

**CUSTOMER SATISFACTION AND ITS DETERMINANTS**  
Case: Rex Hotel Saigon

Rex Hotel Saigon

Nguyen, Phuong Thao

Bachelor Thesis  
School of Tourism and Hospitality Management  
Degree Programme in Tourism  
Bachelor in Hospitality Management

2016

School of Tourism and Hospitality  
Management  
Degree Programme in Tourism  
Bachelor in Hospitality Management

---

<b>Author</b>	Phuong-Thao Nguyen	Year	2016
<b>Supervisor</b>	Ulla Kangasniemi, Petra Paloniemi		
<b>Commissioned by</b>	Rex Hotel Saigon		
<b>Title of Thesis</b>	Customer Satisfaction and Its Determinants in Hotel Industry – Case: Rex Hotel Saigon		
<b>Number of pages and appendices</b>	34 + 1		

---

Customer satisfaction is a core issue in customer services. Understanding customer satisfaction and its determinants is vital and essential in hospitality context. The aim of the thesis research was to help the commissioner – Rex Hotel Saigon to obtain a clear view of customer satisfaction and to understand characteristics of their target group. The thesis wishes to confirm whether customer satisfaction factors are similar with the results from previous researches and if there is any correlation between customer satisfaction and dissatisfaction determinants.

The data collected for the thesis research was the online reviews from booking.com of Rex Hotel Saigon - a 5 star luxury hotel environment located in Ho Chi Minh City. The second data source was collected by interviewing Rex's hotel managers. Using in-depth interview method and text mining approach, the results of the analysis included factors affecting customer satisfaction and dissatisfaction. The results also illustrated the similarities and conflicts in opinion between hotel managers and customers. The findings of the thesis help Rex Hotel Saigon, the commissioner of the thesis, to understand customer satisfaction determinants in order to develop their services accordingly.

Key words

customer satisfaction determinants, text mining,  
online reviews

## CONTENTS

1 INTRODUCTION .....	5
2 CUSTOMER SATISFACTION .....	7
2.1 Reviews on Customer Satisfaction .....	7
2.2 Customer Satisfaction and Dissatisfaction Determinants.....	8
3 SERVICE QUALITY AS MEASUREMENT FOR CUSTOMER SATISFACTION.....	11
4 REX HOTEL SAIGON .....	13
5 RESEARCH METHODS.....	15
5.1 Qualitative Method.....	15
5.1.1 Purpose and Strategy.....	15
5.1.2 Data Collection and Research Analysis .....	16
5.2 Text Mining Approach.....	19
6 RESULTS .....	23
7 DISCUSSION AND SUGGESTIONS.....	29
8 CONCLUSION.....	31
BIBLIOGRAPHY .....	33
APPENDIX.....	35

## FOREWORD

I would like to thank Ulla Kangasniemi and Petra Paloniemi for their help and support and I am grateful to complete the thesis research under their tutoring with dedication. Besides, I also want to acknowledge my friend, Van Le Thi Thanh for her help with Rapidminer tutorial. Without her, I would have used a different research method rather than text mining analysis. I would also like to express my gratitude to hotel managers of Rex Hotel Saigon in assisting and providing valuable thoughts on Rex Hotel Saigon's services. I hope the readers find this research paper useful for their next projects. I was inspired to do things differently. That is one of the reasons I chose to approach the research questions differently. I hope this thesis inspires the readers to be creative and develop a habit of looking for new challenges to conquer. Thank you for spending your time reading my work.

Phuong-Thao Nguyen (Rachel)

## 1 INTRODUCTION

Hospitality is a distinctive industry in comparison to other industries. In other industries, final products play the key role in firms' success while services support to enhance a product's features. On the other hand, in hospitality, the products that hotels offer are not only considered as visible or tangible ones but as services creating experiences. It can be clearly seen that the core of hospitality is service. It occurs throughout the whole process since the first moment a customer arrives until he leaves. It can even extend to processes before arrival and after departure for example booking for rooms, dealing with feedbacks or complaints. Therefore, customer satisfaction in hospitality is more complicated and also comprises various elements. However, firms need to understand how vital customer satisfaction and its determinants are so that they can serve customers better and develop unique selling points. However, in real context, hospitality firms' perception towards customer satisfaction is not always the same as that of customers. Some may say that service quality is an efficient method to measure customer satisfaction due to the fact that it has been shown that service quality is positively correlated with customer satisfaction (Wilkins, Merrilees & Herington 2007, 841–847).

The commissioner of this thesis, Rex Hotel Saigon, is a 5-star hotel in city centre of Ho Chi Minh City. Although having 90 years of reputation in hospitality industry, Rex Hotel Saigon is still willing to learn about their customers in order to adjust and improve their services. The thesis research was conducted due to the commissioner's wishes to understand the perception of customers on customer satisfaction and to analyse the conflicts between customers' expectation and hotel services offered. Together with the advantages and drawbacks Rex Hotel Saigon already had, suggestions could be offered to hotel managers to improve and develop hotel services to improve customer satisfaction. To fulfil the commissioner's wishes, this paper aims to answer two questions: What differences are there between guests' and hotel managers' perceptions when it comes to customer satisfaction and what factors influence customer satisfaction and dissatisfaction and whether they differ from each other in hospitality context or not. In addition, the result of the thesis research

could also be a possible evidence to confirm or disagree with previous studies on customer satisfaction and dissatisfaction determinants.

The thesis paper starts with literary reviews of theoretical backgrounds used in the research. Firstly, the research brings up how customer satisfaction is defined and what main determinants of customer satisfaction and dissatisfaction in hospitality context are. The differences in types of hotels which can affect the determinants are also mentioned. Next, brief reviews on service quality are presented with an introduction to SERVQUAL model and how service quality is considered as a measurement for customer satisfaction. The following parts discuss the missions and objectives of the commissioner – Rex Hotel Saigon and its nature of business including its advantages and drawbacks. Along with the author's observation and information that the author received when having her advanced training there, the discussion is supported by information gathered when conducting the in-depth interviews with hotel managers. The research methods are presented in the next sections which are in-depth interview and text mining approach. The outcomes from the analysis show the customer satisfaction and dissatisfaction determinants. Similarity and conflicts in opinion between hotel managers and customers are also discussed. Finally, possible suggestions are offered for hotel managers to improve and develop the hotel's services to increase customer satisfaction

## 2 CUSTOMER SATISFACTION

### 2.1 Reviews on Customer Satisfaction

Customer satisfaction measures how products or services perform according to customers' perception. According to the expectation-disconfirmation model (Oliver 1980, 460–469) which Nordic European school of thought on service quality is based on, customer satisfaction occurs when product or service performance meets customer's expectation and vice versa. According to Xu and Li (2016, 58), Oliver (1980) defined that satisfaction occurs when the service performance exceeds expectation. However, customer expectation can differ from service quality in definition. Service quality illustrates the performance of a certain service while customer expectation is based on perception. Indeed, customer perception is how a customer thinks a service performs. Each customer's perception is different due to demographic discrepancies. Hence, service quality may be constant but customer expectation is not.

Customer satisfaction is a vital factor which can guide service development managers and marketers to manage and monitor their services more effectively. Effectively customer satisfaction management helps enterprises to retain customer loyalty; pinpoint pros and cons as well as reduce negative word-of-mouth. Therefore, enterprises must have sufficient knowledge of customer satisfaction and understand how customers define service quality. As customer needs and objectives lead to various types of satisfaction, no service can ensure to deliver exactly the same satisfaction to all customers. By understanding customers' perception towards service quality, enterprises can determine which target market group they would like to focus on and which elements they should further develop in order to meet the target market group's expectation and deliver satisfaction. Besides, customers' perception of quality may be affected by brand image of a hotel (Novikova 2009, 4). There should be consistent operation and cooperation between product managers and hospitality marketers to successfully deliver the value and benefits that customers expect (Panda & Das 2014, 63). By achieving high levels of customer satisfaction, enterprises can have a niche in hospitality industry which helps to prevail over competitors (Dominici & Guzzo 2010, 4).

Customer satisfaction is measured by perceptions and attitudes of customers. Due to the fact that consumer behaviour varies among societies, cultural differences and other backgrounds, customer satisfaction measurement cannot become a reliable source if customer profiles are not taken into consideration. Each person is a sample reflection of a nation as well as its own customs and behaviours. Hence, examining customer profiles undoubtedly helps firms to adjust and improve services accordingly. Another point to consider when measuring satisfaction is cultural issues. Many countries may share the same customs and traditions like eating habits, the celebration of Lunar New Year or Christmas but each nation also has its own distinctive values and customs. Cultural differences occur between Western and Asian countries, between countries on the same continent or even vary between the north and south areas of one country. Culture has long had a significant impact on one's perception, behaviour and problem solving which can lead to various levels of satisfaction on a specific product or service.(Lam 2015.)

In addition, in order to understand the satisfaction of international customers, firms must also know that there are other issues affecting customers' feedbacks towards products and services such as different languages, literacy, construct interpretations (Pizam & Taylor 1999, 335). For example, a person who is not a native English speaker may find it hard to fully express her opinion when giving feedback in English due to lack of vocabulary or feelings of inconvenience. In this paper, for the ease of the research analysis, only English feedbacks on Booking.com are considered and collected including both native English speakers and non-native English speakers. However, even most international guests at Rex Hotel Saigon are from English speaking countries such as United States, United Kingdom and Australia, language barrier and vocabulary usage should not be underrated.

## 2.2 Customer Satisfaction and Dissatisfaction Determinants

Customer satisfaction determinants are factors which affect whether customer satisfaction is met or not. In hotel context, sources of customer satisfaction can fall into different categories such as location, room and cleanliness, staff, amenities, accessibility. According to Radojevic, Stanasic and Stanic (2015, 14)



Choi and Chu (2001) argued that staff quality, room quality and value for money are the most significant factors affecting customer satisfaction while Chaves, Gomes and Pedron (2012) stated that regarding hotels, room, staff and location should be considered as major factors when determining customer satisfaction. On the other hand, it must be made clear that sources of customer satisfaction and dissatisfaction are not necessarily akin. The Motivation-Hygiene theory by Herzberg asserts that the absence of satisfaction sources from motivator factors does not lead to dissatisfaction but creates a positive experience when provided. Herzberg's findings revealed that factors for dissatisfaction, for instance hygiene factor, are significant but it does not help to create satisfaction. (Herzberg 1964, 3–7.) The findings are important to research relevant to hotel satisfaction because they help hotel managers understand that preventing dissatisfaction does not come together with creating satisfaction. It indicates that identifying which factors causing customer dissatisfaction certainly helps hotels discard those negative factors but it does not mean hotels should invest in improving those factors as they do not lead to satisfaction.

Regarding differences between customer satisfaction and dissatisfaction determinants, researches on the antecedents of customer satisfaction and dissatisfaction by Xu & Li (2016, 57–69) pointed out that the number of satisfaction factors was smaller or equal to the number of dissatisfaction factors. It can be said that if hotels only focus on satisfaction factors and do not consider dissatisfaction factors seriously, customers are more likely to have unpleasant experiences. In the research by Szymanski and Henard (2001, 16–25), unsatisfied customers were discovered to voice their dissatisfaction to ease their tension and receive empathy from others. It is a warning sign for hotels as nowadays people are easily connected and engaged on social media. The internet and social media platforms can help hotels to build their brand and reputation but also can easily damage their image if customers spread their anger altogether.

Another significant issue to mention is that customer satisfaction factors change across different types of hotel. There are certain characteristics of hotels that set them aside from others which affect how customers expect and evaluate their services. A noticeable point for example is that some features are

favourable or even a must when customers make decisions on accommodation. Due to the natural distinctness of tourism where hotels are based, facilities and services offered by hotels can vary accordingly. For instance, in a sun-and-sand tourism location, hotels are expected to have decent swimming pools and related services. Contrariwise, other hotels such as those based in a city tourism location such as capital cities, urban areas... are preferred if located near the city centre (Hall & Page 2014, 127). When it comes to types of hotels themselves, a previous study discovered that full-service hotels are to have the highest customer-to-staff ratio (Mohammed, Guillet & Law 2014, 29–40). It is clear for various reasons such as shortage of staff and large capacity. From this perspective, staff-based dissatisfaction is more likely to occur in larger hotels than smaller ones. When a hotel has more guestrooms and restaurants, another issue is that it serves more customers which may lead to customer impatience while parking their cars. This can cause hotels to receive complaints and increase dissatisfaction from customers who experience it.

### 3 SERVICE QUALITY AS MEASUREMENT FOR CUSTOMER SATISFACTION

The most popular definition of service quality is based on SERVQUAL model developed by Zeithaml, Parasuraman and Berry in the 80s (Figure 1). It is a quality management framework that measures service quality using gap analysis between customers' expectation of a service and customers' perception of the actual performance of the service. That is why it is sometimes called the GAP model. Even though there are other definitions and theories of service quality, SERVQUAL is widely used because it takes all important dimensions of service quality into consideration: tangibles, reliability, responsiveness, assurance and empathy. It is worth mentioning that not all dimensions are equal. Some dimensions are more significant to a group of customers, but less significant to others. Among these 5 dimensions, responsiveness is believed to be the key dimension. The rationale behind it is that other 4 dimensions rely on reliability.

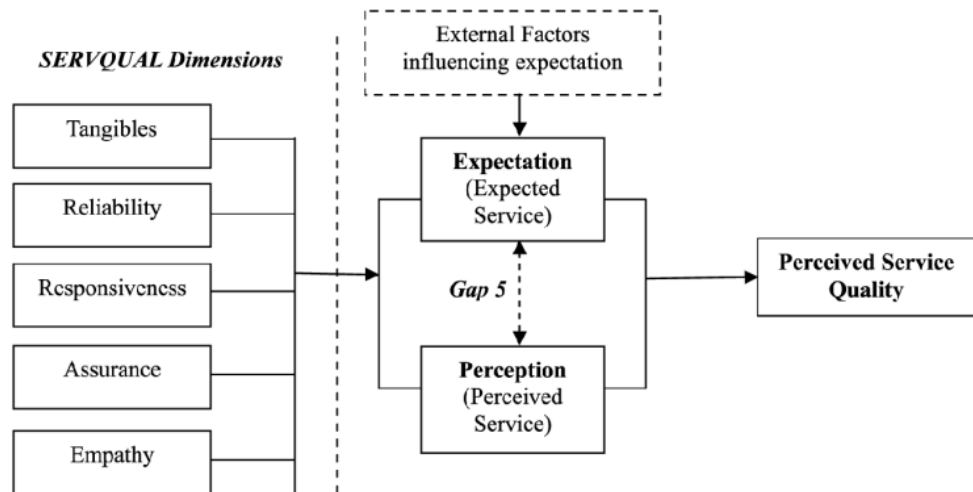


Figure 1. SERVQUAL Model (Parasuaman, Zeithaml & Berry 1988)

However, a previous research conducted by Wilkins, Merrilees and Herington (2007, 849) discovered that in hotel context, guests typically assume service quality as a holistic experience rather than separated dimensions. That is the reason why hotels should be aware that in order to provide the best services to their guests, they need to pay careful attention to all dimensions. By managing and frequently inspecting service routines, updating staff training programmes,

hotels can ensure guests' satisfaction as a holistic experience. Additionally, previous studies also argue that there are certain differences between service quality and customer satisfaction. According to Khan, Garg & Rahman (2015, 267), Klaus and Maklan (2013) describe how complex customer satisfaction is due to the fact that it involves feelings and emotions which go far beyond the definition of quality of services itself. That is why service quality should not always be considered a measurement for customer satisfaction.

#### 4 REX HOTEL SAIGON

The information was derived mostly from the in-depth interview with Rex's hotel managers and from the author's observation and discussion with hotel managers during her advanced training as a sales and marketing assistant at Rex Hotel Saigon from 1 June 2015 until 31 August 2015. The commissioner, Rex Hotel Saigon, is a luxury 5-star hotel strategically located in the heart of Ho Chi Minh City. The hotel offers a variety of rooms such as Deluxe, Premium, Governor and President Suite making up 286 guestrooms. Rex Hotel Saigon has been known as one of the best luxury hotels in Ho Chi Minh City for years. Even though Rex has been constantly renovated to catch up with the modern lifestyle, its appearance is still connected with historical heritage dating back to early 20<sup>th</sup> century. Each guest room is individual decorated with dedication. (Rex Hotel Saigon 2014.) According to booking.com, Rex Hotel Saigon was one of the most booked hotels in Ho Chi Minh in 2015 (The Priceline Group 2016).

Rex Hotel Saigon has been well-known as a local leading hotel with the slogan "Your Vietnam Home". The slogan is also the goal which Rex Hotel Saigon always reminds its staff when serving customers. It means that all products and services need to deliver experiences that make customers feel exactly like home: in the comfort of home, feeling relaxed and cosy. (Lam 2015.) That is the mission Rex Hotel Saigon keeps carrying and passing on to the next generation. Moreover, Rex Hotel Saigon has also been actively promoting Vietnamese culture to international guests and visitors. Even though Rex is not an official tourism ambassador of Ho Chi Minh City, its contribution to Ho Chi Minh City's tourism is significant. Rex tells the stories of Ho Chi Minh City by dating back to the old time of Saigon with nostalgia and longing. Rex Hotel Saigon founded Rex Charity Fund to support elderly people and disable children as well as rural areas' development. Each year, Rex holds a charity fair and all revenue from the charity fair is donated for charity purpose. (Lam 2015.) In order to keep following its vision and contribute to tourism in Ho Chi Minh City, remaining as a 5-star standard hotel with outstanding services is a prior objective. Along with establishing strong relationship with loyal and existing customers, Rex aims to increase the volume of its target group coming from USA, Australia, and France. (Nguyen 2015.)

One of the most visible advantages that Rex Hotel Saigon has over direct competitors is its location. By being located right in the heart of city centre, opposite Ho Chi Minh City Hall and Nguyen Hue Boulevard, Rex certainly satisfies almost all guests staying at the hotel. (Bui 2016.) In addition, Rex also provides various options for in-house guests such as luxury brand shopping, casino for foreign guests, Rooftop bar and live music every night (Rex Hotel Saigon 2016).

All the services mentioned do not operate smoothly in the absence of the help of back office staff. Due to its large capacity of guestrooms and restaurants, there are many different departments within the hotel and smaller teams in each department. Because of effective cooperation between teams and departments, customers' issues and problems are handled quickly and thoroughly. Even though excelling in customer services, Rex Hotel Saigon is always under pressure of competition. In more detail, Rex Hotel Saigon is operated under the roof of Saigontourist Holding Company which is a state owned enterprise. There are 6 other 5-star hotels in Saigontourist Holding Company competing directly with Rex Hotel Saigon. The competition between hotels in Saigontourist is challenging not to mention 5-star hotels of foreign chains such as Lotte Legend Hotel Saigon and Park Hyatt Saigon. (Quan 2016.) Even listed as a luxury hotel, Rex Hotel Saigon is also aware of price sensitive customers. For example, in the case of cooperate customers; corporations usually book hotel rooms on the behalf of their employees. Indeed, from the viewpoint of corporations, price is always a sensitive issue that they want to minimize if possible. That is why taking good care of relationship with corporate customers and offering promotion price are vital tasks for hotel managers. (Bui 2016.)

## 5 RESEARCH METHODS

### 5.1 Qualitative Method

#### 5.1.1 Purpose and Strategy

The first method used in this research was in-depth interview – a qualitative method. The in-depth interview method is a common type of qualitative methods. As a semi-structured method, in-depth interview in this research aimed to obtain deeper and more specific information from informants about their opinions and experiences. The purpose of using an in-depth interview was to understand the perspective of hotel service providers by how they rate and reflect on the hotel's service quality. As service quality is frequently considered as a measurement for customer satisfaction, how interviewees think of service quality is akin to how they think the services affect customer satisfaction. If they have positive opinions on such services, there is more possibility that in their opinions, those specific services most likely to satisfy customers. (Radojevic et al. 2015, 13–21.) The result of this method analysis could possibly answer one of the research questions which is whether there are differences between perception of hotel managers and customers. The research could find out what kind of conflicts in perceptions between them by comparing the result of methods, in-depth interview and text mining approach.

The informants chosen for the research are hotel managers in Sales & Marketing Department of Rex Hotel Saigon. Due to the fact the research focused on in-house guests at Rex Hotel Saigon and also to ensure quality and relevance of information obtained, only hotel managers in the hotel guestrooms division were invited to the interview. In total, three e-mail interviews with hotel managers Huong Nguyen, Tam Bui and My Quan were conducted. Hotel managers were asked to give their answers to open-ended questions and rate different types of Rex Hotel Saigon's existing services. The interview questions asked are formed based on the 5 dimensions of the SERVQUAL model: tangibles, reliability, responsiveness, assurance and empathy. In other words, the questions focus on whether the service quality satisfies customers in 5 dimensions of the SERVQUAL model. For instance, whether tangible assets

such as facilities satisfy customers or there are problems, whether staff is supportive and helpful with responsiveness and assurance. are questions based on SERVQUAL dimensions. The themes of the interview were service quality of Rex Hotel Saigon in room and restaurant division, staff performance and further development plan. The answers of the interview draw a picture how hotel managers think of their services. The result from the qualitative analysis is then compared with the result from text mining approach whether there are similarities and conflicts between them.

Another point to notice is that the interviews were conducted in Vietnamese because it was more comfortable and convenient for hotel managers to express opinions in their mother tongue. The appendix included in the research paper is the translated version of the questions. The advantage of using Vietnamese instead of English was that choices of words interviewees used were wider, complex and unanticipated. It also helped the author receive rich and meaningful answers in comparison to answers in English.

#### 5.1.2 Data Collection and Research Analysis

An email interview questionnaire was formed and sent to hotel managers during the period from 20 August 2016 to 14 September 2016. The answers were received around 1 week later. Because of the busy time preparing for high seasons, when more information needed, the hotel managers preferred to be contacted by Viber rather than email. The additional interviews were conducted with the help of Viber, a voice over IP (VoIP) app, and it took around 15-20 minutes, some interviews were longer, up to 30 minutes, depending on the context. The interviews through Viber were made during the period from 14 September 2016 to 25 October 2016.

The email interview questions were divided into 3 parts. First the interviewees were asked to introduce themselves and give professional backgrounds and previous experience in the hotel sector, especially at Rex Hotel Saigon. The next part was about their opinion on current service quality at Rex Hotel Saigon. The topics included accommodation, restaurant, facility, impression in general



and hotel staff performance. In the last part, the possibility of development and improvement Rex Hotel Saigon in near future were brought up to discussion.

The research data analysis consisted of 6 stages. The first stage was to translate the interview answers into English. Following that is to review the purpose of the analysis. Asking why the analysis needed and which questions expected to be answered after conducting the analysis helped to form interview questions into separated topics and themes. After the identification of the key questions, the next stage was to categorize the data from in-depth interviews. Themes were created accordingly in relation to the information derived from the transcripts and coherent categories were formed accordingly. By adding all data into appropriate topics and eliminating irrelevant ones, in the following stage, the author could link and find connection between topics and answers. The question might arise whether there should be a relationship between staff performance and the hotel disadvantages. (Taylor-Powell and Renner 2003.) For example, even friendly hospitality cannot fully be an advantage of Rex Hotel Saigon if staff is lacking foreign language skills. Afterwards, a summary of the data was made. It includes the most important issues helping to answer the research questions (Table 1).

Table 1. Summary of Interview Answer Analysis

Categories	Answers
<b>Advantages</b>	<ul style="list-style-type: none"> <li>• Historical factors</li> <li>• Location</li> <li>• Reasonable price</li> <li>• Variety choice of breakfast</li> <li>• Friendly staff</li> <li>• Unique products and services</li> </ul>
<b>Weaknesses</b>	<ul style="list-style-type: none"> <li>• Differences in rooms and amenities' quality depending on new and old wings of the hotel.</li> <li>• Local brand hotel</li> <li>• Quite noisy when renovation takes place</li> <li>• Unprofessional staff training</li> <li>• Unattractive loyalty programme</li> <li>• Shortages of rooms with street view</li> </ul>

<b>Improvement and problem handling</b>	<ul style="list-style-type: none"> <li>• Attention on staff training, especially front desk with foreign languages</li> <li>• Offering personalised services</li> </ul>
<b>Further development</b>	<ul style="list-style-type: none"> <li>• Hoping to create new products and services</li> <li>• Being aware of new opportunities</li> <li>• Specific action not yet planned and discussed</li> </ul>

The results also include the scores of the services rated by hotel managers (Table 2). It is the reflection of their opinions on service quality of Rex Hotel Saigon. The results from the interviews were then ready to compare with the results from text mining analysis.

Table 2. Service Quality Ratings by Hotel Managers

<b>Services</b>	<b>Factors</b>	<b>Scores by hotel managers</b>			<b>Average score (out of 5)</b>
<b>Restaurant</b>	Food	3	5	3	3.67
	Catering services	4	5	4	4.33
	Atmosphere	5	4	4	4.33
	Facilities	4	5	4	4.33
<b>Accommodation</b>	Room services	5	4	4	4.33
	Facilities	4	4	4	4
	Cleanliness	5	4	4	4.33
	Amenities	4	4	4	4
<b>Impression general</b>	in Atmosphere	3	4	4	3.67
	Communication	3	4	4	4.33
	Location	5	5	5	5

## 5.2 Text Mining Approach

Text mining, sometimes referred to as text analysis, is the process of deriving information from textual data. It is regarded neither as a qualitative method nor quantitative method. Indeed, text mining is an analysis method which can examine a large volume of textual resources and then analyse them using mathematical measurement. The results generated through the text mining approach are numerical and valuable. For example, using text mining analysis, a set of terms are discovered describing pros and cons of a certain product or service. (Quest Software Inc 2016.) Hence, it is easier to compare with other research results using the same technique. The most significant application of text mining is in search engines. For example, when a user searches for a database with key terms, the search engine suggests the most relevant results by using text mining. In more detail, the search engine evaluates which data resources are more helpful by rating whether the key terms are important in the data resources.

There are some rational reasons why the author applies the text mining approach for her thesis research. Firstly, the author wants to use a new method rather than quantitative method (online survey) to find an answer for her research question. Besides, this method has been applied in many other fields for decades but has not been widely used in tourism research. By employing a new approach in her research, the author hopes to introduce this method to other professionals and researchers in tourism industry. The last motive of text mining usage is reliability. As the core result of the method is to find the most significant and relevant terms through ranking. It helps to sort out important key terms of customer feedbacks and as a result links to related customer satisfaction factors in hospitality industry.

The data was collected through booking.com during the period of 3 months from 1 June 2016 until 31 August 2016. Only feedbacks written in English were considered and those which were left blank or no comment were excluded as well. In total, 74 feedbacks were gathered. All feedbacks were then separated into 2 categories: positive feedbacks and negative feedbacks. In one category, each feedback was put in one text file, in other words, each text file represents

one positive or negative feedback. The following steps were applied to positive feedbacks. After the analysing process of positive feedbacks had been successfully conducted, the same steps were used for negative ones.

The data analysis was conducted with the help of Rapidminer. Rapidminer is visually-based software that provides integrated environment for data mining, text mining as well as business analytics (Rapidminer 2016). Rapidminer is well-developed with explanation and description for each operator in the software. It also launched a separate website [docs.rapidminer.com](https://docs.rapidminer.com) in order to provide deeper tutorials on how to use Rapidminer and even instruct how to create your new operators. With the help of Rapidminer, the author was not required to process the data traditionally, as a result, could analyse faster and more easily.

The data was input in Rapidminer by operator 'Process documents from file' (Figure 2). In this operator, minor operators were used to skim and omit unnecessary terms and shorten the texts. The first minor operator was 'Tokenize'. It serves the purpose of separating non-letter characters. The next step was to transform all cases of characters in documents to lower cases by 'Transform case' operator. After that, stop words (such as about, as, than, more...) were eliminated from the texts because they do not belong to any related category in the research. Afterwards, duplicated phrases (eg. friendly staff, great location) were identified by 'Generate n-gram'. The sixth step was stemming words. The words were reduced to their word roots and words with same root (eg. amazing, amaze, amazed) were set as a token only (eg. Root of amazing, amaze and amazed is amaz). This resulted in a list of words and phrases in positive feedbacks. The wordlist was then used to find out how important a word is in a document. This was done by applying term frequency-inverse document frequency method (TF-IDF). 'Generate TF-IDF' operator calculates the value (score) of a term in a text and reflects how important a term is. The outcome of the final step in Rapidminer was a table of words scores.

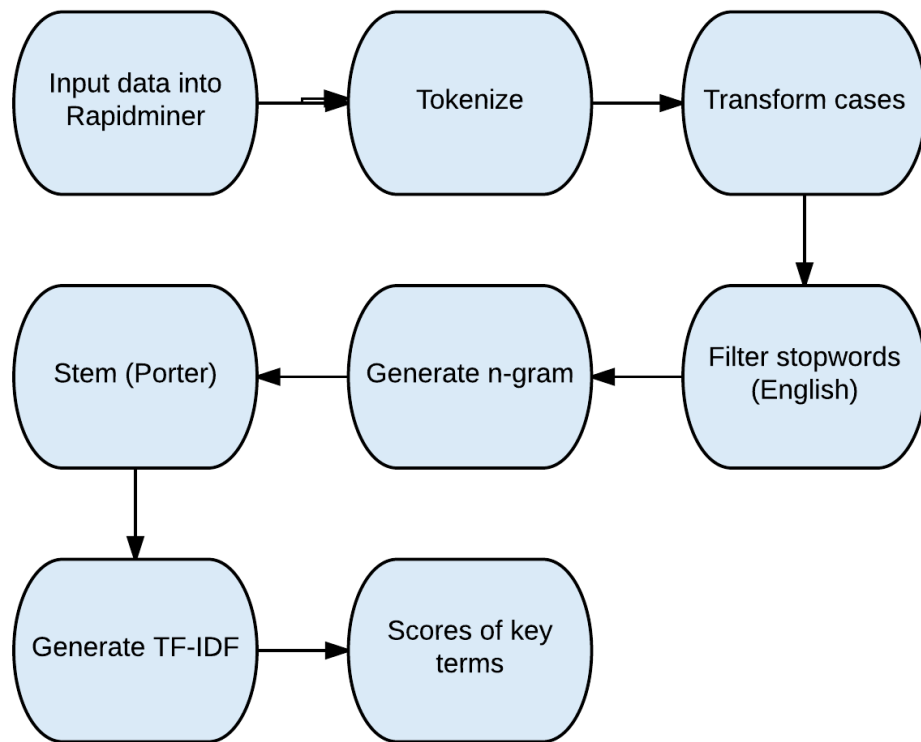


Figure 2. Process Data with Rapidminer (Nguyen, based on McGuigan 2010)

The following process was to calculate scores of customer satisfaction factors in hospitality and rank them accordingly (Figure 3).

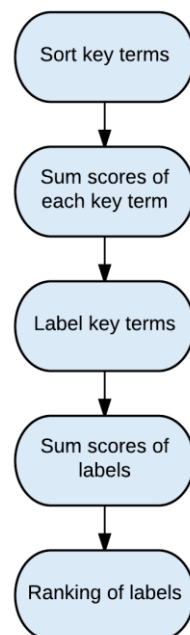


Figure 3. Customer Satisfaction Factors' Scores and Rankings (Nguyen 2016)

Initially, all keywords from the wordlist including scores were sorted to eliminate irrelevant words. Next, scores of words were calculated by summing scores of each keyword. For example, a word appearing in 20 documents would have 20 scores related to each document. Therefore, the score of that word is the sum of 20 scores together. In the following step, all words were labelled with a hospitality theme. The rankings of customer satisfaction determinants depend on the word scores. Therefore, the customer satisfaction determinants' rankings can be high even with a few high scored words.

## 6 RESULTS

The findings from text mining analysis answer the second research question of the thesis. The customer satisfaction and dissatisfaction determinants were discovered with their rankings. As a core service of hotel industry, it is clear that room and cleanliness takes the lead when it comes to customer satisfaction factors with the score of 25.53. Following Room and Cleanliness is the location, restaurant and staff. In contrast, the dissatisfaction determinants and their rankings are different. Noise comes first as a factor receiving the most negative feedbacks. Concerning dissatisfaction determinants, the online reviews do not have a wide variety of word choices as in the case of satisfaction. It means that customers express their anger and disappointment with repeated words but they are significantly more powerful.

Table 3. Customer Satisfaction Factors' Scores and Rankings

Ranking	Labels	Scores	Terms
1	Room & Cleanliness	25.53	bed, bedroom, big_room, bed_pillow, comfort, comfortable_b, pillow, room, room_great, spaciou, spacious_room, clean, nice_clean, room_clean
2	Location	21.59	centr, central, central_loc, distanc, fantastic_loc, good_loc, great_loc, locat, location_excel, location_great, perfect_loc, walk, walking_dist
3	Restaurant	21.02	breakfast, breakfast_amaz, breakfast_buffet, breakfast_good, breakfast_great, breakfast_nic, buffet, choic, dish, excellent_breakfast, food, food_excel, good_breakfast, great_breakfast, noodle_soup, restaur, top_restaur
4	Staff	17.08	friendli, friendly_staff, help, helpful, helpful_friendli, staff, staff_help, staff_helpful

Table 4. Customer Dissatisfaction Factors' Scores and Rankings

Ranking	Labels	Scores	Terms
1	Noise	18.91	construct, get_good_night, metro, metro_construct, nois, noise_renov, noisi, renov, quiet, quiet_room, sleep, traffic_nois

2	Restaurant	12.36	breakfast, buffet, food, restaur
3	Facilities & Amenities	11.69	lift, lobbi, old, pool, pool_area, swimming_pool, water, shampoo, shower
4	Value	7.61	expens, overpriced_room, overpr, price, price_expens
5	Staff	7.01	attitud, friendli, help, rude, staff, staff_friendli

In addition, the results of text mining are presented using Word cloud to highlight key term roots of each factor of customer satisfaction and dissatisfaction. Tagul.com was used to create word clouds so that readers find it and more convenient and easier to understand. Figures 4 and figure 5 exhibit the major factors that affect customer satisfaction positively and negatively respectively. The figures highlights popular terms used relating to the factors in online reviews.

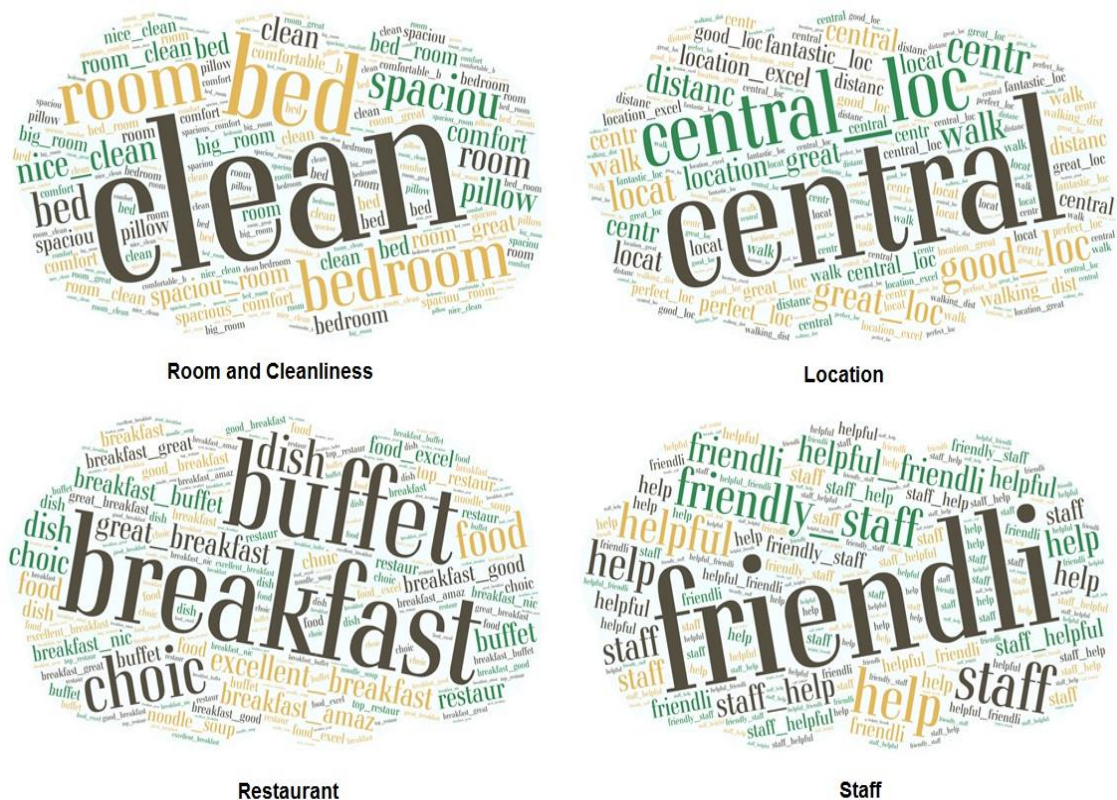


Figure 4. Customer satisfaction determinants

The word clouds are used to illustrate the frequency of words appeared in the online reviews. For example, positive reviews of Room and Cleanliness were



contributed by a set of words including “clean”, “bed”, “bedroom”, “nice clean” while “buffet”, “breakfast” and “choice” made up a large portion of Restaurant’s score. It is also worth noticing that even regarding to breakfast, customers use a wide range of words to describe their opinions on the service such as “good breakfast”, “excellent breakfast”, “amazing” and “great”.

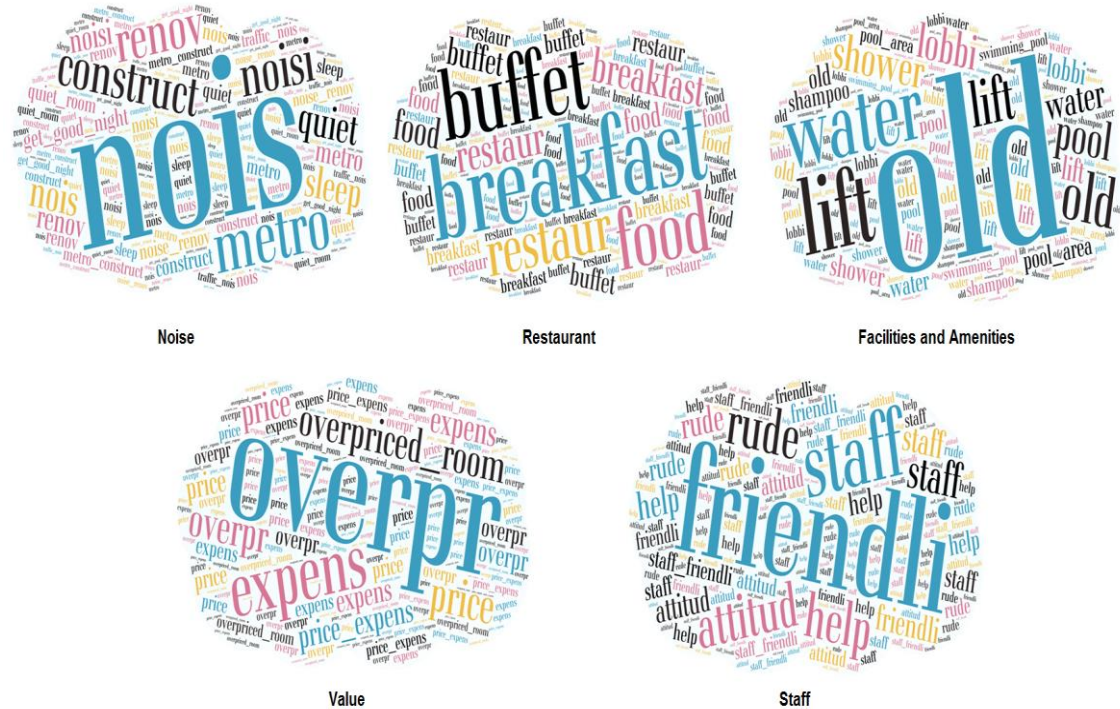


Figure 5. Customer dissatisfaction determinants

On the other hand, dissatisfied reviews are expressed using repeated but meaningful words. It can also be seen that choices of words using in negative reviews are not diverse in comparison to positive reviews. Besides, even though restaurant and staff performance create considerable value for the hotel, some other customers find the services not as good as they expected. For example, breakfast, buffet and friendly appear in both compliment and complaint reviews. It means that in the case of good performance, restaurant and staff create customer satisfaction and create dissatisfaction if they fail to deliver what customers expected. However, the appearance of noise has significant impact on customer satisfaction but the absence of noise does not deliver any extra value to customers.

The results from the text mining analysis confirm Motivation-Hygiene theory by Herzberg that satisfaction and dissatisfaction determinants are not the same in customer service context. Even if the factors happen to appear as leading factors for both satisfaction and dissatisfaction of customer, their rankings and scores in each table are different. In detail, an excellent performance of restaurant gives more credit than credit an unpleasant experience can lose. The results of the thesis research are also reliable as they are similar to previous researches conducted on customer satisfaction factors. The results include all factors that Chaves, Gomes and Pedron (2012) asserted such as room quality, staff performance and location. Moreover, the results are similar to which in the research conducted by Xu and Li (2016). Good location, clean room and good restaurant are the top customer satisfaction determinants in full-service hotels. (Xu & Li 2016, 61.)

The later findings from the research are conflicts and similarities between opinions of customers and hotel managers regarding customer satisfaction determinants. The results from text mining analysis share some similarities with the results of in-depth interviews. For example, regarding location, all hotel managers emphasized that location is among the important advantages that Rex had over its competitors. All the hotel managers rate 5 out of 5 for Rex's location. This is an aspect confirmed by customers staying at Rex as location is ranked as the second most important factors of customer satisfaction according to the research results. The complete results of the comparison of online review analysis and in-depth interview analysis is illustrated in Figure 13.

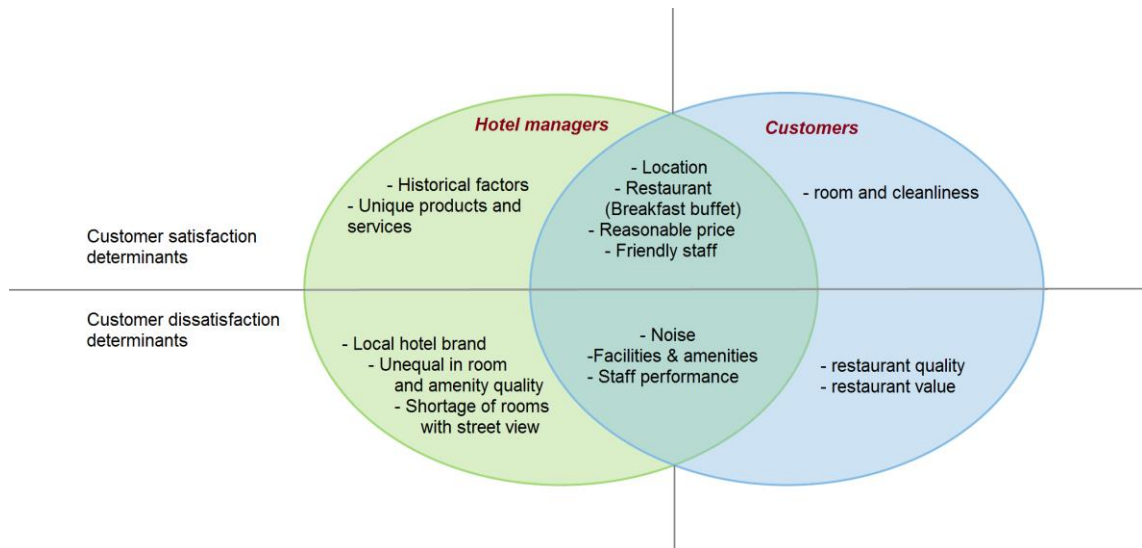


Figure 6. Similarities and Conflicts between Opinions of Hotel Managers and Customers Regarding Customer Satisfaction Determinants

Besides, concerning the value factor, it seems to be contrary. Price related factors do not appear as any leading satisfaction determinant while value ranks as the fourth dissatisfaction determinant. The issue draws the author attention because hotel managers gave compliment on their attractive price and how their customers support Rex because of the price offered. When comparing interview answers and customer online reviews, it shows that hotel managers and customers give complement on the attractive price. However, because of its minor impact, value factor does not appear as one of leading satisfaction determinants. After the author had a deeper look into all specific reviews containing value factor's key terms, there was a surprising finding. By examining each online review again, the findings show that the value factor is not related to room price but the price in Rex's restaurants. The restaurant value causes displeased customers to raise their voice. It is worth noticing because none of hotel managers was aware of this issue. It is understandable because the restaurant can score highly in satisfaction determinants because of the breakfast buffet quality. It is due to the fact that the free breakfast buffet is always included the room price. However, if customers are supposed to pay for food and beverage in the restaurants, customers think that the price is much higher than what they are willing to pay for.

Similarly, Room and cleanliness – the most important satisfaction determinant, however, was ignored in the interviews with hotel managers. When asked about

advantages of Rex and important factors in hotel context, most issues discussed were hospitality, variety in product offering, friendly staff and location. Yet giving 4 or 5 out of 5 when asked to rate their room and cleanliness, they did not consider these elements put much important weight on them. This is an overlooked factor by Rex Hotel Saigon in overall. They try to attract more customers with reasonable price, great buffet and great staff performance but somehow they forget the core of the hotel context is hotel room quality.

When it comes to noise issue, the hotel managers when asked were aware of the problems and they gave solution for renovation noise and dust. For example, rooms located farthest from the renovation are preferred. If rooms are full and there is no other option rather than staying in rooms close to the renovation, hotel rooms are usually upgraded from Premium to Executive to compensate for customers' inconvenience. However, solutions by hotel managers seem that they did not have enough weight for compensation and did not satisfy customers. There were still many negative online reviews complaining about the renovation with insufficient help from staff. Although customers and hotel managers share the same opinion that noise was a drawback of Rex Hotel Saigon during that period, how hotel managers approached and handled the problem do not please customers as they thought. That is an issue needing more discussion between hotel managers and director board in order to find better solutions.

## 7 DISCUSSION AND SUGGESTIONS

With the results of the research, some suggestions are brought to discussion for the hotel managers to consider in the future marketing and operation plans of Rex Hotel Saigon. As the feedbacks from online reviews show that customers are more aware of small and specific features of the products and services, Rex should pay more attention to the small picture of the services along with big picture. By that, it means that dedicating attention to minor details is as important as conducting excellent marketing campaign. There are cases that customers are not interested in historical value of the hotel than simply a great luxury hotel room. Therefore, improving room quality and delivering extra value is an option to enhance customer experiences and customer satisfaction.

Excluding location, staff training should be more professional as staff performance is one of the factors that generate greater customer satisfaction. One of the hotel managers admitted that because Rex Hotel Saigon was not an international chain hotel, it did not have any professional standardised guideline for staff training. This leads to internal inconsistency and contradiction with Rex. Furthermore, as Szymanski and Henard (2001, 16–35) point out that customers are more likely to voice their dissatisfaction if unpleasant experiences occur, staff training should also include guideline helping staff to handle problem professionally. By lessening the anger of customers, negative electronic words of mouth can be reduced significantly. It is likely easier and cost effective to offer proper staff training than to rebuild reputation surrounding by negative feedbacks. In addition, as Rex Hotel Saigon does not have management response on booking.com website, it is difficult to communicate with customers and handle negative feedbacks as well as show appreciation to positive feedbacks. Implementing managerial responses to online review, Rex can improve its image with personal touch and dedication to customers. It is also an effective solution for post-purchase communication. It maintains relationship with customers and increase possibility of loyalty.

On the other hand, the location which plays a significant role in the success of Rex Hotel Saigon is something that cannot to change. Nevertheless, it appears that location is in promotion campaign and brochure as a pinpoint for Rex but

none of them truly focus on marketing for the location. In order to show off how great the location is, Rex should make customers understand why Rex is outstanding and beats all other competitors regarding its location. One option is to create pocket city centre map to highlight its location. Customers cannot know the advantage of Rex's location until they are aware of the distance from Rex to tourist attractions in Ho Chi Minh City. The map can also be included in Rex's brochure and be able to be downloaded from Rex's website and third party booking websites. In this way, Rex can draw more attention from customers looking for accommodation in a 5-star hotel in Ho Chi Minh City.

## 8 CONCLUSION

The results of the thesis successfully answer the research questions. It is proven that the customer satisfaction and dissatisfaction determinants are different and are not correlated. The findings also include rankings of leading customer satisfaction and dissatisfaction determinants. In addition, the similarities in opinion that hotel managers and customers share are asserted along with the conflicts. It is evident that how hotel managers define their service quality is not the same as what key factors affecting customer satisfaction.

It can be also a confirmation that the text mining analysis method is possible to implement in hospitality context. Likewise, there is possibility to apply the text mining analysis method in other tourism researches in the future. Furthermore, the author hopes the thesis could somehow raise other researchers' interest in text mining analysis and its application in tourism research. At the same time, the results of the thesis give valuable information and knowledge for Rex Hotel Saigon to understand and its customers. Indeed, the research serves as a basic guideline for Rex Hotel Saigon in considering service development accordingly.

Besides, there are a few limitations of the thesis worth noticing. Firstly, the data collecting process was during the period in which the renovation and metro construction occurred. As a result, it is vital to understand that noise became a more debated issue leading to higher negative scores in dissatisfaction factors. In addition, comparing positive and negative online feedbacks also faces a challenging issue. According to Szymanski and Henard (2001, 16–25), customers are more likely to voice their disappointment and express anger than those with positive experiences. It could become a bias if negative online feedbacks are dominant on review websites. Following that, the thesis paper is a small-scale research project including only the case of Rex Hotel Saigon. It is deemed to support deeper researches relating customer satisfaction in hospitality context rather than a fixed standard for demonstrating customer satisfaction determinants. The rationale behind it is that the results of such similar topic may differ depending on the target group and the characteristics of the tourist cities in the research. Moreover, being only able to analyse English

online reviews, the author is mindful that the results do not serve as a standard for online reviews in other languages. The choice of words, culture and information technology access are some issues affecting how customers react and express their opinions on the review websites. The difference in internet penetration rate across country and demographic group is also a vital factor affecting online reviews. Due to these factors, the validity of the thesis should not be considered as external validity and applied in a large-scale level. Even the results are reliable and confirm previous case studies researches; the thesis is useful as a supporting paper for other researches in the future.



## BIBLIOGRAPHY

Bui, T. 2016. Thesis's interview questionnaire. Email  
Phuong.Nguyen@lapinamk.edu.fi.

Dominici, G. & Guzzo, R. 2010. Customer Satisfaction in the Hotel Industry: A Case Study from Sicily. *International Journal of Marketing Studies*, 3–12.

Hall, C. & Page, J. 2014. *The Geography of Tourism and Recreation: Environment, Place and Space*. New York, London: Routledge.

Hellstrand, P. 2009. Understanding Guest Satisfaction. Accessed 10 February 2016 <http://www.hospitalitynet.org/news/4044511.html>.

Internet Live Stats. 2016. Accessed 10 November 2016  
<http://www.internetlivestats.com/internet-users-by-country/>

Khan, I., Garg, R. & Rahman, Z. 2015. Customer Service Experience in Hotel Operations: An Empirical Analysis. *Procedia – Social and Behavioral Sciences*, 266–274.

Lam, N. 2015. Rex Hotel Saigon. Marketing and Communication Manager's Discussion 2015.

Mohammed, I., Guillet, D. & Law, R. 2014. Competitor Set Identification in Hotel Industry: a Case Study of a Full-Service Hotel in Hong Kong. *International Journal of Hospitality Management*, 29–40.

Nguyen, H. 2015. Rex Hotel Saigon. Sales Manager's Discussion 2015.

Novikova, K. 2009. A Study of Customer Satisfaction Factors and Employee Satisfaction in the Hospitality Industry. Southern Illinois University at Carbondale. Postgraduate Thesis.

Oliver, R. 1980. A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions. *Journal of Marketing Research*, 460–469.

Panda, K & Das, S. 2014. The Role of Tangibility in Service Quality and its Impact on External Customer Satisfaction: A Comparative Study of Hospital and Hospitality Sectors. *IUP Journal of Marketing Management*, 53–69.

Parasuraman, A., Zeithaml, A. & Berry, L. 1988. SERVQUAL: A Multiple Item Scale for Measuring Consumer Perceptions of Service Quality. *Journal of Retailing*, 12–40.

Pizam, A. & Taylor, E. 1999. Customer Satisfaction and its Measurement in Hospitality Enterprises. *International Journal of Contemporary Hospitality Management*, 326–339.

Quan 2016. Rex Hotel Saigon. Sales Manager's Interview 2 November 2016.

Quest Software Inc 2015. Text Mining (Big Data, Unstructured Data). Accessed 12 October 2016 <http://documents.software.dell.com/statistics/textbook/text-mining>.

Radojevic, T., Stanistic, N. & Stanic, N. 2015. Ensuring Positive Feedback: Factors that Influence Customer Satisfaction in the Contemporary Hospitality Industry. *Tourism Management*, 13–21.

Rapidminer 2016. Data Science behind Every Decision. Accessed 30 September 2016 <http://rapidminer.com/>

Rex Hotel Saigon 2016. Accommodation. Accessed 26 June 2016 <http://rexhotelvietnam.com/accommodation>.

Rex Hotel Saigon 2014. Hotel Brochure. Accessed 16 November 2016 <http://rexhotelvietnam.com/wp-content/uploads/sites/49/2015/02/FactSheet2014.pdf>.

Szymanski, D. & Henard, D. 2001. SAT: a Meta-analysis of the Empirical Evidence. *Journal of the Academy of Marketing Science*, 16–35.

The Priceline Group 2016. Accessed 27 June 2016 <http://booking.com>.

Taylor-Powell, E. & Renner, M. 2003. Analyzing Qualitative Data. Program Development and Evaluation. University of Wisconsin-Extension.

Wilkins, H., Merrilees, B. & Herington, C. 2007. Towards an Understanding of Total Service Quality in Hotels. *International Journal of Hospitality Management*, 840–853.

Xu, X. & Li, Y. 2016. The Antecedents of Customer Satisfaction and Dissatisfaction toward Various Types of Hotels: A Text Mining Approach. *International Journal of Hospitality Management*, 57–69.

## APPENDIX

**QUESTIONNAIRE**

*The goal of this questionnaire is to help the thesis author to have better knowledge of how hotel managers evaluate hotel quality services (Case: Rex Hotel Saigon) and help the author to complete her thesis research.*

*Your answers are vitally important to the thesis research.*

---

1. Could you please provide some details about yourself:
  - Your name:
  - Position at Rex Hotel Saigon:
  - Information about your professional background:
2. In your opinion, what are the advantages which Rex Hotel Saigon has over the competitors? (Regarding service quality, USP, marketing, branding, etc.)
3. Which elements do you think plays important roles in success of Rex Hotel Saigon? Why do you think so?
4. Using the numeric rating scale 1-5(1: lowest and 5: highest), please rate Rex Hotel Saigon under categories below:
  - Restaurant
    - . Food
    - . Catering services
    - . Atmosphere
    - . Facilities
  - Accommodation
    - . Room services
    - . Facilities
    - . Cleanliness

- . Amenities
  - Impression in general
    - . Atmosphere
    - . Communication
    - . Location
5. Do you think staff members (who have direct interaction with guests) are doing well or need more training in certain areas?
  6. As Rex is under renovation, what are your plans to minimise or prevent disturbance to guests from the renovation?
  7. What is your opinion on some other issues which have not yet been mentioned such as food allergy, smoking restriction, personal touch in services, employee attitude (when serving, communicating and dealing with guest's problems) .... Do you think they are important in hospitality management? Why do you think so?
  8. From your viewpoint, what are deficiencies (shortages) and weaknesses that Rex should pay more attention in order to improve its quality services? Which are important and which are less important than others?
  9. How do you think they (about deficiencies and improvement) will change in the near future (next 5 years maybe)?

*Thank you for your valued time and cooperation to answer the question sheet. I wish you have a productive working day and success in the future.*

*If you need assistance to answer the questions or need further discussion, please do not hesitate to contact the author by email: [Phuong.Nguyen@edu.lapinamk.fi](mailto:Phuong.Nguyen@edu.lapinamk.fi).*