Emerging Market Dynamics Within and Beyond Customer Buying Decision Using TOPSIS to the Budget Hotel Chain Industry

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Abstract: *Hotel industry is an important part of tourism. The expansion of tourism is unavoidable bringing out development of hotel industry. Hotel industry is so closely linked with the tourism that it isresponsible for about 50% of the foreign exchange earnings from tourism department. The hotel industry in India is a fully developed industry marked by extreme competition, where an increase in market share typically comes at a competitor's price. The Indian hotel industry is experiencing a prolonged success. At present this industry has a supply of 1, 25,000 rooms in India and Government has taken several steps to boost travel & tourism which have benefited hotel industry the most in India. The data available with the World Travel and Tourism Council, India, indicates that India ranks 18th in business travel, and should rank among the top 5 within this decade. The hotel industry in India is going through an interesting phase. One of the major reasons for the increase in demand for hotel rooms in the country is the high growth in sectors like information technology, telecom, retail and real estate etc. The growth of the tourism industry has also added bonus to the hotel industry. Taj hotels, Resorts and Palaces covers a great market in hotel industry than the other luxury hotels in the race. They have better product profile than the rest i.e., great management, hospitality and facilities provided to their customers. To compete with this luxurious hotels is very difficult. But India is still a developing country where each individual is poor in nature and for them the government has come up with a budget hotel concept which is quite affordable and has reasonable price according to its facilities.*

I. Introduction

Indian Hospitality markets used to bedominated by unorganised players locally and disrupt the entire hotel industry in India by creating a pure asset-light budget stays. But post 20th century many hotels(5star)which have been adopted by western countries have entered into Indian market dethroning the unorganised players and dominating Indian market the major categories being budgeted segmented stays.

The main scope of the study is to find the most suitable business development strategy for budget hotels to facilitate growth in its sales. It covers information gathered from the present and future potential customers of hotel industry as well as the respondents who have expressed their views on budget hotel chain. The study emphases on brand awareness and consumer behaviour towards hotel industry. The study is done to know the overall perception towards the hotel industry and to how consumer elevate each attribute that build the perception. A set of questionnaires was put forward to the customers to evaluate the most suitable hotel rooms. In this research, a technique called multiple-criteria decision-making (MCDM) is used to evaluate the results after the response of the customers. This method can help decision makes to effectively deal with such situation and make wise design decisions to produce an optimized design. In this technique, there are different types of method like SAW (Simple Additive Weighting), ELECTRE (Elimination and Choice Translating Reality), AHP (Analytical Hierarchy Process), TOPSIS (Technique for Order Preference by Similarity to the Ideal Solution) ANP (Analytical Network Process) etc. The method I have used in this research is called TOPSIS which selects the alternative that is closest to the positive ideal solution (one which has the best attributes values) and farthest from negative ideal solution (one which has the worst attributes values).

II. Review Of Literature

- **Singh, T.V (1975):** In his study, has assessed hotels capacity at twelve different locations of tourist importance in the state of Uttar Pradesh. The main findings of the study were that the domestic tourists are neither choosey about accommodation nor they demand superior service. But the foreign tourists demand better quality hotels. As such, there is a shortage of accommodation in relation to foreign tourist.

- **Bhatia, A.K (1978):** He has made certain suggestion regarding the level of demand for accommodation services. He suggest that while calculating the requirements of rooms, various variable are required to be considered like duration of stay of a tourist and occupancy rates of tourist accommodation. If the annual occupancy would be higher, then number of rooms or beds required for the visitors would be high and vice versa.

- **Malkarnekar, G.S (1979):** In a case study has observed that the accounting system of a company helps to show the true state of affairs in hotel industry. He suggests that the management should use operating charts for various departments to show/profit loss of various sections during different quarters, revenues and various operating expenses of these departments shows their contribution to the net earnings of the company.

- **Guha (1981):** While highlighting the importance of the hotel industry in Indian tourism has suggested that the hotel has to provide basic hospitality services besides doing marketing (promotion) of rooms, supply of food, hot water, T.V, etc. He suggest ways of maximum utilization of the capacity and ways to increase tourist inflow.

- **Kalaskar P. (2013):** In India the hotels are classified on the basis of general features and facilities offered, hence they are classified as five star deluxe, five star, four star, three star, two star, one star and heritage hotels. These are the classification given by Ministry of Tourism, Government of India. Every five years these ratings are put under review. The 5 star hotels are included in the premium and luxury segment, 3 and 4 star hotels are included in the mid-market segment, 1 and 2 star hotels are included in the Budget hotels.

- **Kachru, Arun (1981):** In his paper, concludes that each hotel room gives employment to 3 direct workers while indirectly 9 workers are employed. Further important role of hotel industry is the generation of employment and foreign exchange earnings.

- **Bagri S.C., et al. (2012):** In an effort to increase guest satisfaction, hotels should make a concerted effort to increase employee satisfaction through policies and programs that these employees view as beneficial. Employee friendly policies and programs help to provide motivation. Motivation is considered to be a primary factor or variable that can act upon employees and inspire them to render effective service.

- **Krishnaswamy, J. (1980):** He has suggested that in order to develop tourism, a country has to provide hotels facility at various destinations. Further, he states that from the countries from which India used to attract tourist have shown a slowdown in the growth rate. The slow down in the arrival of tourist traffic is due to factors like political disturbances, rise in fuel cost, inflation and recession are attributable to the slow growth rate of tourist arrivals.

- **K.Pai (2012):** In his article the author has mentioned that India has a huge opportunity of growth in budget segments of hotels. He further states that the hospitality industry is seeing a sluggish demand due to the economic slowdown, todays hoteliers are of the view that the budget hotels have great scope of growth in India's market. He describes that budget hotels also helps the hotel companies to expand their business to new cities and market faster. The author further states that braded and non-branded budget hotels can be easily taken to tier-I and tier-II cities, unlike luxury hotels. Moreover, in tough times budget hotels can be flexible with pricing and still make profits.

- **Batra M. (2014):** Service bonding, Service timeliness, Service availability, Service communication are not showing good results though these factors are equally important parameters of service quality. All the parameters especially service bonding should be looked upon very seriously. So all the concerned hotels must try to improve on these fronts. It is ironical that all the hotels under study are five star and in spite of charging high prices of the services, they are performing miserably on Service Customization, Service Inclination and Service recovery parameters.

III. Research Gap Identified

Though India has a great pool of hotel market, but multi-billion doller segment is still unorganised. The presence of brand or brand awareness is not sufficient enough as 80% of room supply is within the budget segment. Compare to other country like China ,UK and Europe online hotel market penetration is insufficient. The aim of this study is to evaluate the future prospect of market potentiality, exploring the expectation of guest,

potential innovations, emerging and emerging opportunities. The aim of the study is also to examine the potential business development in India and encourage innovative ideas.

Company need to revamp their Information Management in the terms of customer perception and consumer attitude which form the basis of the problem statement. The study is an attempt to uncover the details within the problem statement.

IV. Objective Of The Study
* To investigate how the hotel industry could keep retaining their current customer satisfaction and loyalty.
* To know the prospect customer for further improvement of their profit margins.
* To determine the level of customer satisfaction and challenges faced by their customers.
* To study the involvement of buying decision of the customers.
* To study the over demand of customer's expectations and improvement the service quality of the hotels.

V. Methodology

Application of TOPSIS (MCDM)

The **Technique for Order of Preference by Similarity to Ideal Solution** (**TOPSIS**) is a multi-criteria decision analysis method, which was originally developed by Hwang and Yoon in 1981with further developments by Yoon in 1987,and Hwang, Lai and Liu in 1993.It is based on the concept that the chosen alternative should have the shortest geometric distance from the positive ideal solution (PIS)and the longest geometric distance from the negative ideal solution (NIS). The method introduces two reference points but does not consider the relative importance of the distances from these points. This method is not only very intuitive and practical but also an effective one.

It is a method of compensatory aggregation that compares a set of alternatives by identifying weights for each criterion, normalising scores for each criterion and calculating the geometric distance between each alternative and the ideal alternative, which is the best score in each criterion. An assumption of TOPSIS is that the criteria are monotonically increasing or decreasing. Normalisation is usually required as the parameters or criteria are often of incongruous dimensions in multi-criteria problems. Compensatory methods such as TOPSIS allow trade-offs between criteria, where a poor result in one criterion can be negated by a good result in another criterion. This provides a more realistic form of modelling than non-compensatory methods, which include or exclude alternative solutions based on hard cut-offs.

In real life, decision-making problems are not fixed, and by the time some modifications to the initial problem may be required. TOPSIS technique has been commonly used to solve decision-making problems. This technique is based on the alternative is removed or added, depending on the situation, the whole process for TOPSIS should be redone, which is laborious and time-consuming.

Review of TOPSIS

The best decision alternative may be evaluated using TOPSIS through a series of steps shown below:

STEP 1: Normalization of Decision Matrix

$$n_{ij} = {x_{ij}} \Big/ {\sqrt{\sum_{j=1}^{m} x_{ij}^2}} \; ; j = 1,2,\ldots\ldots m \; \& \; i = 1,2,\ldots\ldots n$$

STEP 2: Weighted normalized decision matrix. The weighted normalized values are calculated as

$$v_{ij} = w_i n_{ij} \;, j = 1, 2 \ldots m; i = 1, 2 \ldots n \; \&$$

$$w_i = \text{Weight of the i}^{th} \text{ attribute or criterion and } \sum_{i=1}^{n} w_i = 1$$

Evaluation of weight is dealt separately under the section 'Choice of Weights'.

STEP 3: Determination of Positive and Negative Ideal solution

$$A^+ = \{v_1^+, \ldots, v_n^+\} = \left\{ \left(\begin{matrix} max \\ j \end{matrix} v_{ij} \middle| i \in I \right), \left(\begin{matrix} min \\ j \end{matrix} v_{ij} \middle| i \in J \right) \right\}$$

$$A^- = \{v_1^-, \ldots, v_n^-\} = \left\{ \left(\begin{matrix} min \\ j \end{matrix} v_{ij} \middle| i \in I \right), \left(\begin{matrix} max \\ j \end{matrix} v_{ij} \middle| i \in J \right) \right\}$$

where I is associated with the benefit criteria, and J is associated with the loss criteria.

STEP 4: Calculation of Separation Measures, using the n-dimensional Euclidean distance.

The separation of each alternative from the positive ideal solution is given by

$$d_j^+ = \left\{ \sum_{i=1}^n \left(v_{ij} - v_i^+ \right)^2 \right\}^{\frac{1}{2}}, j = 1 \ldots m$$

The separation of each alternative from the negative ideal solution is given by

$$d_j^- = \left\{ \sum_{i=1}^n \left(v_{ij} - v_i^- \right)^2 \right\}^{\frac{1}{2}}, j = 1 \ldots m$$

STEP 5: Calculation of Relative Closeness to Ideal Solution. The relative closeness of the alternative A*j*with respect to A$^+$ is defined as

$$R_j = \frac{d_j^+}{\left(d_j^+ + d_j^- \right)}, j = 1 \ldots m$$

Since $d_j^- \geq 0$ and $d_j^+ \geq 0$, then clearly, $R_j \in [0, 1]$

STEP 6: Ranking the preference order. For ranking using relative closeness value, the smaller the value, the better is the alternative as it is relatively closer to the ideal solution. Thus, the alternatives may be ranked in increasing order.

VI. Data Analysis & Findings

The data is collected by filling up the questionnaire and asking the respondents about different attributes which were taken in the scale of 1 to 5. The ratings given are from 1 to 5 where 1: Worst to 5: Best. The following are the tables that represent specific consumer characteristics:

WEIGHTAGE	0.3	0.2	0.1	0.2	0.2
NAMEOF BUDGET HOTEL	PRICE FEASIBILITY	LOCATION AS PER CONVENIENCE	CANCELLATION CHARGES	CLEANLINESS	BASIC AMENITIES

CHAIN					
FABHOTELS	3	3.5	3.5	4	4
OYO ROOMS	5	4.5	4	3.5	3.5
TREEBO	4	4	3	3.5	4

Data analysis is the process of systematically applying statistical and logical techniques to describe and illustrate, condense and recap, and evaluate data. Multi-criteria decision making techniques ae useful tools to help decision makers to select options in the case of discrete problems. In this research project one of the multi-criteria models in making decision, a Technique for Order Preference by Similarity to an Ideal Solution (TOPSIS) is being used. Some of the advantages of TOPSIS methods are: simplicity, rationality, comprehensibility, good computational efficiency and ability to measure the relative performance for each alternative in a simple mathematical form.

The best decision alternative may be evaluated using TOPSIS through a series of steps shown below:

STEP 1: Calculate normalized matrix

NAMEOF BUDGET HOTEL CHAIN	PRICE FEASIBILITY	LOCATION AS PER CONVENIENCE	CANCELLATION CHARGES	CLEANLINESS	BASIC AMENITIES
FABHOTELS	0.424264	0.502571	0.573462	0.628539	0.601317
OYO ROOMS	0.707107	0.646162	0.655386	0.549972	0.526152
TREEBO	0.502519	0.574367	0.491539	0.549972	0.601317

STEP 2: Calculate weighted normalized method

NAME OF BUDGET HOTEL CHAIN	PRICE FEASIBILITY	LOCATION AS PER CONVENIENCE	CANCELLATION CHARGES	CLEANLINESS	BASIC AMENTITES
FABHOTELS	0.127279	0.100514	0.057346	0.125708	0.120263
OYO ROOMS	0.212132	0.129232	0.065539	0.109994	0.10523
TREEBO	0.150756	0.114873	0.049154	0.109994	0.120263

STEP 3: Calculate the ideal best and ideal worst value

A^+ = Ideal best value

A- = Ideal worst value

IDEAL VALUE	PRICE FEASIBILITY	LOCATION AS PER CONVENIENCE	CANCELLATION CHARGES	CLEANLINESS	BASIC AMENITIES
A+	0.212132	0.129232	0.065539	0.125708	0.120263
A-	0.127279	0.100514	0.049154	0.109994	0.10523

STEP 4: Calculate Euclidean distance from ideal best value
D^+= Euclidean distance from ideal best solution

NAME OF BUDGET HOTEL CHAIN	D^+
FABHOTELS	0.089954746
OYO ROOMS	0.021746316
TREEBO	0.066997089

STEP 5: Calculate Euclidean distance from ideal worst value
D^- = Euclidean distance from ideal worst solution

NAME OF BUDGET HOTEL CHAIN	D^-
FABHOTELS	0.023238
OYO ROOMS	0.091067
TREEBO	0.031358

STEP 6: Calculation of Relative Closeness to ideal solution
Rj= Relative Closeness or performance score

NAME OF BUDET HOTEL CHAIN	R_j
FABHOTELS	0.205298
OYO ROOMS	0.807236
TREEBO	0.318824

STEP 7: Ranking the preference order
Ri= Rank

NAME OF BUDGET HOTEL CHAIN	R_i
FABHOTELS	3
TREEBO	2
OYO ROOMS	1

VII. Results

The result shows that Oyo rooms is performing the best in the market followed by Treebo hotel and then followed by Fabhotels, all the data collected were coded and tabulated on the basis of various objectives and variables that measure them. Because there is no standardised routine to ensure this in an independent budget hotels, the quality of the guest's visit is put at risk- this is what these brands have to overcome. Reservation can mixed up, double-bookings can occur, room availability may be misinterpreted and guests may need to be accommodated at other properties. These issues can severely hamper the growth of this segment as a whole.

The result of study shows that company should include the other additional services as part of the booking/ reservation system. The study also reveals that the company should upgrade the system to online inquiry, so that the client can easily get a feedback or answer once they send an inquiry message. Up gradation of the system of online payment through all the possible modes, thus giving their client the ease of easily and immediately paying their reservation fee without leaving their own home according to the finding of the study. They should also include an audit trail, to track the time of log-in and log-out of the user. There should be more security and safety measures which should be undertaken specially for foreign tourists. There should be more facilities which should be brought about according to the rates of the hotel rooms. Check-in and check-out processes should be available 24*7 so that travellers should not face much problem.

VIII. Conclusion

Based on the information it can be concluded that by taking initiative beyond generating bookings and branding the property, the brands can equip these properties with processes and technology that can simplify this management for both parties. Take automation of repetitive tasks for instance: this can significantly bring down the number of human errors and unsatisfied guests, enhance the guest experience, and even lighten the load on the hotel's staff. In addition, technology can also automate certain aspects of the collaboration between the supplier and the demand generator, lowering costs as well as dependence on manpower. By employing these methods, these demand generators can ensure long-term sustainability. It's easier said than done, but it is necessary to bring about the disruption we all want to see.

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