. This confirms the validity of the construction. In addition to this, the squared correlations between the pairs of the constructions were found to be less than the AVE values which supports the discriminant validity.

**Structural Equation Model:**
The model was tested using the SEM and the virtue of a good statistics was proved competently.

\[ df = 176 \text{ (p.001)} \quad \text{RMSEA} = 0.056 \quad \text{CFI} = 0.957 \quad \text{IFI} = 0.960 \quad \text{NFI} = 0.905 \quad \text{AGFI} = 0.85 \quad \text{GFI} = 0.883 \]

The table and the figure demonstrated below bear a very high prognostic possibility HSA re-exploration motives. As per the model stats, HSA has deemed for 16% of the overall disparity in ME, Satisfaction accounted for 36% in DI to re-explore.
Hypothesis Evaluation Measures

<table>
<thead>
<tr>
<th>Description</th>
<th>Estimate</th>
<th>p-values</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>PU ← PEOU</td>
<td>0.201</td>
<td>0.003</td>
<td>Accepted</td>
</tr>
<tr>
<td>ME ← PU</td>
<td>0.416</td>
<td>***</td>
<td>Accepted</td>
</tr>
<tr>
<td>ME ← PEOU</td>
<td>0.020</td>
<td>0.767</td>
<td>Rejected</td>
</tr>
<tr>
<td>Satisfaction ← ME</td>
<td>0.260</td>
<td>0.003</td>
<td>Accepted</td>
</tr>
<tr>
<td>DI ← Satisfaction</td>
<td>0.139</td>
<td>0.019</td>
<td>Accepted</td>
</tr>
<tr>
<td>DI ← ME</td>
<td>0.229</td>
<td>0.002</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

Anatomy Model Test

Five of the six hypothesis tested came out with positive feedbacks. SEM proved that the authority of PEOU of HSA on PU were positive and consequential (β = 0.201, p < 0.05). Thus, number one is confirmed. 2nd hypothesis showed the strongest bonding (β = 0.416, p < 0.05). This clearly suggested that the PU generated from using the branded HSA has a strong impact factor on the ME. 3rd hypothesis couldn’t get the desired support and hence it could not sustain. Support was revived in
the 4th hypothesis when we could observe that ME has a very crucial impact on the satisfaction of the guest ($\beta = 0.260, p < 0.05$). 5th hypothesis also got the desired support and performed well ($\beta = 0.139, p < 0.05$) and confirmed that ME & satisfaction both are inter-related. The final hypothesis also achieved good results ($\beta = 0.229, p < 0.05$). It also proved a good relationship between ME & DI.

The detection accentuates on the gravity of perceived usefulness, memorable encounters, guest satisfaction and DI to re-explore the hotels and its application. The unearthing of this research is quite alike to the experiments performed by Chen and Rahman et al., 2019; Seyfi et al., 2019. The research showed that with the memorable encounters of the guest, they plan to revisit and thus the business gets flourished. To add, the guest satisfaction when merged with the exceptional and accordant service, often excels to the top of the profits for any organization and it is observed that the guest tends to build up the brand loyalty.

Consulting & Conversation
The purpose of this study was to inspect about the reaction and the feedback of the guests using hotel smart-phone applications. It was also done to scrutinize whether the guests would return for re-use & re-exploration or not. Previous researches were not so deeply driven unlike this which emerged out with a consolidated model which can do the prediction and can also transcribe the guests’ discernible intent. This structure brings out an encyclopaedic study of the human behaviour and depicts the behavioural & technical aspects of the application. There was a hypothesis which proved to be wrong. The study focused on one significant angle, “Making easy software won’t help but making software easy to use will lead the way”. This belief is very strong, and the management of a hotel company must strengthen to believe in the technical advancement. The results showed that guests feel the convenience and advantageous over other platforms because of which the HSA started gaining the momentum. It pin-pointed that we are ready for a higher level and smart system of tourism technology that would make deeper impacts in the guest mind. The good and memorable encounters of the guest create opportunities of re-exploration. With good customer encounters and good services through applications reflect the re-purchase motives.

Connotations
COVID regulation persists in maximum part of the country and of the world also. Safety protocols are of utmost importance to guests who are traveling. Hotel applications have shown a new gateway to the innovative future with distinct communication channels with minimal error. The big brands have started espousing trademarked companies for better technology solutions. The positive results between PU and ME have pointed out that the hospitality industry has immense scopes to improve the guest encounters. Guests with good experiences tend to return with inflow of profits to the company while guests with bad encounters decided not to return and might not recommend also.

Study Obstacles & Prospects
The study was centred in India with the metropolitan cities in focus to target only the elite star category hotels. We could infer that if more cities were included with a greater number of properties, then the study might have showed some deviated results also with some varied endings and consequences. It is quite inapt that not every hotel uses the software applications as it involves implementation & maintenance cost. As it was a numerical study, using some other procedures in the nearest future as discussed above might fetch some different detection.

Cited Works
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