

The Impact of Online Traveler Ratings with the Willingness of the Traveler to Recommend Hotels for Five Selected Cities in China

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Abstract

The purpose of this research is to provide hotel operators an opportunity to better understand the relationship between online traveler ratings for hotels and the traveler's willingness to recommend the hotel for 16,597 online hotel user generated ratings collected for China's major cities of Beijing, Shanghai, Shenyang, Shenzhen and Tianjin. The results of the study show a stronger relationship between customer satisfaction rating and the willingness to recommend for hotel in the cities of Beijing and Shanghai than the other three cities. When hotels received the lowest customer satisfaction score, only 1.09% of people recommended the hotel to a friend. For hotels receiving a customer satisfaction score of 2 to 5, the recommended proportion was significantly associated with rating overall for hotels in Beijing, Shanghai, Shenzhen and Tianjin.

Keywords: China; Hotel; Loyalty; Online; Rating; Satisfaction

Introduction

The lodging industry in China is growing [1]. When Deng Xiaoping introduced the Open Door Policy in 1978 there were 137 hotels accepting international travelers in China [2]. In 2012, the total number of star rated Chinese hotels had reached 12,280 hotels [3].

Hotel companies have increased their focus on expanding into China [4,5]. China has more hotels and hotel rooms in the construction pipeline than any other country. The Chinese hotel industry is expected to grow by 12% annually for the next five years. By the year 2025 the Chinese hotel market is predicted to be the largest in the world with 6.1 million hotel rooms.

The internet has changed the hotel reservation and information process substantially in the past 10 years. Traditionally, information about hotels was established through formal ratings by governments, associations, and other for profit businesses [6]. With the growth in the internet, a common form of rating and information about hotels is the user generated review. Many websites now provide an opportunity for guests to review and rate a hotel [7]. Online hotel reviews provide a potentially rich source of customer information data regarding opinions and sentiment [8].

User generated hotel reviews generally include a composite product score (total rating of customer satisfaction) on a Likert type scale from one to five with one being the lowest and five being the highest (mimicking the 5 star rating system). The reviews also often include a question asking travelers if they would recommend the hotel to a friend. TripAdvisor.com is the world's largest rating and review site [9].

Online user generated hotel reviews are even more important to the reservation process for Chinese hotels [10]. Experts have opined that hotel quality in China is more difficult to predict than for many other countries. Classification systems are often subject to "provincial differences in interpretation" [11]. Branding and the chain affiliation which often help travelers to predict quality and facility standards for a hotel have been less dependable in China. This lack of reliability in Chinese hotel information has made online user generated reviews vital for the Chinese market.

The advent of hotel rating systems on the Internet and the growth

in the Chinese hotel market has combined to bring new access to guest satisfaction and loyalty information. This study utilized data from online user generated hotel reviews on Trip Advisor to examine the association of the customer satisfaction ratings for a hotel and loyalty as assessed using the traveler's indication of their likelihood to recommend a hotel for five selected cities in China. Data were collected for five selected cities in China: Beijing, Shanghai, Shenyang, Shenzhen, and Tianjin. These cities were selected because the number of user generated hotel reviews and ratings were robust. This is likely because these cities have been at the center of a Chinese hotel industry expansion.

Literature Review

Customer satisfaction

Customer satisfaction is fundamental to the marketing concept of satisfying the needs and desires of consumers [12-14]. Customer satisfaction is a "consumer's fulfillment response. It is a judgment that a product or service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including levels of under or over-fulfillment" [15]. Customer satisfaction is a standard for how well the customers predict the performance level from the product or service [16].

Expectancy theory is an area of customer satisfaction research that has focused on "disparity between expectations and perceived product performance" [17]. The expectations of a customer can interfere with the satisfaction level of the service experience or product affecting a customer's review or rating of the product or service.

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Customer satisfaction in the hotel industry has been widely researched [18-21]. Hotel customer satisfaction intertwines the service experience with the product [22]. Among the factors that research has revealed to drive hotel guests' satisfaction are: guest room cleanliness, hotel maintenance, employee friendliness, and knowledgeable employees [23,24].

Customer loyalty

Customer loyalty is an important topic in the hotel business. Hoteliers believe loyal customers might be likely to repeat their purchases of a hotel's products [25,26]. Loyal customers are also more likely to recommend the hotel to friends [27]. Hotels can build a better reputation and capture a higher profit by reinforcing loyalty [28].

Researchers have typically classified loyalty as having two dimensions: behavioral and attitudinal [29-33]. Behavioral loyalty is measured through repeat purchases, while attitudinal loyalty is measured through a customer's intention to recommend or repeat a purchase [34].

In earlier research, most research focused on the behavioral concept of loyalty. However, loyalty research in marketing has evolved from focusing on purchase behavior to customer attitude [35-40].

Recommend proportion as customer loyalty for hotel industry

Traditionally, the likelihood of repurchase has been considered to be the best indicator of customer loyalty for the hotel industry [41]. However, some experts suggest that repeat purchases do not necessarily indicate customer satisfaction, for they may be "trapped by inertia, indifference, or exit barriers erected by the company or circumstance" [42]. They also argue that a loyal customer may not make frequent purchases.

For a hotel, a guest's likelihood to return or to repurchase is affected by many factors, and therefore behavioral loyalty may not be a reliable indicator. A satisfied guest may not repurchase because future travel plans do not include travel to a particular area, or have a similar trip purpose. Likewise, some people travel to experience something new, and thus will try a different hotel when returning to the area [43]. Other factors such as price and convenience can affect hotel room purchase decisions.

Because loyal guests do not always return to a hotel, attitudinal loyalty may be a better measure of hotel guest loyalty [44]. Guests who are loyal to a hotel will return to the hotel when the circumstances permit. While a loyal customer may not be in the position to make a repeat purchase in the near future, they may recommend the product or company to others. Consumer satisfaction researchers often measure loyalty using recommendation behavior: would the consumer recommend the product or service to others [45-47].

Loyalty expert Fred Reichheld [48] proposes a relationship between loyalty and satisfaction. Reichheld's research found that the key to loyalty has been one simple question: "would you recommend us to a friend?" Reichheld proposes that tracking the answer to this question produces a clear measure of an organization's performance in its customers' eyes.

Relationship between customer satisfaction and customer loyalty

Research over the past twenty years has shown customer satisfaction to be an essential factor in loyalty [49,50]. Research has

also demonstrated that customer satisfaction leads to both behavioral and attitudinal loyalty [51,52]. Increased customer satisfaction has been shown to increase repeat purchase behaviors, [53], as well as the attitudinal loyalty component of favorable recommendations by the consumer [54,55]. Customer satisfaction has also been shown to have a direct effect on brand loyalty [56,57], and profits. For hotel guests, research has also shown a relationship between increased levels of satisfaction and the guests' indication of their likeliness to return [58].

Customer satisfaction of chinese hotels

Customer satisfaction of Chinese travelers and for Chinese hotels has been studied by several researchers. Overall Chinese travelers have expressed satisfaction with hotel experiences [59]. Satisfaction between guests staying at foreign versus domestic brands has been found to be the same. Customers staying in luxury hotels in China reported an overall higher satisfaction than those staying in economy hotels.

Research has found several elements to be important in customer satisfaction for Chinese hotel guests. Chinese travelers have indicated front desk services, housekeeping, hotel image, security, common facilities, and room size to be important attributes in determining satisfaction [60,61]. While other studies have reported that transportation, food and beverage management, and value were the highest determinants of customer satisfaction in online user generated reviews. Perceived website quality has been found to have a direct and positive impact on customer satisfaction for Chinese hotel guests [62]. Employee service climate has also been found to contribute to positive hotel guest satisfaction among Chinese [63].

Researchers have suggested that hotel satisfaction in the Chinese market differs from other markets [64]. Guest satisfaction for Chinese hotel guests emphasizes the core products of comfort and cleanliness; while other key aspects of hotel service fail to emerge as primary determinants of satisfaction. Satisfaction among Chinese hotel guests is more closely related to factors of value, security and basic facilities, than extended guest services [64]. When Chinese travelers visit other countries, they seek different amenities in a hotel, than guests from other parts of the world, favoring gift shops and restaurants over spas, fitness centers and entertainment [65].

Expectancy theory may also play a higher role in guest satisfaction among Chinese hotel guests. Chinese guest satisfaction with hotels has been found to be influenced by the hotels' star ratings. Hotels with higher star ratings often received lower guest satisfaction ratings. Guests staying in higher rated hotels had higher expectations, and when those expectations were not met, the satisfaction scores were affected. Research has also proposed that intention to return or loyalty differs with the Chinese guest.

Loyalty to a brand and the willingness to return to a property is not as high for Chinese nationals as foreigners. In hotel selection and loyalty among Chinese travelers: image was found to be more important than location or convenience of the location of the hotel. Chinese guests would prefer a hotel with a better image in a more inconvenient location, than vice versa. This differs from studies on hotel guest satisfaction and loyalty for other markets for which hotel convenience or location was found to be one of the most important factors in guest satisfaction [66-68].

While research has highlighted many perspectives of customer satisfaction and loyalty with Chinese travelers and Chinese hotels, few studies have examined the relationship between satisfaction and loyalty for this market. Additionally, while previous research has examined

the relationship between satisfaction and loyalty among hotel guests in many markets, researchers have found that Asian guests have different expectations, satisfaction predictors, and components of loyalty than Western hotel guests. As loyalty patterns and customer satisfaction determinants for the Chinese hotel market are different, this research examines whether the relationship between satisfaction and loyalty follows the patterns of other markets or differs.

Research Design

Data used in this study were obtained from publicly available hotel reviews posted on the TripAdvisor.com website. Specifically the study used responses to an Overall Rating score for the hotel to measure customer satisfaction, and responses to "Would you recommend the hotel to a friend?" as a measure of customer loyalty.

Research variables

Travelers rated overall satisfaction, Overall Rating, using a 5-point Likert scale: 1=Terrible, 2=Poor, 3=Average, 4=Very good to 5=Excellent. Travelers were prompted to consider a variety of attributes including Cleanliness, Location, Rooms, Service, Value and Sleep Quality when they provided the overall satisfaction rating. Travelers also answered "Yes" or "No" to the question "Would you recommend this hotel to a friend?"

Subject sampling selection: population and sampling procedure

During March of 2010 an automated web spider [69] visited TripAdvisor.com and collected traveler reviews for hotels. The spider gathered all available traveler comments and associated ratings for each hotel, adhering to the site's Robot Exclusion Standard restrictions [70]. The population for this study was international hotel reviews selected from Jan 2004 to March 2010. A total number of 17,478 reviews from five selected cities were collected. Because Trip Advisor does not require respondents to answer all questions, some reviews contained answers to one of the questions but not the other. Removing incomplete reviews reduced the number of reviews to 16,597.

Data analysis procedure

All 16,597 data points were analyzed using SAS version 9.2 Software [71]. We obtained descriptive statistics (frequencies and percent distributions) for traveler's Recommend Proportion across different overall satisfaction ratings for each city in the study. Logistic regression was used with loyalty (as measured by Recommend Proportion) as the response variable and city and satisfaction (Overall Rating) as categorical explanatory variables. To do this, a 21-level variable combining Overall Rating levels and cities was created. This variable had a level corresponding to each combination of city and the Overall Rating levels 2-5 resulting in 20 categories. The 21st category was created by aggregating all traveler responses with a satisfaction rating of 1 for all cities. This was done because relatively few individuals assigned an overall satisfaction rating of 1 and because Recommend Proportion at Overall Rating=1 for the five cities were similar (ranging from 0% to 1.90%). Pooling these responses improved the numeric behavior of the logistic regression results.

Using a model with a categorical explanatory variable fitted a unique logit, which can be transformed into a unique proportion or percent, to each of the 21 levels of the categorical explanatory variable. The model did not assume the association between Recommend Proportion logits and Overall Rating was linear and also circumvented

problems related to treating an ordinal scale variable (Overall Rating) as if it were measured on an interval scale. Goodness of fit was assessed using a pseudo-R² value [72].

Using rating levels 2-5 and all 5 cities, the city-rating interaction was tested. Because the interaction was significant, recommend proportions were compared among rating levels within each city and among cities within each rating level. If the initial test comparing recommend proportions among Overall Rating levels 2-5 within a city was significant, then follow-up comparisons were used to assess whether recommend proportions differed among ratings levels within that city. Similarly, for Overall rating levels where cities differed; follow-up comparisons assessed which cities differed.

The logistic regression recognized response clusters formed by combinations of hotel and rating; over-dispersion was accounted for using the deviance-based scale parameter. In order to assess sensitivity of conclusions to extreme data clusters, a variant of the outlier strategy was used [73] where hotel-rating clusters with high magnitude (greater than 3) deviance residuals were removed from a second logistic regression model. The Estimated Recommend Proportions (\pm estimated Standard Error) from both the original fitting and the fitting with outliers removed were reported on a percent scale. Significance was defined for $p \leq 0.05$.

General Results

There were a total of 16,597 valid observations in five cities. For Beijing, there were 10,130 observations, for Shanghai there were 5,008 observations, for Shenyang there were 215 observations, for Shenzhen there were 930 observations and for Tianjin there were 314 observations. Among all of the observations from hotels the mode Overall Rating was 4, with 40.56% travelers rating at 4, 30.18% rating 5, 18.93% rating 3, 6.18% rating 2 and only 4.15% rating 1 (Table 1).

In the logistic regression of Recommend Proportion on the 21-level categorical predictor corresponding to city and Overall Rating combinations (pseudo-R²=0.32), the contrast assessing interaction between city and Overall Rating was significant ($\chi^2=95.99$ df =12, $p<0.0001$) (Table 2). Recommend Proportions differed among Overall Ratings 2 to 5 in Beijing ($\chi^2=1095.68$, df=3, $p<0.0001$), Shanghai ($\chi^2=466.77$, df=3, $p<0.0001$), Shenzhen ($\chi^2=29.38$, df=3, $p<0.0001$), and Tianjin ($\chi^2=9.61$, df=3, $p=0.0222$), but not in Shenyang ($\chi^2=2.33$, df=3, $p=0.5064$) (Table 2). And Recommend Proportions differed among cities for Overall Ratings of 3 ($\chi^2=34.71$, df=4, $p<0.0001$), 4 ($\chi^2=211.83$, df=4, $p<0.0001$), and 5 ($\chi^2=52.96$, df=4, $p<0.0001$) but not for the Overall Rating of 2 ($\chi^2=4.87$, df=4, $p=0.3009$).

Comparing recommend proportions by rating overall within cities

Beijing: Recommend Proportions differed significantly between each rating level pair. As expected, the percent of travelers who would recommend the hotel increased steadily as Overall Rating increased (Table 2). For Beijing, when an Overall Rating of 1 was assigned to the hotel, only 1.09% (model-based estimate pooling all cities 1.16% (± 0.57)) of travelers would recommend the hotel. When an Overall Rating of 5 was assigned, 72.50% (± 1.16 %) of travelers would recommend the hotel. When travelers gave the hotel an Overall Rating of 2, 4.19% (± 1.17 %) indicated they would recommend the hotel, 18.96% (± 1.21 %) of travelers who assigned an Overall Rating of 3 would recommend the hotel and, 34.54% (± 1.02 %) of travelers who assigned an Overall Rating of 4 would recommend the hotel.

City	N	Ratings				
		1 (%)	2 (%)	3 (%)	4 (%)	5 (%)
Beijing	10130	3.63	5.66	20.2	41.84	28.68
Shanghai	5008	4.99	7.47	16.85	37.78	32.91
Shenyang	215	2.33	6.98	15.81	45.58	29.3
Shenzhen	930	5.7	5.38	17.42	39.25	32.26
Tianjin	314	3.82	4.46	17.83	44.27	29.62
Total	16597	4.15	6.18	18.93	40.56	30.18

Table 1: Sample Size (N) and Overall Rating Percentage Distribution within each City and for all data.

City	N	Rating														
		1 (Terrible)*			2 (Poor)			3 (Average)			4 (Very good)			5 (Excellent)		
		N	f	%	N	f	%	N	f	%	N	f	%	N	f	%
Beijing	368	4	3	1.09%	573	24	4.19%	2046	388	18.96%	4238	1464	34.54%	2905	2106	72.50%
Shanghai	250	3	4	1.20%	374	17	4.55%	844	263	31.16%	1892	1133	59.88%	1648	1213	73.60%
Shenyang	5	0	0	0.00%	15	1	6.67%	34	6	17.65%	98	21	21.43%	63	18	28.57%
Shenzhen	53	1	1	1.89%	50	8	16.00%	162	60	37.04%	365	197	53.97%	300	188	62.67%
Tianjin	12	0	0	0.00%	14	1	7.14%	56	9	16.07%	139	28	20.14%	93	38	40.86%

*Formal analysis pooled ratings equal to 1 across cities to create a single category with N=688, f=8, and a Recommend percentage of 1.16%.

Table 2: Sample sizes (N), Recommend frequencies (f), and Recommend percentages by Overall Rating and City.

Most high residual data points came from either Beijing or Shanghai and all were associated with hotels with relatively large numbers of observations. Re-analysis with outliers removed did not change the pattern of significance in Beijing; however, estimated Recommend Proportions corresponding to Overall Ratings 3, 4, and 5 were reduced to 13.77% ($\pm 0.93\%$), 18.25% ($\pm 0.80\%$) and 63.10% ($\pm 1.25\%$), respectively.

Shanghai: The Recommend Proportion increased steadily with increasing Overall Rating (Table 2). Just 1.2% of travelers who assigned an Overall Rating to the hotel of 1 indicated they would recommend the hotel to a friend. For Overall Ratings 2, 3, 4, and 5, the estimated Recommend Proportions were 4.55% ($\pm 1.50\%$), 31.16% ($\pm 2.22\%$), 59.88% ($\pm 1.57\%$) and 73.60% ($\pm 1.51\%$), respectively. Re-analysis removing outliers revealed the same pattern with Recommend Proportions differing between all Overall Rating level pairs; however, estimated Recommend Proportions were reduced at rating levels 3, 4 and 5 to 30.83% ($\pm 1.85\%$), 56.18% ($\pm 1.51\%$) and 71.29% ($\pm 1.43\%$).

Shenyang: The Recommend Proportion did not differ significantly among Overall Ratings from 2 to 5 (Table 2) but estimated Recommend Proportions for Overall Ratings 3, 4, and 5 were higher than the estimated Recommend Proportion for an Overall Rating of 1 (1.16% $\pm 0.57\%$). For Overall Ratings 2, 3, 4, and 5 estimated Recommend Proportions were 6.67% (± 8.98), 17.65% (± 9.12), 21.43% (± 5.78), and only 28.57% (± 7.94), respectively.

Shenzhen: While the Recommend Proportion increased with increasing Overall Rating, not all differences were significant (Table 2). For an Overall Rating of 1, the estimated Recommend Proportion of 1.16% ($\pm 0.57\%$) was lower than any other Recommend Proportion. Estimated Recommend Proportions for Overall Ratings 2 and 3 (16% ($\pm 7.23\%$) and 37.04% ($\pm 5.29\%$), respectively) were lower than estimated Recommend Proportions for Overall Ratings 4 and 5 (53.97% ($\pm 3.64\%$) and 62.67% ($\pm 3.90\%$), respectively). Re-analysis with outliers removed slightly reduced the estimated Recommend Proportion for an Overall Rating of 4 to 52.56% ($\pm 3.09\%$) and resulted in all differences achieving statistical significance. This change in the significance pattern was due to smaller value for the estimated over-dispersion parameter in the re-analysis with outliers removed that resulted in smaller standard error estimates and, consequently, more sensitive tests. For the analysis using

all data, the deviance-based over-dispersion parameter on the scale of the standard error was 1.40 versus a value of only 1.16 for the re-analysis with outliers removed.

Tianjin: While estimated Recommend Proportions increased as Overall Ratings increased, few observed differences were significant (Table 2). The estimated Recommend Proportion of 7.14% (± 9.60) for respondents with an Overall Rating of 2 did not differ from any other estimated Recommend Proportion. Recommend Proportions for travelers assigning ratings of 3, 4, and 5 differed from the estimated Recommend Proportion for those assigning a rating of 1. Recommend Proportions for travelers assigning Overall Ratings of 3 or 4 (16.07% ($\pm 6.85\%$) and 20.14% ($\pm 4.75\%$), respectively) differed from the Recommend Proportion for travelers assigning an Overall Rating of 5 (40.86% ($\pm 7.11\%$)). Only the Recommend Proportion at an Overall Rating of 4 changed slightly to 18.38% (± 3.86) when data were re-analyzed with outliers removed.

Comparing recommend proportions among cities by each rating overall

At overall rating of 2: As already noted, at an Overall Rating of 2, Recommend Proportions did not differ among cities. At an Overall Rating of 2, the estimated Recommend Proportions ranged from 4.12% to 16.00% (Table 2).

At overall rating of 3: At an Overall Rating of 3, the estimated Recommend Proportions were 18.96% for Beijing, 31.16% for Shanghai, 17.65% for Shenyang, 37.04% for Shenzhen, and 16.07% for Tianjin (Table 2). The Recommend Proportion for Beijing differed significantly from the Recommend Proportions for Shanghai and Shenzhen. While the estimated proportions appear to fall into two groups, Beijing, Shenyang and Tianjin with Recommend Proportions around 16-19%, and Shanghai and Shenzhen with Recommend Proportions between 30 and 40%, the only other significant difference was between Shenzhen and Tianjin. Re-analysis with outliers removed reduced estimated Recommend Percentages for Beijing (13.77%) and Shanghai (30.83%).

At overall rating of 4: As was the case at an Overall Rating of 3, the pattern of significant differences among cities was driven by both differences between estimated Recommend Percentages and sample

sizes (Table 2). Only three city comparisons were not significant: Shanghai and Shenzhen, with estimated Recommend Percentages 59.88% and 53.97% did not differ; Shenyang and Tianjin with estimated Recommend Percentages 21.43% and 20.14% did not differ; and Beijing with an estimated Recommend Percentage of 35.54% did not differ from Shenyang. Re-analysis with outliers removed reduced the estimated Recommend Percentages for Beijing (18.25%), Shanghai (56.18%), Shenzhen (52.56%), and Tianjin (18.38%). Pairwise comparisons no longer detected a difference between Beijing and Tianjin so that the re-analysis identified two city groups. The first consisted of Beijing, Shenyang and Tianjin with Recommend Percentages around 18-20% and the second group included Shanghai and Shenzhen with estimated Recommend Percentages over 50%.

At overall rating of 5: At an Overall Rating of 5, the estimated Recommend Percentages were 72.50% for Beijing, 73.60% for Shanghai, 28.57% for Shenyang, 62.67% for Shenzhen, and 40.86% for Tianjin (Table 2). Recommend Percentages for Beijing and Shanghai were similar but differed from Recommend Percentages for the other three cities. The Recommend Percentage for Shenzhen differed from the Recommend Percentages for Shenyang and Tianjin. Re-analysis with outliers removed reduced estimated Recommend Percentages for Beijing (63.10%) and Shanghai (71.29%) and also changed the significance pattern. In the re-analysis, Shanghai differed from all other cities, while Beijing and Shenzhen did not differ.

Summary and Discussion

Hotels in China appear to be performing well in terms of the overall satisfaction ratings reported. Although only 30.18% of travelers ranked the hotels in the highest rating of 5, a very low percentage, just 4.15%, reported an overall customer satisfaction rating of 1. The most frequent rating assigned by travelers was an Overall Rating of 4 at 40.56% among all five cities. Thus almost 71% of the travelers rated the hotels in the top two rating categories.

But the positive ratings are overshadowed by the fact that only 43.33% of the travelers indicated that they would recommend the hotel. While the data supported the findings of other research: Recommend Proportion did increase as the Overall Rating increased, the numbers of those willing to recommend the hotel were lower than expected. When travelers assigned hotels the bottom Overall Rating of 1, only 1.16% or 8 out of 688 indicated they would recommend the hotel. For hotels in Beijing and Shanghai the Recommend Proportion increased steadily with Overall Rating when travelers assigned the hotel an Overall Rating of 2 to 5. In Shenzhen and Tianjin, the Recommend Proportion increased with increasing Overall Rating although not all differences were significant. However, for hotels in Shenyang, the Recommend Proportion was not significantly associated with the Overall Rating when travelers assigned the hotel an Overall Rating of 2 to 5. Some of these results may be due to the relatively smaller sample sizes for these cities but even at an Overall Rating of 5 the Recommend Proportion for Shenyang was quite low at 28.7% and only 40.86% at Tianjin. This supports the findings of other researchers who found loyalty and the willingness to return to be lower among the Chinese market.

At Overall Ratings 3, 4, and 5, Recommend Proportions differed among cities with Shanghai and Shenzhen tending to have relatively high Recommend Proportions. Shenyang and Tianjin had relatively low Recommend Proportions at each Rating level. While Beijing's Recommend Proportions were relatively low at an Overall Rating of 3, intermediate at an Overall Rating of 4, and relatively high at an Overall Rating of 5, Beijing's Recommend Proportions were sensitive

to outliers. When outliers were removed, Beijing's Recommend Proportion at an Overall Rating of 4 was low and at an Overall Rating of 5 fell from 72.50% to 63.10%, lower than Shanghai's 71.29% (with outliers removed) but similar to Shenzhen's 62.67%. The results show clear differences in travelers' ratings and recommendations between the cities. This warrants further investigation. There are many factors that could contribute to this difference. Is the traveler who is recommending and rating the hotels different? Is the purpose for travel different? Are the hotels different? Within each of these questions lie many other factors that could contribute to the difference. For instance when examining the traveler, origin of the traveler, age, gender, previous experience traveling, and size of the travel party are just a few factors that could contribute to the differences in rating behavior.

Outliers tended to be associated with relatively high Recommend Proportions from hotel-rating clusters that had relatively large numbers of traveler ratings. Most outliers came from either Beijing or Shanghai and re-analysis with outliers removed produced lower estimated Recommend Percentages for Beijing and Shanghai. While the reductions were small for Shanghai, the reduction for Beijing was marked at Overall Ratings 3-5. Thus a relatively small number of hotels with many respondents inflated Beijing's Recommend Proportions.

Conclusions and Recommendations

Many travelers now search online for their hotel. Most select their accommodations based on rating scores and whether other travelers have recommended the hotel. It is imperative that hotel managers pay attention to both online traveler satisfaction scores and the willingness of traveler to recommend the hotel to others. When travelers recommend a hotel, occupancy might rise and the hotel might return increased profits to the hotels owners.

The results suggest that the customer satisfaction ratings and the willingness of a traveler to recommend a hotel and are related for some markets, but not for all. Regular discussions and analysis of the ratings among Chinese hotel management might allow the hotel to improve its scores and respond to general trends. More importantly, the operation should make an effort to impact the ratings posted on the Internet by interacting with the guests in proactive manner. Even if there is a problem or service issue, responding to the problem and proper follow up might make the difference between the willingness of the traveler to recommend or not recommend the hotel [74]. This supports what Bowen and Shoemaker postulated about the crucial importance for hospitality customer organizations "to find supervisory strategies that allow the customer contact employee to effectively and efficiently deliver the service experience to the customer".

The results of this study suggest that Chinese hotel managers should develop or expand their own in-house review system to encourage travelers to write positive reviews for the hotel. The numbers of reviews reflect participation of the hotel or relative numbers of tourists but increased participation of satisfied guests could influence the ratings. This might be especially beneficial in smaller markets such as Shenyang which had a lower participation in TripAdvisor®.

Recommendations for Further Research

Future research might focus on exploring both the causes of the low ratings, and the reasons travelers do not recommend the hotel. Having a better understanding of why some individuals rate hotels high, but do not recommend the hotels would allow the operators to respond and improve their online recommendation scores. For example, some travelers in this study gave an Overall Rating 4 or 5 but the Recommend

Proportion was low. A better understanding is needed of why a traveler would give a high rating to a hotel, yet not recommend the hotel.

A future study might focus on comparing ratings from different classifications, types and levels of hotels. Likewise a study comparing hotels between brands or between types of brand affiliations might reveal differences in traveler rating and recommendation patterns.

It also would be interesting to determine more about the travelers that made the comments. Further research could examine customer segments, and what motivates customers to post comments online. Future research could also classify the travelers and their ratings by these motivations and develop a system that identifies from the guest list those most likely to rate the hotel highly and recommend the hotel. A bigger focus might be comparing data by breaking down data clusters to give specific data corresponding to the individual hotels

This study noted a difference in Recommend Proportion by city. Future research could examine if the travelers who rated the hotels in the different cities were different travelers, different markets, or if they had different reasons for travel.

The standard for hotel excellence in terms of rating is now online. A better understanding of the processes involved is important. The new standard of excellence for hotel operators is not only to improve quality of product and service but also to find methods to motivate your guest to write a glowing online recommendation of your hotel.

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