THE EFFECT OF ONLINE REVIEWS ON THE

REVIEW ATTITUDE AND PURCHASE INTENTION

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Preface

I would like to show my appreciation to my supervisors Sesil Lim and Bas Donkers. I want to thank them for answering all my questions and for giving proper feedback and ideas. Therefore, I owe my gratitude to my supervisors, Sesil Lim and Bas Donkers.

Finally, I would also want to thank all the respondents who participated in the online experiment. Without the contribution of these people it wasn't possible to write this master's thesis.

"The only way to become better is to reject your own work."

Abstract

With online reviews having an important place in consumer's decision journey, the effect of online reviews on the final purchase intention is an interesting aspect for marketers. Particularly because the number of consumers using online reviews continues grow. Therefore, this research studies the effect of online review elements on review attitude and purchase intention. This study made a distinction in the online review elements and selected valence, recentness and length. For this online experiment, 16 manipulated reviews were used in a within subjects design (N = 315). The reviews were manipulated on valance (positive vs. negative), recentness (recent vs. old), length (short vs. long) and with the moderator variable review type (objective vs. subjective). The expected effect was that positive valence positively influenced review attitude and purchase intention. This effect was also expected for recent and long reviews. And it was supposed that objective online reviews as a moderator variable increases the effects on review attitude and purchase intention. Because these objective online reviews are specific, clear, explained with objective reasons and more persuasive. And the effect on consumer's purchasing intention is bigger when reviews are more persuasive (Park et al., 2007). The results show that review attitude affects purchase intention. The effect of review attitude on purchase intention is even bigger when objective online reviews occurred as a moderator variable. As expected, a positive valence had the biggest effect on review attitude and purchase intention. And finally the moderated effect of objective online reviews didn't increases the effects of valence, recentness and length on review attitude and purchase intention as expected. The effect of subjective online reviews was higher. The marketing communication mix is renewed with online reviews as new aspect these study results are therefore socially relevant. Beside, these results are an addition to the existing literature about the effect of online reviews for restaurant visits.

Keywords: online reviews, review attitude, purchase intention, path analysis

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1. Introduction

Whoever thought that only 22 years after the emergence of the internet there is no longer need to leave the house for shopping? From buying a book to booking a holiday, everything is possible with internet. The internet (1995) and mobile internet (2010) definitely caused a lot of changes. Nowadays we are having iPadschools, cooking with YouTube videos made by Albert Heijn and sending WhatsApp messages to customer services instead of calling. The times of physical shopping, face-to-face recommendations and just walking in town are slowly fading. We are moving to a digital economy. This economy have changed the way how people purchase their products. Consumers are buying more online and making a bigger gap between the online and offline shops. These consumers have less time, want comfort, want to be redeemed of their concerns and want to be surprised (Rabobank, 2016). To make sure they make the right choice in their limited time, online reviews are an easy outcome. This makes online reviews relevant in the digital area. The digital economy trends makes it possible to read other consumer's opinion and experiences in online reviews of a particular product (Chatterjee, 2001).

Especially, the effect of online reviews on experience goods has attracted the researcher's attention. Because online reviews can be seen as one of the most affecting information resources, particularly for experience goods (Duan et al., 2008). Among many experience goods, restaurants have many interesting features. Interesting part of restaurant as an experience good is the difficulty of determining the quality in advance (Luca, 2011). In economics, restaurants are a classic example where consumers make decisions based on less information (Luca, 2011). The restaurant industry grows continue, the demand within this industry of lunchrooms, coffeebars and fastfood concept will grow further this year (Rabobank, 2016). Restaurants have a goal of human connection and shaping social relations (Fieldman, 2015). The reason for choosing restaurants in this study is because of the interesting aspect of restaruants in the experience good category. Therefore, this study will focus on restaurants.

Existing literature investigated several topics about online reviews combined with restaurants, for example the outcome of positive ratings on the availability of reservations of restaurants (Anderson & Magruder, 2012). Researchers investigated if promotional marketing and online word-of-mouth (WOM) directly affected the sales with the measurement of online review effects (Lu et al., 2013). Another paper investigated what the economic value is of online reviews for the consumers and restaurants (Wu et al., 2015). Appendix 1 provides an overview

of several studies which combined online reviews and restaurants. The available research about online restaurant reviews has focused on e.g. review helpfulness, online popularity or restaurant sales. Limitations of the existing literature is that there is not much literature about the effect on review attitude and purchase intention. Researchers have already examined several variables but not much research has been done with the basic online review elements.

This missing part is leading to the online review elements for this study: valence, recentness and length. It is supported that these online review content elements are important factors. Valence and recentness are identified as a part of important factors that are associated with the stimulus (Cheung & Thadani, 2012). Length is investigated as one of the most important signals used by consumers when searching for products (Järveläinen et al., 2013). The afore mentioned elements weren't investigated in a combination. At the end it is relevant to know the consumer's attitude and consumer's purchase intention. Therefore, this study will investigate the effect on review attitude and purchase intention.

The expected contribution of this study is to have results and implications of relevant online review elements. This study is relevant for the marketing section of restaurants because after this study they have more information about the important elements of online review content. They are able to anticipate on this study results. In addition, the marketing communication mix is renewed with online reviews as new aspect (Chen & Xie, 2008). This makes this study also socially relevant. The situation where consumers don't read online reviews is this study basic situation. Relative to this basic situation this study will investigate the situation where consumers read online reviews before visiting a restaurant. This study will investigate if online reviews have an important role on restaurant visits comparing with the situation where consumers don't read online reviews when looking for a restaurant.

Main goal of this research is testing the impact of online reviews on review attitude and purchase intention. This study will answer this research question: "*To what extent are online reviews influential on review attitude and purchase intention in relation to a restaurant visit*?". To answer the research question, the organization of this study is as follows: chapter 2 evaluates relevant literature, explains the developed hypotheses and displays the conceptual framework. The next chapter will explain the method used for this study. Chapter 4 will describe the data of the research. This fourth chapter presents and discusses the empirical results. Finally the last chapter will cover the discussion, implications, limitations and conclusion.

2. Theoretical framework

This chapter evaluates the prior literature research that has been done. First, word of mouth and experience goods will be explained. Afterwards, the dependent variables review attitude and purchase intention will be discussed. Then, the independent variables and moderator variable will be explained. Based on this literature research the hypotheses are developed. In the last paragraph of this chapter a conceptual framework of this research is provided.

2.1 The role of online reviews as eWOM

You cannot ignore them when buying products on the internet: online recommendations and online reviews. Online recommendations and online reviews forms a part of WOM. The definition of WOM can be defined as exchanging information between a non-commercial person and the person who receives about e.g. a specific brand (Dichter, 1966). WOM is in others words a conversation between consumers about a product, a consumer-dominated marketing communication channel (Bambauer-Sachse & Mangold, 2011). WOM occurs mostly via social networks. In these social networks people receive information from others and tell this information again to others (Allsop et al., 2007). Traditional WOM influence pre-purchase decisions (Purnawirawan et al., 2012). With the growing digital economy and the still upcoming digital revolution the online consumers are providing a spot to spread their opinions in the world and a new definition is born: eWOM. The term electronic word-of-mouth (eWOM) means, consumers sharing what they think and have experienced via internet (e.g. via social networking sites and websites) about e.g. a product they bought at a specific company (Kietzmann & Canhoto, 2013). Satisfied consumers *may* inform a part of the crowd about their positive experience with a company, but dissatisfied consumers *will* tell the whole crowd about the negative experience (Chatterjee, 2001). EWOM communication plays a bigger role nowadays, because eWOM has an outstanding accessibility and a high scope (Bambauer-Sachse & Mangold, 2011). For the products (e.g. hotels and restaurants) where consumers obtain information, book or buy online understanding the ins and outs of eWOM is very important (Sparks & Browning, 2011).

The digital revolution makes it common for consumers viewing online product reviews during the purchase process. Online reviews are product evaluations which are placed on a company's or external party website (Mudambi & Schuff, 2010). With either a positive or negative impact on the decision making, online reviews can also play a role during the purchase process (Arndt, 1967). Online product reviews are one of the most influential forms to give a recommendation

(Bambauer-Sachse & Mangold, 2011). Recommendations are one of the most powerful selling tools for companies, since consumers trusted recommendations of others most when buying products (Nielsen, 2007). 78% of the consumers trusted recommendations of consumers they do not know. 90% of the worldwide internet consumers have faith in recommendations from known people in their circle. And 70% of the worldwide internet consumers trust consumers' opinions posted online by other people they do not know (Nielsen, 2009). When looking at the duration of WOM's impact, WOM referrals have a bigger impact in the end comparison with traditional marketing (Trusov et al., 2009). With the upcoming eWOM and trend of more people online, the impact of eWOM is an interesting field to investigate. Because online reviews are one of the most important forms to give a recommendation this study will focus on the impact of *online reviews*.

One of the most powerful online tools, as a part of recommendations, are online reviews (Duan et al., 2008). Recommendation is the most powerful selling tool for companies since consumers trusted recommendations of others most when buying products (Nielsen, 2007). This is in line with the trend of the upcoming impact of the internet, meaning that review sites provide consumers insight into price, quality, atmosphere and experience (Rabobank, 2016). It is possible to discover digitally about (experience) products before eventually buying the product (Lynch & Ariely, 2000). With this online trend a new type of WOM communication was created (Hennig-Thurau et al., 2004): eWOM. Online reviews (part of eWOM) can be seen as one of the most used powerful channels generating WOM (Duan et al., 2008). Online reviews are an affecting aspect in the consumer's decision-making process and predicting product sales.

2.2 Online review and product categorization: experience vs. search good
More than 40 years after Nelson's article has been published, the product arrangement is still the one adopted by Nelson. This product arrangement ordered products into search goods and experience goods. Search goods are goods where the consumer can made conclusion about the quality by checking up the quality before purchasing. And experience goods on the other hand are goods where qualities cannot be determined in advance by the consumers (Nelson, 1974). Another clear definition to point out the difference between search and experience goods is the fact that experience goods need to be tried in reality in advance of the purchase (Hao et al., 2010).

Experience goods have a larger depth in searching and consumers spent more time looking per product page (Huang et al., 2009). Depth can be described as how long a consumer evaluates product information on an internet page (Huang et al., 2009). The definition of breadth is how many times a consumer visits a product Web page. Experience goods have a greater depth and a lower breadth. Typical experience attributes are subjectivity and difficult evaluation (Hoch & Deighton 1989; Hoch and Ha 1986). In the first place experience goods were goods, where the consumer wasn't able to discover product quality before purchase (Nelson, 1974). But this is changing because the internet makes it possible to discover the product quality of experience goods (Lynch & Ariely, 2000).

With the growing digital economy and bigger online influences the line between experience and search goods has changed. Consumers read consumer ratings and feedback, evaluating interactive videos, using gestural controls or 360 views demonstrations of the product (Ramaswamy, 2013). Consumers read product tests and recommendation to obtain information about experience goods (Hoch & Ha, 1986). The traditional relationship between search and experience goods is changing because of the internet. The internet gives consumers new opportunities to learn before purchasing about several product features (Lynch & Ariely, 2000).

Online reviews for search goods are not really fascinating because the reviews focus on specific, tangible aspects and how the particular search good is performing in different situations (Mudambi & Schuff, 2010). Because of the subjective part of experience goods, this product type has many extreme ratings and only few moderate ratings. Therefore, this study will focus on experience goods. Interesting about online reviews for experience goods are the findings that objective content is better and reviews with neutral ratings are more helpful comparing with extremely positive or negative reviews (Mudambi & Schuff, 2010).

Beside the part of restaurants giving their customers food and drinks, restaurants also have a goal of human connection and shaping social relations. Restaurants do have an important place in shaping the economy in general and the final nature and makeup of the cities (Fieldman, 2015). Restaurants are not just only a place to eat. There is more, restaurant visitors are coming for the company, the food or generally said the completely social experience. The restaurant world is growing in The Netherlands. Datlinq maintains a complete national database of the whole food market since 2004. According to research by Datlinq, the Dutch restaurant industry has grown over the last year with 1000 catering businesses. The growth, shown in figure 1, was

caused by the increase of the number of restaurants, cafés and takeaway concepts (Datlinq, 2016).
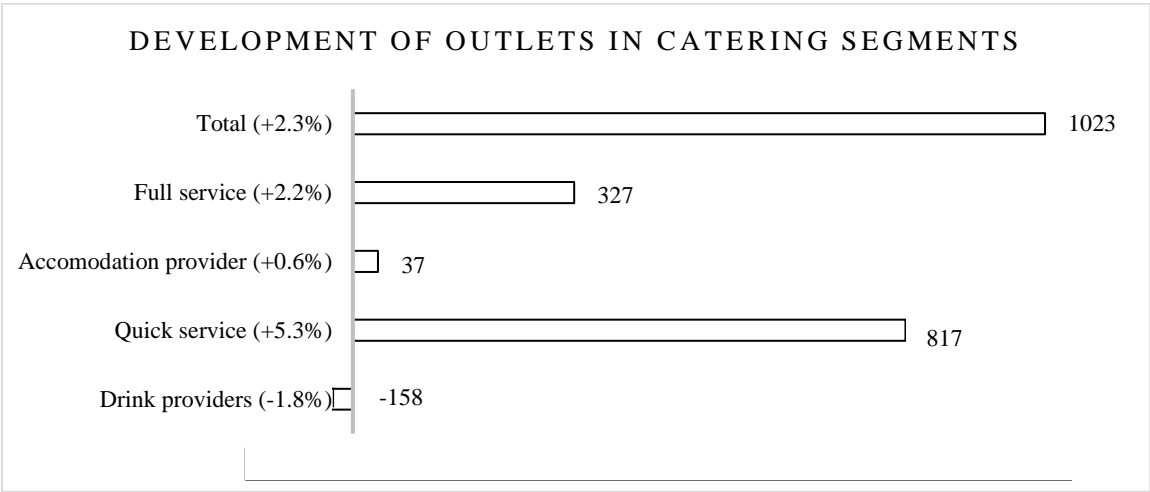
DEVELOPMENT OF OUTLETS IN CATERING SEGMENTS

Total (+2.3%)	1023
Full service (+2.2%)	327
Accomodation provider (+0.6%)	37
Quick service (+5.3%)	817
Drink providers (-1.8%)	-158

Figure 1: Development of outlets in catering segments (Datlinq, 2016)

With all the existing and upcoming restaurants, there are a lot of online reviews available. When looking at Iens.nl (Dutch restaurant review website), they represent online reviews of more than 70,000 (Iens, September 20, 2016) Dutch restaurants. Connecting the Dutch restaurants and the influence of the web, the main focus of this study will be in the category experience goods and specifically: restaurants. Experience goods have a larger impact from online reviews in comparison with search goods (Huang et al., 2009). Since social media and the web are core dimensions nowadays in 2017, it is important for restaurants to investigate the impact of online reviews on review attitude and purchase intention of a restaurant visit. With the existence of online reviews written by consumers and shown on diverse multimedia, the modern consumer is able to interact with products and services before purchasing.

2.3 Online review and consumer decision process

The way in which consumers are searching and buying is changing, this is driven by new technology and the internet (Court et al., 2009). Consumers nowadays don't want to sit passively and having advertising coming at them. They are actively reaching to blogs, websites and online reviews to understand their options (Court et al., 2009). Changes in the consumer decision process makes online reviews part of the active evaluation in their consumer decision journey (figure 2).

In the traditional process where consumers make decisions, the consumer first start with selecting a set of potential brands and secondly will identify the relevant attributes of each brand. Third step is to evaluate the various attributes of the different brands. Last step in the traditional process is to lower the number of potential brands and at the and select the final decision and make a purchase (Philips et al., 1995). Traditional marketing driven by companies through traditional advertising, direct marketing and sponsorships remains important (Court et al., 2009). But the change in technology means that marketers need to move their strategy to WOM and internet information sites in the process where consumers make decisions. In today's consumer decision making process, consumers actively search and pull product information. During the active evaluation stage online reviews are an important part (figure 2). Online reviews are today's tool while selecting brands, identifying attributes and evaluating various attributes of different brands. Online reviews are involved in the active evaluation stage since consumers are gathering information while reading online reviews. Offering the consumer review information, the online review brings consumers into the purchase process if the review information is informative and could increase the consumer's willingness to pay. Meaning that this important tool is also involved in the purchase decision stage (Chen & Xie, 2008).
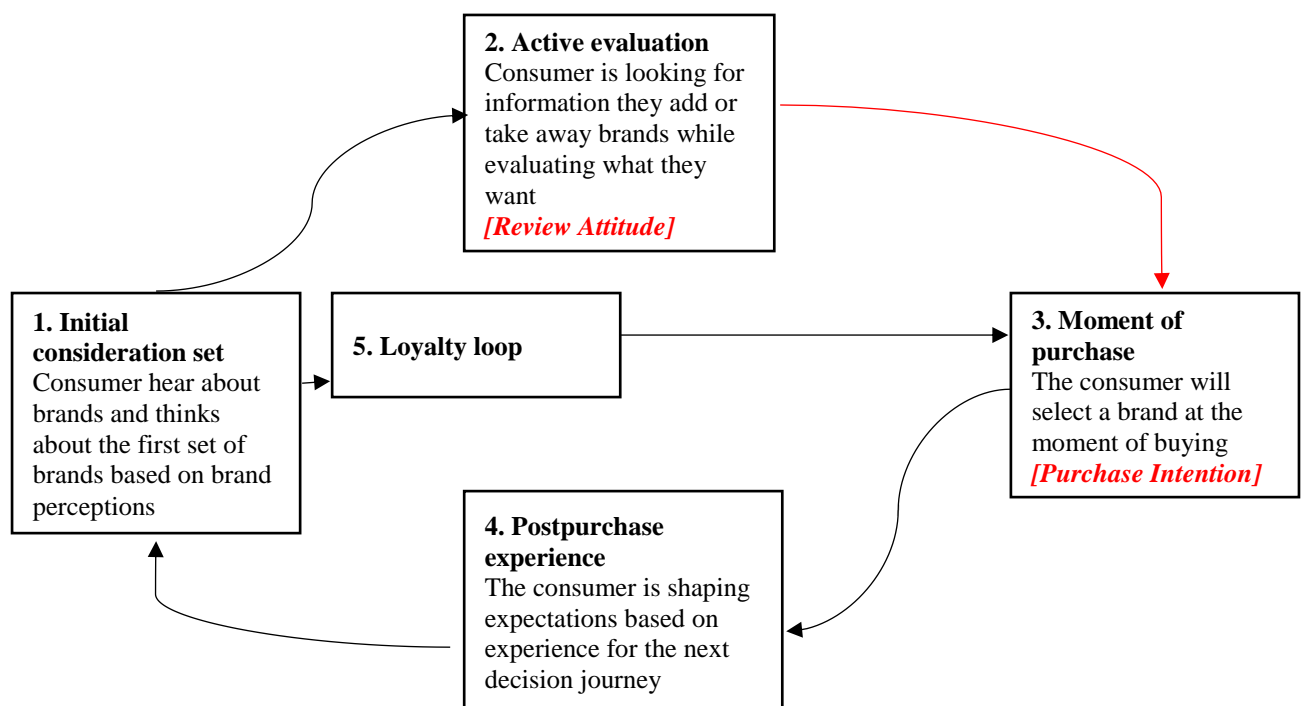

Figure 2: Consumer Decision Journey (Court et al., 2009)

Today's evaluation stage in the consumer decision journey means gathering information on the internet. Online reviews can help as sales assistants without charge to help the consumer (Chen

& Xie, 2008). This evaluation stage can be compared with review attitude. The general definition of the term attitude means the complete judgment of persons (including oneself), objects and issues. The attitude of a persons is referring to how positive/negative or how favourable/unfavourable the view is relative to a certain event, object or product (Petty & Wegener, 1998). Another clear theoretical explanation of attitude is presented by Fishbein and Ajzen (1975): the attitude of a person is a function of his most remarkable beliefs at a certain moment. These aforementioned attitude evaluations can vary in a lot of different ways in addition to the different categories, such as emotions, beliefs or past experiences and behaviours (Petty & Wegener, 1998). One example of past experiences and behaviours that fits within this study: the last time I ate at this restaurant, I had an overcooked diner. The attitude meant in this study is the "review attitude". This is the person's attitude how among other things informative, helpful and useful the review information is for the reader. The review attitude is important for consumers at first sight because they form their opinion based on the different review elements. With the several online review elements consumers are able to collect restaurant information.

After reading the online review the consumers will form their intention if they will visit the particular restaurant. This is third part in the consumer decision journey where the dependent variable purchase intention will have an important role. The purchase intention is the stage before the purchase decision. This makes the purchase intention an important variable for this research. A purchase intention is the likelihood of purchasing a good or service linked with a certain percentage that the consumer will actually purchase the good or service at the end (Whitlark et al., 1991). This study will define purchase intention as a future plan of the consumer to visit a restaurant. The concept of purchase intention is still relevant in the scope of marketing (Morrison, 1979). Theoretic support prove that marketing managers have good reason to use consumers' purchase intention as an indicator of the future plans of consumers in the market place (Morwitz, 2012). This theory comes from social psychological models which linked attitudes and intentions to behaviour (Fishbein & Ajzen, 1975). And also from the theory of planned behaviour (Ajzen, 1991). These theories assume that different psychological constructs are able to predict individual's intention to take part in the behaviour. Psychological constructs such as, subjective measures and behavioural control which is recognized. And the other way around, individual's intentions to take part in the behaviour can predict actual behaviour, together with other psychological constructs. These models have been tested in both general domains and in marketing domains. In these tested models, there is a strong support for the link between intentions and behaviour. Another outcome of these models is that intention

is the single best predictor of behaviour (Morwitz, 2012). Therefore, the concept of purchase intention is still relevant in the scope of marketing (Morrison, 1979).

Kotler & Armstrong (2010), introduced the buyer decision process (shown in figure 3). The decision making process consists of five stages: need recognition, information search, evaluation of alternatives, purchase decision and post purchase behaviour. In the third stage, the evaluation stage, the consumer will rank different brands and eventually shape purchase intentions (Kotler & Armstrong, 2010).
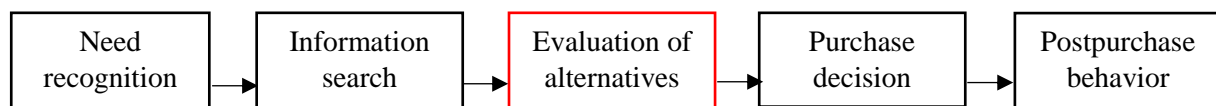
| Need recognition | Information search | Evaluation of alternatives | Purchase decision | Postpurchase behavior |

Figure 3: The buyer decision process (Kotler & Armstrong, 2010)

Because review attitude appears in the second stage and the purchase intention at a stage after it, these two variables are in succession to each other and have a certain link. This makes it interesting to investigate review attitude and to combine with the purchase intention. The relationship between these two dependent variables is shown in figure 2.

The dependent variables in this study are review attitude and purchase intention. The effect of review attitude on purchase intention or the other way around is unknown yet. Little is known about review attitude. Most comparative concept with review attitude is advertisement attitude. Therefore theory about attitude towards advertisements will be used. Advertisement attitude is an option to respond in a positive or negative way to a particular advertising (Kaushal & Kumar, 2016). This is similar with the concept of review attitude, where the consumer respond to the review how among other things informative, helpful and useful the review information is for the consumer itself. Advertisement attitude is seen in many studies as the main input of brand attitude and these both attitudes finally influencing the purchase intention (Kaushal & Kumar, 2016). Consumers with a positive attitude seems to have a stronger purchase intention in comparison with consumers who had a negative attitude (Hung et al., 2016). These findings suggest that marketers should invest in a positive attitude which influence the purchase intention at the end. Because of the lack of literature about review attitude combined with purchase intention, the expected relationship between review attitude and purchase intention is made based on the findings about (advertisement) attitude and purchase intention. When review attitude is positive this will have a positive and significant effect on the purchase intention

(figure 4). This situation will be different when review attitude is negative, this will have a negative and insignificant effect on the purchase intention (figure 5).
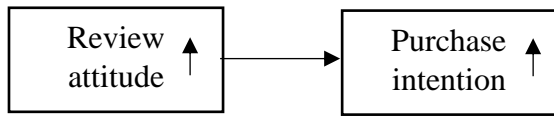

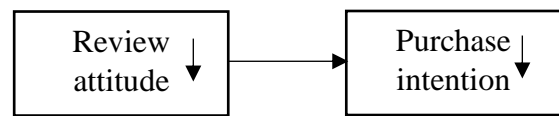*Figure 4: Positive review attitude*   *Figure 5: Negative review attitude*

Based on theory that attitude will affect purchase intention, the next hypothesis is developed:
H1: Review attitude will affect the purchase intention positively

2.4 Characteristics of online reviews

There are less geographic boundaries within this digital world. This also applies for online reviews, these reviews can reach a huge audience online and directly. Online consumer review is a type of product information written and created by users and the content is based on what the users personally have experienced (Chen & Xie, 2008). Meaning that online reviews play an important role for modern businesses. Since online consumer reviews are one of the most powerful channels generating more online WOM (Duan et al., 2008). An online review is any positive or negative description of a (former) customer about a product or service of a particular company written on the internet (Hennig-Thurau et al., 2004).

In the online review example in figure 6, different online review elements are highlighted. An online review has two components: quantitvity (e.g. review rating) and quality (e.g. review readability) (Agnihotri & Bhattacharya, 2016). Several elements in the online review are: name of the author, number rating, degree in tasting level, review rating in general and the length.

Figure 6: Online review example (Iens.nl)

Interesting part to investigate are the elements specifically focused on the review content: rating review in general (valence), recentness, review text (valence) and the length.

Researchers have investigated three several aspects of online reviews (shown in figure 7): posting an online review, using an online review and purchasing based on an online review (Lee & Lee, 2009). This study will focus on the stage between the 2nd and 3rd activity: using an online review.
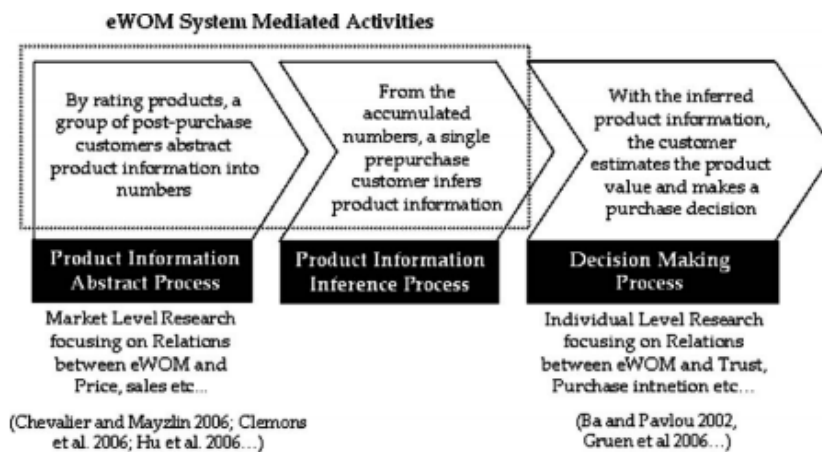
Figure 7: Online review activities

There are two kind of reviews: consumer reviews and professional reviews (Chen & Xie, 2008). According to Chen and Xie (2008) the content of professional reviews is formed by results of lab testing or evaluations of experts. Professional reviews focus on product attribute information, for example performance and features. Another difference between consumer reviews and professional reviews is the difference that online consumer reviews are based on personal stories and experiences. This study will focus on consumer reviews.

EWOM consists diverse media forms and website types, where online reviews and ratings are the most accessible forms of eWOM (Chatterjee, 2001). Online reviews is having a bigger role in the purchase process of the modern consumer, 88% have been influenced after reading an online customer service review in the actual purchase decision (Zendesk, 2013). More than 90% of the consumers uses online reviews before purchasing (OpenCompanies, 2015) (ChannelAdvisor, 2011). And 83% of the consumers are affected in their purchase decision because of online reviews (ChannelAdvisor, 2011).

Online reviews have two goals. In the first place the online review gives product/service information and secondly online review plays the role of a recommendation. Recommendations in general are one of the most important services that are able to send personalized content to users (Wang et al., 2012). Beside online reviews, social media recommendations are seen as one of the most important services to send personal recommendations to other users in an online social network (Wang et al., 2012). The key question in this research is what the impact is of online reviews on review attitude and purchase intention of restaurant visits. Based on the theory that online reviews are seen as one of the most important services to send personal recommendations to others, online reviews could have a big impact on review attitude and therefore also on purchase intention.

2.4.1 Valence

The attached value to a review and the final effect after reading a review depends on several factors (Senecal & Nantel, 2004; Chevalier & Mayzlin, 2004). The three review elements selected for this study are: valence, recentness and length. The different factors focused on the content of the review are explained in the following subparagraphs.

The valence can either be positive or negative. When recommending a product this is the same as positive word-of-mouth. The opposite when consumers are advising against a certain product, this can be defined as negative WOM. Cheung and Thadani (2012) identified valence as one of the important factors that are associated with the response. Meaning that the valence of positive online reviews is positive and the opposite for negative online reviews. The strongest effects for online reviews are found in the sectors with experience products and services, since it is difficult to experience the product before using. Research has shown that experience products are most sensitive for online reviews (Park & Lee, 2009). Mostly consumers write an online review because their expectations towards a particular product were too low or too high (Bone, 1995). Therefore, the review content is mostly positive or negative (Chatterjee, 2001). Positive information can lead to a positive attitude and purchase intention (Sorensen & Rasmussen, 2004). And the opposite for negative information, this can lead to a negative attitude and purchase intention. A number of authors studied the effect of valence on the purchase behaviour of consumers. Therefore, the third hypothesis will focus on the direction of valence. The literature about valence lead to the following hypothesis:

H2: The valence of online reviews has a positive effect on (a) review attitude and therefore also on (b) purchase intention

Besides the negative attitude an purchase intention, negative information also reduces the trustworthiness of the original advertising (Huang & Chen, 2006). An remarkable conclusion in Skowronski's and Carlston's (1987) study is the negativity effect. The negativity effect means that consumers attach more value to negative information in comparison with positive information (Skowronski & Carlston, 1987). Negative information is better remembered than positive information and attracts more attention. Fiske (1980) experimented to show participants different content (differed from very positive to very negative). This study suggested that negative content has a greater impact in looking from the participants in comparison with the positive content (Fiske, 1980). This study implies that the attention effect is greater for negative information in comparison with positive information. Continuing the negativity effect, negative offline WOM has a stronger effect on brand attitude and purchase intention in contrast to positive WOM (Arndt, 1967). Besides the theory about negative information several studies have concluded that positive information lead to a positive attitude and purchase intention. And negative information lead to a negative attitude and purchase intention. Online reviews which are honest are influential for the purchase intention (Cheng & Zhou, 2010). Specific studies found that the purchase intention is higher for positive online reviews in comparison with negative online reviews (Sparks & Browning, 2011; East et al., 2008). This could be explained by the fact that positive online reviews reach the positive emotional feelings of the reader with all the positive words written in the review (Xia & Bechwati, 2008).

2.4.2 Recentness

The second independent variable to manipulate the online reviews is the recentness: the date the online review was posted (Gretzel et al., 2007). Cheung and Thadani (2012) identified recentness as one of the important factors that are associated with the response. The recentness can be divided into "recent" postdates and "old" postdates. A study which investigated the kind of role and actual effect of online travel reviews rated the recentness as extremely important when evaluating a travel review. 59.3% of the respondents rated the recentness as critical when evaluating an online review (Gretzel et al., 2007). Wisdom says that the impact of the most recent online reviews may be bigger than old online reviews because of the up-to-date information of most recent online reviews (Jin et al., 2014). But the exact relationship between the recentness and the influence on consumer decision is unclear. There are several studies which investigated in this context like Wu and Huberman (2007), they found that memory and newness will expire after some time. Another study suggest that consumers consider old

reviews more helpful than expected (Pan & Zhang, 2011). Because a positive correlation was found between the perceived helpfulness of a product review and the passed time since the review was posted. Recent research says that participants prefer recent reviews over old reviews (Jin et al., 2014). This result is in line with previous research that recent messages are more informative (Berger & Iyengar, 2012). The study of Jin (2014), is specifically focused on the timeframe interaction. Meaning that participants with near future purchases (booking a hotel in two days) read more recent reviews than participants with distant future purchases (booking a hotel in six months). And participants with further future purchases read more old reviews than participants with near future purchases (Jin et al., 2014). There aren't a lot of studies and theories about the recentness and the influence on the purchases.

Less research has been done on the effect between recent and old online reviews. The study about online travel reviews assumes that the recentness is important when judging a travel review (Gretzel et al., 2007). Participants with near future purchases read more recent reviews (Jin et al., 2014). When consumers read old online reviews, they might think that the review content is too old to use and therefore unreliable when making purchase decisions (McKinney et al., 2002). It is assumed in this context that the effect of recent online reviews is bigger compared with old online reviews. This is based on logic and experience. Since recent information is more credible and usable for consumers. To investigate the direction of the recentness the following hypothesis is developed:

H3: The recentness in online reviews has a positive effect on (a) review attitude and therefore also on (b) purchase intention

2.4.3 Length
A third aspect which matter in online review content evaluation is the length: the total number of typed characters (Chevalier & Mayzlin, 2004). Shorter online reviews likely have less information comparing to longer online reviews (Pan & Zhang, 2011). Longer online reviews offering more information and could be perceived as more convincing than shorter online reviews. Beside, longer online reviews draw more attention because consumers have more hope to find the content they are looking for in longer online reviews. Length is therefore one of the most important signals used by consumers when searching for products (Järveläinen et al., 2013). If the decision maker has more information available, the more this is a boost for the confidence of the decision maker (Tversky & Kahneman, 1974). This implies that longer online

reviews are more helpful comparing with shorter online reviews. Because of the fact-based nature of search goods, these reviews can be short (Mudambi & Schuff, 2010).

The differences between search goods and experience goods has an impact on the length. The effect of length for search goods increases the diagnosticity more in comparison with experience goods (Mudambi & Schuff, 2010). According to Nelson (1970, 1974), it is more easy to gather information on the product quality for search goods before purchasing a certain product. The length has a correlation with the enthusiasm of the author (Chevalier & Mayzlin, 2004).

Longer online reviews could be perceived as more convincing because longer online reviews offer more information and often consists of more details about the particular product and more information about the situation in which setting the product was used (Mudambi & Schuff, 2010). Based on this finding the assumption is made that the length of the online review could have impact on review attitude and purchase intention. Therefore, the following hypothesis is developed:

H4: The length in online reviews has a positive effect on (a) review attitude and therefore also on (b) purchase intention

2.4.4 Review type
Following the other factors, the last factor is review type. The measurement of each online review can be divided into two types. The first type is the subjective measurement and the second type is the objective measurement. The subjective measurement is based on the judgment of the consumer and what the consumer already knows. Linked to the subjective measurement these are opinions. These are subjective ideas based on individual opinions and are therefore always biased. Subjective information contains emotional information and it may involve the colour and shape (Lee & Lee, 2009). This subjectivity can be influenced due the fact that the interpretation and use of WOM information will dominate when the individual's feeling or confidence is stronger (Chatterjee, 2001). Online reviews as "I am so happy with this place; I still can't imagine this product is mine", is an example of a subjectivity (Park et al., 2007). While the objective measurement is based on the evaluation of another person's knowledge and objective measurement can be categorized in the category facts. Objective information is based on the product's characteristics which are measured objective, like length or weight (Lee & Lee, 2009). Facts are objective and have proven ability (Selnes & Gr°nhaug,

1986). Online reviews as "This USB stick is ten times faster as other USB sticks and even €5,-cheaper", is an example of objectivity. Because this online review is specific, clear and explained with objective reasons. Online reviews may be supplementary information of WOM for consumers. Online reviews with more understandable and objective content with enough reasons to recommend is more persuasive in contrast to online reviews with emotional and subjective content with recommendations based on not a single specific reason (Park et al., 2007). Online reviews will not easily be believed if the content doesn't contain enough information (Ratchford et al., 2001). This is due to the fact that online review writers are anonymous on the internet. Therefore, their content is only convincing if they provide enough information. The effect on consumer's purchasing intention is bigger when online reviews are more persuasive (Park et al., 2007). The theory above concludes that online reviews which are objective, clear and persuasive have a bigger effect on the purchase intention in contrast to subjective and emotional online reviews. This assumes that review type operates as a moderator variable on review attitude and purchase intention. It is expected that the effects are stronger when reviews are objective. To test if objective online reviews increases the effect, the following hypotheses are developed:

H5: Objective online reviews increases the effect of the valence, (a) review attitude and therefore also on (b) purchase intention compared to the subjective online review

H6: Objective online reviews increases the effect of the recentness, (a) review attitude and therefore also on (b) purchase intention compared to the subjective online review

H7: Objective online reviews increases the effect of the length, (a) review attitude and therefore also on (b) purchase intention compared to the subjective online review

2.5 Conceptual model
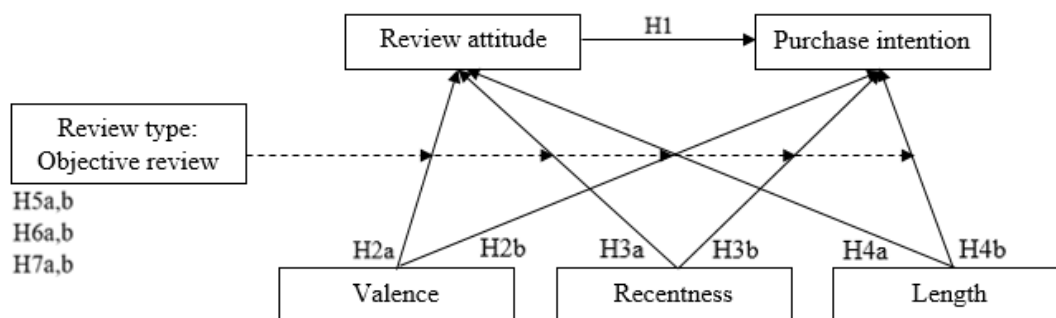Figure 8 provides a schematic view of the hypotheses.

Figure 8: Conceptual model

3. Method

In this chapter, the research design and method of this research will be discussed. First paragraph will explain the chosen research design. Thereafter, the measurements for the several variables will be described. After that, the questionnaire questions will be presented and explained. Then, the manipulation check will be presented and described. And the last paragraph is about the measurement and data analysis of the online experiment.

3.1 Design

In order to investigate the extent to which the impact of online reviews is for the final decision making of a restaurant visit an online experiment will be performed based on the conceptual model in figure 8. The respondents will study different online reviews at random and also fill in relating questionnaires. This online experiment includes a questionnaire with manipulated online restaurant views. The online reviews are made in the same design and style of the existing online review website Iens.nl. Some of the respondents will probably know and already use this website. The main goal of using an existing website is to come as close as possible to the reality. Both questions and online reviews were written in Dutch for the respondents. In appendix 2 the questionnaire is translated in English and also the online reviews are translated in appendix 3.

The independent variables are divided in three review elements: valence, recentness and length. The reviews are manipulated on the following three points: valence (positive vs. negative), recentness (recent vs. old) and length (long vs. short). The variable recentness means how recent the online review is. A recent review is dated on January 21, 2017. And an old review is dated on May 9, 2015. The review length means how long the online review is. Long reviews have a word count of 168 – 184 words and short reviews have a word count of 39 – 64 words. The dependent variables are review attitude and purchase intention, with review type as moderator variable. The moderator variable (objective online review as group 1 and subjective online review as group 0) was inserted in the path analysis in AMOS with a multigroup analysis. This resulted in a 2 x 2 x 2 x 2 design with 16 conditions, shown in table 1. All questions in the questionnaire are measured at interval level on a seven-point Likert scale.

Table 1: 2x2x2x2-Design with 16 conditions

Online review elements	
Valence	*Positive vs. negative*
Recentness	*Recent vs. old*
Length	*Long vs. short*
Review type	*Objective vs. subjective*
Conditions	
Positive – recent – long – objective	Negative – recent – long – subjective
Positive – recent – short – objective	Negative – recent – short – subjective
Positive – old – long – objective	Negative – old – long – subjective
Positive – old – short – objective	Negative – old – short – subjective
Positive – recent – long - subjective	Negative – recent – long – objective
Positive – recent – short – subjective	Negative – recent – short – objective
Positive – old – long – subjective	Negative – old – long – objective
Positive – old – short - subjective	Negative – old – short - objective

To test the effect of different levels of independent variables and moderator variable on the dependent variables a 2 x 2 x 2 x 2 factorial design will be used for this research. The three independent variables (valence, recentness, length) and moderator variable are all measured on two levels and this is referring to a 2 x 2 x 2 x 2 factorial design.

3.2 Research material

Both for the manipulation check and the final online experiment, the program Qualtrics was used. In Qualtrics the questionnaire was created and a link connected the respondents to the questionnaire. For the final online experiment program displayed randomly two of the 16 conditions (see table 1) to the respondents. In the beginning of the survey the respondents is explained that this survey is made in context of a master thesis research and that the investigation is focused on the topic online reviews (appendix 2). First the respondents read one of the online reviews. And after that, the questions about the online review were exposed. Each respondent saw two conditions at random per questionnaire. It was decided to insert two conditions into an online review. Meaning that this research will use a within subjects design. Argument to choose this design is the great statistical power because within subjects design have smaller error variance (Hanover University, 2017).

The design of the manipulated restaurant reviews is based on the most popular restaurant review site in The Netherlands: Iens. Main reason to use the same design of Iens was to relate the online reviews closely to real online reviews. The manipulated restaurant reviews are based on an unknown restaurant, so the respondents can't have an attitude and opinion of the restaurant. With this unknown restaurant it is excluded that the effect of online reviews was influenced by earlier experiences with the restaurant.

3.3 Review attitude

The measure scale for the dependent variable review attitude is based on the study by Olney, Holbrook and Batra (1991). The measure scale measuring the dependent variable, review attitude (questions 4-15), are displayed in appendix 2. The measure scale consists 12 questions. The original measure scale was used to measure the attitude towards advertising. This study will use the measure scale for review attitude. The scale consists of three components: hedonism, (fun, pleasant, entertaining, enjoyable), interestingness (important, helpful, informative, useful), and utilitarianism (curious, boring, interesting) (Olney et al., 1991). The items of review attitude were measured with Cronbach's alpha.

Cronbach's alpha is a trustworthiness analysis to look at the relationship of a different items as a group. A "high" Cronbach's alpha value means that the different items illustrate acceptable consistency as a group (Gliem & Gliem, 2003). The trustworthiness coefficient of Cronbach's alpha commonly lies in the middle of 0 and 1. If the coefficient of Cronbach's alpha is closer to 1.0 then the consistency of the different items as a group is better. Coefficients above the 0.7 can be seen as a stable Cronbach's alpha (Lance et al., 2006). For the this study's measurement model, with 12 questions, most coefficients have a value above 0.7 (see appendix 4) result in a reliable scale with a Cronbach's alpha of 0.922 (M = 54.21, SD = 13.586).

3.4 Purchase intention

To measure the dependent variable, purchase intention, the findings of Wu, Hu and Wu (2010) are used. The questions (16-19) are displayed in appendix 2. The questions are measured at interval level on a seven-point Likert scale ranged from (1) very low (7) very high. The items of purchase intention, with four questions, result in a reliable scale with a Cronbach's alpha of 0.951 (M = 14.45, SD = 6.186).

3.5 Review type

The variables objective and subjective online reviews are manipulated in the online review designs. The items which are used to measure the moderator variable, review type, are based on findings of Park & Kim (Park & Kim, 2008). The main goal of this moderator variable is to test whether objective online reviews increases the effect of the independent variables more on review attitude and purchase intention compared to subjective online reviews. The questions (20-24) are incorporated in appendix 2. The questions are measured at interval level on a seven-point Likert scale ranged from (1) completely disagree to (7) completely agree. The items of review type result in a reliable scale with a Cronbach's alpha of 0.595 (M = 26.08, SD = 3.769). The reliability of the scale of review type was improved by deleting the item: objective facts are more important to me than personal opinions. This result in a Cronbach's alpha of 0.668 (M = 20.99, SD = 3.263). This Cronbach's alpha value is accepted because a Cronbach's alpha of 0.668 is close to the acceptable value of 0.7.

On second thoughts this study uses a dichotomous moderator variable. Meaning that the questions 20 – 24 are not necessary to test the effect of objective online reviews. So these questions are therefore not included in the final analysis.

3.6 Background information

At the end, a few questions (25-32) will be asked for background information. The questionnaire asked for the respondent's age and gender. And how many times the respondent on average dining out at a restaurant. In addition to the background information, the questionnaire asked for some general questions about online reviews. The items used measuring the general questions were "How many times on average do you visit a restaurant in a week", "How often do you read online reviews before visiting a restaurant", "When reading an online review about a restaurant, this is because".

3.7 Manipulation check

Before the final survey to investigate the influence of online reviews, a pre-test was done to test if the conditions were manipulated well. A total of 37 respondents filled in the pre-test. Each respondent saw two conditions per questionnaire. In table 2 is shown, how many respondents filled in each condition in the pre-test.

Table 2: Number of respondents pre-test

Conditions	Positive Long Recent Objective	Positive Long Old Objective	Positive Short Recent Objective	Positive Short Recent Objective
Respondents	5	5	5	4
Conditions	Positive Long Recent Subjective	Positive Long Old Subjective	Positive Short Recent Subjective	Positive Short Recent Subjective
Respondents	5	5	4	4
Conditions	Negative Long Recent Objective	Negative Long Old Objective	Negative Short Recent Objective	Negative Short Recent Objective
Respondents	5	5	5	4
Conditions	Negative Long Recent Subjective	Negative Long Old Subjective	Negative Short Recent Subjective	Negative Short Recent Subjective
Respondents	4	5	4	5

From all respondents of the pre-test 56.8% was female and 43.2% was male. The average age is 25 years (SD = 4.39). The pre-test was categorized in questions for the three independent variables: valence, recentness and length. And for the moderator variable: review type. The questions are shown in table 3.

Table 3: Questions and measure scale pre-test

Independent variable	Questions	Measure scale
Valence	How do you think the person who wrote the review thinks about the restaurant?	7-point Likert scale Negative - Positive
Length	The review is…	7-point Likert scale Long - Short
Recentness	The review is…	7-point Likert scale Old - Recent
Moderator variable	**Question**	**Measure scale**
Review type	The review is mostly based on…	7-point Likert scale Facts - Feelings

All questions are measured with a seven-point Likert scale. To test if the conditions were manipulated well, a t-test for independent samples is used. The results shows that negative

online reviews were written by a person with negative thoughts about the restaurant (M = 2.16, SD = 1.04). The respondents thought that the positive online reviews were written by a person which was positive about the restaurant (M= 6.54, SD = 0.51). The relationship between the positive and negative online reviews is significant (t (72) = 14.007, p < 0.05).

The manipulated condition recentness is measured with the question "the review is…", with a 7-point Likert scale with 1 = old and 7 = recent. The recent online reviews are evaluated with an average of 6.49 (SD = 1.39). The old online reviews are evaluated with an average of 1.22 (SD = 0.712). To compare the recentness for online reviews with the conditions recent and old an independent samples t-test was performed. The relationship between recent and old online reviews is significant (t (72) = 20.56, p < 0.05).

Length is measured with the question "the review is…" with a 7-point Likert scale with 1 = long and 7 = short. The long online reviews are evaluated with an average of 1.123 (SD = 0.485). The short online reviews are evaluated with an average of 5.74 (SD = 1.172). The relationship between long and short online reviews is significant (t (72) = -22.051, p < 0.05).

The last manipulated condition review type is measured with the question "the review is based on" with a 7-point Likert scale with 1 = most on facts and 7 = most on feelings. The subjective online reviews are evaluated with an average of 5.81 (SD = 0.938). The short online reviews are evaluated with an average of 2.46 (SD = 0.767). The relationship between long and short online reviews is significant (t (72) = -16.82, p < 0.05). Altogether, all manipulated conditions are tested and the results are significant and related to their real condition. Therefore, the pre-test was successful for the conditions valence, recentness, length and review type.

3.8 Measurement

Questions 1 – 24, 26, 28 and 29 are measured on a seven-point Likert scale. There has been chosen for a seven-point Liker scale since the values of a five-point Likert scale are too close to each other. The probability is large that these values won't be selected. Since the introduction of the Likert scale researchers are discussing about the optimal number. After all those years the findings are still conflicting (Adelson & McCoach, 2010). There are several studies which confirmed the choice of a seven-point Likert scale (Dawes, 2008; Adelson & McCoach, 2010). This study will measure with a seven-point Likert scale. After analysing the answers it is possible to conclude that one score is higher than another. Since these levels are ordinal scaled

it isn't possible to say how much higher. Common practice of Likert scale is that many researchers measure Likert scale questions on interval scale (Jamieson, 2004). This assumes that the differences are equal between each response. Since the values of Likert scale are covered within ordinal scale it is contradictory that Likert scale is measured on interval scale. But still it is common to assume that Likert scale is measured on interval scale (Jamieson, 2004). Therefore, the Likert scale questions in this study are measured on interval level.

3.9 Data analysis

To test the conceptual model, path analysis will be conducted. A path model is a diagram relating the independent, mediating, moderating and dependent variables (Garson, 2008). Common term for path analysis is also causal modelling (Jackson et al., 2005). This analysis is an logical extension of multiple regression models (Schumacker & Lomax, 2010). Path analysis is developed by Wright (1921). Path analysis is a model to test theoretical relationships between variables. The path model used for this thesis will establish the causal relationship among two variables. The independent variables are manipulated and the expectation is that these cause a change in the dependent variables. Path analysis makes it possible to investigate a set of relationships. The relationships may consist of one or more dependent variables, with the choice between continuous or discrete variables. All relationships between the variables can be tested. Main goal of path analysis is analysing causal relationships between a set of variables and to relate all the variables to one another and to discover the relationship between the variables (Schumacker & Lomax, 2010). The hypotheses will be tested using the program AMOS. This program makes it able to test the hypotheses and the different relationships between variables measured on interval level. A short view of the dependent, independent and moderator variables is graphically shown in appendix 5. The questionnaire model is also summarized in appendix 6.

4. Data and results

This chapter will describe the research data. The data method is described in the previous chapter. This section presents and discusses the empirical results of the path analysis. Main goal of this chapter is to clarify all data and to eventually support the proposed hypotheses and to answer the research question.

4.1 Descriptive statistics

The respondents have been approached by e-mail and Facebook. The respondents were recruited between January 24, 2017 and February 18, 2017. A total of 350 respondents filled in the survey.

Table 3: Distribution of respondents

Conditions	Positive Long Recent Objective	Positive Long Old Objective	Positive Short Recent Objective	Positive Short Old Objective
Respondents	41	41	39	41
Conditions	Positive Long Recent Subjective	Positive Long Old Subjective	Positive Short Recent Subjective	Positive Short Old Subjective
Respondents	40	37	37	43
Conditions	Negative Long Recent Objective	Negative Long Old Objective	Negative Short Recent Objective	Negative Short Old Objective
Respondents	31	34	43	37
Conditions	Negative Long Recent Subjective	Negative Long Old Subjective	Negative Short Recent Subjective	Negative Short Old Subjective
Respondents	43	38	40	45

35 reactions are deleted because of extreme values. In table 3 the distribution of the respondents to the several 16 conditions is viewed. After deleting the extreme values the final sample size exists of 57.3% of all respondents is female and 42.7% is male. The age of the respondents varied from 17 to 68 years with an average age of 31 years (M = 30.76, SD = 12.301). Major part of the respondents has finished a HBO education (46%). 24.6% have their MBO degree. And 16.2% of the respondents has their university degree. 11.5% of all respondents finished their high school education as highest level of education. The respondents are in general familiar with restaurants because 24.3% of the respondents visits on average once a month a

restaurant. 19.1% visits a restaurant on average 2 or 4 times a month. And 16.9% goes 3 times in a month to a restaurant. Online reviews are not unfamiliar to the respondents because for 29.1% of the respondents online reviews about restaurants are crucial (5 on a scale from 1 to 7) when choosing a restaurant. And 22% agrees (6 on a scale from 1 to 7) that online reviews are crucial when choosing a restaurant. This results implying that the respondents are average restaurant visitors. With a total sample size of 315 respondents, the total sample size is enough for this research. Because the main rule is to have at least 20 respondents per condition (List et al., 2011)

At the begin of the questionnaire it was checked whether the conditions were manipulated well. An independent t-test is performed for the manipulation check of the conditions. The item used measuring the valence was "This review is" with a response category from (1) negative to (7) positive. The first manipulation showed that negative online reviews were seen as negative (M = 2.28, SD = 1.07) and the positive online reviews were seen as positive (M = 6.02, SD = 0.80) (t (628) = -49.993, p < 0.05). The independent variable recentness was "This review is" with a response category from (1) old to (7) recent. In line with the pre-test and as expected, the respondents rated the old online reviews (M = 2.05, SD = 1.09) as more old than the recent (M = 6.26, SD = 1.10) (t (628) = -48.30, p = 0.581). The last manipulation was measured with the item "This review is" with a response category from (1) long to (7) short. The length condition wasn't manipulated that well. Long online reviews were rated as long but not very long (M = 4.93, SD = 1.18). The manipulation for short online reviews was successful (M = 2.78, SD = 1.27) (t (628) = 22.089, p = 0.132).
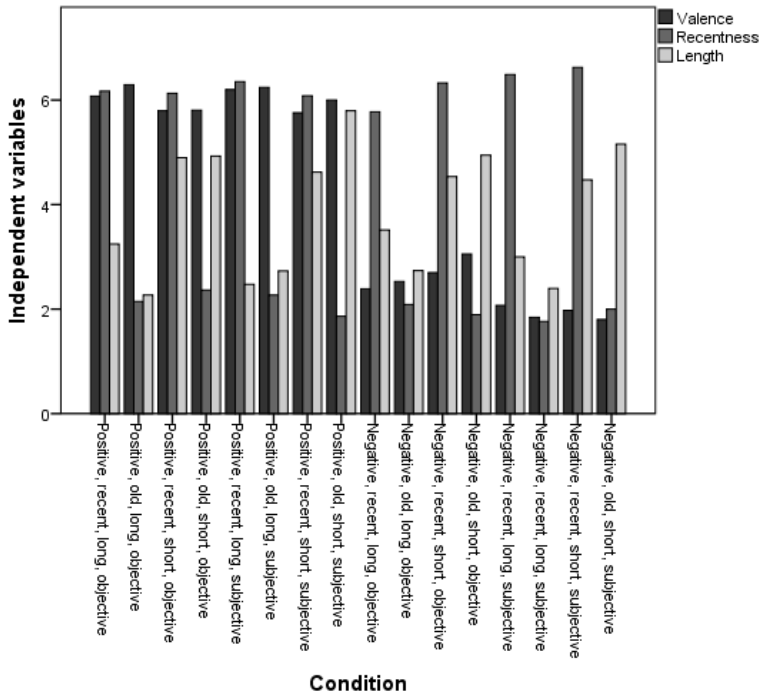
Figure 9: Bar chart independent variables

Figure 9 gives a clear overview of the independent variables results. Although the manipulation for recentness and length weren't significant. The respondents did saw the differences between the different manipulated conditions. This is also reflected in figure 9. The insignificant difference in the respondent's perception for recentness and length could affect the final results.
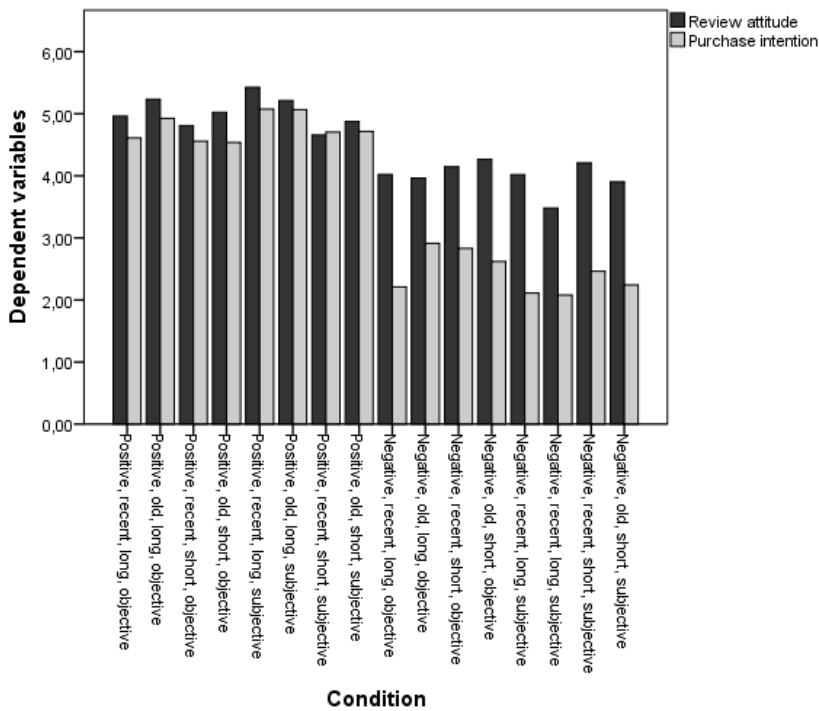
Figure 10: Bar chart dependent variables

Figure 10 graphically shows the results of the dependent variables. When summarizing this bar chart: there is a higher impact on review attitude and purchase intention when the online reviews are positive in comparison with the negative online reviews.

4.2 Path analysis indices

The techniques of path analysis have been used to examine the direct and indirect effects in the hypothesis testing. The coefficients of the path analysis will be computed based on the hypothesized model via multiple regression analyses in AMOS.

First step in the path analysis is to indicate the model fit. Model fit is standing for the fit of the correlations between variables in the dataset in the proposed model. A good fit is found when all major correlations are accounted inherent in the data set. If the path analysis find a difference which is significant between the correlations proposed and the correlations observed, this gives a poor model fit. First measurement is the chi-square test. When discussing the model fit, the chi-square value is the most common measure which indicates the difference between the expected and observed covariance matrices (Hooper et al., 2008). When the chi-square value is close to zero this demonstrates that the difference in the middle of the expected and observed covariance matrices is narrow. In this study, the chi-square value is 9.243 with 9 degrees of freedom and a probability level of .415. The chi-square is insignificant (.415> .05) in this study. Meaning that there is a insignificance difference between this study's model and the saturated model and that the model fit is good. A limitation of the chi-square test is the sample size sensitivity, unfortunately the chi-square test is extremely sensitive to sample size. Meaning that the model may fit the data reasonably well but could be reject by the chi-square test because of the large sample size (Lei et al., 2007). When a research sample size is more than 200 many researchers ignore the chi-square and use other indices to indicate if the model is acceptable (Moss, 2016). A limitation of the chi-square test is when the sample is larger the power of this chi-square test is larger, meaning that smaller differences are reported as indicating statistically significant misfit between the data and the model (Tennant & Pallant, 2012). Even though the chi-square value can detect very small differences and with large sample sizes it is known that it will be significant, it is recommended to report the chi-square value in addition with the other fit indices. Therefore, the other fit indices will be discussed for this study. All fit indices values are shown in table 4.

Table 4: Fit indices path analysis

Statistical measures	Acceptable values	Values
Chi-square p-value	≥ 0.05 ; (Moss, 2016)	P = .415
Relative chi-square index (CMIN/DF)	≤ 3 ; (Kline, 1998)	CMIN/DF = 1.027
Root mean square error of approximation (RMSEA)	≤ 0.08 ; Steiger and Lind (1980)	RMSEA = .005
Goodness of fit index (GFI)	≥ 0.80 ; Jöreskog and Sörbom (1986)	GFI = .997
Adjusted goodness of fit index (AGFI)	≥ 0.80 ; Jöreskog and Sörbom (1986)	AGFI = .985
Normed fit index (NFI)	≥ 0.95 ; Bentler and Bonnett (1980)	NFI = .994
Comparative fit index (CFI)	≥ 0.90 ; Bentler (1990)	CFI = 1.000

The first index to view is CMIN, this is the chi-square value in AMOS. The results for CMIN are 9.243 and p = .415. RMSEA indicates the scope of how a model fails to fit the data per degree of freedom and preference models which are more complicated. The RMSEA (RMSEA = .005) in this model indicates a good fit (Hu & Bentler, 1999). For a better model data fit, the GFI and AGFI should be high (≥ 0.80). When looking at the results the GFI and AGFI turned out to be .997 and .985 respectively. Meaning that these values indicate a good fit. RMR indicates the mean squared amount's square root (Jenatabadi, 2015). A RMR value of ≤ 0.08 will be accepted. RMR should be lower for a better model fit because, the smaller the value of RMR the more optimal the fit (Jenatabadi, 2015). This study results showed a RMR value of 1.634, this indicates not an optimal fit.

The NFI and CFI fall under the category comparative fit indices. Note for these models is that all variables in the null hypothesis are uncorrelated (McDonald & Ho, 2002). The null model is the model that specifies all measured all variables which are uncorrelated (Hooper et al., 2008). The NFI evaluates the model while analysing the different x^2 values between the actual model and the null model. Criteria for the NFI is ≥ 0.95. The CFI could be interpreted in the same way as NFI as a reconsidered form. But the CFI takes the sample size into account and is less affected by the sample size. Acceptable value for CFI is ≥ 0.90. The values in this study for NFI = 0.994 and CFI = 1.000 are indicating a good model fit. The presentation of the path

analysis results can be found in table 4. The results are acceptable according to the theory and to continue the analysis. Meaning that these results can be used to test the hypotheses.

4.3 Path analysis results

Looking at table 5 below, the regression weights of the three groups are shown. Table 5a shows the regression weights of the total group. Table 5b shows the regression weights of the objective group and table 5c shows the regression weights of the subjective group. These groups are conducted by the multigroup analysis in AMOS. When summarizing table 5, the positive and significant effects of a positive valence in all groups are remarkable. The same for the positive and significant effect of review attitude on purchase intention.

Table 5: Regression weights

5a.			Estimate (unstandardized)	S.E.	C.R.	P
Review attitude	<---	Valence	1.014	.080	12.595	***
Review attitude	<---	Recentness	.050	.080	.620	.535
Review attitude	<---	Length	.001	.001	1.275	.202
Purchase intention	<---	Valence	1.978	.084	23.426	***
Purchase intention	<---	Recentness	-.061	.075	-.805	.421
Purchase intention	<---	Length	.000	.001	.256	.798
Purchase intention	<---	Review attitude	.352	.037	9.426	***

5b. OBJECTIVE REVIEWS			Estimate (unstandardized)	S.E.	C.R.	P
Review attitude	<---	Valence	.900	.116	7.757	***
Review attitude	<---	Recentness	-.139	.116	-1.202	.229
Review attitude	<---	Length	.000	.001	.043	.966
Purchase intention	<---	Valence	1.613	.122	13.272	***
Purchase intention	<---	Recentness	-.109	.111	-.977	***
Purchase intention	<---	Length	.000	.001	.443	.658
Purchase intention	<---	Review attitude	.414	.055	7.568	***

5c. SUBJECTIVE REVIEWS			Estimate (unstandardized)	S.E.	C.R.	P
Review attitude	<---	Valence	1.128	.110	10.233	***
Review attitude	<---	Recentness	.222	.110	2.011	.044
Review attitude	<---	Length	.001	.001	1.673	.094
Purchase intention	<---	Valence	2.358	.114	20.663	***
Purchase intention	<---	Recentness	.009	.100	.091	.928
Purchase intention	<---	Length	.000	.001	.467	.641
Purchase intention	<---	Review attitude	.266	.050	5.320	***

Figure 11 gives an overview of the path analysis included path coefficients. The direct effect from variable to variable is explained by a path coefficient. It is assumed that this direct effect is a cause on another variable. These path coefficients are standardized coefficients, to compare the path coefficients the process of standardized coefficients is based on the standard deviations (Grace & Bollen, 2005). The variables have no precise meaning, therefore standardized estimates are chosen since these are easier to interpret. An advantage of standardized estimates is the fact that it is not hard to see which variable is more influential (Jackson et al., 2005). Another advantage is the criterion of the relationship's importance: standardized coefficients greater than .8 is seen as large, .5 as a moderate relationship and less than .2 as small (Jackson et al., 2005). The standardized path coefficients are set in correlations terms, they represent the variations related with the relationships (Grace & Bollen, 2005). The path coefficients will be used to indicate the relationships between the variables in the path analysis.
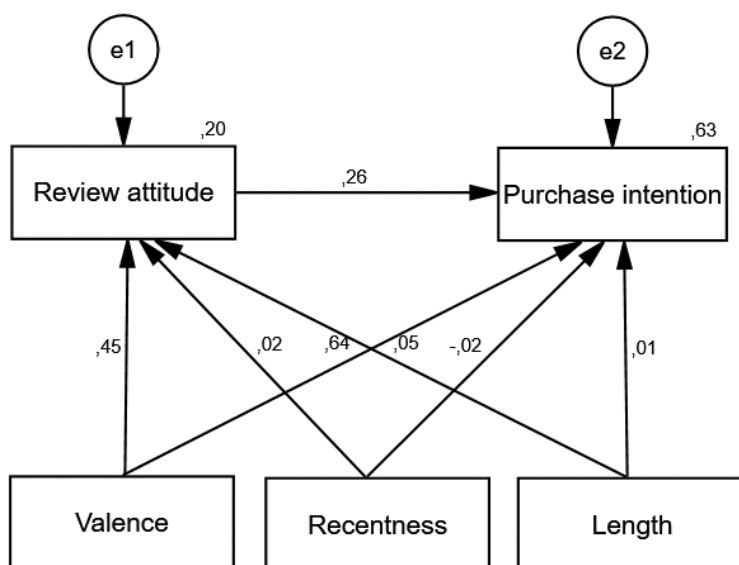

Figure 11: Path analysis graphic

Analysing the results in figure 11, it is clear to see that a positive online review indicates the largest direct effect (.64) on purchase intention. With a path coefficient of .45, a positive valence indicates a moderate direct effect on review attitude. The effect of review attitude on purchase intention (.26) indicates a moderate direct effect. Other variables (recent reviews > review attitude .02; long reviews > review attitude .05; long reviews > purchase intention .01) have very small path coefficients which indicates small relationships between variables. The relationship between recent reviews and purchase intention seems to be negative. Meaning that if the reviews are recent, the purchase intention of consumers will decrease a little. This does not match with the theory that most recent online reviews may have a bigger impact because of the up-to-date information (Jin et al., 2014). In this context it could be that the respondents do not attach value if the online review is either old or recent. The expected bigger effect of recent online reviews is not fulfilled.
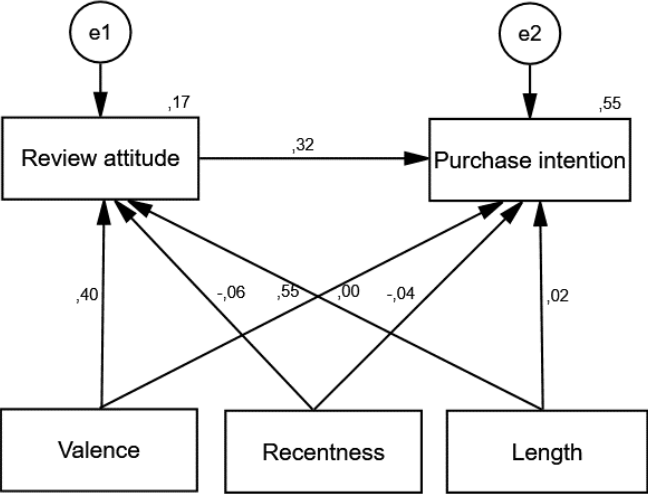
Figure 12: Path analysis graphic (objective online reviews)
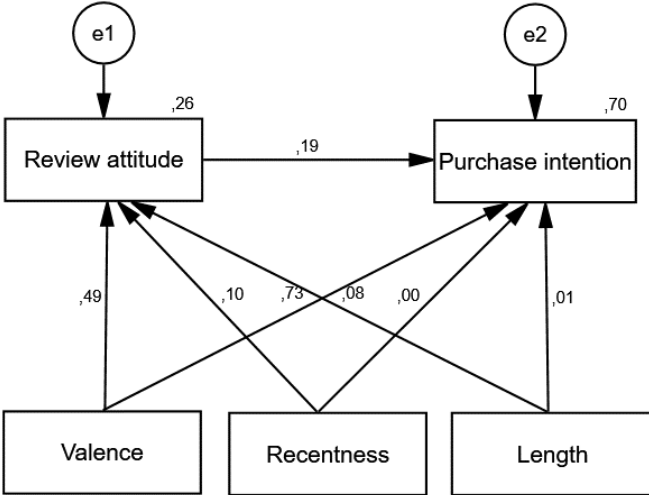
Figure 13: Path analysis graphic (subjective online reviews)

Figure 12 demonstrates the path analysis with path coefficients in the situation where objective online reviews are moderating. Vice versa for figure 13 where subjective online reviews are moderating. The largest direct effect (.55) in figure 12 is from positive objective reviews on review attitude. With a path coefficient of .40, the moderated effect of objective online reviews of a positive valence on review attitude indicates a moderate relationship. Other variables (long reviews > review attitude .00; long reviews > purchase intention .02) have very small path coefficients which indicates a small direct effect of the moderator objective online reviews. The relationship between recent reviews, review attitude and purchase intention seems to be

negative. Meaning that if the objective online reviews are recent the review attitude and purchase intention of consumers will decrease a little. Remarkable is that review attitude affects purchase intention more (.32 vs. .19) when objective online reviews are moderating. Comparing with figure 13 where subjective online reviews are moderating, almost all effects are bigger on review attitude and purchase intention. Except for long subjective online reviews (.01) on purchase intention and review attitude on purchase intention (.19). Meaning that subjective online reviews are moderating better in comparison with objective online reviews. And that subjective online reviews increases the effect of valence, recentness and length on review attitude and purchase intention.

For the hypothesis analysis, the standardized results of table 5, figure 11, 12 and 13 will be combined. Table 5a explains that three of a total of seven hypotheses are supported by the results. All these supported hypotheses have a significance level of p < .05. Table 5a is showing an overview of the calculated standardized estimates and the corresponding significance. The first hypothesis is as follows: review attitude will affect the purchase intention positively. The result is as expected, the effect is positive and also significant (H1: β = .352, p = .000). This hypothesis is fully supported. The relationship between review attitude and purchase intention showed a positive significant effect. The path coefficient (.26) in figure 11 also showed a positive direct relationship from review attitude on purchase intention.

Looking at the second hypothesis which suggest that valence has a positive effect on (a) review attitude and (b) purchase intention. This result turned out to be positive and also significant (H2a: β = 1.014, p = .000 ; H2b: β = 1.978, p =.000). This hypothesis is fully supported. The relationship between a positive valence and review attitude and purchase intention showed a positive significant effect. The direct effects of valence in figure 11 on review attitude and valence also showed a positive relationship with path coefficients of .45 on review attitude and .64 on purchase intention. This implies that it is important for the review attitude of (potential) visitors to read positive online reviews when actually visiting that restaurant. And that positive online reviews affect the final purchase intention.

Given the third hypothesis which predicted a positive effect of recentness on (a) review attitude and therefore also on (b) purchase intention. The effect on review attitude is positive but insignificant (β = .050, p = .535). The effect of recentness on purchase intention is negative and insignificant (β = -.061, p = .421). Based on the results combined with the path coefficients of

figure 11 (.02 on review attitude and -.02 on purchase intention) hypothesis 3 is not supported. The effect and relationship of a recent online review on review attitude was positive but insignificant. And the effect and relationship of a recent online review on purchase intention was negative and not significant. The pre-test results in the actual survey found insignificant effects on the variable recentness. This insignificant difference in the respondent's perception could be a reason why there is no significant effect found for recentness. Because the p-values are insignificant there is no statistical evidence that the effect of recent online reviews is not due to chance.

The fourth hypothesis hypothesized a positive effect of length on (a) review attitude and therefore also on (b) purchase intention. The results turned out to be positive but insignificant for review attitude and positive for purchase intention (H4a: $\beta = .001$, p = .202 ; H4b: $\beta = .000$, p = .798). This hypothesis is not supported. The relationship between a long online review and review attitude and purchase intention showed a positive but insignificant effect. The direct effects of length in figure 11 on review attitude and valence showed a positive relationship with path coefficients of .05 on review attitude and a minimum positive path coefficient of .01 on purchase intention. The pre-test results in the actual survey also found insignificant effects on the variable length. This insignificant difference in the respondent's perception could be a reason why there is no significant effect found for length. Because the p-values are insignificant there is no statistical evidence that the effect of long online reviews is not due to chance.

The last three effects were predicted to test if the moderator variable (review type) increases the effect if valence, recentness and length. These hypotheses are as follows:

H5: Objective online reviews increases the effect of the valence, (a) review attitude and therefore also on (b) purchase intention compared to the subjective online review

H6: Objective online reviews increases the effect of the recentness, (a) review attitude and therefore also on (b) purchase intention compared to the subjective online review

H7: Objective online reviews increases the effect of the length, (a) review attitude and therefore also on (b) purchase intention compared to the subjective online review

Table 6: Comparison objective online reviews and subjective online reviews

Hypothesis	Paths	Objective reviews		Subjective reviews	
		Estimate (unstandardized)	Path coeff.	Estimate (unstandardized)	Path coeff.
H5a	Valence > RA	.900	.40	1.128	.49
H5b	Valence > PI	1.613	.55	2.358	.73
H6a	Recentness > RA	-.139	-.06	.222	.10
H6b	Recentness > PI	-.109	-.04	.009	.00
H7a	Length > RA	.000	.00	.001	.08
H7b	Length > PI	.000	.02	.000	.01

RA = Review attitude

PI = Purchase intention

Table 6 compares the estimates and path coefficients of objective and subjective online reviews. The moderator variable (objective online review as group 1 and subjective online review as group 0) was inserted in the path analysis in AMOS with a multigroup analysis. Therefore, the regression weights for objective online reviews are shown in a separate table (5b) and in table 5c for subjective online reviews. As shown in table 5b the finding for the moderating effect of valence on review attitude is found to be positive and also significant ($\beta = .900$, p = .000). The same for the effect on purchase intention, which is $\beta = 1.613$, p = .000. Even though the values of the subjective online review group are also significant (review attitude; $\beta = 1.128$ p = .000, purchase intention; $\beta = 2.358$, p = .000), the path coefficients of subjective online reviews (table 6) have a higher effect. The path coefficient of positive subjective online reviews is .49 versus .40 of objective online reviews on review attitude. And a bigger path coefficient of .73 versus .55 on purchase intention. This means that objective online reviews do not increase the effect of valence on review attitude and purchase intention, thus hypothesis 5 is not supported. These results implies that the effect is greater of positive subjective online reviews on both the review attitude and purchase intention.

For the sixth hypothesis the moderating effect between objective online reviews and recentness is both negative and insignificant on review attitude ($\beta = -.139$, p = .229) and on the purchase intention ($\beta = -.109$, p = .328). With negative path coefficients: -.06 on review attitude and -.04

on purchase intention. Looking to the regression weights of subjective online reviews (review attitude; $\beta = .222$, $p = .044$, purchase intention; $\beta = .009$, $p = .928$) and path coefficients (.10 and .00). These results implies that recent subjective online reviews are positive and increase the review attitude and purchase intention more in comparison with objective online reviews. Therefore hypothesis 6 is not supported. Because of the only significance of recent subjective online reviews on review attitude, the conclusion can be made that recent subjective online reviews do have an impact on review attitude. Because the p-values are insignificant of the other effects there is no statistical evidence that the effect of positive online reviews is not due to chance, thus no conclusion can be made of the other effects.

And for the last hypothesis the results are found to be positive but insignificant (H7a: $\beta = .000$, $p = .966$; H7b: $\beta = .000$, $p = .658$). The results in table 6 show that subjective long reviews have a bigger effect on review attitude (.08 vs. .00). The effect of subjective long reviews on purchase intention has a minimum difference (.01 vs. .02). Because all p-values are insignificant there is no statistical evidence that the effect of long online reviews is not due to chance, thus no conclusion can be made. But looking at the path coefficients in table 6, these path coefficients show that subjective online reviews increase the effect of length on review attitude but not for purchase intention, thus hypothesis 7 is supported for the half.

5. Discussion

In this chapter the research question will be answered and discussed. The analysis and findings of this thesis will be further presented. This study tried to clarify the relationship between the review content and review attitude and purchase intention. First the general discussion will be presented and then the limitations and future research will be described.

5.1 General discussion

Main goal of this research is to investigate the effect of the review content on review attitude and purchase intention and to answer the following research question: "*To what extent are online reviews influential on review attitude and purchase intention in relation to a restaurant visit*?". The results showed a positive effect of review attitude on the purchase intention in general. Meaning that a positive review attitude leads to a positive purchase intention. Remarkable is that the review attitude affect purchase intention more when objective online reviews are moderating. Because research didn't investigate the effect of review attitude in particular on purchase intention, this finding is an addition to the current literature. The result corresponds with prior research where advertisement attitude has a positive impact on purchase intention (Kaushal & Kumar, 2016).

The results of this current study showed a positive and significant effect of valence on review attitude and purchase intention. The effect of positive online reviews on purchase intention is the strongest with a path coefficient of .64. Meaning that a positive story and opinion in the online reviews are relevant for the consumers review attitude and purchase intention. The effect of positive online reviews on review attitude and purchase intention was as expected the strongest (Sorensen & Rasmussen, 2004).

Based on the prior literature (Gretzel et al., 2007), recentness could be assumed as important when evaluating an online review. Results in this study showed that the recent online reviews had a positive insignificant effect on review attitude. And a negative insignificant effect on purchase intention. The pre-test results already found insignificant effects on the variable recentness. This insignificant difference in the respondent's perception could be a reason why there is no significant effect found for recentness. No conclusions can be made because there is no statistical evidence that these results of recentness are not due to chance.

The results showed not a clear and significant difference in the effect of length on review attitude and purchase intention. The expectation was a stronger effect for longer online reviews. Because Mudambi and Schuff (2010) concluded that longer online reviews could be more convincing. Longer online reviews offer more information about product details and the use context of the product. The results of long reviews on both review attitude and purchase intention are insignificant. The pre-test results already found insignificant effects on the variable length. This insignificant difference in the respondent's perception could be a reason why there is no significant effect found for length. Therefore no conclusions can be made because there is no statistical evidence that these results of length are not due to chance.

Based on the literature about review type, the expectation was that the objective online reviews had a bigger effect on review attitude and purchase intention. This effect was expected because objective online reviews provide extensive, detailed and subjective information. According to Park (2007) the purchase intention is bigger when online reviews are more persuasive. Meaning that objective online reviews have a stronger effect on review attitude and purchase intention. The results showed that not objective online reviews increase the effect of valence, recentness and length on review attitude and purchase intention. But subjective online reviews did. Subjective online reviews increases the effect of valence and recentness on review attitude with positive and significant values. And subjective online reviews boost the effect of valence on the dependent variable purchase intention with a positive and significant value. All other effects of subjective reviews on recentness and length are positive but insignificant. Thus the effect where objective online reviews increases the effect of valence, recentness and length on review attitude and purchase intention was not as expected.

5.2 Implications

Online reviews have speed up and enlarge the reach of firms to consumers (Agnihotri & Bhattacharya, 2016). This study illustrates the effect of review content with three review characteristics. One study (Zhou & Guo, 2017) had investigated these three review characteristics earlier. The first implication for theory is that this study investigated three characteristics which have never been combined together. And this study adds new insights to the online review literature.

A notable aspect is the higher effect of subjective online reviews in comparison with objective online reviews. And the bigger outcome of review attitude on purchase intention when objective

online reviews occurred as a moderator variable. Findings show that facts, clearness, objectivity and positive valence are important elements for the consumers while looking for a proper restaurant. This is in line with Park's (2007) research: specific, clear and an objectively explained online reviews are more persuasive. The effect was stronger for positive objective online reviews. The moderated effect for objective recent online reviews and objective long online reviews was insignificant. Park (2007) explains that understandable and objective online reviews have a bigger persuasive effect and could influence the purchase intention at the end. This study results confirm Park's (2007) findings half. The path coefficients in table 6 show a higher effect for subjective online reviews. But the final outcome of review attitude on purchase intention is bigger when the online review is objective. If restaurant owners want to convince potential guests to come over for dinner, they have to search for solutions in shaping objective online reviews about their restaurant. For the impact on the final purchase intention. Restaurant owners can give the online review writers the opportunity to write objective online reviews. This could be done with adding some options in the internal system of online reviews. An example is to give the online review writers the opportunity to name at least 5 facts (max. two words) about their restaurant experience in a bullet system. And to add an strict spelling check in order to prevent spelling errors. An online review without spelling errors and a normal and clear language assists in shaping an objective online review. But restaurant owners should also look for ways how to encourage subjectivity in the online reviews. Because these study results shows higher effects when the online reviews are subjective. Give consumers the opportunity to add pictures in their online review could be a way to encourage the subjectivity. Another way to encourage the subjectivity is to give the consumers a bullet point list in the online review with subjective words (e.g. great, nice, dirty, cool) so they can tick at least one of these words. These words can give the online review a subjective charge.

The findings show that online reviews do have impact on review attitude and purchase intention. No literature was found about restaurant owners reading the online reviews written about their restaurant. Restaurant owners should benefit of the growing consumer participation with active communication to make the relationship with the consumers stronger. Because of the impact it is important for restaurant owners to read the online reviews and to filter the review information properly. And because online reviews function both as information- and recommendation channel, online reviews can be used by restaurant owners as communication channel (Park et al., 2007). The results showed that positive online reviews had both a positive review attitude and purchase intention. In the context of negative online reviews it is important

for restaurant owners to respond in a proper way. The wrong way is to try and get the negative online review removed. Restaurant owners should treat the upset customer with empathy, compassion and a kind way of commitment to make things right (Markidan, 2015). According to Markidan (2015) the right way to do this is with Walt Disney's H.E.A.R.D. technique, shown in figure 14.

Hear: Often consumers just want a person who listens so, let the consumer talk without disturbing.
Empathize: Give the consumer the feeling that you understand the consumer's situation. Phrases like "I would be mad too" can help.
Apologize: For a real upset consumer, apologies are never enough. Even if you aren't responsible for what made the consumer upset, apologies are never enough to compensate the consumers feeling. Phrases in the I sentence like "I am always sorry" can help.
Resolve: Key is to solve the problem quick. It is okay to ask the consumer: "What can I do to solve this problem?".
Diagnose: After the conversation with the consumer the next step is to find out how this mistake happened. Important is to blame no one. Key is to focus on fixing the process to prevent the same problem in the future.

Figure 14: H.E.A.R.D. technique (Markidan, 2015)

Because of the online aspect of online reviews the conversation part is a critical missing element in a one-sided online review. Meaning that restaurant owners should create the conversation when applying the H.E.A.R.D. technique. Negative information can contain valuable information, restaurant owners can explore new sections of values and interest. They can integrate this information in their answer on the online review and in their daily restaurant business.

Because this study shows again the relevance of online reviews, restaurant owners could experiment with different ways to stimulate consumers writing an online review. Restaurants could ask their guests to write an online reviews for them. With all the technology trends from nowadays online reviews have a stronger effect in comparison with advertising and personal sale. Beside, online reviews have the power to reach a huge audience and make little to no costs. There are few ways to encourage the guests to write an online review. The restaurant owners can give them the opportunity while sitting in their restaurant to anonymously write an online

review through an iPad for example. After writing down their online review they receive a 10% discount voucher for their next visit. Or the restaurant owners could send every guest which wrote an online review on Iens.nl an e-mail with a voucher with for example a free dessert. Basic thought is that the restaurant owners should give the guests the feeling they will be rewarded for writing an online review. Because people who are rewarded for their behaviour are more likely to repeat that behaviour (Wirtz & Chew, 2002). Rewards can function as an extrinsic motivator and these rewards can increase the motivation.

With the positive significant effect of review attitude on purchase intention this makes the part of review attitude important. The review attitude was measured with the components: hedonism, (fun, pleasant, entertaining, enjoyable), interestingness (important, helpful, informative, useful), and utilitarianism (curious, boring, interesting) (Olney et al., 1991). The marketing section of the review websites should adjust some review settings to encourage review attitude in a positive way. What is most striking in the histogram results in appendix 7, is the fact that pleasantness, informative, helpfulness and usefulness had the highest score in all manipulated conditions. This implies that these elements can encourage a positive review attitude and a positive purchase intention as result. To shape a positive review attitude the marketing section of review websites could add some review attitude tools for the review writers focused on these elements (pleasantness, informative, helpfulness and usefulness).

5.3 Limitations and future research

A few limitations should be considered when generalizing this research findings. First limitation is the aspect of an online experiment. With an online experiment the respondents are not in the same setting. You cannot exclude that external influences did influence the respondents while performing the online experiment.

The second limitation is the average age of the sample size. With an average age of 31 years in the total sample size, this indicates that the respondents were relatively young. This relatively young average limits this research to generalize the findings. Future research could experiment with more different ages to generalize the findings.

To come as close as possible to reality, the online reviews are made in the exact same design and style of the existing review website Iens.nl. It could be that the respondents in this study don't have a positive association with Iens.nl, meaning they could be biased when reading an

online review of Iens.nl. Further research can choose to avoid to come as close as possible to reality and to manipulate the reviews in an unknown and natural design.

The fact that the manipulated online reviews was based on an anonymous hamburger restaurant is the fourth limitation. The choice for the manipulation could biased the respondents towards the online reviews. Reason to choose for a hamburger restaurant in the manipulation is because hamburgers are popular (Ferdman, 2016). Reasons why hamburgers are becoming more popular: we want easy, quick, healthy and affordable food (FoodAtelier, 2015). Because of the popularity of hamburgers this food is a mainstream food and therefore this study's manipulation choose for a hamburger restaurant.

The choice for three review characteristics is a small selection of all existing review characteristics. Of all review characteristics, three variables is a small amount. This small amount is a limitation for this research. Further research could investigate more review characteristics to generalize the findings of the effect of the total online reviews (e.g. reviewer characteristics and purchase involvement). And the limit of this study is the focus on one product category: experience product (experience products vs. search products).

Results find that the elements pleasantness, informative, helpfulness and usefulness had the highest score for review attitude. This implies that these elements can encourage a positive review attitude and eventually a positive purchase intention as result. The marketing section of review websites could add some buttons for the review writers focused on these elements to shape a positive review attitude (pleasantness, informative, helpfulness and usefulness). But it is not known yet how consumers want to see these four elements back in the online reviews. Suggestions are clear buttons to summarize your opinion, online review summary, pictures or videos. Future research could investigate how consumers want to see these four elements back as tools in an online review. With an optimal review attitude as a result.

5.4 General conclusion

This study shows the extent to which online review elements effect review attitude and purchase intention. First, the study results confirmed a positive and significant effect of a positive valence on review attitude and purchase intention. This wasn't the case for recentness and length. Both independent variables were insignificant. The effect for recentness was positive on review attitude and negative on purchase intention. The effect of length was positive for both dependent

variables. When objective online reviews were moderating this had only significant effect with positive reviews on the review attitude and purchase intention. But nevertheless, this study provides a good impression for the different impacts on review attitude and purchase intention. When answering the research question: "*To what extent are online reviews influential on review attitude and purchase intention in relation to a restaurant visit*?", the extent to which online reviews are influential is partially. Despite all several review elements most relevant is still a positive valence. In addition to valence the whole review attitude is also influential to the eventual purchase intention.

If restaurant owners want to convince potential visitors it is important to give the potential visitors a positive impression with positive reviews. The marketing section of the restaurant should insert the positive reviews on the website and on their social media profiles. Another option is to create a "wall of reviews" in the restaurant itself, close to the entrance. So, the new visitors immediately get a positive impression. The marketing section of the online review websites should adjust some online review settings to encourage review attitude in a positive way. What is most striking in the histogram results in appendix 7, is the fact that pleasantness, informative, helpfulness and usefulness had the highest score in all manipulated conditions. This implies that these elements can encourage a positive review attitude and a positive purchase intention as result. To shape a positive review attitude the marketing section of review websites could add some review attitude tools for the review writers focused on these elements (pleasantness, informative, helpfulness and usefulness).

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Appendix 1: Overview studies which combined online reviews and restaurants

	Title	*Authors*	*Dependent variables*	*Independent variables*
1	The impact of e-word-of-mouth on the online popularity of restaurants: A comparison of consumer reviews and editor reviews	Ziqiong Zhanga, Qiang Yea, Rob Lawb, Yijun Li (2010)	Online popularity of a restaurant	- Page views - Food quality rating - Environment rating - Service rating - Consumer text comments on a restaurant - Star rating - Editor's comment - Average cost of each diner
2	Promotional Marketing or Word-of-Mouth? Evidence from Online Restaurant Reviews	Xianghua Lu, Sulin Ba, Lihua Huang, Yue Feng (2013)	Restaurant sales	- Valence - Review volume - Negative review percentage - Online coupon - Monetary value of coupon offering - Number of keywords - Average price of person reported by all reviewers - Number of competitors of restaurants - Number of dishes recommded - Average historical consumption
3	Electronic Meal Experience: A Content Analysis of Online Restaurant Comments	Ioannis S. Pantelidis (2010)	**Analysis** To identify the factors that are most salient in a guest's evaluation of a restaurant	
4	Aspect and Sentiment Unification Model for Online Review Analysis	Yohan Jo, Alice Oh (2011)	**Analysis** To find aspects that users evaluate in reviews / Discovering how opinions and sentiments for different aspects are expressed	
5	The order effect on online review helpfulness: A social influence perspective	Shasha Zhou, Bin Guo (2016)	Review order / Review helpfulness	- Connectedness - Expertise - Valence - Length - Time distance

6	Demographics, Weather and Online Reviews: A Study of Restaurant Recommendations	Saeideh Bakshi, Partha Kanuparthy, Eric Gilbert (2014)	**Analysis** To study the dynamics behind participation in these online communities and how the recommendations in these communities are formed We study the effect of these aspects of three broad classes of factors: restaurant attributes, local demographics and local weather conditions at the date of visit	
This study	**The Impact of Online Reviews on Review attitude and Purchase Intention**	**Nicky Somohardjo**	**Review attitude / Purchase intention**	**- Valence - Recentness - Length - Review type (moderator variable)**

Appendix 2: Questionnaire

Introduction

I would first like to thank you for your interest in this research. For my master thesis at the Erasmus University I am doing research on the effect of online reviews.

Altogether you will see two different online reviews. After every online review some questions will follow. Try to replace yourself in the following situation: you are looking for a suitable hamburger restaurant and during the search you read several online reviews.

Do not think too long about the answer, it is about your first impression and your personal opinion. Wrong answers do not exist. It will be handled reliably with your data. The questionnaire will take about 5-7 minutes of your time.

With your participation in this study you have a chance to win one of five vouchers of bol.com with a value of € 10, -. For a chance to win a voucher you must fully complete the survey and enter your email address on the last page.

For questions or comments, please contact 431787ns@eur.nl.

Sincerely,

Nicky Somohardjo

Questions

1. This review is

| Negative | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Positive |

2. This review is

| Old | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Recent |

3. This review is

| Long | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Short |

4. Based on the review you just read, what is the best description for this review?

| Unpleasant | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Pleasant |

5.

| Not fun to read | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Fun to read |

6.

| Not entertaining | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Entertaining |

7.

| Not enjoyable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Enjoyable |

8.

	1	2	3	4	5	6	7	
Unimportant	1	2	3	4	5	6	7	Important

9.

	1	2	3	4	5	6	7	
Uninformative	1	2	3	4	5	6	7	Informative

10.

	1	2	3	4	5	6	7	
Not helpful	1	2	3	4	5	6	7	Helpful

11.

	1	2	3	4	5	6	7	
Makes me not curious	1	2	3	4	5	6	7	Makes me curious

12.

	1	2	3	4	5	6	7	
Boring	1	2	3	4	5	6	7	Nice

13.

	1	2	3	4	5	6	7	
Not interesting	1	2	3	4	5	6	7	Interesting

14.

	1	2	3	4	5	6	7	
Doesn't have my attention	1	2	3	4	5	6	7	Does have my attention

15.

	1	2	3	4	5	6	7	
Not useful	1	2	3	4	5	6	7	Useful

16. My intention to purchase from this restaurant would be.

	1	2	3	4	5	6	7	
Very low	1	2	3	4	5	6	7	Very high

17. The likelihood that I would purchase from this restaurant is.

	1	2	3	4	5	6	7	
Very low	1	2	3	4	5	6	7	Very high

18. The probability that I would consider buying from this restaurant is.

	1	2	3	4	5	6	7	
Very low	1	2	3	4	5	6	7	Very high

19. My willingness to buy from this restaurant is.

	1	2	3	4	5	6	7	
Very low	1	2	3	4	5	6	7	Very high

20. Subjective interpretations are important in an online review

	1	2	3	4	5	6	7	
Strongly disagree	1	2	3	4	5	6	7	Strongly agree

21. Objective facts mean a lot to me when reading an online review

	1	2	3	4	5	6	7	
Strongly disagree	1	2	3	4	5	6	7	Strongly agree

22. It's important for me to read in an online review what kind of restaurant it is.

	1	2	3	4	5	6	7	
Strongly disagree	1	2	3	4	5	6	7	Strongly agree

23. Personal opinions are easy to understand in an online review.

	1	2	3	4	5	6	7	
Strongly disagree	1	2	3	4	5	6	7	Strongly agree

24. Objective facts mean a lot to me when reading an online review

Strongly   1   2   3   4   5   6   7   Strongly agree
disagree

25. How many times on average do you visit a restaurant in a month?

26. How often do you read online reviews before visiting a restaurant?

Never   1   2   3   4   5   6   7   Always

27. When reading an online review about a restaurant, this is because

□ I am not familiar with that restaurant

□ I am curious what other people's experiences are with that restaurant

□ The restaurant is expensive

□ I want to know if the restaurant is the same as my expectations

□ Other...:

28. The reviews on restaurants determine my decision when I eventually pick a restaurant to

eat.

Strongly   1   2   3   4   5   6   7   Strongly agree
disagree

29. The reviews about the restaurant make me confident when I'm picking a restaurant online

Strongly   1   2   3   4   5   6   7   Strongly agree
disagree

30. What is your gender?

○ Male   ○ Female

31. What is your age?

32. What is your highest level of education?

○VMBO   ○ HAVO   ○ VWO   ○ MBO   ○ HBO   ○ WO

Appendix 3: Manipulated reviews

Positive, recent, long, objective

Tess de Groot
MASTER TASTER (44 reviews)

9/10

Date of your visit: Jan. 21 2017

This restaurant is a hidden jewel in the old North, ten minutes by bike from the centre. The magnificent - hand-carved! - stones in the wall and the rural wooden interior immediately attract your attention when entering the small hall.

They have salads, fries, desserts, hot dogs and hamburgers. You can compose the hot dogs and hamburgers by yourself. Beginning with the price of €9. The ingredients are fresh, the prices are good (ranging from €2 - €13) and the portions are large.

The burgers are fresh and grilled on the spot. The classic burger deserves special attention: juicy burger meat, fresh baked hamburger buns (brown and white), grilled onion rings, beautiful curls cheddar cheese and organic tomatoes on a bed of lettuce. And if that was not good enough, the burger is completed with - again fresh - truffle mayonnaise. Hang at this restaurant with the classics, because the cheesecake - perfect in balance with the raspberry sauce topping - you really want to taste.

Single bummer was the loud music ... but for dinner or a drink you can certainly enjoy great fresh and local ingredients in a pleasant setting!

Positive, old, long, objective

Tess de Groot
MASTER TASTER (44 reviews)

9/10

Date of your visit: May 9 2015

This restaurant is a hidden jewel in the old North, ten minutes by bike from the centre. The magnificent - hand-carved! - stones in the wall and the rural wooden interior immediately attract your attention when entering the small hall.

They have salads, fries, desserts, hot dogs and hamburgers. You can compose the hot dogs and hamburgers by yourself. Beginning with the price of €9. The ingredients are fresh, the prices are good (ranging from €2 - €13) and the portions are large.

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Single bummer was the loud music ... but for dinner or a drink you can certainly enjoy great fresh and local ingredients in a pleasant setting!

Positive, recent, short, objective

Tess de Groot
MASTER TASTER (44 reviews)

9/10

Date of your visit: Jan. 21 2017

This restaurant, ten minute by bike from the centre, has salads, fries, desserts, hot dogs and hamburgers. The ingredients are fresh, the prices are good (ranging from €2 - €13) and the portions are large. The gin and tonic is well balanced. The restaurant is actually a little bit too tight. Despite the tight space this is definitely a restaurant that should not be missing on your list!

Positive, old, short, objective

Tess de Groot
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This restaurant, ten minute by bike from the centre, has salads, fries, desserts, hot dogs and hamburgers. The ingredients are fresh, the prices are good (ranging from €2 - €13) and the portions are large. The gin and tonic is well balanced. The restaurant is actually a little bit too tight. Despite the tight space this is definitely a restaurant that should not be missing on your list!

Negative, recent, long, subjective

Julia L.
TASTER (2 reviews)

9/10

Date of your visit: Jan. 21 2017

Last Saturday we had an enjoyable evening with our best friends. Everything felt like a party. We were received in a very nice way and got enough time to settle down. A simple composition of ingredients but really harmonized. The taste of organic and local ingredients of the meat and vegetables farmers round the corner ... what a great idea!! We tasted that the ingredients were fresh. Our friends chose the classic burger and my partner and I took the veggie burger. We didn't missed the idea of meat at all. Fresh burgers topped with truffle mayonnaise. Very good fries and our menu was complete. We also choose the classic gin and tonic which was recommended by the waitress. Delicious!! I liked the service, the atmosphere and the friendly staff. Only the wind through the open door was quite a bummer! We are very proud we have discovered this restaurant! We see new restaurants everywhere but anyone who reads this would really here once to eat!. I think this is really a must!

Negative, old, long, subjective

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9/10

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Last Saturday we had an enjoyable evening with our best friends. Everything felt like a party. We were received in a very nice way and got enough time to settle down. A simple composition of ingredients but really harmonized. The taste of organic and local ingredients of the meat and vegetables farmers round the corner ... what a great idea!! We tasted that the ingredients were fresh. Our friends chose the classic burger and my partner and I took the veggie burger. We didn't missed the idea of meat at all. Fresh burgers topped with truffle mayonnaise. Very good fries and our menu was complete. We also choose the classic gin and tonic which was recommended by the waitress. Delicious!! I liked the service, the atmosphere and the friendly staff. Only the wind through the open door was quite a bummer! We are very proud we have discovered this restaurant! We see new restaurants everywhere but anyone who reads this would really here once to eat!. I think this is really a must!

Positive, recent, short, subjective

Julia L.
TASTER (2 reviews)

9/10

Date of your visit: Jan. 21 2017

Tasty burgers and great fries. I think the meat was tasty and well cooked.For dessert I ordered a cheesecake. A pity we could not order coffee by a defective coffee machine! But I enjoyed, I'll definitely be back!!

Positive, old, short, subjective

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Negative, recent, long, objective

Tess de Groot
MASTER TASTER (44 reviews)

5/10

Date of your visit: Jan. 21 2017

Entering this restaurant the wood interior gives you a dark and stuffy feeling. Despite this feeling you cannot avoid: the beautiful view!

They have salads, fries, desserts, hot dogs and hamburgers. You can compose the hot dogs and hamburgers from € 9 by yourself. The ingredients are fresh, the prices are good (ranging from € 2 - € 13) and the portions are large.

The burgers are fresh and grilled on the spot. What is most striking about the meat is the juicy texture. Quite negative. The taste and composition of the burgers were not even near the expectation. Too juicy meat on a soft bun - so bad that it is almost impossible to hold - and although truffle mayonnaise is delicious with everything, the sauce on the burger was too dominant.

Smudged cutlery and dirty menus are unnecessary mistakes. Very frustrating and above all a shame, because the concept of this restaurant is so nice.

Negative, old, long, objective

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Negative, recent, short, objective

Tess de Groot
MASTER TASTER (44 reviews)
5/10

Date of your visit: Jan. 21 2017

The concept (organic and local) of this restaurant has lots of potential. With some improvement because the meat is too juicy and the bun too soft. Additionally the prices are too high (1 burger €18). Staff on their phone and not beautifully presented plates are important points! Too bad. Luckily, the good cappuccino and homemade carrot cake have compensated a lot!

Negative, old, short, objective

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Negative, old, long, subjective

Julia L.
TASTER (2 reviews)
5/10

Date of your visit: Jan. 21 2017

We had dinner at this restaurant on a quiet saturday night with our two best friends. Nice part of this restaurant is the open kitchen.Untwill we saw the cook sneezing, wiping his nose with his hand and then proceed with cooking. It took a very long time before our order came. Hamburger meat was too juicy and not tasteful. I've eaten better burgers! The ratio of meat and bun was hard to find: really a great amount of meat. Finished with a small teaspoon of mayonnaise ... And the service of the staff member. She walked the whole time by our table but ignored us completely. A great pity the inattention. I look back with mixed feelings to this evening. I thought it was sadly disappointing. We were looking for a hotspot to be a regular customer as this is our neighborhood. But unfortunately, this was our first and last time. The location is great. We wanted to give the food another chance. But the dramatic service has ruined it completely. Not a repeat for me.

Negative, old, long, subjective

Julia L.
TASTER (2 reviews)
5/10

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We had dinner at this restaurant on a quiet saturday night with our two best friends. Nice part of this restaurant is the open kitchen.Untwill we saw the cook sneezing, wiping his nose with his hand and then proceed with cooking. It took a very long time before our order came. Hamburger meat was too juicy and not tasteful. I've eaten better burgers! The ratio of meat and bun was hard to find: really a great amount of meat. Finished with a small teaspoon of mayonnaise ... And the service of the staff member. She walked the whole time by our table but ignored us completely. A great pity the inattention. I look back with mixed feelings to this evening. I thought it was sadly disappointing. We were looking for a hotspot to be a regular customer as this is our neighborhood. But unfortunately, this was our first and last time. The location is great. We wanted to give the food another chance. But the dramatic service has ruined it completely. Not a repeat for me.

Negative, recent, short, subjective

Julia L.
TASTER (2 reviews)
5/10

Date of your visit: Jan. 21 2017

Last Saturday I just wanted to eat something nice. I chose this restaurant for its good accessibility. The food was unfortunately to cry. Too juicy meat, a soft bun. I did not like it at all! I could better made some burgers at home by myself. The wait staff was more concerned with themselves than with the customers. Too bad, but never again for me!!.

Negative, old, short, subjective

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Appendix 4: Cronbach's alpha

Review attitude

Question	Mean	Std. Deviation	Cronbach alpha
Based on the review you just read, what is the best description? [pleasant]	4,23	1,842	0,922
Based on the review you just read, what is the best description? [fun to read]	4,32	1,656	
Based on the review you just read, what is the best description? [entertaining]	4,02	1,566	
Based on the review you just read, what is the best description? [enjoyable]	4,17	1,647	
Based on the review you just read, what is the best description? [important]	4,77	1,432	
Based on the review you just read, what is the best description? [informative]	5,26	1,327	
Based on the review you just read, what is the best description? [helpful]	4,92	1,369	
Based on the review you just read, what is the best description? [curious]	4,08	1,759	
Based on the review you just read, what is the best description? [boring]	4,27	1,439	
Based on the review you just read, what is the best description? [interesting]	4,50	1,434	
Based on the review you just read, what is the best description? [attention]	4,54	1,542	
Based on the review you just read, what is the best description? [useful]	5,13	1,403	

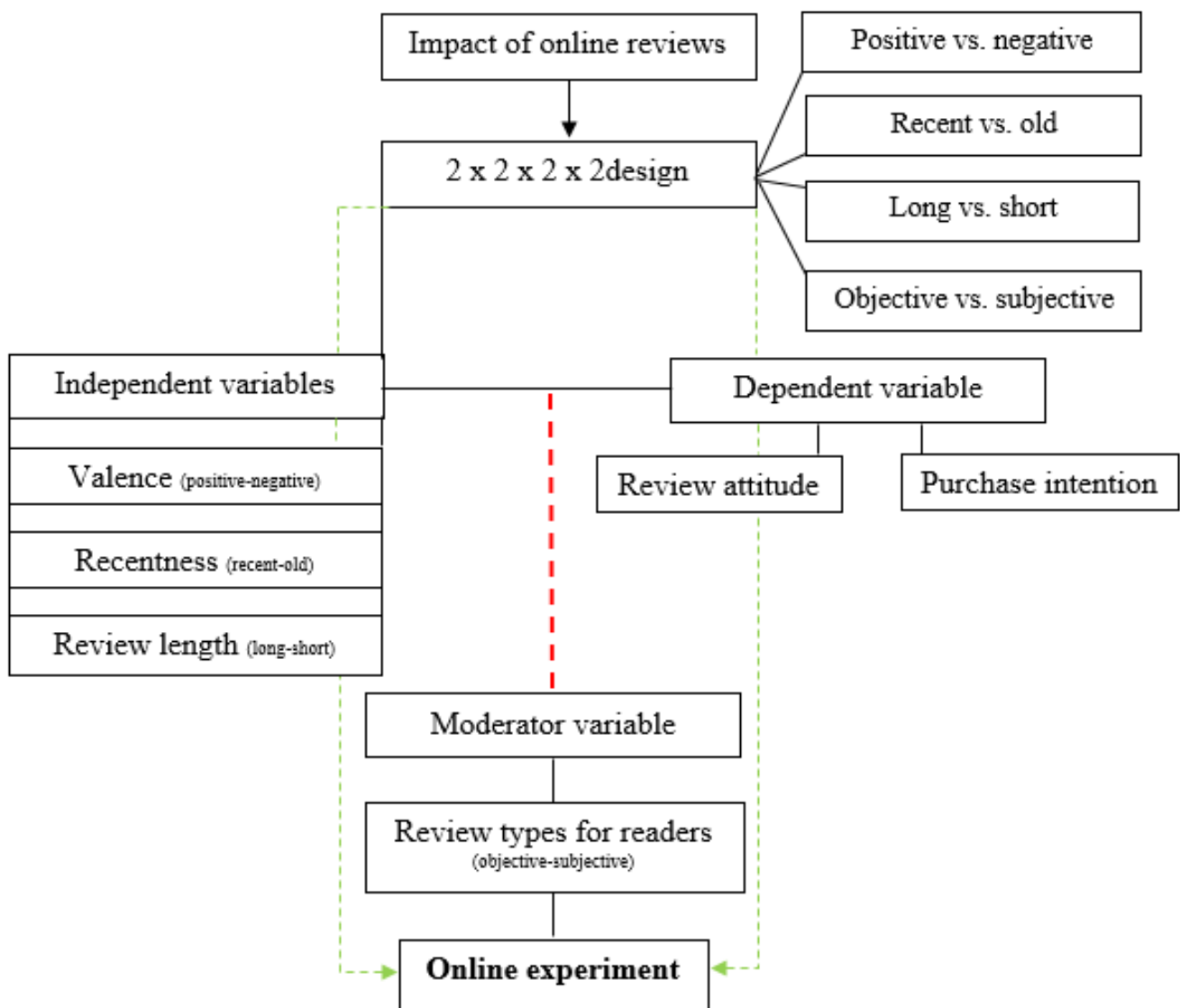**Purchase intention**

Question	Mean	Std. Deviation	Cronbach alpha
My intention to purchase from this restaurant would be [low – high]	4,23	1,842	0,951
The likelihood that I would purchase from this restaurant is [low – high]	4,32	1,656	
The probability that I would consider buying from this restaurant is [low – high]	4,02	1,566	
My willingness to buy from this restaurant is [low – high]	4,17	1,647	

Review type

Question	Mean	Std. Deviation	Cronbach alpha
Subjective interpretations are important in an online review	5,20	1,154	0,668
Objective facts mean a lot to me when reading an online review	5,57	1,063	
It's important for me to read in an online review what kind of restaurant it is	5,43	1,141	
Personal opinions are easy to understand in an online review	4,80	1,244	
Objective facts are more important for me than personal opinions	5,10	1,458	

Appendix 5: Graphic view of the methodology

Appendix 6: Questionnaire in a graphic

Variables	Measure items	Questions
Review Attitude	Olney, Holbrook and Batra, 1991	Based on the review you just read, what is the best description for this review? 1. Unpleasant/pleasant 2. Not fun to watch/fun to watch 3. Not entertaining/entertaining 4. Not enjoyable/enjoyable 5. Not important/important 6. Uninformative/informative 7. Not helpful/helpful 8. Not useful/useful 9. Doesn't make me curious/makes me curious 10. Not boring/boring 11. Not interesting/interesting 12. Doesn't keep my attention/keeps my attention
Purchase Intention	Wu, Hu and Wu, 2010	1. My intention to purchase from this restaurant would be… 2. The likelihood that I would purchase from this restaurant is… 3. The probability that I would consider buying from this restaurant is… 4. My willingness to buy from this restaurant is…
Review Types for Readers	Park & Kim, 2008	1. Subjective interpretations are important in an online review. 2. Objective facts mean a lot to me when reading an online review. 3. It's important for me to read in an online review what kind of restaurant it is 4. Personal opinions are easy to understand in an online review

Appendix 7: Histogram results review attitude