

# Backpackers' Expectations of Hybrid Hotels: A Text Mining Approach

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# **Backpackers' Expectations of Hybrid Hotels: A Text Mining Approach**

## **Abstract**

Backpackers are a rapidly growing youth traveler segment, motivated by budget airfare and the increasing popularity of hostels. Hostels are the primary choice of accommodation as they provide a unique social atmosphere, designed to facilitate interactions between guests, at an affordable price. With hostel trends on the rise, hotels are trying to claim part of the market by offering inexpensive dormitory accommodations, i.e. hybrid hotels. However, is a hotel with dormitory-style rooms and communal facilities enough to qualify it as a hostel? Literature review reveals that backpackers hold expectations and evaluate hostels based on eight accommodation attribute dimensions. The study employs text mining and sentiment analysis to provide insight into the perceptions, expectations, and sentiments of backpackers opting to stay in a hybrid hotel rather than a hostel. The results reveal that backpackers seek a set of unique benefits in their accommodation, which rarely is met by hybrid hotels.

*Keywords: Backpacker, Text mining, Customer Satisfaction*

*Track: Tourism Marketing*

## 1. Introduction

In 2009, the international youth traveler segment, which is comprised of Generation Y (also referred to as ‘millennials’) and Generation Z, had a total value of USD 190 billion, and in less than ten years, that value doubled to USD 280 billion in 2017. The United Nations’ World Travel Organization (UNWTO) forecasts that by 2020, the nearly 370 million youth travelers will spend collectively over USD 400 billion (WYSE Travel Confederation, 2018). Since they were first recognized as an independent tourist segment in 1968 by Erik Cohen, backpackers have significantly increased their market share. This group tends to take longer trips, as they have more free time, and despite having limited funds, they generally spend more money directly in local communities than other types of tourists. They are primarily between the ages of 15 and 25 and find themselves at a juncture in life and decide to travel for extended periods (Riley, 1988; Loker-Murphy & Pearce, 1995; Uriely, Yonay, & Simchai, 2002). They do not follow strict travel schedules, travel on a small daily budget and are budget conscious in their purchasing decisions. Backpackers make a conscious effort to avoid mainstream tourists and mass-tourism experiences where they can meet other like-minded individuals. While word-of-mouth (WOM) is the most common way backpackers exchange information, they also offer their experiences in the form of reviews online (Cohen, 1973; Riley, 1988; Loker-Murphy & Pearce, 1995; Elsrud, 2001; Murphy, 2001; Uriely, Yonay, & Simchai, 2002; Hecht & Martin, 2006; Nash, Thyne, & Davies, 2006; Kerry, 2013; Mohn, 2013; Oliveira-Brochado & Gameiro, 2013; Hostelworld Group, 2016; Mikulić, Miličević, Šerić, & Ćurković, 2016; Dayour, Kimbu, & Park, 2017; Martins, Rachão, & da Costa, 2018).

Accommodation is an integral part of the travel experience. Hostel backpacking has become a significant global cultural, social and economic phenomenon due to the emergence of cheap and affordable plane tickets and new hostels opening (Thyne, Davies, & Nash, 2005). Hostelworld.com (2020) reported 6.78 million net bookings in 2019. The hostel industry, valued at USD 6.08 billion in ‘bed’ revenue in 2019, is expected to grow 7-8% year-over-year (Hostelworld Group, 2016; The Business Research Company, 2020). With hostel trends on the rise, hotels are trying to claim part of that market segment by offering dormitory accommodations with shared common areas for budget tourists. Once these hybrid hotels begin marketing themselves on an online travel agency (OTA) such as Hostelworld.com, questions on

how they can meet the expectations and needs of backpackers need to be addressed. A review of the literature showed that backpackers hold expectations regarding eight accommodation attribute dimensions: price/affordability, facilities, cleanliness, security, location, staff, atmosphere and miscellaneous services. However, insights remain inconclusive whether hybrid hotels meet the expectations held by backpackers to the same degree as traditional hostels do (Cohen, 1973; Riley, 1988; Loker-Murphy & Pearce, 1995; Firth & Hing, 1999; Murphy, 2001; Hecht & Martin, 2006; Nash et al., 2006; Kerry, 2013; Brochado, Rita, & Gameiro, 2014; Amblee, 2015; Hostelworld Group, 2016; Mikulić et al., 2016; Martins et al., 2018).

This study aims to explore the perceptions and expectations held by backpackers regarding hybrid hotels. This is done by employing a netnographic approach using text mining analysis of hybrid hotel reviews from backpackers (Mazanec, 2020). This provides insight into their perception of this accommodation type and allows conclusions on the customer-business fit. Moreover, this study also aims to demonstrate the usefulness of latent topics and sentiment analysis for performance analysis in hospitality.

## **2. Conceptual framework**

The economic influence of backpackers is growing each year; therefore, it is important to understand their values and expectations to gain insight into their post-purchase satisfaction level. Consumers hold expectations about a product or service before consumption. Essentially, individuals create a frame of reference that will form the basis for a comparative judgment. Once the product or service has been consumed, the customer evaluates their experience and determines if their expectations were either confirmed or disconfirmed. In evaluating the quality of the experience, the consumer determines if they are satisfied (Oliver, 1980). Satisfaction is an individual's measurement of a specific transaction. It results from a comparison of what a consumer 'would' expect, and service quality results from the comparison of what a consumer 'should' expect. Service quality is an attitude formed by a consumer's overall evaluation. They differentiate in the way they operationalize disconfirmation (Cronin & Taylor, 1992). Lehtinen (1983) qualifies service quality in terms of 'process-' and 'output quality'. A customer judges the process quality while the service is being carried out, and the output quality is determined following the delivery and performance of the service (as cited by Berry, Zeithaml &

Parasuraman, 1985). Berry et al. (1985) were able to conclude that customers perceptions of service quality are based on the comparison of expectations held prior to using the service and the actual experience of consuming the service, as a result of their study.

### *2.1 Text analysis in tourism*

Hospitality practitioners have access to an over-whelming amount of data, given the capacity of Web 2.0 to store an almost seemingly limitless amount of data. Text mining is particularly useful for companies dealing with a significant amount of reviews because reading and analyzing reviews one by one is just not feasible, fiscally or timewise (Lee & Bradlow, 2011). It allows users to extract meaning from keywords and phrases. Lau, Lee and Ho (2005) laid out three reasons why hotel management might find text mining to be a useful tool. The first is it can be used for an environmental scan of customer intelligence by means of analyzing customer-generated content online. This tool can also be used to analyze qualitative data to collect customer intelligence. Third, it can improve a hotel's knowledge management efficiency by analyzing internal sources of information. Studies employing text analysis have demonstrated its efficacy in identifying and uncovering patterns, trends, meaning and topics.

Lau et al. (2005) conducted three studies to demonstrate the usefulness of text mining to manage large amounts of hotel information. The first study was geared towards the creation of a hotel profile database. They suggest this can be useful for managers to identify opportunities and threats. The second study implemented text mining to analyze the hotels' room pricing schedules. The final study was to gather customer intelligence by analyzing travel-related newsgroups. As a result, Lau et al. confidently concluded that text mining is a tool that hoteliers should invest in.

Lee, Singh and Chan (2011) utilized text mining to form keyword clusters for service failures and recovery actions in the hotel industry. Fifty keywords in eight clusters were identified for service failure, and 50 keywords in seven clusters were also identified for recovery action. Lee et al. (2011) successfully demonstrated how text mining can be used to systematically cluster service failures and recoveries in a manner that provides context, meaning and identifies patterns.

Dickinger and Mazanec (2015) employ text mining to identify keywords associated with either positive or negative hotel reviews. The authors collected 443 online reviews from

TripAdvisor.com and separate them into two groups (positive and negative reviews). In order to understand the predictive power of keywords, a penalized Support Vector Machine is chosen.

He et al. (2017) use text mining, along with sentiment analysis, to analyze online hotel reviews. A total of 11,043 reviews were collected from TripAdvisor.com. They used Google Prediction API to classify their dataset into positive, negative and neutral comments. The authors concluded that the five most important aspects of a hotel for guests are food, location, rooms, service, and staff.

### **3. Methodology**

Data in the form of reviews for this study was collected from a hybrid hotel in Vienna listed on Hostelworld.com. This property was selected for this study because it is marketed as a hybrid hotel, suggesting it is both a hotel and a hostel. It is a hybrid hotel chain that caters to budget tourists, namely families, backpackers, school groups and business travelers. The property has large common areas, a communal kitchen with laundry facilities, and dormitories. The price point is comparable with €20 per bed/night at all three properties of this little chain.

The sample, 500 reviews, was manually collected from Hostelworld.com in April 2019. The reviews were screened and selected based on the criteria that distinguish backpackers from other tourist segments. Backpackers are typically solo travelers so only reviews that listed single travelers staying in a dormitory were selected. They had to be written in English to avoid possible misinterpretations. The reviews also had to contain a minimum of five words to provide enough information for the text mining analysis. The reviews were recorded and formatted in a manner that is usable in PSPP and WordStat. The gender, age, nationality and reviewer status (along with the number of reviews written) of the reviewer was recorded in addition to their overall rating of the accommodation and their feedback.

The dataset was imported into WordStat for natural language preprocessing. Data preprocessing included removing stop words, lemmatization, punctuation, numbers, special characters, white spaces and putting all words into lowercase (Denny & Spirling, 2018).

WordStat categorized the reviews into various latent topics with word and phrase lists (Peladeau & Davoodi, 2018). Minor adjustments were performed to clarify each topic. This included combining topics and removing words that did not fit the theme. Text mining was then used to analyze the reviews for word frequency and co-occurrences. The sentiment analysis was

performed using Text Analysis API from Aylien, in combination with Google Sheets. The reviews were uploaded onto a Google Sheet, and the programmed API conducted a sentiment analysis. The API also provided the confidence level for each case, in addition to classifying the reviews into positive, negative and neutral sentiments (Alkalbani et al. 2017). The dataset was further analyzed using WordStat, now with sentiment classifications and cross-tabulations performed on keywords, phrases and topics. Lastly, the results were carefully examined to identify patterns and themes that provide insight into backpackers' preferences and sentiments towards various accommodation attribute dimensions.

#### **4. Findings**

The 500 reviews had an average rating of 8.51/10 with 153 positive reviews, 92 negative reviews and 15 neutral reviews. The categorization process revealed the four most frequent topics across the dataset, namely atmosphere, facilities, location and staff.

'Staff' is the most satisfying element of a backpacker's visit to the hybrid hotel (see Figure 1). The staff either met backpackers' expectations or exceeded them. This dimension was mentioned in 80 positive reviews (52.3%). It appears in fewer negative reviews than any other category, with only 39. The reviews mention the interpersonal behaviors of the service providers, namely their politeness, friendliness, helpfulness and kindness, thus confirming Lehtinen's (1983) definition of service quality (as cited by Berry et al., 1985). However, there is always room for improvement. A hostel staff plays a crucial role in a backpacker's experience by encouraging an open and friendly atmosphere that is conducive to networking and social interactions among guests. Organizing and facilitating activities within the common areas is sought out by backpackers (Murphy, 2001).

The 'location' of the hybrid hotel was present in 57% of reviews. A sentiment analysis determined that backpackers were split; the topic was present in 55.9% of all positive reviews and 51.1% of all negative reviews. The hybrid hotel is located about a 10 to 15-minute walk from an underground station, and about a 25-minute walk to the city center. Reviewers appreciate the proximity to many popular places. The word 'walk' was present in 122 cases, accounting for 24.8% of all positive reviews and 21.7% of all negative reviews. Backpackers are a resilient segment, always pushing their physical, mental, emotional and spiritual limits. For the most part, the results are consistent with Brochado et al. (2014) and Amblee (2015) in that

location is an accommodation attribute that this segment of travelers is willing to forgo, if the hostel exceeds at meeting the expectations held about the other attributes.

Topic	Keywords	Coherence	Frequency	No. Cases	% Cases
STAFF	STAFF; HELPFUL; FRIENDLY; SUPER; STAFF WAS; STAFF WERE; FRIENDLY STAFF; STAFF ARE; FRIENDLY AND HELPFUL; STAFF IS;	0.351	309	232	46.40%
LOCATION	CENTER; CITY; WALK; MIN; CITY CENTER; MIN WALK; CITY CENTRE; MINUTE WALK; WALK TO THE CITY; OF THE CITY; STATION; MINUTE; METRO; WALK; MIN; MINUTE WALK; LOCATION IS; MIN WALK; METRO STATION; MINUTES WALK; LOCA- TION; CLOSE; METRO;	0.360	565	285	57.00%
ATMOSPHERE	GOOD LOCATION; LOCATION WAS; MEET; PEOPLE; TRAVELLER; AREA; NIGHT; FAMILY; MEET PEOPLE; PLACE TO MEET PEOPLE; SOLO TRAVELLER; IS A HOTEL; FEEL; PLACE; HOTEL; NIGHT; TRAVELLER; ATMOSPHERE;	0.362	390	341	68.20%
FACILITIES	HOTEL THAN A HOSTEL; OF A HOTEL; BATHROOM; SHOWER; BED; ROOM; COMFORTABLE; AREA; DORM; ROOM WAS; KITCHEN WAS; BUNK BED; COMMON AREA; BED WAS; DOUBLE BED; KITCHEN; SMALL; ROOM; MODERN; KITCHEN IS; KITCHEN WAS; ROOM WAS; BEDS WERE; HOSTEL; HOTEL; CLEAN;	0.398	1257	458	91.60%

Figure 1: Latent topic categorization

‘Atmosphere’ was the latent topic with the highest percentage of negative reviews (69.6%). Backpackers’ disliked the mixing of tourist types. They did not expect to be sharing common areas with families and school groups and typically avoided spending time in those areas. The atmosphere was frequently likened with that of a hotel. The word ‘hotel’ was found in 52.2% of negative reviews and co-occurred with ‘hostel’ in 38.4% of those cases. Many backpackers who booked the hybrid hotel expected a more hostel-like atmosphere, but there was a disconfirmation of that expectation during the post-purchase evaluation. However, a handful of reviewers recommended it as an ideal atmosphere for groups or solo travelers who need a little rest and relaxation. These findings are congruent with those found in the literature. Backpackers are at their happiest when they are with their own kind and will continue to avoid unnecessary interactions with mass tourists. The hybrid hotel demonstrated that they could not meet the atmosphere expectation as it is predicated upon the vision of a budget accommodation for all types of tourists. Furthermore, the design of the environment, including its boundaries, props, modifiers and space, was not conducive of the atmosphere typically sought out by backpackers.

The facilities encompass communal areas, rooms and bathrooms and includes the inherent furnishings and features of these areas. The atmosphere and the facilities topics



frequently overlap in terms of the design of the spaces. The purpose of studying facilities is to understand if the hybrid hotel provides practicality, consistency and reliability with their design (Fesenmaier & Xiang, 2017). It is important to note that the 'cleanliness' attribute was grouped in with the topic as most reviewers used it to describe the state of the facilities. Sentiments associated with topic keywords led to the identification of problem areas. One major issue was that the spaces were quite small, particularly the dormitories. The term 'small' was found in 14.1% of the negative reviews and co-occurred with 'room' 47 times. The communal kitchen (which also contained the laundry facilities) also was quite small and typically was overrun by families and their children, making it difficult for backpackers to use the space. While most backpackers did not enjoy the hotel-like atmosphere and decor, they did appreciate certain features inherent to a hotel, like the comfortable mattresses and the cleanliness.

#### **4. Conclusions and implications**

The research at hand investigates the perceptions of travelers on a stay at a hybrid hotel. The findings indicate that hybrid hotels only partially meet the expectations held by backpackers to the same degree as traditional hostels do. Backpackers choosing to stay at a hybrid hotel might not be aware that they will be sharing it primarily with main-stream tourists. Literature on slow and individual tourism suggests that these types of tourists prefer to stay away from mass tourism. For destinations and hotel developers, the budget tourist segment, which backpackers are a part of, proves to be an interesting growth market. While innovative accommodations, such as hybrid hotels, at first sight may cater to those individuals; however, a closer look at the benefits backpackers seek reveals that property developers need to tailor their offer to the segment they want to cater.

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