User-generated content data and electronic word-of-mouth: their use by hotels in Thessaloniki

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Abstract

The aim of this study is to examine the use of user-generated content data that characterizes the hotel sector in Thessaloniki. Electronic word-of-mouth and customer satisfaction are two issues that are connected with user-generated content data. For this reason, hotel members of Thessaloniki Hotel Association were asked to answer to a specific questionnaire that includes questions about these three issues. Questions are sent via e-mail and answers are coded in Excel sheets in order to be processed.

The literature review is based mainly on articles of Hospitality and Tourism, Management and Marketing journals, all found via the Google Scholar tool. It begins with an introduction to Big Data and user-generated content and it continues with the issues of electronic word-of-mouth and customer satisfaction, all connected with each other.

The data analysis lead to interesting results. First, hotels in Thessaloniki are familiar at a high level with digital tools, such as social media, travel platforms and user-generated content analysis. Travel platforms are more important for their reputation and Booking is ranked as the most important one. Second, the majority of the hotels use content analysis and more specifically they have hired specialists for this. Third, online comments are the most important feedback source and the majority of them agree that negative online comments have a big impact in a hotel’s sales. Their attitude towards them is either responding to them or taking them into account without responding. Those who do not respond represent a percentage of 45% of the sample, which was expected to have been smaller because of their opinion on the level of importance of negative comments on sales. Respondents who do not answer to negative comments are more likely not to strongly believe that they affect hotel’s sales. Further analysis indicates that these two variables do not affect each other. Fourth, hotel managers develop their strategies aiming to attract new customers rather than retaining the existing ones. However, statistical analysis indicates that this difference is not statistically significant. Fifth, content analysis use is not related with their feedback sources and customer feedback is not fully exploited, as it is not taken into account as a stimulus to develop new products and services. In order to result to the above deductions, tables, pivot tables, chi-square tests and t-tests have taken place.
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Katerina Karavasiloglou
Table of Contents

Abstract ................................................................................................................................. 1
Acknowledgements .................................................................................................................. 2
Table of illustrations ................................................................................................................ 4
Introduction ............................................................................................................................. 6
Literature Review .................................................................................................................... 7
The importance of Big Data nowadays .................................................................................. 7
The Big Data challenges ......................................................................................................... 8
Big Data in tourism ................................................................................................................ 8
Big Data and Electronic Word-of-Mouth ............................................................................... 11
  The connection between Big Data and eWOM ................................................................. 11
  The electronic Word-of-Mouth as an opportunity in the hospitality industry .......... 13
  The reasons behind e-complaints ....................................................................................... 14
Other uses of UGC data in the tourism and hospitality industry ........................................ 15
Customer satisfaction and eWOM ....................................................................................... 16
  The theory behind customer satisfaction ........................................................................ 16
  The importance of customer satisfaction ......................................................................... 17
Methodology .......................................................................................................................... 18
  The aim, the population and the sample size ................................................................... 18
Data analysis & Discussion ................................................................................................... 18
  Social media ....................................................................................................................... 19
  Content analysis ................................................................................................................ 22
  Customer satisfaction and feedback ............................................................................... 24
  Negative online comments ............................................................................................... 25
  Attracting new customers or retaining the existing ones? ............................................. 27
  Customer feedback as stimulus for co-creation ............................................................... 29
Further data analysis ........................................................................................................... 30
Table of illustrations

Picture 1: Chi-square results ................................................................. 33
Picture 2: Chi-square results ................................................................. 34
Picture 3: T-test results ................................................................. 35

Graph 1: Social media importance ................................................................. 20
Graph 2: Mean rating of social media importance ................................................................. 21
Graph 3: Content analysis use ................................................................. 22
Graph 4: Content analysis use: Yes ................................................................. 22
Graph 5: Content analysis use: No ................................................................. 23
Graph 6: Feedback sources ................................................................. 24
Graph 7: Negative e-comments have a big impact on sales ................................................................. 26
Graph 8: Attitude towards e-complaints ................................................................. 26
Graph 9: Assistance level of digital tools ................................................................. 28
Graph 10: Digital tools’ assistance level mean rating ................................................................. 29
Graph 11: Customer feedback level of importance in product and services development ................................................................. 30

Table 1: Social media importance ................................................................. 19
Table 2: Mean rating of social media importance ................................................................. 20
Table 3: Feedback sources ................................................................. 24
Table 4: Negative e-comments have a big impact on sales ........................................25
Table 5: Assistance level of digital tools ........................................................................27
Table 6: Digital tools’ assistance level mean rating ..........................................................28
Table 7: Customer feedback level of importance in product and services development 30
Table 8: Attitude towards e-complaints ...........................................................................31
Table 9: Mean ratings of two different attitudes towards e-complaints .....................31
Table 10: Content analysis use and impact of e-complaints on sales .........................32
Table 11: Content analysis use and impact of e-complaints on sales .........................32
Table 12: Mean ratings comparison .................................................................................34
Introduction
Nowadays, eight to ten people, born from 1980 to 2000, in the United States are affected by strangers’ online reviews. The new digital era has forced companies to have an electronic image that will form their reputation and affect their sales. Tourism industry is no exception to this. Social media and travel platforms have provided hospitality and tourism companies with a huge amount of customer information regarding personal preferences, opinions, observations, complaints and praises. This volume of data increases on a daily basis and companies exploit them with the assistance of content analysis tools. The result is their effective use on improving their electronic word-of-mouth, increasing customer satisfaction and total sales.

This research aims to investigate the use of user-generated content data by the hotel sector in Thessaloniki and the ways that electronic word-of-mouth and customer satisfaction are connected with this. Electronic word-of-mouth and customer satisfaction are directly connected with each other. This study approaches UGC data from a managerial and not technical perspective. The findings concern mostly managers and professionals that make the important decisions of a company. For this reason, this study may be useful to professionals and students that are interested in being informed on how a manager should exploit user-generated content in order to achieve better results and how the electronic word-of-mouth is related with its use.
Literature Review

The importance of Big Data nowadays

The “Big Data” term appeared in mid-1990s but became widespread in 2011 because of its extended use in IBM’s and other technology companies’ campaigns (Gandomi & Haider, 2015). The definition that TechAmerica Foundation gives for this term is the following: “Big data is a term that describes large volumes of high velocity, complex and variable data that require advanced techniques and technologies to enable the capture, storage, distribution, management, and analysis of the information” (Gandomi & Haider, 2015). Big data are simply massive-scale data (structured or unstructured) that are generated, recorded, stored and accumulated (Jingjing, Lizhi, Ling, Shouyang, & Ling, 2018). Thanks to big data, managers are able to understand better their companies and their customers. A simple example to understand it, as McAfee & Brynjolfsson refer, is a retail store that first had no online shop. After constructing an online shop managers are not only able to keep track of the sales but also to track the way customers navigated, whether the promotions attracted them and categorize them by their choices (McAfee & Brynjolfsson, 2012). Big data is a powerful tool that can provide companies with important information. In order to understand better the big data term its three main characteristics should not be excluded. These are the volume, the velocity and the variety or The Three V’s (Gandomi & Haider, 2015).

Volume refers to the large-scale of data that companies need to store and manage. McAfee & Brynjolfsson support that the volume of data that cross the internet now in a second is more than those stored 20 years ago. A simple example is Walmart that collects more than 2.5 petabytes of data within an hour (1 petabyte=1 quadrillion bytes) (McAfee & Brynjolfsson, 2012).

Velocity refers to the rapidly growing data. In some cases, the velocity is more important than the volume, as companies are able to make fastest decisions or predictions. For instance, the use of location data through mobile phones has helped an MIT team to predict the sales of Macy’s (retail store) in the United States on Black Friday. They were able to calculate the volume of cars in the Macy’s parking lot at each time for an entire day (McAfee & Brynjolfsson, 2012). The result was the Macy’s revenue prediction for the day.
Variety refers to the kind of data that companies need to process. Pictures and texts from social networks and GPS locations are only two examples that indicate the kinds of information that companies need to take under consideration. The new era of mobile phones, online shopping and GPS produce torrents of data in a second. Most of them are also unstructured, which means that they are not organized in a database (McAfee & Brynjolfsson, 2012).

As a conclusion, these facts have led to a new era of data, the Big Data. A cautious management and analysis of Big Data can lead to the development of prosperous companies. As McAfee & Brynjolfsson highlight “You can’t manage what you don’t measure”, making big data the management revolution. Big data has become useful in areas of science, engineering, healthcare, management, business, tourism etc. (Jingjing, Lizhi, Ling, Shouyang, & Ling, 2018).

The managerial Big Data challenge
Another issue that need to be addressed is the management issue. Are companies willing to take advantage of this new era? What happens when the analysis results are not consistent with the managers’ opinions? During the previous years, on the not data-driven era, managers and executives made their decisions based on their experience or intuition. Companies even were hiring expensive outsiders to help them based on their expertise or experience. This phenomenon was called “HiPPO”, the Highest Paid Person’s Opinion. The challenge today for companies is to depend more on the data results rather than executives’ intuitions. As McAfee & Brynjolfsson support companies need to change their decision-making culture and this should start by the management team. When having to make an important decision they should start asking “what do the data say?” and then simply rely on the data results. This constitutes the new role of the management team (McAfee & Brynjolfsson, 2012) and is an issue that this new age of data has created.

Big Data in tourism
As already mentioned, tourism is only one of the sectors that uses big data as a management and decision-making tool. Jingjing et al. highlight that the main sources of big data in tourism are the following: users, devices and operations.

Firstly, social media have become the tool throughout users express themselves by creating user-generated content (UGC) data such as photos, videos, texts etc. Secondly,
after the development of Internet of Things electronic devices and applications have contributed to the rapid data distribution in tourism. These applications are the global position system (GPS), mobile roaming, Bluetooth, WI-FI apps etc. Thirdly, several operations in tourism such as web searching, online booking and purchasing, webpage visiting etc. create the corresponding transaction data. Marketers and academics use these three sources in order to understand better the tourism industry and to make better decisions (Jingjing, Lizhi, Ling, Shouyang, & Ling, 2018). When analyzing big data large-scale data are being used and this is an asset in data processing (e.g. statistical analysis) as the sample becomes bigger. In this way, there will be an adequate sample of data to describe the tourist behavior and the possibility for no bias among them will be higher (Jingjing, Lizhi, Ling, Shouyang, & Ling, 2018).

Although tourism marketers have initiated using big data analysis, the existing literature is yet very restricted. The research of Jingjing et al. in 2018 is the first attempt of presenting a literature review regarding the big data in tourism research. The first big data publications in tourism take place around 2007 and there is a peak in 2016 with 30 publications this year. This indicates that academics have apprehended that a new era in tourism industry has emerged. However, this topic is still at an early age.

According to Jingjing et al. the regions that have used big data the most on their research are Asia, Europe and North America. More specifically, USA, China and Australia have contributed the most. In Greece, companies do use big data; however, their use is still at an early stage, despite other European countries such as Italy, Spain, Germany or France.

Big Data from users, devices and operations

In this topic, further investigation of big data that comes from users, devices and operations will take place. The availability of users’ data is higher because of its low cost of use and easy access. On the other hand, transaction data that come from operations include a lot of private information that are available only for tourism organizations or governments. More specifically, the percentages of the big data used in tourism research are the following; 47% for users, 36% for devices and 17% for operations (Jingjing, Lizhi, Ling, Shouyang, & Ling, 2018).

Users & UGC

The source of users creates UGC data through social media. There are two types of data: online textual data (reviews and blogs) and online photo data (photos on websites).
Online textual data
This kind of data can be found on online social media that tourists express their satisfaction or dissatisfaction, review a place or a product and generally express their experiences. Textual data are separated into two categories: reviews and blogs data.

Reviews data, are being used in order to measure the tourism satisfaction. This process makes clear the characteristics of tourism satisfaction and the relationship between the latter and other factors such as guest experience or location. Hotel reviews are crucial for improving the hotels’ e-word of mouth. Restaurant reviews are important for satisfaction judgement and attraction reviews for attraction management. These three are the main targets that reviews data are used for because “lodging, eating and traveling might be the top three important factors that travelers are mostly concerned about in a tour” (Jingjing, Lizhi, Ling, Shouyang, & Ling, 2018). Reviews data are found on specific social media such as TripAdvisor, Expedia, Ctrip, Qunar, Booking, Dianpin etc. and TripAdvisor is the most popular.

Blogs data are found on tourist blogs and social media and include both traveling reviews and tourists’ sentiments. Often there are also recommendations regarding specific places, hotels, restaurants etc. Blogs data are found on Twitter and Sina Weibo (Chinese alternative to Twitter).

Online photo data
Photos constitute also UGC that users upload on social media and are connected to time and places, important factors in tourism research. Jingjing et al. support that photo data exploration is crucial because travel destinations & routes and tourism duration can be studied. Moreover, photo data can assist in developing tourism marketing.

Photo data present tourists’ activities in a city by geo-tagged photos. In this way tourists develop travel routes, make recommendations for a specific area and present points-of-interest through their geo-tagged photos. Tourism duration can be studied also by exploring the uploaded photos. Flickr is a tool that has already been used for this kind of analysis exploring both destinations & routes and duration (Jingjing, Lizhi, Ling, Shouyang, & Ling, 2018).

Online photo data can be exploited in order to form tourism destination management strategies and build tourism destination image (TDI) by the destination management organizations (DMO).
An important characteristic of online photo data is the metadata (heterogeneous information) that photos conclude and these are separated into the four following categories:

- User-related information such as user ID and photo ID
- Temporal information, which is the taken date and uploaded date
- Geographical information, which is the latitude and longitude
- Textual information such as tags, descriptions and titles

Except for Flickr, two more online social media platforms have been used for photo data analysis and these are Panoramio and Instagram. Although Instagram (released in 2010) is more popular (more users and photos), Flickr has been exploited more extensively on research because of its longer history (released in 2005) which makes its data more sufficient.

**Device Data**
After the development of IoT, several devices have been exploited for exploring tourism behaviors and movements. GPS, mobile roaming, Bluetooth, RFID, WI-FI and meteorological data are an asset to tourism management.

**Transaction data**
Transaction data analysis is useful for tourism prediction, tourism behavior understanding, tourism marketing and search engine optimization (SEO). This kind of data stems from tourism-related operations such as web-searching, webpage visiting, online booking & purchasing etc.

**Big Data and Electronic Word-of-Mouth**

**The connection between Big Data and eWOM**
As research has indicated, the most popular part of big data in tourism is the UGC (Marine-Roig & Clave, 2015, p. 162). More specifically, UGC is the richest and most diverse source regarding users’ online information. Moreover, important is its assistance on building a destination’s electronic word-of-mouth (eWOM), its image and reputation. During the previous years a massive growth of online travel reviews (OTRs) has taken place simultaneously with a decrease in travel blogs. Online reviews on TripAdvisor,
Trivago, Booking and Expedia had increased importantly and that makes OTRs and social media such them a valuable source of information for both the destination and the hospitality sector (Marine-Roig & Clave, 2015). A significant number of hospitality companies uses UGC and eWOM as parts of their marketing strategy. Lu and Stepchenkova support that eight to ten people in the United States from the Generation Y (people born from 1980 to 2000) are affected from strangers’ online reviews (Lu & Stepchenkova, 2015, p. 121). Companies take advantage of UGC to get customers’ feedback, monitor their preferences, communicate with them, make product or service changes and co-create with them the company’s brand.

Litvin et al. highlight the importance of UGC for a company’s marketing. Social media and thus eWOM play a significant role in a lot of marketing aspects in hospitality and tourism industry. According to Litvin et al. social media data can assist on three important features of tourism marketing:

- Segmentation and positioning
- Customer relationship marketing and brand engagement
- Market research on big data of social media

First, segmentation is dividing the market into target groups with specific characteristics. Social media is a tool that indicates the social engagement of customers and potential customers. Individuals express their travel preferences and tourism companies can take advantage of this feature for market segmentation. Companies understand better their customers through social media and this makes it easier to develop a marketing and segmentation strategy. Social media is the tool to both understand and address their customers.

Second, customer relationship management (CRM) has become a priority in hospitality companies. As Litvin et al. support CRM has evolved after the marketing concept had been described as “the key to profitability” for companies (Litvin, Goldsmith, & Pan, 2017, p. 317). It is necessary for companies to understand their customers and their needs. CRM is achieved by the development of specific applications that record customers’ information and needs. It can also be a way of communication between the company and the customers. Building relationships with them has become the main marketing goal. Academics and marketers agree that profit comes more from long-term relationships with customers rather than individual sales. Managers, in this way, can keep in touch with
previous customers and turn them into future or even into repeat customers. A recent definition of CRM is: “the overall process of building and maintaining profitable customer relationships by delivering superior customer value and satisfaction” (Litvin, Goldsmith, & Pan, 2017, p. 317). Social media is the tool that can be exploited for this use.

Third, the recent development of social and mobile media has made the big data research necessary in hospitality and tourism industry. As already mentioned, Litvin et al. also support that social media is a main source of important information regarding customers. Social media analytics can be exploited in order to discover trends, communicate with customers, make predictions and understand their behavior and needs. The social media analytics field can be exploited not only by big companies but also by average and small ones, as it is affordable and it is a job that can be assigned to partners. There are specific companies that do this kind of market research; they collect, analyze and share this information for their customers (Litvin, Goldsmith, & Pan, 2017).

The electronic Word-of-Mouth as an opportunity in the hospitality industry
The need, for hospitality managers, to understand the importance of eWOM and online reviews has increased. Before the social media and online travel platforms era customer feedback derived only from interpersonal communication and guest comment cards. This feedback was never accessed by other customers and was used only for the hospitality companies’ informing. Nowadays, customer feedback has the form of online comments and reaches the hospitality company through third-party media. At the same time these comments are visible to every potential customer, partner or competitor. Litvin et al. support that this kind of sharing is called “democratization of opinions” (Litvin, Goldsmith, & Pan, 2017, p. 318).

Already, since 2008, Litvin et al. in a former research, had highlighted that eWOM should be seen as an opportunity by the hospitality industry. The democratization of opinions is still the main concern of hospitality managers as negative reviews do exist and have an impact on potential customers. As Litvin et al. support, studies have shown that negative eWOM has a bigger influence on them rather than positive. However, the biggest percentage of reviews are positive. Managers, need to understand that when the number of reviews increases the impact of individual reviews decreases. At the same time, with
the increase of review number the ratings become more positive and this applies to all hospitality segments except for luxury brands (Litvin, Goldsmith, & Pan, 2017). As a conclusion, hotel managers need to pay attention on customer review density and eWOM quantity management.

Another matter of interest is the fake or fraudulent customer comments. For instance, 20% of TripAdvisor comments do not deliver real information. However, consumers still trust online reviews; the reason is because they trust their ability to determine whether the reviews they read are truthful or not. As Lu & Stepchenkova support, studies have tried to identify comments like that by comparing the language structure between fraudulent and truthful reviews. Another study has indicated that methods to identify such reviews are not trustworthy as they are simplified. A study has shown that a percentage of 23.5% of reviews were suspected to be misleading. This makes the analysis of UGC data more difficult and possible to lead to false results (Lu & Stepchenkova, 2015).

Another significant issue is the impact that reviews have on potential customers. Lu & Stepchenkova claim that residents and experienced travelers have a different influence on them. Residents are more influential regarding food and beverage and safety. On the other hand, travelers influence them on matters such as accommodation, transportation and travel costs (Lu & Stepchenkova, 2015, p. 136). A significant percentage of 50% globally do not make a booking until they read other customer reviews, as a study of PhoCusWright (Hotelmarketing.com) in 2014 has shown (Litvin, Goldsmith, & Pan, 2017). Moreover, a New York University research has indicated that 95% of respondents read at least one review before booking (Litvin, Goldsmith, & Pan, 2017).

**The reasons behind e-complaints**

Several studies have taken place regarding the analysis of online comments. Depending on the area of interest, researchers use different methodologies and tools in order to have the desired effect. Some common studies are the following:

- Exploration of the contents of comments (positive/negative) with regard to hospitality features (tangible or intangible)
- Examination of online comment credibility
- Exploration of the comments impact on potential customers
- Examination of the negative comments (complaints)
Negative online comments are an area of interest for hotel managers and researchers have tried to analyze the reasons behind e-complaints. E-complaint is an alternative term for a negative online comment. Online comments form the hotel eWOM and are more powerful in the hospitality industry, as 75% of travelers read online reviews before booking (Lianping, Hanqin, & Ben, 2015). Lianping et al. support that literature indicates several reasons that urge customers to post e-complaints; however, customers mostly refer to intangible products. Poor service quality is one of the main reasons for negative comments and regarding the tangible products, room features, public areas and food and beverage quality are reported to be the most important.

**Other uses of UGC data in the tourism and hospitality industry**

As already mentioned, UGC constitutes the eWOM of hospitality companies to date and is used extensively in their marketing strategies. However, there are more issues in tourism and hospitality industry for which the UGC data have been useful. Below are described the five sectors that UGC has been used for, according to a survey of Lu & Stepchenkova in 2015.

1. Service Quality
2. Destination Image and Reputation
3. Experiences and Behavior
4. Mobility Patterns
5. UGC as eWOM

The first sector that has altered because of the UGC data is the service quality, meaning issues such as customer satisfaction, complaint behavior, service failure and recovery. The sources of these data were platforms such as TripAdvisor and the main reasons for the complaints were employee rudeness, employee incompetence and misinformation. Online negative reviews have a significant influence on potential customers’ bookings and thus the hospitality and managerial staff should pay attention on solving their customers’ problems. The main reason that customers post negative online comments is because of the managerial failure to solve them in cooperation with the customer. Managers should daily also pay attention to the comments posted online and answer to them; something that will assist in interacting with their customers (Lu & Stepchenkova, 2015).
Regarding the destination image, UGC is being used by DMOs globally in order to develop marketing strategies. Before the UGC data DMOs used human subjects for their studies. However, the collection of this kind of data nowadays is easier and not so expensive. Destinations are able to understand their travel customers and the development of an effective destination marketing strategy is more simple.

Recent studies have shown that UGC analysis can describe specific experiences and behaviors of specific travel groups globally. Lu & Stepchenkova describe tourist blogs as the “near-perfect” source to identify new tourism trends and niche markets. Moreover, online platforms can assist in studying the human behavior in real time, which is an emerging topic in UGC research. A research in 2013 used Facebook and Twitter backpacker posts to study their behavior in the Chilean earthquake in 2010 and in the street protests in Bangkok in 2006. The aim was to report their behavior during crisis. When in crisis, UGC research is more valuable than the traditional survey and Twitter is probably the most appropriate source (Lu & Stepchenkova, 2015).

Regarding the mobility patterns, mobile devices, especially smart-phones, have become a crucial mode in UGC composition. Individuals assist in the identification of the most visited places, the popular attractions of a destination and events they are interested in. Geo-tagged photos can become useful for the development of tourist routes, since the most attracting places will be indicated via them (Lu & Stepchenkova, 2015). It is a tool to follow the digital footprint of travelers, something that can be exploited by the whole tourism and hospitality industry.

**Customer satisfaction and eWOM**

**The theory behind customer satisfaction**

Many studies have focused on customer satisfaction theories even before the digital age. However, it is still an important issue and remains one of the main managerial goals. The definition of customer satisfaction comes from the World Tourism Organization in 1985 and is the following: “Customer Satisfaction is a psychological concept that involves the feeling of well-being and pleasure that results from obtaining what one hopes for and expects from an appealing product and/or service” (Pizam, Shapoval, & Ellis, 2015). The most popular theory among them is the Expectancy Disconfirmation Theory (1980) supporting that customers have expectations about the performance of the goods and
services before purchasing them. Satisfaction comes when the actual performance overcomes the expectations. The SERVQUAL model defines quality as: Quality = Performance – Expectations.

The literature defines expectations as a very significant factor in customer satisfaction and in the quality that customers enjoy as well. Expectations can be altered for several reasons such as changes in:

- Needs
- Customer objectives
- New experiences
- Other factors that influence the quality of the outcome

The importance of customer satisfaction

Pizam et al. highlight the importance of customer satisfaction. Knowledge of customer satisfaction provide information on how they define quality of service and products and it is an important factor for the word-of-mouth recommendations. Studies have shown that attracting a new customer costs 5 times more time, money and resources than retaining an existing one. This makes customer satisfaction the cheapest way to promote a service or product.

The challenges for hospitality companies are directly connected with the awareness of customers’ expectations, high levels of services and the maintenance of existing customers. Companies have turned into consumer-oriented corporations in order to achieve this and customer complaints are an important part of it. Hospitality companies seek for feedback intentionally, instead of waiting for customers’ complaints.

Tsao and Hsieh (2012) have studied the impact of quality on a company’s eWOM and these are the following results:

- Customer satisfaction affects in a positive way customer commitment and trust.
- Customer trust has a positive impact on customer commitment.
- Customer commitment is a more significant factor on developing positive eWOM than customer trust.
Customer satisfaction and trust are not enough for spreading positive e-comments; these need to be turned into commitment to the company in order for the achievement of positive eWOM.

Methodology

The aim, the population and the sample size
The aim of this study is to examine the connection between the use of UGC data analysis with eWOM. Specific questionnaire is being formed (see Appendix A) and answered by hotel members of Thessaloniki Hotels Association (THA), in Thessaloniki as an attempt to investigate specific behaviors around this issue. The methods that are used is questionnaire analysis. The questionnaire methodology is used in order to gather information and record specific behaviors that are connected with the study. The questionnaire includes quantitative questions that require statistical analysis and that is the reason why it is considered to be the most appropriate research type.

The population of the study has decided to be hotels that belong to the Thessaloniki Hotel Association and this makes the sample size specific. More specifically, the questionnaire has been sent to 84 hotels, the actual members of Thessaloniki Hotels Association. This sample includes hotels from 1 to 5 stars (*) and one youth hostel. The highest percentage of the hotels are 3* hotels. However, the study does not depend the results on the hotels’ stars. The reason because Thessaloniki Hotel Association is chosen is because members of associations tend to have an extended communication and collaboration about industry matters. It would be interesting to investigate whether their answers would deviate from one another.

Data analysis & Discussion
This section includes all the questionnaire results. Data are downloaded directly from Google Forms and saved and processed in Excel. The questionnaire can found on the Appendices area. The exact amount of responses is 51.
Social media
Before the presentation of results, some basic information about social media that have been used is going to follow. In this study Booking, TripAdvisor, Facebook and Instagram have been taken into account. Booking and TripAdvisor are traveling sites, that include all the important information about each hotel and have also special offers regarding booking. Both of them include customers’ feedback; however, Booking is more reliable as only customers who have booked a hotel through Booking can leave a comment. On the other hand, Facebook and Instagram are not traveling platforms but can be used as promoters for some of the hotels.

From the questionnaire analysis arises that 100% of the hotels uses at least one of the above social media and 100% of them also strongly believe that online social presence affects the hotel’s reputation.

Regarding the level of importance of each medium, the following responses have been taken:

<table>
<thead>
<tr>
<th>Social media</th>
<th>Very low</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
<th>Very high</th>
</tr>
</thead>
<tbody>
<tr>
<td>TripAdvisor</td>
<td>0%</td>
<td>0%</td>
<td>6%</td>
<td>63%</td>
<td>31%</td>
</tr>
<tr>
<td>Booking</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>6%</td>
<td>94%</td>
</tr>
<tr>
<td>Facebook</td>
<td>0%</td>
<td>0%</td>
<td>73%</td>
<td>27%</td>
<td>0%</td>
</tr>
<tr>
<td>Instagram</td>
<td>0%</td>
<td>6%</td>
<td>88%</td>
<td>6%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Table 1: Social media importance

The usefulness of each media is ranked on a different way and the distribution of the responses vary. On the one hand, a percentage of 63% consider TripAdvisor to be of high importance and 31% has ranked its importance level as “very high”. On the other hand, 73% of the respondents find Facebook of moderate importance and 88% rank Instagram at the same position. The following chart makes obvious that Booking and TripAdvisor are considered more important for the reputation and the sales of a hotel.
On that note, it is interesting to categorize these media according to their level of importance. In order to do that, the table 2 will be used. This table provides information about the importance ranking of each media. The mean rating is calculated as follows:

\[
\frac{x_1w_1 + x_2w_2 + \cdots + x_nw_n}{Total}
\]

\[w=\text{weight of ranked position (1 for Very low, 2 for Low etc.)}\]
\[x=\text{response count for answer choice}\]

<table>
<thead>
<tr>
<th>Social media</th>
<th>Very low</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
<th>Very high</th>
<th>Total</th>
<th>Mean rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>TripAdvisor</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>32</td>
<td>16</td>
<td>51</td>
<td>4.25</td>
</tr>
<tr>
<td>Booking</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>48</td>
<td>51</td>
<td>4.94</td>
</tr>
<tr>
<td>Facebook</td>
<td>0</td>
<td>0</td>
<td>37</td>
<td>14</td>
<td>0</td>
<td>51</td>
<td>3.27</td>
</tr>
<tr>
<td>Instagram</td>
<td>0</td>
<td>3</td>
<td>45</td>
<td>3</td>
<td>0</td>
<td>51</td>
<td>3.00</td>
</tr>
</tbody>
</table>

Table 2: Mean rating of social media importance

1 source: [https://elearn.ihu.edu.gr/pluginfile.php/40684/mod_resource/content/1/Slides%20Part%201%20Research%20Methods%20and%20Survey%20Results.pdf](https://elearn.ihu.edu.gr/pluginfile.php/40684/mod_resource/content/1/Slides%20Part%201%20Research%20Methods%20and%20Survey%20Results.pdf)
The graph displays the average preference of each medium. It is obvious that the order has been formed as follows:

1. Booking (4.94)
2. TripAdvisor (4.25)
3. Facebook (3.27)
4. Instagram (3.00)

As a conclusion, hotel managers seem to consider travel platforms to be more important than communication social media regarding reputation and sales. Booking and TripAdvisor have a preference over 4, with Booking almost reaching 5. Facebook and Instagram have a preference lower than 3.5.
As already mentioned, UGC data in tourism derive mostly from social media and travel platforms. However, how many hotels in Thessaloniki do actually use this tool? A significant percentage of 75% do use content analysis as a tool to understand their customers’ needs, the level of customer service, customer satisfaction and dissatisfaction.
An interesting issue is whether the hotels have hired specialists for the text analysis or they have assigned this to third-party companies. As the results show 58% of the respondents have hired specialists and 42% have assigned it to independent partners. The corporate culture, the corporate operation or economic reasons may be behind this choice. However, this issue is not being studied in this research and it may be an issue for further analysis in the future.

On the other hand, regarding the negative responses about the use of content analysis the reasons are shown in graph 5. As it is obvious, the hotel sector in Thessaloniki is informed about the existence and capabilities of content and text analysis, as no response indicates ignorance about it. On the one hand, 69% of the respondents support that content analysis is not needed. These specific hotels may be capable of following the feedback of their customers on their own. Some hotels have assigned this job to the guest relations team, since they are responsible for the solution of any guest issue. On the other hand, a percentage of 31% find the content analysis expensive as a tool and thus they do not use it, as shown on graph 5.

As a conclusion, the new digital and big data era has developed important tools that are popular among the Thessaloniki hotels. 100% of the respondents are aware of the UGC data analysis and over 50% of them use it. The ones that do not use it mostly consider it to be not needed, for reasons that have not been specified.
Customer satisfaction and feedback
The questionnaire includes also several questions about customer satisfaction, as it is directly connected with the UGC data and electronic word-of-mouth. Respondents are asked to choose the ways of customer feedback they use among three choices. Afterwards, they are asked to rank their importance and to define their attitude towards online comments.

<table>
<thead>
<tr>
<th>Sources</th>
<th>Total answers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face to face communication</td>
<td>32</td>
<td>63%</td>
</tr>
<tr>
<td>Guest comment cards</td>
<td>18</td>
<td>35%</td>
</tr>
<tr>
<td>Online comments</td>
<td>51</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 3: Feedback sources

First, online platforms are used by 100% of the respondents in order to evaluate the satisfaction of their customers about the quality level of goods and services. As the literature has indicated, online platforms have become a popular and useful tool both for companies and for customers. The fact that 100% of the hotels in Thessaloniki use this is a strong feature of compliance with the new data era.
Second, 63% of the respondents still use the face-to-face communication in order to estimate whether a customer is satisfied or not. However, many of them use this way complimentary with online comments analysis and guest comment cards.

Third, the use of guest comment cards is rarer in comparison with the former ways. Only 35% of the respondents use nowadays cards, where customers can write down their thoughts and complaints deriving from their experience. The literature supports that this feedback source is obsolete and thus is not so commonly used.

On that note, a significant number of 78% consider online comments to be the most important feedback source among these three. On the other side, 22% of the respondents find the face-to-face communication the most important and accurate way to get customer feedback. It is important to highlight that the percentage of the respondents who find guest comment cards as an important medium for customer feedback is 0%. This shows that the level of familiarity, that characterizes the hotel sector in the city, with the new digital and big data age is high.

**Negative online comments**
Table 4 displays the responses on the statement: “Negative online comments have a big impact on hotel’s sales”.

<table>
<thead>
<tr>
<th>Opinion</th>
<th>Total answers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly disagree</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Disagree</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Neutral</td>
<td>6</td>
<td>12%</td>
</tr>
<tr>
<td>Agree</td>
<td>35</td>
<td>69%</td>
</tr>
<tr>
<td>Highly agree</td>
<td>10</td>
<td>20%</td>
</tr>
</tbody>
</table>

*Table 4: Negative e-comments have a big impact on sales*
Graph 7: Negative e-comments have a big impact on sales

As it is displayed on graph 7, 69% of the respondents agree with this statement, 20% highly agree and a small percentage of 12% is neutral. By using the former formula, the mean rating is calculated as 4.08. This means that the majority of the answers agree that this statement is true. These findings comply with the literature supportings.

Graph 8: Attitude towards e-complaints

As the literature has indicated, negative online comments are of high importance to the reputation and eWOM of a hotel. Moreover, they affect its total sales, as they influence
the bookings of the future and potential customers. Therefore, the attitude towards e-complaints is a matter of high interest. The questionnaire results have proven that all of the respondents have a positive attitude towards them. They either answer them or take them into consideration without answering them, as shown in graph 8. More specifically, 55% of the respondents try to answer to most of the negative online comments and 45% take them into consideration without answering. On the one side, the fact that 0% of the respondents never ignore or delete negative comments is an interesting finding, regarding the eWOM among the hotels in Thessaloniki. On the other side, literature supports that comments and especially the negative ones should be answered as they form the hotel’s image. Moreover, it is a way to develop expectations to the readers and potential guests.

Attracting new customers or retaining the existing ones?

Another important issue is the way hotels use the online platforms, as different uses lead to different marketing campaigns and different eWOM kind of exploitation. The Thessaloniki hotel sector is asked to define the level that social media and eWOM have assisted the most regarding these two cases: attracting new customers and retaining the existing ones.

Table 5 and graph 9 show the percentages of the responses regarding these issues. Concerning the first case, the usefulness of the digital tools is considered either very high or high. The highest percentage of 69% of the respondents find it to be very high and a lower (31%) high. On the other side, the distribution of the responses regarding the second issue is different. They have ranked them as either very high, high or moderate. More specifically, the same percentage of respondents (47%) deem their importance to be both very high and high. A small percentage of 6% find digital tools’ usefulness of moderate importance in retaining the existing customers.
Taking into consideration the responses distribution, the hotel sector uses the digital tools both for attracting new customers and for retaining the existing ones. They also deem these tools to be important for these two goals; however, not at the same level. For this reason, table 6 with the total answers has been used in order to explain the average ranking of each one’s importance level.

<table>
<thead>
<tr>
<th>Company goals</th>
<th>Very low</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
<th>Very high</th>
<th>Mean rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attracting new customers</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>16</td>
<td>35</td>
<td>4.69</td>
</tr>
<tr>
<td>Retaining existing customers</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>24</td>
<td>24</td>
<td>4.41</td>
</tr>
</tbody>
</table>

*Table 6: Digital tools’ assistance level mean rating*
For the calculation of the mean rating the same formula has been used as well. Weights of ranked positions start from 1 (very low) to 5 (very high). The mean importance level of the first case is 4,69 and of the second 4,41. One the one side, this result indicates that digital tools are considered more useful to attract new customers rather than to retain the existing ones. On the other side, there is not enough information about whether this difference is statistically important.

As a conclusion, companies should take advantage of the new digital era in order to increase their sales. As the literature supports, the most appropriate way of achieving this is by actions and strategies that lead to retaining the existing customers. As already mentioned, it is more expensive to attract a new guest rather than to keep one. For this reason, the hotel sector should reconsider the way that exploit these tools and should focus on customer retention.

**Customer feedback as stimulus for co-creation**

The final question concerns the level at which customer feedback is being taken for the development of products and services. This is called co-creation and is a new term in hospitality and tourism industry and it is directly connected with big data, UGC and the new digital era in general. It would be interesting to explore whether hotels in Thessaloniki support it and for this reason they were asked to define the customer feedback level of importance in the development of product and service development.
<table>
<thead>
<tr>
<th>Importance Level</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very low</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Low</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Moderate</td>
<td>34</td>
<td>67%</td>
</tr>
<tr>
<td>High</td>
<td>16</td>
<td>31%</td>
</tr>
<tr>
<td>Very high</td>
<td>1</td>
<td>2%</td>
</tr>
</tbody>
</table>

*Table 7: Customer feedback level of importance in product and services development*

The responses indicate that hotels find customer feedback to be either moderate, high or very high. Interestingly, the majority of them, with a percentage of 67%, deem it to be of moderate importance. High find it a percentage of 31% and very high only 2%. The processing of these results, leads to a mean rating of 3.35, where “very low” has a weight of 1 and “very high” a weight of 5. As a conclusion, hotels in Thessaloniki find the customer feedback of moderate importance in the development of products and services. This result comes in contrast with the former results, where the digital era seemed to be exploited on a higher level for operational and marketing issues. Co-creation is an issue that requires further and deeper analysis in the future.

**Further data analysis**
This section aims at deeper understanding of the questionnaire results. The questions are coded with the use of Excel (see AppendixB) and then results are presented in Tables and Pivot Tables. Statistical analysis has also been used.
Attitude against negative online comments and their impact on sales
First, it will be analyzed the relationship between hotel managers’ attitude against e-complaints and their opinion on whether they have a big impact on hotel’s sales. On the one hand, the majority of hotel representatives that try to answer to most of the negative comments agree that the above statement is true and a smaller number of them highly agrees. On the other hand, the majority of those who only take into account the negative comments without answering them are neutral against it.

<table>
<thead>
<tr>
<th>Attitude</th>
<th>Sum of Disagree</th>
<th>Sum of Highly disagree</th>
<th>Sum of Neutral</th>
<th>Sum of Agree</th>
<th>Sum of Highly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answering</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>20</td>
<td>7</td>
</tr>
<tr>
<td>Taking into account</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>Grand Total</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>35</td>
<td>10</td>
</tr>
</tbody>
</table>

Table 8: Attitude towards e-complaints

By calculating the mean rating, the following results appear:

<table>
<thead>
<tr>
<th>Attitude</th>
<th>Mean rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answering</td>
<td>2.31</td>
</tr>
<tr>
<td>Taking into account</td>
<td>1.76</td>
</tr>
</tbody>
</table>

Table 9: Mean ratings of two different attitudes towards e-complaints

Mean rating of respondents who answer to e-complaints is higher than of those who only take them into consideration, but do not respond. This leads to the following result: the belief that negative comments influence on hotels’ sales is stronger in the first group rather than in group number two. Literature supports strongly that managers should not only take negative comments into account to improve their services, but also hire professionals to respond and resolve customers’ problems.

Content analysis use and negative comments impact on sales
Further on, another pivot table is displayed below. Table 10 aims to explain the relationship between the use of comment content analysis and the hotel managers’ opinion about the impact that negative comments have on sales. Table 11 explains table 10 in percentages.
<table>
<thead>
<tr>
<th>Use of content analysis</th>
<th>Sum of Neutral</th>
<th>Sum of Agree</th>
<th>Sum of Highly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>1</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Yes</td>
<td>5</td>
<td>26</td>
<td>7</td>
</tr>
<tr>
<td>Grand Total</td>
<td>6</td>
<td>35</td>
<td>10</td>
</tr>
</tbody>
</table>

Table 10: Content analysis use and impact of e-complaints on sales

<table>
<thead>
<tr>
<th>Use of content analysis</th>
<th>Sum of Neutral</th>
<th>Sum of Agree</th>
<th>Sum of Highly agree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>2%</td>
<td>18%</td>
<td>6%</td>
<td>25%</td>
</tr>
<tr>
<td>Yes</td>
<td>10%</td>
<td>51%</td>
<td>14%</td>
<td>75%</td>
</tr>
<tr>
<td>Grand Total</td>
<td>12%</td>
<td>69%</td>
<td>20%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 11: Content analysis use and impact of e-complaints on sales

The majority of the responses, with a percentage of 51%, represent those who agree that negative comments have an impact on the hotel’s sales and use content analysis in order to support this. On the other side, a percentage of 18% agree but do not use these tools. The smallest percentages correspond to those who are either neutral or highly agree and do not use UGC data analysis.

In order to better understand the relationship between them, a chi-square test will take place. For the calculation, the online Social Science Statistics calculator has been used. Picture 1 shows the chi-square test results and the significance level that has been used is .05. This means that there is a risk of 5% to conclude that there is an association between the variables even if there is actually none.

\[ \text{Source: } \text{https://www.socscistatistics.com/tests/chisquare2/default2.aspx} \]
Chi-Square Calculator

Success! The contingency table below provides the following information: the observed cell totals, the expected cell totals and the chi-square statistic for each cell.

The chi-square statistic, p-value and statement of significance appear beneath the table. Blue means you’re dealing with dependent variables; red, independent.

<table>
<thead>
<tr>
<th></th>
<th>Neutral</th>
<th>Agree</th>
<th>Highly agree</th>
<th>Row Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>1 (1.53)</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Yes</td>
<td>5 (4.47)</td>
<td>0.06</td>
<td>0.00</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>3 (0.93)</td>
<td>0.00</td>
<td>0.00</td>
<td>38</td>
</tr>
<tr>
<td>Column Totals</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>38 (Grand Total)</td>
</tr>
</tbody>
</table>

The chi-square statistic is 0.354. The p-value is .837796. The result is not significant at p < .05.

Picture 1: Chi-square results

Null Hypothesis: There is no association between the use of content analysis and hotel managers’ opinion whether negative comments influence the sales.

Alternative Hypothesis: There is association between the use of content analysis and hotel managers’ opinion whether negative comments influence the sales.

The results indicate that p-value is 0.84 and so p-value > significance level (0.05). This means that the null hypothesis is being accepted. Content analysis use is not related with managers’ opinion on negative comments’ impact. As a conclusion, these two variables are independent, so the use of content analysis nowadays is not the result of e-complaints significance.

Content analysis use and feedback sources
With the same way, a new pivot table is developed and chi-square test is used in order to decide whether there is a relation between the feedback sources and the use of content analysis. Picture… displays the chi-square test results, again with a significance level.

Null Hypothesis: There is no association between content analysis use and feedback sources.

Alternative Hypothesis: There is association between content analysis use and feedback sources.
Since p-value is greater than significance level the null hypothesis is being accepted. Content analysis and feedback sources are not related. It can be inferred that the reason behind choosing specific feedback sources is not content analysis. However, concerning the respondents that use content analysis, guest comment cards are used at a lower level in comparison with the other two methods. It seems that this feedback option is not popular among respondents that use UGC data analysis techniques.

Content analysis use and hotel strategy
Lastly, the relationship between the use of content analysis and the hotel strategy will be explored. Respondents are asked to rank the level of assistance of digital tools concerning these two following strategies. Table 12 shows the mean ratings that arise from the process of data that concern content analysis use and the digital tools’ importance level, with 1 meaning very low and 5 very high.

<table>
<thead>
<tr>
<th>Content analysis use</th>
<th>Attracting new customers mean rating</th>
<th>Retaining existing customers mean rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>1,20</td>
<td>1,02</td>
</tr>
<tr>
<td>Yes</td>
<td>3,49</td>
<td>3,41</td>
</tr>
</tbody>
</table>

Table 12: Mean ratings comparison

Attracting new customers seems to be the main aim concerning either those who use content analysis or those who do not. Both of the mean ratings on the column that concerns new customers are higher than the others. In order to examine whether there is
a significant difference between these means, a t-test will take place, with the assistance of Excel. T-test is used in order to compare the means of two categories.

Null Hypothesis: There is no difference in the means

Alternative Hypothesis: There is difference in the means

For these specific data and hypothesis, 2-sample t-test was chosen with one-tailed distribution. Picture 3 indicates that p-value is 0.47 and by comparing this with the significance level (0.05) it can be inferred that the null hypothesis is accepted (0.47>0.05). As a conclusion, there is no statistically significant difference between these two means.

![T-test results](image)

Conclusion & Recommendations

Methodology limitations

This study composes an attempt to record and understand the behavior of the hotels in Thessaloniki, and specifically those belonging to Thessaloniki Hotels Association, regarding the use of UGC data and electronic word-of-mouth. However, this research is subject to several limitations, as the majority of studies. The first limitation is the sample size, which may be representative of the hotel members of THA, but not 100% of the whole hotel sector in Thessaloniki. After the electronic communication with them 51 answers were recorded. The second one concerns the sample profile. Every answer
represents the whole hotel culture, strategy and operation. However, all answers are anonymous and there is no information about the position and the bias of every respondent. The position of every respondent in the company may have affected the credibility of the responses. Third, the questionnaire method does not allow the research to deeply apprehend the hotels’ operations but only to record them. For this reason, interviews would be a recommendation for future studies that will concern a small sample size. Fourth, time constraints have affected the study with the result of a limited sample size for the whole hotel sector in Thessaloniki.

**Conclusion**

This section includes all the appropriate and useful information that are connected with the study. The most important information is the following:

1. 100% of the respondents are active in social media
2. 100% support that social media affect the company’s reputation
3. Travel platforms are more widespread among hotels with Booking being the most popular
4. 75% use content analysis, 58% of which have hired specialists and 42% have assigned it to third-party partners
5. 25% do not use content analysis, 69% of which consider it not needed and 31% consider it expensive
6. Online comments are main customer feedback source, but face-to-face communication is also used by 63%
7. The most important feedback source is online comments
8. Almost 70% agree that the following statement is true: “Negative online comments have a big impact in sales”
9. Companies’ main attitude towards e-complaints is answering to them (55%)
10. 45% do not respond to e-complaints
11. Hotels exploit the digital tools mainly to attract new customers rather than to retain the existing ones
12. 67% of companies find customer feedback to be of moderate importance for product and service development
13. The belief that negative comments influence hotel sales is stronger to those who answer to e-complaints
14. Content analysis use is not affected by respondents’ opinion on the impact of e-complaints on sales
15. Content analysis use is not related with the feedback sources that are used
16. The difference between companies that use content analysis to attract new customers and those who exploit them to retain the existing ones is not statistically significant

As a conclusion, the digital era has urged the majority of hotels in Thessaloniki to use content analysis as a tool that will assist them understand the needs of their customers. The main feedback source they use is online comments that come from either social media or travel platforms. This source is considered to be the most important as well. However, the statistical analysis has proven that content analysis use and feedback sources as variables are not related, meaning they are independent variables and one is not affected by the other. It can be concluded that companies use social media and travel platforms not only to gain customer feedback via content analysis tools.

Depending on the questionnaire results, companies understand that negative comments have an important impact on the sales of the hotel as they form its reputation and image. After the statistical analysis, it has been resulted that content analysis use is not affected by the opinion of the hotel managers on this issue. Since these two variables are not related, a further investigation about the reasons behind the content analysis use is recommended.

Further on, content analysis is mainly exploited to attract new customers rather than to retain the existing ones. On the one hand, this comes in contrast with the literature that supports that the key to profitability is increasing customer retention. On the other hand, depending on these specific data the difference between these two groups in Thessaloniki is not statistically significant.

Another issue that should be addressed, is the fact that 45% of the respondents read e-complaints but do not respond. Since data indicate that they realize that negative comments affect the reputation and sales of the hotel a lower percentage was expected. Online comments form the companies’ eWOM and thus they should be cautious with their management. On the other hand, the majority of them do not use customer feedback for service development, but only for improving the already existing services. This
indicates that the idea of co-creation in Thessaloniki is not popular yet and as a result customer feedback is not being 100% exploited.

As a conclusion, the hotel sector in Thessaloniki is familiar with the new digital tools such as social media, travel platforms and content analysis. They use online platforms and gain customer feedback to improve their services. They also are aware of the importance level of their electronic image and use online platforms as a feedback source. Moreover, they use UGC data analysis both to attract new customers and to retain the existing ones with the former being their first choice.

Hotel managers are recommended not to rely on the HiPPO (Highest Paid Person’s Opinion) phenomenon anymore and pay attention to data, especially UGC data that assist in better understanding of the customers. Moreover, customer relation management will assist in increasing the customer retention percentages. As literature supports repeat and committed customers are more likely to spread positive eWOM than of those who just trust the hotel as a company. Hotels are recommended to exploit the digital era and focus on customer commitment as it is more profitable. The hotel industry in Thessaloniki can gain very important information about the tourists that visit the city, their preferences, their characteristics etc. by fully exploiting the UGC that is available online. Each hotel will be able to increase its own sales and customer satisfaction and sharing this information will make the city more approachable to tourists. Thessaloniki Hotel Association members can cooperate with each other in order to develop specific destination marketing strategies that will affect in a positive way both the city and the hotels as individual corporations.
References


Appendices

Appendix A: Questionnaire copy

7. Which of the below ways of customer feedback do you use? *
   - Face-to-face communication
   - Guest comment cards
   - Online comments (on social media)

8. Which one of them do you find to be the most important? *
   - Face to face communication
   - Guest comment cards
   - Online comments (on social media)

5. Your attitude against online negative comments is: *
   - Try to answer most of them
   - Rarely answering them
   - Ignoring them/never answering
   - Taking them into consideration but not answering them
   - Deleting them (when possible)

10. Negative online comments have a big impact on hotel's sales. *
    - Disagree
    - 1
    - 2
    - 3
    - 4
    - 5
    - Agree

11. Please rate on what level customers' feedback play role on hotel services and product development. *
    - Minimum
    - 1
    - 2
    - 3
    - 4
    - 5
    - Maximum

12. On a scale 1-5, with 5 being the highest, on which level has the digital age assisted in the following topics? *
    - Attracting new customers
    - Retaining the existing customers

Appendix B: Coded responses in Excel
<table>
<thead>
<tr>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
<th>Q6</th>
<th>Q7</th>
<th>Q8</th>
<th>Q9</th>
<th>Q10</th>
<th>Q11</th>
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