

The Network Reputation Analysis of Economy Hotels Based on the Identification of the Emotional Inclinations

-- A Case Study of Jinjiang Inns and Home Inns

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Abstract: This paper collects and extracts the consumers' comments on two economy hotels Jinjiang Inns and Home Inns from Qihoo and Ctrip websites by setting a specified period. Based on the given data, the authors distill the key indicators and attributes of the research. In addition, text recognition system and the corresponding statistical software are used to compare the attention-degree of consumers on these two hotels, then to analyse and classify their network reputation (IWOM) and emotional inclinations. The very purpose of this essay is to provide a new analytical perspective and decision-making information, which rely on obtaining and analysing the objective data of specified hotels, to identify the advantages and disadvantages of the hotels in competition.

Key words: Economy hotels Network reputation Emotional inclinations

1. Introduction

Reputation (WOM) has been defined by communication field as a kind of informal propagation among individuals' opinions toward product and service, including positive views and negative ones, which differed from complaint and commend formally raised to company^[1]. Katz and Lazardfeld pointed out that referring to the effectiveness and influence of news spread, the way of reputation communication(WOM), is three times of advertising, four times of personal selling and seven times of newspapers or magazines^[2].

Along with the development and progress of network technology, an increasing number of consumers are choose to communicate by computers. CNNIC *Report* manifests that China has witnessed a boost in both scales of net citizens and broadband citizens, whose Internet scale ranks world top steadily. Up to the end of June.2009, China's Internet users have reached 338 million; while broadband Internet users have reached 320 million, accounting for 94.3% in the total number of Internet users^[3]. Development of the Internet has changed the traditional modes of communication, and re-built a new network communication through computer.

Geth and Johnson pinpointed that the communication and exchange of information through the Internet is also a form of word-of-mouth communication, namely, "online word of mouth"^[4]. Internet word of mouth, compared with the traditional word of mouth, has spread over larger areas and spread faster^[5]. Furthermore, it has a stronger influence on consumers in terms of information searching, purchase decision-making and attitude forming and changing. And it is not only impact the

family members and friends we are well acquainted with, but even those visitors of comments whom we have never met. Therefore, it has an unparalleled spread speed and scope which the traditional word of mouth marketing can not reach. And Gruen, Osmonbekov & CZaplewski come up with a natural conclusion that online word of mouth not only affects the recipient's attitude toward the product's perceived value, but also the desire of loyalty, through a survey of 616 online community members^[6]. Hence, the enterprises are supposed to not only take advantage of Internet word of mouth to market their products and services, optimize its brand image, inhibit harmful information online, but also improve corporate products and services to achieve customer's satisfaction and loyalty according to the observations and recommendations in network reputation by taking full advantages of word of mouth, which plays an important role in the future development of enterprises^[7].

The hotel industry is a standard service industry, so customers' satisfaction is a prerequisite to ensure the future development of hotels. Currently, the computer and network technology has been very popular, more and more people choose to do the work of expression of views, evaluation of the products and services, communication with those buyers or who is interested in that sort of the product and effect formation with each other through the network, for this reason, consumers' satisfaction, to a large extent, is rely on word of mouth to be measured and disseminated. As to economy hotels with intense competition and serious homogenization, it is of great significance for the future development of a hotel to get good word of mouth in both traditional and network, then, offer matched products and services based on the evaluation, and achieve customers' satisfaction and loyalty.

alty, consequently, form a virtuous circle by conducting word of mouth marketing to potential customers, ultimately, reach the result of "win-win".

This passage based on the methods of emotion classification, put it another way, by analyzing information releasers' or customers' emotional tendencies, to count the proportion of both positive emotional information and negative ones. In addition, evaluating customers' reputations(WOM) by quantitative analysis, which eliminates the subjective factors of the researchers so as to make the result of analysis much more objective and reliable.

2. Research methods and data collection

2.1 Research methods

With the rapid development of the Internet, the public are often not only release all kinds of information on the Web, such as blog articles, product evaluation, forum posts and so on, but also post their comments on the economy hotels. No one can have failed to notice the fact that these information are generally with a strong emotional color through a large number of the analysis. The main idea of this passage is: First, obtaining data through the Internet information collection, and then extracting meta-data and text information through web page analysis techniques (such as: information publishers, information dissemination time, information sources, etc.), using machine-learning methods to step into the emotional analysis and mining of the text message, put it another word, the economy hotels' network evaluation. Furthermore, judging whether it is positive or negative information. Then, obtaining quantitative results through the statistics. It offers a better understanding of the user's consumption habits and paves the way for the next step, that is to deeply analyze and sort out of the strategies of development of the economy hotels.

In this paper, the above train of thought is applied to analyze the consumers' comments on two economy

hotels: Jinjiang Inns and Home Inns on Ctrip and the forum of Qihoo, then to distill the indicators and attributes in relatively high frequency in consumers' evaluations on economy hotels, and the corresponding emotional key words. Next, make a distinction between positive and negative emotions of them. Finally, emotional trends and evolutionary law to be obtained.

2.2 Data Object Selection and Description

The authors choose the sample which was used to determine the properties are the customers' evaluations of two economy hotels: Jinjiang Inns and Home Inns on Ctrip and Qihoo forum.

Jinjiang Inns is the largest economy chain hotel in China, and Home Inns is one of China's fastest-growing ones, both of the two have strong economic backing, rely on which, they have got full-speed development, and have maintained the top two of market share in domestic economic chain hotels in a long period. Therefore, these two hotels were chosen by the authors as the representatives of the data selection objects when it comes to the analysis of economy hotels' network reputation(WOM).

Ctrip is China's largest professional tourism and information related website, it classified various hotels, and evaluate the different hotels according to different classification; Qihoo forum is the largest website for questions and answers, so the chosen ones are typical as an alternative sample website.

2.3 Data Collection Process

Data collection process shown in Figure 1, and its general process described as follows:

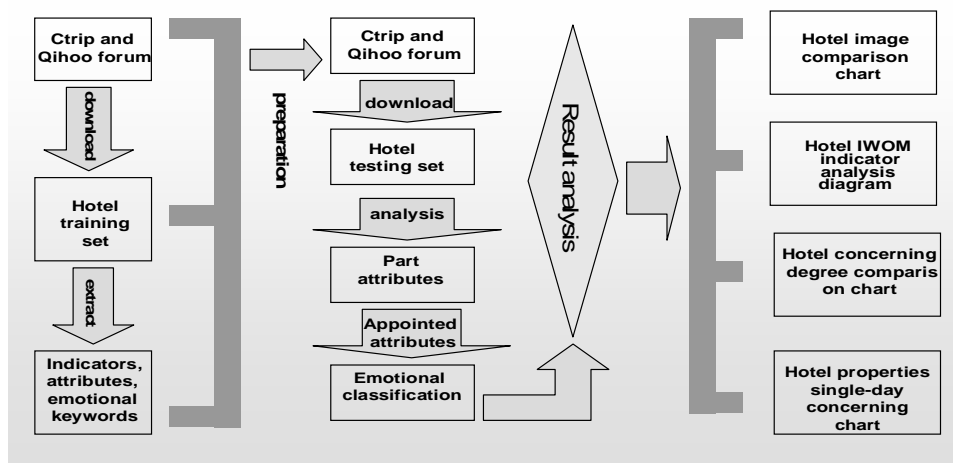
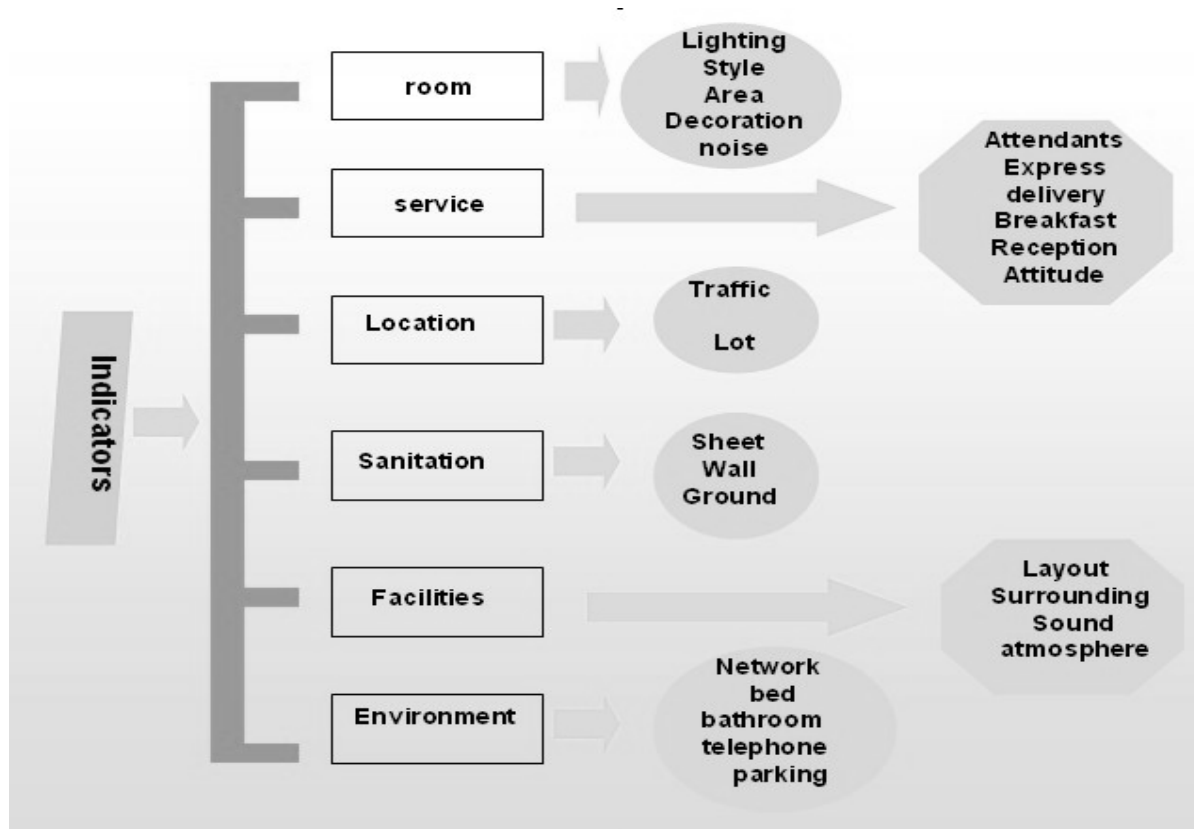


Figure 1 Flowchart of economy hotel data collection

- (1) In early July 2009, about 300 corpus, which are the corresponding evaluations of Jinjiang Inns and Home Inns are captured on Ctrip and Qihoo as the training set.
- (2) Through text analysis, indicators in high frequency occur in the evaluation of economy hotels will be filter out. The index of economy hotels that this article involves are rooms, sanitation, location,

environment, service and price. Separate the attributes of index, and let them corresponding with the related emotional words correspond, then prepared for the analysis of consumers' emotional trends.

Table 1 is the index and attribute categories divided by the process



- (3) During July 11, 2009 to August 31, 2009, information on Jinjiang Inns and Home Inns are captured at fixed time everyday, amount to 619 testing data, which are ready for the final analysis.
- (4) Analyse the download corpus sentence by sentence, and sift the index and attributes of economic hotels. Next, conduct emotional classification and recognition of them and then get the findings and generate a corresponding chart.

The original basis that are quantitative analysed by a series of data collection process is prepared for the further analysis.

3 Data Results Analysis of the Economy Hotels' Network Reputation(IWOM)

Conduct emotional analysis on network reputation data which crawled on July 11 to August 31 according to economic hotels, and we can get Figure 2: The left and the right pies are the number of consumers who concerned about Jinjiang Inns and Home Inns and their images in consumers' minds in trial period respectively. During this period, the total number of people who concerned about Jinjiang Inns is 272, and among whom, 160 gave the favorable comments, and those of Home Inns is 347, among whom, 176 expressed high praise. From Figure 2, we can see that Jinjiang Inns draw slightly less attention than Home Inns, but have a better reputation in comparison. Under the same indicator, the degree of praise of Jinjiang Inns is 8 percent higher than Home Inns. So Jinjiang Inns establish a better brand image in the minds of consumers.

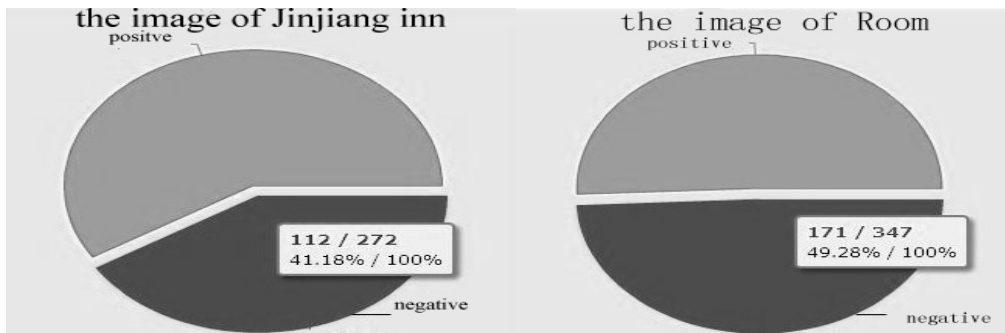


Figure 2 The comparative analysis on the image of online consumers of Jinjiang Inns and Home Inns

3.1 The comparative analysis of the attention-degree of consumers between Jinjiang Inns and Home Inns

Based on the comments downloaded from Ctrip and Qihoo forums, text recognition system conducts the brand identity of Jinjiang Inns and Home Inns, and produces the comparison figure of attention degree.(Figure 3).

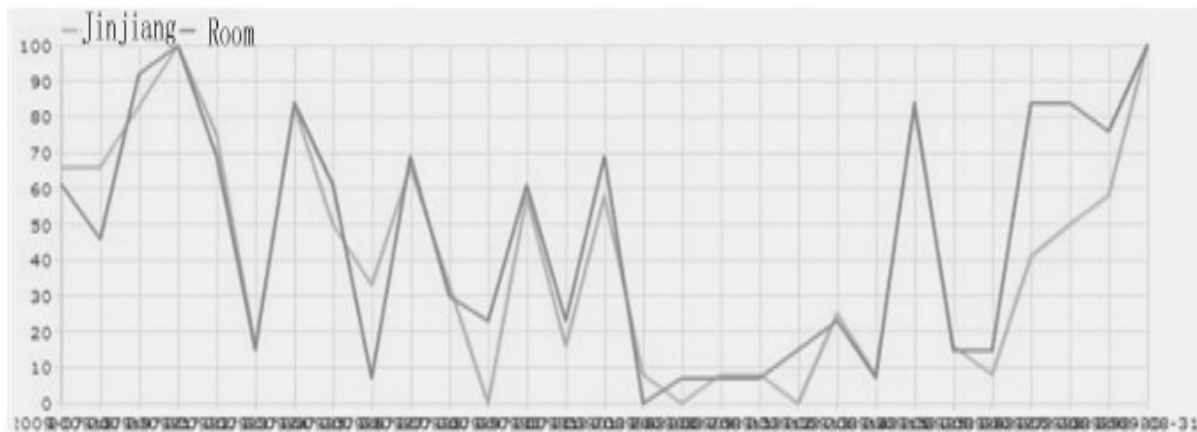


Figure 3 comparative analysis of concerning degree of Jinjiang Inns and Home Inns

In Figure 3, of Value axis, the vertical axis indicates the sentence number (sentence) about corresponding target attributes involved in the text analysis for each consumer, the horizontal axis indicates the time (days).

(1) Seen from Figure 3, in mid-July to mid-August period, the curves of consumers' attention to Jinjiang Inns and Home Inns are highly matched. Highly similar frequency of consumers' attention represents that consumers will comment on the economy hotels in certain specific days; and a very high degree of coincidence of consumers' attention to these two hotels on the curve suggests that consumers have a similar assessment on these two hotels, which can indicate that these two hotels are in a state of fierce competition.

(2) Seen from Figure 3, it is easy to know that the fluctuation state of consumers' attention to these two hotels is basically a one-week cycle. Attention in the weekend and Monday reaches its peak and then gradually decreases, and so on to the early August.

(3) Based on Figure 3, it also can be known that under different time periods consumers concern about the economy hotels differently. The two hotels in late July and the end of August get generally high degree of consumers' attention, and beginning a significant reduction in early August to mid-August. In mid-August, concerns about the two hotels start to climb until they are completely in line, then show greater differences in the rising trend.

3.2 The comparative analysis of the network reputation index between Jinjiang Inns and Home Inns

Economy hotels' reputation is based on the comprehensive balance of the positive and negative assessments of indicators and attributes, so it has obtained a good reputation of the hotel which has obtained a good reputation, also needs a clear

understanding of the causes of obtaining a good reputation and what indicators occupy an important role to obtain an overall good reputation in it. According to the related comments, this paper analyses sentence by sentence to extract the

corresponding indicators and the corresponding emotional words, and get Figure 4 through the statistical software classifying, identifying and counting the corresponding number.

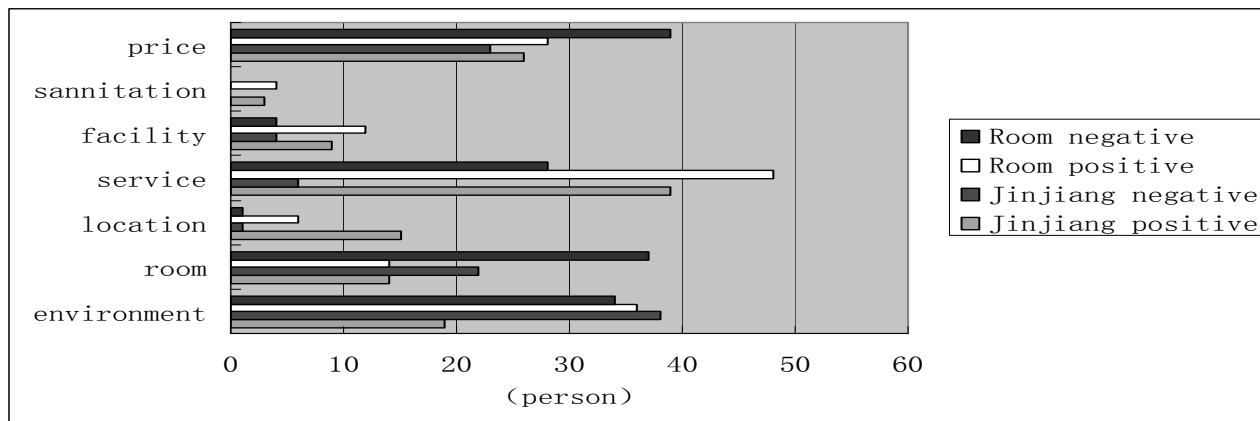


Figure 4 IWOM indicator analysis diagram of Jinjiang Inns and Home Inns

From Figure 4, the environment, facilities and rooms are indicators that consumers most concern about the economy hotels, where hotel service ranks the first. And Home Inns have a relatively high degree of negative feedback in comparison, indicating the conditions of service in Home Inns can only basically meet consumers' general demands, cannot achieve customers' satisfaction; and hotel environment is also highly concerned about. The positive and negative feedbacks have the same higher degree in these two hotels, indicating that the environment is a more important part to attract consumers to check in. So based on consumers' comments, environment is an important consideration for an economy hotel to expand; In the room indicator, Home Inns get a high negative evaluation, indicating there is a certain subordinate attribute or more consumers are not satisfied with, which needs to be improved; hotel location and price are the least parts that the consumers concern about.

Based on a daily analysis of each indicator's subordinate attributes, customs of Home Inns focus on the company's telephone service, noise, reception, surrounding environment and decoration style, both the length of the date and frequency of which are higher than other indicators. Negative attributes are: transportation, decoration and noise, especially noise situation; transport differs due to locations. In the end of July and early August negative assessments up to 100. The properties to obtain a good evaluation are: front desk services and the surrounding environment, both of which have a higher assessment during the test. For example, the good evaluation of the surrounding environment a single day is up to

71 consumers.

According to the previous analysis, Jinjiang Inns have a more favorable brand image than Home Inns in the minds of consumers. It can be seen that indicators of the service, price and the environment achieve positive assessments in Jinjiang Inns, the sum of the three accounting for 68% of the praise degree, in which the highest praise degree of service facilities reaches 32%. Therefore service is a major competitive advantage in Jinjiang Inns. At the same time, the praise degree is obtained from the balance of favorable comments of different properties of indicators. According to the properties of single-day plan, customers focus more on the attendant quality of the service indicator and the telephone in facilities, etc., and these aspects receive the highest praise, while the single-day contribution degree is in traffic and decoration. Brand stands for a certain level of quality, so a good brand image is a significant pillar for Jinjiang Inns to occupy an important position in the highly competitive Chinese economy hotel market, providing a guarantee for the future development of Jinjiang Inns. It is not difficult to find that the general attention to Home Inns is higher than that to Jinjiang Inns. The former gets more consumers' attention and evaluation, which represents it has opportunities of obtaining a higher market share. At the same time, Home Inns have a good network reputation in service, environment and other indicators, and different properties under these indicators also occupy different places. The main advantages of Home Inns are: service and a good hotel environment. Meanwhile, the analysis of single-day properties shows, customers mainly focus on the telephone ser-

vice, noise, reception, surrounding environment and decoration style in Home Inns, and the length of the date and frequency of their being concerned are higher than other indicators. In addition to environmental attributes, the positive comments of Home Inns are lower than those of Jinjiang Inns. It may be becoming the troubled family-like part of Room inn.

Based on the above analysis, for indicators with a very high degree of negative feedbacks, the economy hotels require timely improvement, but for those indicators and attributes with a higher degree of criticisms as well as a higher degree of praise, the economy hotel industry needs to measure and improve the cost, and after the improvement, the current and future earnings of the market measure whether the improvement of indicators will bring good returns and reputation for the hotel.

4. Summary

In a word, at present, the competition China's the economy which is fierce, and in a homogeneous competitive state, so consumers' comments on the economy hotel play a very important role. In the results of the emotional analysis of economy hotels, the authors find that for the hotels, consumers more focus on the decoration, noise situation, reception and the surrounding environment. In order to obtain a good reputation, economy hotels, available to reach the average level at the facili-

ties consumers commonly concern about, are supposed to make improvements of the more concerned parts to consumers' needs. Only all the factors meeting the average level of consumers' satisfaction, it can attract consumers to come to stay, and get the opportunity to have a good reputation and appeals to potential customers to come and will be able to understand consumers' real thoughts about economy hotels, then to determine the future direction of hotel based on the analysis of the evaluation.

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