

Unraveling Tourists' Preferred Homestay Attributes from Online Reviews: a Sentiment Analysis Approach

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Abstract

The purpose of this paper is to identify mostly talked about general and specific attributes of homestay accommodations in online tourist reviews and to bring an understanding on sentiments attached to them. It offers insightful thought on tourists/customer preferred attributes which in turn helps in designing and delivering better homestay services. Sample of 14,084 reviews on homestays located in nine different states of India are extracted from Trip Advisor.in website. Quantitative content analysis based on frequency of words is conducted to get an understanding on mostly spoken about homestay attributes. Further, set of 'tidy' and 'text/sentiment mining' tools are used to approach and infer the emotional content of reviews as whether the part of text is positive or negative, or even more subtle level difference in emotion like joy or fear. Correlation test was conducted to gain quantitative outlook of similarities and differences between the sets of frequent words in reviews of homestays. Application of sentiment analysis resulted in categorizing the sets of words into eight different emotional categories depicting four positive and four negative emotions. The words in these categories were found to have certain associations with various attributes of homestay accommodation. Broadly, fourteen attributes were found to be mostly talked about in sets of words extracted from online reviews signifying that they had strong connection in creation of positive and negative sentiments towards homestays. Words with high frequencies were more specifically related to the attributes of homestay accommodation. As the frequency of words decreased, they were found to be more related to attributes of the homestay location or the destination. Correlation coefficient of word frequencies suggested that majority of reviews were done on common attributes of homestays irrespective of geographical location. Practical and research implications are provided.

Key Words: Homestay, sentiment analysis, online reviews, e-WOM.

1. Introduction

Emergence of Web 2.0 has resulted in enormous amount of user generated online content (Shan, Ren, & Li, 2016). In tourism sector, it has enabled tourists to share their reviews regarding various tourism products online (Rahmani, Gnoth, & Mather, 2017). Homestay is one such key product of cultural tourism and is a fastest growing accommodation segment in Tourism industry (Wang, 2007; Rizal, Yussof, Amin, & Chen-Jung, 2018). With remarkable growth of sharing economy in tourism industry and homestay being a part of it, has seen tremendous increase in demand, since travellers of today desire to engage in meaningful interactions with locals, and to get authentic experience unique to a destination (Hasan, Sabtu, & Sahari, 2016; Tussyadiah & Pesonen, 2016). Homestay has taken a form of product diversification in accommodation sector and has contributed in growth of tourism as well as regional development (Oguchaa, Riungub, Kiamaa, & Mukolwe, 2015). Homestay has been the effective tool in alleviating poverty through income generation especially among rural poor population and hence is considered as pro-poor tourism concept (Bhalla, Coghlan, & Bhattacharya, 2016; Truong, Hall, & Garry, 2014). Homestay is also considered as pro-women tourism concept because of its contribution towards women empowerment by fostering gender equality (Acharya & Halpenny, 2013). In top fifty tourist destinations in India, homestays have taken up as much as 13% share in accommodation sector (Pratap, 2016).

The growing importance of the homestay can be realised by the benefits it brings to the host community and hence it is important that sustainability of this accommodation sector is ensured for consistent development of the community in which the concept is implemented (Agyeiwaah, Akyeampong, Boakye, & Adu-Gwamfi, 2014). Sustainability can be ensured by constant improvement (Abreu, Martins, Fernandes, & Zacarias, 2013). In hospitality industry, sustainability can be achieved through continuous improvement in service operations (Chen, Sloan, & Legrand, 2010) resulting in improved brand image which ensures continuous inflow of tourists. For homestay concept to be sustainable, great attention and strong strategies are needed to develop it further (Samsudin & Maliki, 2015) as homestay accommodation is a special interest tourism product and is experiential in nature as opposed to traditional hotel accommodations (Jamal S. a., 2011; Guttentag, 2015). To improve the services, it is necessary to understand the needs and expectations of tourists regarding facilities provided by the homestays and prioritize continuous improvement in service attributes that are of utmost importance to them (Molina-Azorín, Tarí, Pereira-Moline, Gamero, & Pertusa-Ortega, 2015).

With the growth of internet based accommodation reservation system in last decade, user generated online reviews popularly known as Online Consumer Reviews (OCR) or electronic Word of Mouth (e-WOM) has become one powerful tool to understand needs, feelings and expectations of tourists (Gössling & Lane, 2014). Online reviews have strong influence on decision

making by travelers' while selecting an accommodation during their travel (Gretzel & Yoo, 2008). Through online reviews, travelers who actually stayed in accommodations talk about attributes and facilities which becomes the information base for other travelers during the process of comparison and selection (Filieri & McLeay, 2014). Online reviews reduces the information gap between marketers and customers and facilitate useful exchange of information between them which helps marketers to design their products and services that best suits the needs of customers (Labrecque, Esche, Mathwick, Novak, & Hofacker, 2013). Study of online reviews brings an understanding on what made tourists to post them online, which in turn help hosts to improve and strengthen their services (Park & Allen, 2012).

Homestays have also become the part of internet based reservation system (Kline, Morrison, & John, 2005) and a substantial amount of user reviews has been generated and available online. Comprehending the growing importance of homestay services and mounting academic interest in the study of online reviews as e-word of mouth, authors of this paper determined to understand homestay attributes those are often talked about in online reviews and sentiments of the reviewers towards the accommodation. Further, literature gap in this framework was revealed in the literature review section. To meet the objective, quantitative content analysis approach is followed. The results of the same are presented. Lastly, findings are discussed on the relative impact of online reviews from both academic and managerial perspectives.

2. Literature Review

Homestay is an accommodation arrangement in which tourists stay like a family member in homes of local residents in a destination, eat food, experience daily ways of host's life (Gu & Wong, 2006) in exchange for a payment (Andriotis & Agiomirgianakis, 2013). According to (Jamal, 2011), homestay tourism is a form of tourism which attracts a particular segment of tourism market in which people desire for authentic experiences as it is based on nature, culture and local custom. Unlike other accommodation options, homestay provides opportunity for tourists to learn about local life and culture (Kontogeorgopoulos, Churyen, & Duangsaeng, 2015). Generally, idle rooms in the host's private homes are provided to interested tourists (Hjulmand, Nielsen, Vesterlokke, Busk, & Erichsen, 2003). This becomes an opportunity for hosts to earn some additional income and also to meet people from across culture (Lanier & Berman, 1993; Gan, Inversii, & Rega, 2018). Homestay has gained substantial attention from researchers following its growing demand (Mura, 2015). A number of empirical studies have been conducted to understand which attributes of homestays attract tourists to choose the accommodation. Homely atmosphere, personalized services, home cooked food, authentic local experiences, cultural immersion have remained the top reasons among tourists to choose a homestay accommodation while travelling (Wang, 2007; Gunasekaran & Anandkumar, 2012; Agyeiwaah, 2013). Although homestays is a part of experiential &

cultural tourism(Wang, 2007), empirical findings suggest that price also has a role to play while tourists decide to stay in a homestay accommodation(Hsu & Lin, 2011; Rasoolimanesh, Dahalan, & Jaafar, 2016). Some other reasons concluded by previous researches are quiet local neighbourhoods (Tussyadiah & Pesonen, 2016), less pollution(Agyeiwaah, 2013), scenery, attractions, liesure and relaxation (Hsu & Lin, 2011). Although studies have been done on why tourist choose homestays but their sentiments towards the accommodation has not been studied yet. One way to know sentiments towards certain product or service is sentiment analysis using online consumer reviews (Yu, Duan, & Cao, 2013).

Online consumer reviews (OCR) are the big data source for stakeholders of business (Qi, Zhang, Jeon, & Zhou, 2016). They have implication for businesses especially on sales and business performance (Ye, Law, Gu, & Chen, 2011). In case of customers, it helps in their purchase decision. Analyzing OCR is a challenging task due to its volume, variety, velocity and veracity (Qi, Zhang, Jeon, & Zhou, 2016). This led to the core establishment of Big-data commerce, which can help in extracting real time insights from big data to drive more profitable business decisions. In case of tourism-accommodation sector, OCR has impact on rate of hotel booking and hotel performance (O'Connor, 2008). It has become handy to the travelers in their travel planning specifically while choosing accommodation (Gretzel & Yoo, Use and Impact of Online Travel Reviews, 2008). The negative/positive sentiments expressed in the reviews can influence booking intention and trust among readers about particular service provider (Lee, Law, & Murphy, 2011). Performance of any business can be improved not only by understanding the initial expectation of customers but also by learning from the customers' word-of-mouth about their products. OCRs are more user-oriented and describe the product in terms of different usage scenarios and assess it from a user's perspective (Chen & Xie, 2008). Thus they are popularly called electronic word-of-mouth and gives insights on consumer preferred attributes of a service and their sentiments towards them (Liu & Karahanna, 2017). In manufacturing sector, the description or the opinion mentioned on the product attributes are being considered for product improvement or product development(Qi, Zhang, Jeon, & Zhou, 2016). In homestay accommodation sector too, OCRs have implications to operators on attributes those need improvements or facilities those are to be added by analyzing the reviews.

3. Methodology

Quantitative content analysis was carried out to identify the attributes of homestay services.14,084 reviews on homestays in India were obtained from TripAdvisor.in through web scrapping. The purpose of the paper is to study sentiments towards various attributes of homestays in entire nation. Hence, effort was made to collect reviews across locations in India to ensure maximum coverage. Based on availability of reviews on the website; the

states of Assam, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Rajasthan, Sikkim, Uttar Pradesh, and Uttarakhand were selected. The data was extracted and analyzed using R software. R commands were taken from the works of Silge & Robinson (2018), Hadley & Renkun-ken (2015), Peterson (2017), and Claudia (2017) and customized as per the need of this work.

Tidy text format approach is employed to analyze the review text. The tidy text format is defined as “a table with one-token-per-row. A token is a meaningful unit of text, such as a word, that we are interested in using for analysis, and tokenization is the process of splitting text into tokens”. Further, set of ‘tidy’ and ‘text mining’ tools are used to approach and infer the emotional content of reviews as whether the part of text is positive or negative, or even more subtle level difference in emotion like joy or fear. Lexicons consist of many English words to which scores are assigned for positive or negative sentiment, and also possibly emotions like joy, anger, sadness, and so forth. The “nrc” (Mohammad & Turney, 2013) and “bing” (Liu) lexicons categorize words in a binary fashion (“yes”/“no”). Based on this, “nrc” lexicon classifies words into two sentiments (positive and negative) and eight emotions (anger, anticipation, disgust, fear, joy, sadness, surprise, and trust) categories. The bing lexicon classifies words into positive and negative categories. Both lexicons have more negative than positive words, but the ratio of negative to positive words is higher in the ‘bing’ lexicon than the ‘nrc’ lexicon. This will contribute to the higher systematic difference in word matches (Silge & Robinson, 2018). Hence net sentiment of homestay reviews is analyzed using bing lexicon, and to present more nuanced emotions, nrc lexicon is used.

Single review is a very small section of text, thus it may not have enough words in it to get a good estimate of sentiment. For this reason, reviews of each state were combined together and every 50 lines were taken as one section. Next, counts of positive and negative words from each section were obtained. An ‘index’ was defined to keep track of on which review we are present; this index (using integer division) counts up sections with 50 lines of text. Then we calculated net sentiment i.e. positive minus negative.

Frequency of words in the reviews gives a broader knowledge on most spoken attributes and the sentiment attached to them with regard to homestay. Word frequency ranged from 13478 to 1. As frequency of words reduced, the words were found to be more particular to the unique attribute of destination. Correlation test was conducted to gain quantitative outlook of similarities and differences between the sets of word frequencies in the reviews of homestays located in nine states. For this purpose, ‘proportion’ was calculated by dividing frequency of a word (n) with total number of words ($\text{sum}(n)$).

4. Content Analysis

Sentiment Analysis

Sentiment scores are plotted across the plot trajectory of each state (Figure 1). Net sentiment result of each state is plotted against the index on the x-axis that keeps the track of review time in text sections. Homestays in all nine states have got more positive reviews than negative. The chart exhibits peaks and dips in the sentiment. This might be due to the excellent/poor service quality from host side or changes in tastes, preferences or perception among the visitors. To get better picture on reasons for the variation in sentiment score, reviews were further programmatically analyzed by applying 'nrc' lexicon and results are presented in the form of word cloud. Of the eight emotions given in 'nrc' lexicon, words of four emotions namely joy, anticipation, surprise and trust were categorized as positive sentiment (Figure 2), and the rest four emotions, anger, disgust, fear and sadness are categorized as negative sentiment (Figure 3) (Mohammad & Turney, 2013). Certain attributes of homestay in stills certain emotions, this is inferred from the size of a word's text in proportion to its frequency within its sentiment.

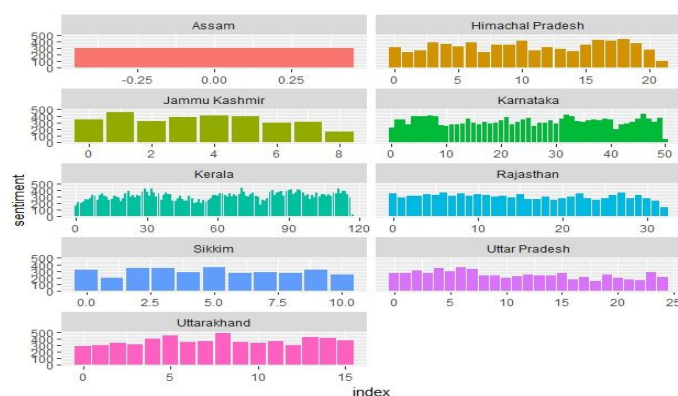


Figure 1 : State Wise Homestay Sentiment Plot

From positive sentiment word cloud (Figure 2), attributes those signified 'joy' are delicious, food, clean, beautiful, love, helpful, welcomed, luxurious, friendly, massage, smiling, green, garden and authentic. This indicates that offering a warm welcome to the guest, providing excellent services with smile and love, being helpful to the guests, providing authentic local experiences, giving authentic information as per guests' needs, beautiful location, luxurious ambience, family maintained gardens, greenery around the location and most importantly delicious food and cleanliness creates joyfulness among visitors. Tourists' expectations from the homestay can be understood by going through the most frequent words used in 'anticipation' lexicon. Tourists anticipate well planned vacation with perfection. The words prepared, time, immediate, efficient signifies anticipation of hosts being

proactive and efficient in providing services and handling uncertain circumstances. Visitors have some expectations regarding neighborhood and people in the destination since staying in a homestay provides opportunity to interact with locals. Delightful experiences make the tourists more satisfied and loyal. The 'surprise' words in the picture highlight that tourists visit the homestays for getting/giving memorable moments for their loved ones. Uniqueness of the homestay location such as local festivals, scenic beauty, natural vegetation, shopping, and invitation have the potential to surprise the guests. Reasonable pricing and providing more than expected definitely surprise guests. 'Trust' is one of the most important antecedents of tourists' visit, revisit or recommendation. Aspects those contribute in creating trust are word-of-mouth i.e. recommendation from others, taking care of visitors by hosts in terms of hospitality, safety and security, providing personal touch by being always attentive to them, giving proper suggestions, holiday budget, and behavior of staff & host family members. These altogether contribute for building up positive sentiment.



Figure 2 : Positive Sentiment Wordcloud

The study of homestay service attributes which generates negative emotions is as important as attributes those generate positive emotions. These emotions in the form of anger, disappointment or regret and worry are generated if the customer is dissatisfied with the service (Mattila & Ro, 2008). The same is expressed online in the form of negative reviews on the service provider. Thus an effort is made to extract the attributes those contributed for negative emotions among the visitors of homestay. The negative sentiment word cloud (Figure 3), presents four segment of words representing four different negative emotions; anger, disgust, fear and sadness. The words in the 'anger' segment of word-cloud are hot, money, words, noisy, politics, broken, strike, complaint, chaotic, annoying, fee, disturbed and confusion. These words shows that extreme weather conditions, unreasonable price structure that does not result in value for money, noisy locality, high fees on activities and nearby attractions.

difficulty in reaching the destination, failure in handling concerns of guests by some hosts, local politics and strikes creating chaotic situation during travel, and broken & ill maintained infrastructure can make the visitors angry. Words in the disgust lexicon with the reviews are toilet, bad, treat, mosquito, sick, lying, greedy, weird, dirt, pollution, messy, overpriced, and stinking. Most of these words are related to cleanliness, health and hygiene. Some ill maintained homestays, hosts being greedy & overcharging, unclean homestay premises & locality may result in guests feeling disgusted. The words in the 'fear' segment reflect unforeseen circumstances. 'Sadness' segment words show that visitors feel sad mainly when they are disappointed with the failure of or mistake in trip plan. These altogether contribute for building up negative sentiment.

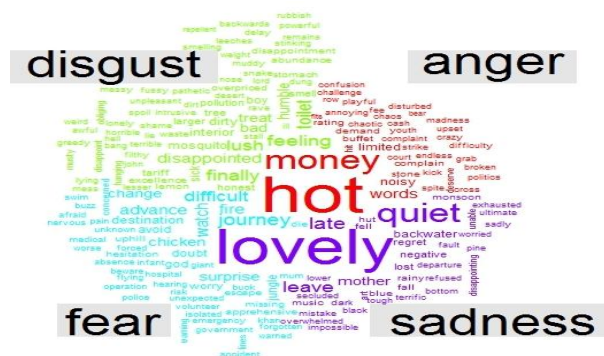


Figure 3: Negative Sentiment Wordcloud

Positive sentiment exceeds negative sentiment by a huge margin (Figure 4). Trust and joy are major contributor in building up positive sentiment towards homestay suggesting that people find enjoyment in homestay and at the same time they also feel safe. Sadness & fear contributes more in building up negative sentiments which may have resulted due to unforeseen circumstances and disappointment during visit.

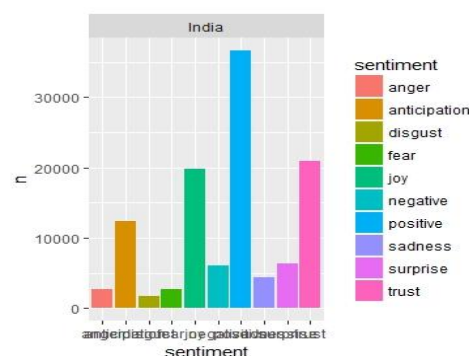


Figure 4: Sentiment Plot

Correlation Test

Homestay services in India altogether have some common attributes and despite of different geographical locations with diverse culture. There are some differential attributes based on the uniqueness of locality and culture. The proportion of similarity and difference were analyzed using correlation between the words used in online reviews of different homestays. The results of correlation are presented below (Table 1). There is a strong, positive correlation between the words in the reviews of homestays located in nine states, which is statistically significant ($p < .005$). The word frequencies are positively correlated between all states, correlation coefficient ranges from 0.7816 – 0.9413. Assam and Uttar Pradesh word frequencies are less correlated with other states. One possible reason for this may be less availability of Homestay reviews of these states in the Trip advisor website which leads to less reserve of words. However, overall results show that there is a huge commonality in words usage in homestay review writing.

Table 1: Correlation Coefficient of Word Frequencies between Homestays

	Assam	Himachal Pradesh	Jammu & Kashmir	Karnataka	Rajasthan	Sikkim	Kerala	Uttar Pradesh	Uttarakhand
Assam	0.0000								
Himachal Pradesh	0.8048	0.0000							
Jammu & Kashmir	0.8170	0.9413	0.0000						
Karnataka	0.8243	0.9347	0.9133	0.0000					
Rajasthan	0.8181	0.8707	0.9113	0.8556	0.0000				
Sikkim	0.8342	0.9076	0.8897	0.9078	0.8711	0.0000			
Kerala	0.7981	0.9282	0.9407	0.9113	0.9114	0.9010	0.0000		
Uttar Pradesh	0.8291	0.7816	0.8142	0.7931	0.8036	0.8638	0.8389	0.0000	
Uttarakhand	0.7880	0.8405	0.8917	0.8556	0.8681	0.8891	0.8586	0.8063	0.0000

Table 2: Distribution of Extracted Reviews

	State	Reviews
1	Assam	40
2	Himachal Pradesh	1075
3	Jammu & Kashmir	425
4	Karnataka	2505
5	Rajasthan	1630
6	Sikkim	534
7	Kerala	5855
8	Uttar Pradesh	1240
9	Uttarakhand	780
	Total	14084

The existence of more common features than difference is exhibited by word frequency comparison plot between Kerala and other 8 states (For example: Figure 5). Words those are close to the line in these plots have similar frequencies in both sets of texts. Words those are far from the line are words

which are found more in one set of texts than another. For example, in the review texts of Rajasthan and Kerala (Figure 5), high frequency correlated words are ‘family’, ‘breakfast’, ‘clean’, ‘amazing’, ‘food’, ‘bed’, ‘birds’, ‘accessible’, ‘air’, ‘authentic’, ‘accommodating’, ‘attentive’, ‘affection’, ‘affordable’, ‘activity’ etc. This indicates that guests often talk about: facilities provided by homestay, behavior of the hosts, activities they can take part and surrounding environment irrespective of homestay they stayed. Further, it can be said that these are the attributes of their concern as the contents of guest reviews are mostly about what matters to them during their stay (Park & Allen, 2013). Words those show low correlations are more specific to the reviews of particular homestay location. For example ‘camel’, ‘haveli’, ‘hut’, ‘safari’ etc. are related to Rajasthan where tourists go for desert safaris in camels. Many hosts in Rajasthan offer accommodation in mud huts. ‘Haveli’ is typical to Rajasthan meaning ‘Traditional space of courtyard house’ (Bryden, 2004). The words ‘coffee’, ‘Ayurveda’, ‘hills’, ‘boat’, ‘good climate’, gardens etc. relates to Kerala. This is suggestive of homestays which are located in hilly areas having pleasant climate as well as coffee & tea plantations and house boats available in backwaters. Kerala is definitely a popular ‘Ayurveda’ treatment hub (Kudlu, 2016). It is evident from the frequency of words that attributes or facilities in homestays are of more importance to the guests rather than attractions in the destination.

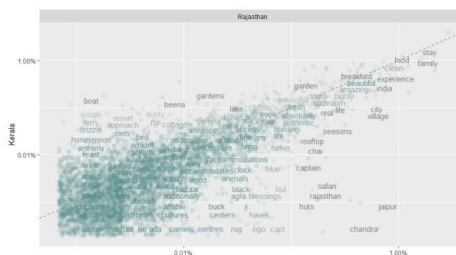


Figure 5: Comparing the Word Frequencies of Kerala and Rajasthan Homestay Reviews

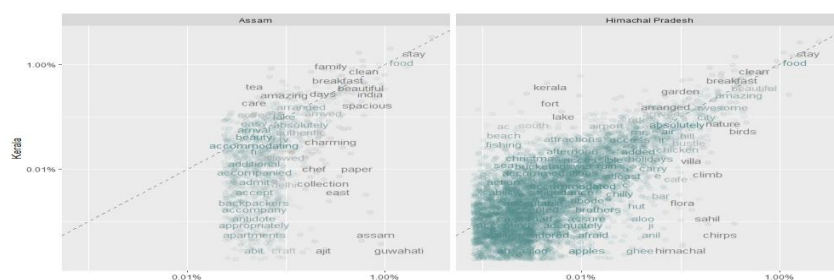
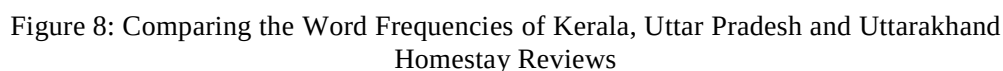


Figure 6: Comparing the Word Frequencies of Kerala, Assam and Himachal Pradesh Homestay Reviews



This study examined the frequency of emotional words used by tourists in their online reviews of homestays to explore the common and specific attributes which are mostly spoken about. The most popular attributes in online reviews are of utmost importance to tourists during their stay which becomes the basis for others while selecting the accommodation. Findings of the study indicate that warm welcome by hosts, excellent service with smile and love, being helpful to the guests is among top attributes that guests talk

about in reviews. This supports the similar findings of (Tussyadiah & Pesonen, 2016) in which they found that ‘feeling being welcomed at someone’s house and ‘hospitality of hosts’ are among top reasons that make tourists choose homestay accommodation. Further, findings such as ‘home-cooked delicious food’ supports the findings of (Mura, 2015); ‘hygiene’, ‘comfort’, ‘scenic beauty’, ‘affordable price’ are at par with findings of (Hsu & Lin, 2011; Rasoolimanesh, Dahalan, & Jaafar, 2016); ‘authentic local experience’ or ‘authentic information to the guests’ similar to the findings of (Wang, 2007) that guests look for authentic experiences; ‘providing services as per the requirement of guests’, ‘unique local festivals’, supports the findings of (Mcintosh & Siggs, 2005) in which ‘personalized services’ and ‘unique feature of homestay’ was found as important attributes that guests look for in a homestay accommodation. ‘Being invited in local celebrations’, ‘interaction with locals’, supports the findings of (Agyeiwaah E. , Akyeampong, Amenumey, & Boakye, 2014) in which they concluded that guests choose homestay accommodation since they want to immerse themselves in local culture. It was well understood from the reviews that when guests find what they look for in homestays, it results in generating positive emotions towards homestays. In the context of sentiment, overall results show that positive sentiment towards the attributes of homestay accommodation is way higher than negative sentiment. This is a new finding as this study is first of its kind in which sentiment analysis on homestay accommodation is done. High positive sentiment towards homestay supports the logic behind consistent growth of homestay accommodation in the last decade (Bhatt, 2012). Negative sentiments, though found very low, are usually triggered by problems faced by guests during the stay. The findings of this paper such as ‘unhygienic toilets’, ‘mosquitos’, ‘dirty surroundings’ support the findings of (Hamzah, 2008) in which ‘unhygienic conditions’ in homestay made guests feel disgusted. Further, ‘services not at par with high prices’, ‘slow response in problem handling, and ‘unnecessary disturbances, noisy environment’, poor accessibility were among the concerns expressed by some guests in their reviews. Strikes and political unrest although not in control of hosts, also caused disappointment among guests which contributed to negative sentiments. These are new findings in the context of problems faced by guests as there are limited researches available particularly on problems faced by tourists/guests during the stay in a homestay accommodation.

6. Implications & Scope for Further Studies

In general, the study of customer generated information at attributes level gives a lot of inputs to the service provider in designing and delivering the service thereby one can reduce service quality gaps (Parasuraman, Zeithaml, & Berry, 1985). The homestay attributes identified in the analysis of online reviews can act as validation for existing items in homestay service performance & satisfaction measuring scales. This work throws light on the need of further empirical studies on the creation of various emotions in tourists

by homestay service performance as well as impact of emotions on word of mouth. To the homestay service providers, tourist generated online information in the form of reviews brings an understanding about tourist preferred attributes of homestay. These help them in designing better promotional activities and enhance their services. In addition, sentiment analysis of online tourist reviews can act as summary of service performance evaluation by tourists. By considering this, service providers can take measures to improve their service to ensure their sustainability in the industry.

This work throws light on the need of further studies on the impact of various sentiment emotions in enhancing customer relationship. The findings of this study should be viewed in light of limitations before generalizing the results. First, even though reviews gave rich information, all were extracted from a single website. Second, reviews only relating to Indian Homestays were taken. Third, reviewers may not be the expert of language and may have used words and sentences as per their understanding and vocabulary. Further studies using same approach can be conducted by taking reviews from different websites as well as taking homestays from across nations. This approach can also be extended to conduct similar studies on various other services as well as products.

References

- [1] Abreu J., Martins P.V., Fernandes, S., & Zacarias, M. (2013). Business Processes Improvement on Maintenance Management:. Conference on ENTERprise Information Systems (pp. 320 – 330). Elsevier.
- [2] Acharya, B. P., & Halpenny, E. A. (2013). Product for Sustainable Community Development: A Case Study of Women Managed Tourism Product in Rural Nepal. *Tourism Planning & Development*, 367-387.
- [3] Agyeiwaah, E. (2013). Volunteer tourists' motivations for choosing homestay in the Kumasi metropolis of Ghana. *African Journal of Hospitality, Tourism and Leisure*, 2(3), 1-11.
- [4] Agyeiwaah, E., Akyeampong, O., & Amenumey, E. K. (2014). International tourists' motivations to choose homestay: Do their socio-demographics have any influence? *Tourism and Hospitality Research*, 16-26.
- [5] Agyeiwaah, E., Akyeampong, O., Amenumey, E., & Boakye, K. A. (2014). Accommodation preference among international volunteer tourists in the Kumasi Metropolis of Ghana. *Tourism Management Perspectives* 10, 7–10.
- [6] Agyeiwaah, E., Akyeampong, O., Boakye, K. A., & Adu-Gwamfi, A. B. (2014). Pros and Cons of Hosting International

- Tourists: Is It Rational? *Tourism Planning & Development*, 11 (4), 435–451.
- [7] Andriotis, K., & Agiomirgianakis, G. (2013). Market escape through exchange: home swap as a form of non-commercial hospitality. *Current Issues in Tourism*, 17(7), 576-591.
 - [8] Bhalla, P., Coghlan, A., & Bhattacharya, P. (2016). Homestays' contribution to community-based ecotourism in the Himalayan region of India. *Tourism Recreation Research*, 41 (2), 213-228.
 - [9] Bhatt, S. (2012). Community-based Homestays: Innovation in Tourism. *Journal of the Development and Research Organisation for Nature, Arts and Heritage*, IX(2).
 - [10] Bryden, I. (2004). There is no outer without inner space': constructing the haveli as home. *Cultural Geographies*, 26-41.
 - [11] Chen, J., Sloan, P., & Legrand, W. (2010). *Sustainability in the Hospitality Industry*. Routledge.
 - [12] Chen, Y., & Xie, J. (2008). Online Consumer Review: Word-of-Mouth as a New Element of Marketing Communication Mix. *Management Science*, 54(3), 477-491.
 - [13] Filieri, R., & McLeay, F. (2014). E-WOM and Accommodation: An Analysis of the Factors That Influence Travelers' Adoption of Information from Online Reviews. *Journal of Travel Research*, 53(1), 44.
 - [14] Gan, S. W., Inversii, A., & Rega, I. (2018). Tourism, Development and Digital Technologies: Insights from Malaysian Homestays. In *Information and Communication Technologies in Tourism 2018* (pp. 52-63). Cham: Springer.
 - [15] Gössling, S., & Lane, B. (2014). Rural tourism and the development of Internet-based accommodation booking platforms: a study in the advantages, dangers and implications of innovation. *Journal of Sustainable Tourism*, 23(8-9), 1386-1403.
 - [16] Gretzel, U., & Yoo, K. H. (2008). Use and Impact of Online Travel Reviews. In O. P., H. W., & G. U, *Information and Communication Technologies in Tourism 2008* (pp. 35-46). Vienna: Springer.
 - [17] Gu, M., & Wong, P. P. (2006). Tourism Geographies: An International Journal of Tourism Space, Place and Environment. *Tourism Geographies*, 8(3), 253–273.
 - [18] Gunasekaran, N., & Anandkumar, V. (2012). Factors of influence in choosing alternative accommodation: A study with

- reference to Pondicherry, a coastal heritage town. *Procedia Social and Behavioral Sciences*, 1127-1132.
- [19] Guttentag, D. (2015). Airbnb: disruptive innovation and the rise of an informal tourism accommodation sector. *Current Issues in Tourism*, 18(12), 1192-1217.
 - [20] Hamzah, A. (2008). Malaysian homestays from the perspective of young Japanese tourists: The quest for Furusato. In J. Cochrane, *Asian Tourism: Growth and Change* (pp. 193-207). Elsevier.
 - [21] Hasan, M. A., Sabtu, N. S., & Sahari, N. H. (2016). Syariah Compliant Homestay in Malaysia: Formulating Legal Framework. In A. M. S., A. R. F., & S. M (Eds.), *Contemporary Issues and Development in the Global Halal Industry* (pp. 371-380). Singapore: Springer.
 - [22] Hjulmand, L. G., Nielsen, U., Vesterlokke, P., Busk, R. J., & Erichsen, E. (2003). TOURISM AS A DEVELOPMENT STRATEGY IN RURAL AREAS ADJACENT TO THE CROCKER RANGE NATIONAL PARK, SABAH, MALAYSIA. *ASEAN Review of Biodiversity and Environmental Conservation (ARBEC)*.
 - [23] Hsu, S. L., & Lin, Y. M. (2011). Factors Underlying College Students' choice of homestay accomodation while travelling. *World Transactions on Engineering and Technology Education*, 196-202.
 - [24] Jamal, S. A. (2011). Tourist perceived value in a community-based homestay visit: An investigation into the functional and experiential aspect of value. *Journal of Vacation Marketing*, 17(1), 5-15.
 - [25] Jamal, S. A., Othman, N., & Muhammad, N. M. (2011). The Moderating Influence of Psychographics in Homestay Tourism in Malaysia. *Journal of Travel & Tourism Marketing*, 28(1), 48-61.
 - [26] Kline, S. F., Morrison, A. M., & John, A. S. (2005). Exploring Bed & Breakfast Websites. *Journal of Travel & Tourism Marketing*, 17(2-3), 253-267.
 - [27] Kontogeorgopoulos, N., Churyen, A., & Duangsaeng, V. (2015). Homestay Tourism and the Commercialization of the Rural Home in Thailand. *Asia Pacific Journal of Tourism Research*, 20(1), 29-50.
 - [28] Kudlu, C. (2016). Keeping the doctor in the loop: Ayurvedic pharmaceuticals in Kerala. *Anthropology & Medicine*, 275-294.

- [29] Labrecque, L. I., Esche, J. V., Mathwick, C., Novak, T. P., & Hofacker, C. F. (2013). Consumer Power: Evolution in the Digital Age. *Journal of Interactive Marketing*, 27, 257-269.
- [30] Lanier, P., & Berman, J. (1993). Bed-and-breakfast inns come of age. *The Cornell Hotel and Restaurant Administration Quarterly*, 34(2), 15-23.
- [31] Lee, H. A., Law, R., & Murphy, J. (2011). Helpful Reviewers in TripAdvisor, an Online Travel Community. *Journal of Travel and Tourism Marketing*, 28(7), 675-688.
- [32] Liu, B. (n.d.). Opinion Mining, Sentiment Analysis, Opinion Extraction. Retrieved from Cs.uic.edu: <https://www.cs.uic.edu/~liub/FBS/sentiment-analysis.html#datasets>
- [33] Liu, Q. B., & Karahanna, E. (2017). The dark side of reviews: The swaying effects of online product reviews on attribute preference construction. *MIS Quarterly*, 41(2), 427-448.
- [34] Mattila, A. S., & Ro, H. (2008). Discrete Negative Emotions and Customer Dissatisfaction Responses in a Casual Restaurant Setting. *Journal of Hospitality & Tourism Research*, 32(89).
- [35] McIntosh, A. J., & Siggs, A. (2005). An Exploration of the Experiential Nature of Boutique Accommodation. *Journal of Travel Research*, 74-81.
- [36] Mohammad, S., & Turney, P. (2013). Crowdsourcing a Word-Emotion Association Lexicon. *Computational Intelligence*, 29(3), 436-465.
- [37] Molina-Azorín, J. F., Tarí, J. J., Pereira-Moline, J., Gamero, M. D., & Pertusa-Ortega, E. M. (2015). The effects of quality and environmental management on competitive advantage: A mixed methods study in the hotel industry. *Tourism Management*, 41-54.
- [38] Mura, P. (2015). Perceptions of authenticity in a Malaysian homestay e A narrative analysis. *Tourism Management*, 51, 225-233.
- [39] O'Connor, P. (2008). User-Generated Content and Travel: A Case Study on TripAdvisor.Com. *Information and Communication Technologies in Tourism*, 47-58.
- [40] Oguchaa, E. B., Riungub, G. K., Kiamaa, F. K., & Mukolwe, E. (2015). The influence of homestay facilities on tourist satisfaction in the Lake Victoria Kenya Tourism Circuit. *Journal of Ecotourism*, 278-287.

- [41] Park, S.-Y., & Allen, J. P. (2012). Responding to Online Reviews: Problem Solving and Engagement in Hotels. *Cornell Hospitality Quarterly*, 1–10.
- [42] Park, S.-Y., & Allen, J. P. (2013). Responding to Online Reviews: Problem Solving and Engagement in Hotels. *Cornell Hospitality Quarterly*, 64-73.
- [43] Pratap, R. (2016, May 13). A place like home. Retrieved from businessline:
<https://www.thehindubusinessline.com/blink/work/a-place-like-home/article8590747.ece>
- [44] Qi, J., Zhang, Z., Jeon, S., & Zhou, Y. (2016). Mining customer requirements from online reviews: A product improvement perspective. *Information and Management*, 53(8), 951-963.
- [45] Rahmani, K., Gnoth, J., & Mather, D. (2017). Tourists' Participation on Web 2.0: A Corpus Linguistic Analysis of Experiences. *Journal of Travel Research*, 1 –13.
- [46] Rasoolimanesh, S. M., Dahalan, N., & Jaafar, M. (2016). Tourists' perceived value and satisfaction in a community-based homestay in the Lenggong Valley World Heritage Site. *Journal of Hospitality and Tourism Management*, 72-81.
- [47] Richins, M. L. (1983). Negative Word-of-Mouth by Dissatisfied Consumers: A Pilot Study. *Journal of Marketing*, 47(1), 68-78.
- [48] Robinson, J. (n.d.). Text Mining with R. Retrieved from Tidytextmining.com:
<https://www.tidytextmining.com/sentiment.html>
- [49] Samsudin, P. Y., & Maliki, N. Z. (2015). Preserving Cultural Landscape in Homestay Programme Towards Sustainable Tourism: Brief critical review concept. *Asian Conference on Environment-Behaviour Studies* (pp. 433 – 441). Seoul: Elsevier.
- [50] Shan, S., Ren, J., & Li, C. (2016). The dynamic evolution of social ties and user-generated content: a case study on a Douban group. *Enterprise Information Systems*, 1-19.
- [51] Truong, V. D., Hall, C. M., & Garry, T. (2014). Tourism and poverty alleviation: perceptions and experiences of poor people in Sapa, Vietnam. *Journal of Sustainable Tourism*, 1071-1089.
- [52] Tussyadiah, I. P., & Pesonen, J. (2016). Impacts of peer-to-peer accommodation use on travel patterns. *Journal of Travel Research*, 55(8), 1022-1040.
- [53] Wang, Y. (2007). Customised Authenticity begins at home. *Annals of Tourism Research*, 34(3), 789-804.

- [54] Ye, Q., Law, R., Gu, B., & Chen, W. (2011). The influence of user-generated content on traveler behavior: An empirical investigation on the effects of e-word-of-mouth to hotel online bookings. *Computers in Human Behavior*, 27(2), 634-639.
- [55] Yu, Y., Duan, W., & Cao, Q. (2013). The impact of social and conventional media on firm equity value: A sentiment analysis Approach. *Decision Support Systems*, 919-926.

