

# Reviewing the world of online hotel reviews - how important is sustainability?

**Master thesis 30 credits**

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## **Acknowledgement**

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Thank you all,

Danielle Groeneveld

## Summary

The title of this research is ‘reviewing the world of online hotel reviews – how important is sustainability’. The aim of this research is to examine if sustainability is an important topic in the world of online reviews. This research is twofold, first by looking at what online review websites offer on their platforms with regards to sustainability (supply), and secondly if consumers find it important that sustainability becomes a ranking option on online review websites (demand).

The two main methods used in this research are a questionnaire and a document analysis. The findings from the document analysis show that sustainability currently does not play an important role for online hotel review websites. It was found that sustainability is not a ranking category on any of the ten researched online review, that four out of the ten online review websites do not have any information about sustainability (60% does), that no clear goals have been set for the future, that front-staff does not have sufficient knowledge about sustainability and that most of the sustainable efforts focus on the environment.

The findings from the online questionnaire show that people find sustainability important when booking a hotel, but it is not a top priority for them when other factors (location, food, price, service, room, hygiene) come to play. Age and gender are the determining factors for sustainability, income and with whom someone goes on holiday do not have significant effects on the importance of sustainability. Males under 35 years old show the most interest towards sustainability. When people are searching for information about sustainability efforts at hotels (around 70% searches for this information), they mostly use online review websites to find this information. People who find sustainability an important topic are also interested in reviewing sustainability on online review websites. About half of the respondents in this research would be interested in reviewing sustainability on online review websites.

As an overall conclusion it can be said that sustainability it is not an important topic for online holiday review websites yet. For consumers and hoteliers it is an important topic, but it is not a top priority for them. There is still a gap between the attitude towards sustainability and the actual behavior.

*Key words: online reviews, sustainability, online review websites, tourism.*

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# Chapter 1 Introduction

*This chapter starts with introducing the background of the study by talking about Web 2.0, the importance of online hotel reviews and an introduction about the main topic of this research, sustainability. Further, this chapter gives a description of the research aim and the formulated research questions.*

## 1.1 Study background

Web 2.0 has changed the tourism industry significantly. The term Web 2.0 was used for the first time in 2004, and describes a platform where content is continuously modified by all users in a participatory and collaborative way (Haenlein & Kaplan, 2010). The two main characteristics of Web 2.0 are user generated content and social media. One example of a Web 2.0 application that is important for tourism is the emergence of online hotel review websites. Examples of the most influential companies in the review world are Tripadvisor, Booking.com, Trivago and HolidayCheck. These websites rely on word-of-mouth, in this case called electronic word-of-mouth. Goldsmith et al. (2008, p.10) defines electronic word-of-mouth as “all informal communications directed at consumers through internet-based technology related to the usage or characteristics of particular goods and services, or their sellers”.

Online holiday review websites have become important to consumers for various reasons. One of these reasons is the trust that consumers have in reviews. According to a study by Nielsen (2012), consumers trust earned media such as word-of-mouth or recommendations from friends and family above all other forms of advertising. Online consumer reviews are described as the second most trusted source of brand information and messaging. Further, Gretzel and Yoo (2008) mention that consumers feel that reviews from other travelers are more likely to contain up-to-date, reliable and enjoyable information in comparison with information from travel service providers. Another factor that explains the popularity of online reviews is the nature of the product. Holidays are intangible products, which means that there is no transfer of ownership (as with physical goods), and it is not possible to try them before buying (Dierdonck et al., 2013). Thus, the opinions of other consumers are of high importance before a buying decision. Moreover, because of the high price of holidays, the risk of this product is high for consumers. A high risk product asks for high involvement with an extensive information search phase.

To reduce this risk, travelers use reviews to get inspired in the beginning of the holiday planning process, to narrow down choices in the middle of the process and later on to confirm decisions (Gretzel & Yoo, 2008). A recent study about the online travel review website Tripadvisor (PhoCusWright, 2013) shows that 53% of the travellers will not commit to a booking until they have read reviews. Not only are online reviews an important part of the holiday decision process, they also influence consumers in several ways. Various researches have been conducted to show the impact of online reviews: on hotel booking intentions and perceptions of trust (Browning & Sparks, 2011), on expectations and purchasing intentions (Mauri & Minazzi, 2013) on the choice of holiday accommodation (Sidali et al., 2009), on hotel conversion rate and pricing (TrustYou, 2014) and on the effects of positive or negative reviews (Vermeulen & Seegers, 2009).

After looking at these examples of influences on consumers who use online reviews, it would be interesting to further look into other influencing factors which have not been discussed much previously in this context. The focus of this study is one of the biggest challenges in tourism, the influence of sustainability. The researchers interest in this topic started by reading about a campaign called 'Dear Tripadvisor', a campaign by Nordic Choice Hotels and Norwegian Rainforest Foundations. They believe the online hotel review website Tripadvisor should change approach and allow users to rate hotels on their sustainability efforts (Dear Tripadvisor, 2014). However, this is only the view of one hotel chain. What would be interesting to research further is the view of consumers on this topic and the current situation of sustainability on online hotel review websites.

## **1.2 Research aim and research questions**

The aim of this research is to examine if sustainability is an important topic in online reviews. This research is twofold, first by looking at what online review websites offer on their platforms with regards to sustainability (supply), and secondly if consumers find it important that sustainability becomes a ranking option on online review websites (demand).

From the answers to both of these questions useful conclusions and recommendations with regards to sustainability can be drawn for the online review world.

The following research questions are formulated:

**1. In what ways are online hotel review websites including sustainability in the review process?**

In order to answer this research question, the ten most popular online review websites are reviewed themselves. These websites are analyzed based on the following questions:

- What are the review categories on the website?
- Do they include sustainability in the review process?
- Do they include sustainability on the website?
- How do they display sustainability on the website?
- Are there any future plans regarding sustainability?

This first research question is answered with the use of a document analysis, while primarily looking at the websites and press releases of these companies.

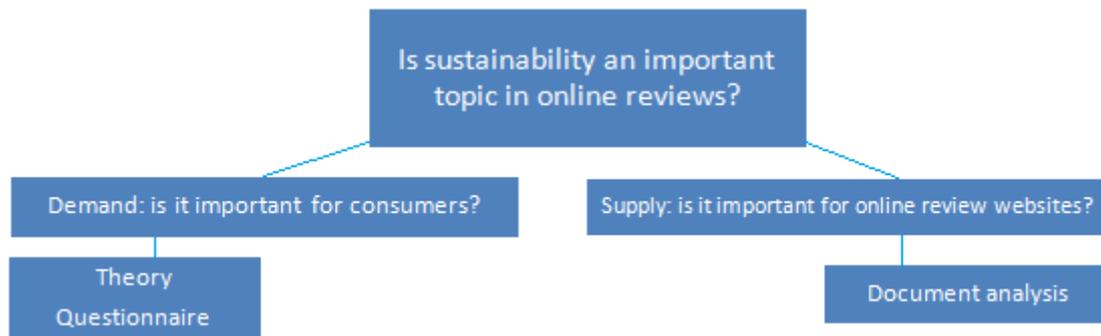
After this analysis of what the online review companies have to offer, the next research question focused on whether the consumers find sustainability an important topic in online reviews or not.

**2. Is it important for consumers that sustainability becomes a ranking option on online hotel review websites?**

In order to answer this research question, theory about sustainability in general and theory about consumers and hotels with regards to sustainability is used, together with a quantitative empirical research (an online survey). The newsletter database of the company HolidayCheck.nl is used as a population, and from this population a sample is derived. The newsletter receivers of the company HolidayCheck.nl are used as a population and from this population a sample is derived.

Figure 1 displays the research topic and the research questions in a diagram.

**Figure 1 Research topic and questions**



## **Chapter 2 Theory**

*In this second chapter academic literature and other sources are studied, in order to gain valuable knowledge about the topics sustainability and online reviews. The chapter first focuses on understanding sustainable tourism, secondly discusses the importance of sustainability to consumers and the importance to hotels. Finally, there is an insight on the current situation of ranking sustainability.*

First of all, it is good to repeat the research questions to decide which theories need to be studied in order to get a good theoretical basis. The first research question looks at in what ways online review websites are currently including sustainability in the review process, where the second research question looks if it is important for consumers that sustainability becomes a ranking option on online review websites.

Since the first research question is hard to answer because there is no existing literature about this topic, this theory chapter focuses on the second research question. First the general definition of sustainable tourism is discussed, and the terms related to this topic. Secondly, the importance of sustainability to consumers and hotels is discussed in this chapter. It is interesting to see how different stakeholders think about the same topic, to conclude if sustainability is an important theme. Since it is already known that online reviews play an important role in tourism, the empirical research in this paper works as a ‘linking factor’ which describes if sustainability should play a bigger role in online reviews too. Finally, it is important to describe how sustainability is currently ranked, and take learning from this.

## **2.1 Sustainable tourism**

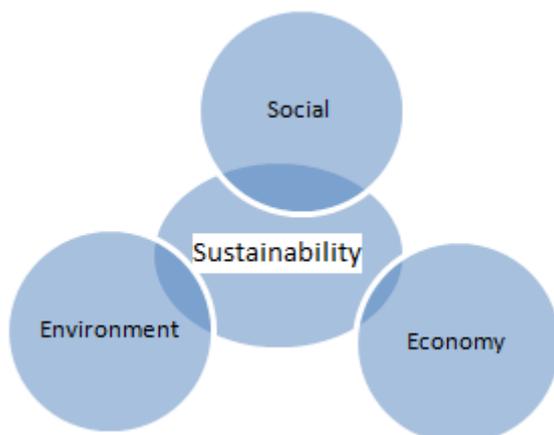
With the enormous size of the touristic sector, the impact on the environment is enormous too. The effects of tourism on local communities and society, on the environment and on the economy brings both positive (such as money and jobs) as negative effects (for example damage to the rainforest, or negative impacts to the local community). Sustainable tourism is there to make sure that the impact of tourism will be narrowed down, and that the future of tourism is assured. When looking at the academic literature with regards to sustainability there is the Journal of Sustainable Tourism, which focuses on sustainability specifically. The most read articles in series of this journal concern for example how consumers view green hotels, the potential of sustainability in different fields, which critiques there are concerning sustainable tourism development and various approaches to sustainable tourism. Some of the articles mentioned in this journal are used throughout the theory chapter.

### **Definitions of sustainability**

When looking at sustainable tourism, it should be recognized that there is a difference between sustainable development and sustainable tourism. It started with the development of the ideology of sustainable development. Sustainable development means “to meet the need of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987, p.43). Hardy et al. (2002) says the concept of sustainable development was a convergence between economic development and environmentalism. Sustainable development later was taken into the context of tourism, which created sustainable tourism. Ruhanen et al. (2015) say that since the start, sustainable tourism has emerged as the dominant paradigm in tourism development. In academic literature and other sources it is one of the most recurring themes within tourism. Sustainable tourism has been defined in many ways, but there is not one definition of sustainability which everyone agrees on. In the definition by the UNWTO (2005, p.11) sustainable tourism is described as tourism that “takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities”. McMichael et al. (2003) describes that sustainability means transforming our ways of living to maximize the chances that environmental and social conditions will be supported fully. Hawken (2007) says that sustainability is about stabilizing the relationship between two of the most complex systems on earth: human culture and the living world.

UNEP (2005, p.11-12) defines: "Sustainability principles refer to the environmental, economic, and socio-cultural aspects of tourism development, and a suitable balance must be established between these three dimensions to guarantee its long-term sustainability". Finally, a quote by Ehrenfeld (2008, p.2) to finish of these definitions about sustainability "I define sustainability as the possibility that all forms of life will flourish forever". Related to these definition of sustainability, there are three sustainable development goals identified in the General Assembly of the United Nations (2005). These are economic development, social development and environmental protection. As mentioned above there are many definitions describing sustainability and related to this sustainable tourism, but all these definitions have certain characteristics in common. Sustainability is about the environmental, economical and social impact and it is all about finding a balance between these three elements, something what is displayed in figure 1. The focus is on both the current as the future needs .

**Figure 2 Elements of sustainability**



There are several kinds of tourism related to sustainable tourism, such as ecotourism, responsible tourism and ethical tourism. Ecotourism is different from sustainable tourism because it focuses more on nature, so in the definition of sustainable tourism only the environmental impacts (UNWTO, 2002). Responsible tourism is about taking responsibility for achieving sustainable development through tourism (Responsible Tourism Partnership, n.d.). Finally, ethical tourism is tourism where ethical issues are the key drivers, for example social injustice or animal welfare (Institute for tourism, n.d.).

## **Criticism on sustainable tourism**

Finally, there is some criticism on and problems with sustainable tourism. First of all, there is criticism on how to measure sustainability. Sustainable tourism is based on finding a balance between the economic, social and environmental issues. But how much is too much, to keep a balance between these elements? It is very difficult to measure the level of sustainability, thus it is very difficult to keep a balance too. There are still disagreements in the literature about what the exact indicators are for measuring sustainability (Liu, 2003). Finding a balance can be a misleading term, as economic growth through tourism often conflicts with environmental protection (Cater, 1995). When looking at the social and cultural impacts of tourism, the most common view is that traditional lives and cultures should be maintained and not impacted by tourism. But as Liu (2003) says this can also be viewed from another side: changes of social and cultural nature brought by tourism are beneficial and the role of tourism in promoting modern values, social progress and cultural evolution should be appreciated. As said before in this chapter, sustainability has been defined in many ways, but there is not one definition which everyone agrees on. This is also one of the main criticisms on sustainable tourism: the lack of clarity of the definition. For all stakeholders involved sustainable tourism has a different meaning and they can have conflicting expectations, goals, values, interests and responsibilities. According to Swarbrooke (2001) stakeholders in sustainable tourism are divided into five main categories. These are governments, tourists, tourism businesses and other sectors. Freeman (1984, p.46) describes a stakeholder as “any group or individual who can affect or is affected by the achievement of the organizations objectives”. For some sustainability is an ideology, for others a process, concept or a political catch phrase (Shaw et al., 2004). The different stakeholders and their different views should be taken into account when making sustainable decisions. Sustainability is a continuous process which requires constant monitoring. It is essential that sustainability is perceived as an important goal throughout entire organizations, this requires a system thinking that everything is related in some way, and that everyone can contribute towards more sustainability (Landrum and Edwards, 2009).

## **2.2 Importance to consumers**

To decide whether it would be important for consumers if sustainability becomes a ranking option on online review websites, it is interesting to research if sustainability in general is an important topic (or not) for consumers. The importance of sustainability to consumers can be divided into several themes.

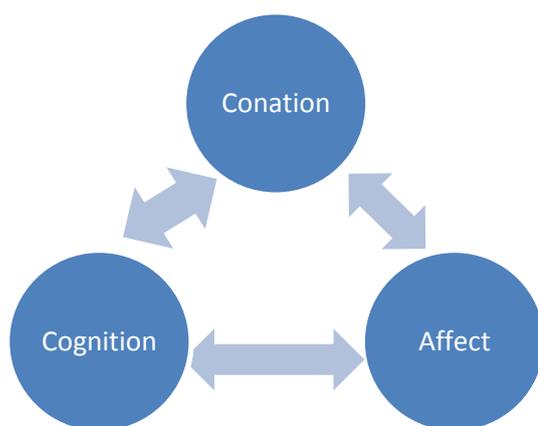
When looking at academic literature and tourism related publications, recurring themes are the attitudes of consumers to stay in a sustainable hotel, what people are willing to give up and willing to do for a sustainable stay and the differences between attitudes and behavior with regards to sustainability. This theory chapter will also look into differences between gender, age, spending, what kind of holiday people prefer, and if this effects their views on sustainability.

A Tripadvisor study (2012) about green tourism discovered that three out of four travelers often make eco-friendly travel decisions, such as their choice of hotel, transportation or food. This same study shows that travelers are interested in eco-friendly practices, but that they are in need of more information about the plans and policies of hotels. When looking at sustainability with regards to other decision factors when choosing a hotel, Bohdanowicz (2006) found that hotel guests find location, quality of services, price, and hotel image more important than environmental concerns, which ranks after these subjects in importance. Based on this statement it can be said that 'being green' is not a top priority on the agenda of consumers. Becken (2004) suggests that tourists can be segmented into five groups, based on their attitudes and behavior towards green tourism. There are green tourists, uninformed willing, skeptics, resisters and undecided. The green tourists are the ones that perceive the environment as important and who are willing to do something about the negative effects. The uninformed willing are the ones who do not have enough knowledge about the topic, but they are potentially interested. The resisters do not recognize the link between climate change and tourism, the skeptics do recognize the issue, but do not show behavior to make it better. Finally there are the undecided which are people who are unsure about their responses.

Furthermore, it is interesting to see what consumers are willing to do or give up for a sustainable stay. Kim and Han (2010) found in their study that hotel guests are willing to undergo minor inconveniences during their holidays to support sustainability. This result is in contrast with a study from Kasim (2004) who concluded that guests do not want their hotel experience to be impacted because of sustainability. With regards to paying more for a sustainable stay, studies show that there are contrasting views about this specific topic. According to a Tripadvisor (2012) study, half of the travelers say they would be willing to spend more money to stay in an eco-friendly accommodation. Many consumers have a personal preference for eco-friendly goods, but a lot of them would set this preference aside and buy whichever product is cheaper (Nielsen, 2011).

In a study by Manaktola & Jauhari (2007) results show that one third of the people in their research feel that environmental costs should be shared by the consumer and the hotel, more than half of them feel hotels should pay the costs, and just fifteen percent is willing to pay for environmental initiatives themselves. This observation is confirmed by a study from Ogbeide (2012) where almost half of the consumers believe that hotel owners should pay the initial cost of going green, and that hotel rooms should be priced more or less the same. Respondents feel like they should receive a reward or discount for staying in a green hotel. From these studies it can be concluded that there are contrasting views about what customers are willing to do (and what not) when it comes to a sustainable stay. Consumers do not want to take the full responsibility themselves, but they think that hotels should be responsible for handling sustainable issues. Another issue that should not be forgotten when talking about sustainability is that consumers are not always predictable when it comes to their behavior and attitudes. To understand this it is good to take a look at the different elements which represent attitudes first. Fishbein (1967) proposes that attitudes exist of three elements, a cognitive element, an affective element and a conative element. All of the elements influence each other (figure 2). The conative element stands for the active element, which is the behavioral intention, the cognitive element for the knowledge that someone possesses about the topic and the affective element stands for the emotional connection. What should be mentioned is that consumers are not born with pre-existing attitudes, but that these attitudes are formed through experience (Reitmuller & Buttriss, 2009).

**Figure 3** The elements of attitudes



Fishbein (1967)

When applying these elements to sustainability, the cognitive element is the awareness of the consumer of the consequences of sustainability, and the factual knowledge about sustainability. The affective component is the consumers emotional connection to sustainability and the conative element determines if consumers have intentions to do something with sustainability. All these elements together create the attitudes towards sustainability. It can be said that attitudes are good predictors for behavior. A lot of consumer behavior studies focus on the fact that consumers value harmony among their attitudes and behavior. This is called the principle of cognitive consistency, mentioned first by Festinger in 1957. But in the case of sustainability, a gap can be seen between the attitudes of a consumer and the actual behavior. This gap can be explained in various ways.

Young (2004) calls the differences between these two the attitude-behavior gap. There is a gap between consumers who are concerned about sustainability, and that think it is important for companies to pay attention to this, but that do not use these positive attitudes when making purchase decisions. Rajecki (1982) explains four causes between the differences of attitudes and behavior. First of all, there is the difference between the experience of people, it matters if someone has direct or indirect experiences. An indirect experience with sustainability is for example learning about it from a book, direct experiences occur for example when people see in real life what the consequences of sustainability are. Obviously, the direct experiences have a bigger influence on people. Further there are the normative influences which play a role for behavior, these are for example the social norms, traditions and customs of people. Moreover, something that is called temporal discrepancy should be taken into account, this means that the attitudes of people can change over time. Further, the sensitive nature of the topic explains the sensibility to something that is called social desirability bias. This means that people answer questions in a way that it will be viewed favorable by others (Roxas and Linsey, 2011). Connected to this are subjective norms, what a consumer perceives to be socially accepted behavior and the pressure from society to behave in this way. The power of other people should be acknowledged in purchasing decisions (Ajzen, 1991). Because sustainability is of such importance nowadays, it may look bad when you are not involved or paying attention to it. Another theory that could explain the differences between attitude and behavior is called the value-action gap. This value-action gap could arise when environmental behavior does not match with self-interest (Ozaki, Pickett-Baker, 2008). This can also be seen in the segmentation of the five kinds of sustainable tourists which was mentioned earlier in this chapter by Becken (2004).

Especially for the ones who recognize the issues, but that do not show the behavior to make it better. And as Budeanu (2007) says, low support from consumers is one of the main barriers to progress toward sustainable tourism. Another interesting theory that can be used in connection with sustainability, is the theory behind social marketing. Social marketing was defined first by Kotler and Zaltman (1971) who say that social marketing is the design, implementation and control of programs used to influence the acceptability of social ideas. Social marketing is there to trigger behavioral change, it can provide the needed impuls so people can leave their old patterns behind and change. Shang et al. (2010) for example found that some hotels use social marketing methods to stimulate consumers to reuse towels and linen.

Not only attitude and behavior can differ when it comes to sustainability, but there are also differences per person. When looking at academic literature and other sources, Laroche et al. (2001) found out that women are more concerned with the environment and are willing to pay more for this as well, compared to males. Further, UNDP (2012) mentions that women are more inclined than men to choose sustainability as a lifestyle, engage in environmentally appropriate behavior and make sustainable consumption choices. Han et al. (2009) found that female customers are more willing to pay for a sustainable stay compared to males. Contrasting research by Kang et al. (2011) shows that male consumers are inclined to pay more. When looking at the differences between age, results show that millennials (age 21-34) find sustainability important, are more responsive to sustainable actions than other age groups, and are willing to pay more in comparison with other groups (Nielsen, 2014). This was also found in a study by Han (2010) who found out that younger people (under 30 years old) show slightly more environmental and eco-friendly behavior, because they tend to search for new and alternative information. Andereck (2008) found a negative correlation between age and perceived value of green practices, which means in this case that younger people care more about environmental practices. When looking at other differences, Manaktola and Jauhari (2007) found out that people who are more concerned about the environment, also tend to have more environmental friendly buying behavior. This is also found by Kang et al. (2011) who states that consumers with greater environmentalism are more inclined to pay premium prices for green hotels.

### **2.3 Importance to hotels**

For years now hotels have been implementing sustainable practices. This ranges from towel and linen reuse to employment of local people. For a hotel it is important to know how consumers think about sustainability, to be able to make better decisions regarding this topic. There are often differences in what consumers expect from sustainability and what the actual behavior of hoteliers is.

So what is known about what consumers think about sustainable practices of hotels, and what lessons can be learned from this? According to a Tripadvisor (2012) study, almost half of the consumers believe it when a hotel claims to be eco-friendly. They would find it even more reliable if they experienced or witnessed green practices on their own. Almost one out of four consumers would believe in the green practices of a hotel if they see an environmental certification. A big problem lies in the informing of travellers, since 60% of them said they rarely feel informed about whether hotels are truly eco-friendly. This view is supported by Huegel et al. (2013) who says that the communication of sustainability efforts is not well regulated, and that there are large differences in the way of reporting. Barber (2012) says that for hotels to position 'green' products and communicate this green policy to customers, different segments of consumers need to be identified, based on their attitudes towards being green. In this report this specific segmentation of consumers has been discussed before, with the segmentation into five groups by Becken (2004).

For different segments, different strategies are needed to reach these consumers.

However, Barber says that the key to long-term success will be to put out a direct message that targets a widespread audience first. When booking a hotel, there are several important factors for consumers. Bohdanowicz (2006) found out that hotel guests find location, quality of services, price and hotel image more important than environmental concerns. Lockyer (2005) found that cleanliness is the most important determinant for hotel selection. Ramanathan and Ramanathan (2011) found similar results in their research with cleanliness as a major factor influencing customer loyalty. Dolnicar (2002) found the same result, he says that hygiene and cleanliness are critical factors that influence tourist satisfaction. In a further study by Dolnicar and Otter (2003) they reviewed 21 studies regarding hotel attributes, with cleanliness as the top priority. They also found that none of the top attributes were related to the environment. Bohdanowicz and Martinac (2003) researched the attitudes of chain hotels towards sustainability. This research showed that hotels perceive the environment as an

important factor for the development and success of tourism and that their knowledge about the environment varies. Further, they are a bit scared of getting involved in environmental initiatives, as they fear that such actions might negatively affect customer comfort and satisfaction. This fear is not without reason, because as seen before in this research most of the consumers do not want their experience to be effected by sustainability. Implementing sustainability brings high costs, something that could scare of potential hoteliers interested in sustainability. By asking premium prices it is possible to lower the risk for hoteliers investing in sustainability. As seen in paragraph 2.2, there are contrasting views from consumers about willing to spend more for a sustainable stay. According to Kang et al. (2011) this willingness to pay a premium also depends on the type of hotel people are staying in. Luxury and mid-priced hotel consumers show a higher willingness to pay a premium.

Bohdanowicz et al. (2004) say that there is not only a lack of environmental knowledge and awareness among consumers, but also among hoteliers. To better understand and develop the potential of sustainability, this knowledge gap needs to be filled for both parties. The same result was also found by Mensah (2013) who says that hotels should step-up environmental education among their guests. Not even twenty percent of the respondents in his research agree that hotels educate their guests on environmental responsibility enough. He mentions that sustainable information should be available on the hotel website, so people can access it beforehand. Further, front line staff should be educated about this topic. As mentioned before in this chapter, attitudes of consumers are build on several elements. First of all the knowledge, secondly the emotional connection, and finally the intention. In order to have an effective sustainable positioning strategy, this needs to be build on both functional and emotional benefits. Functional benefits focus on the benefits of sustainability, a big reason for consumers to support and participate. But the problem with functional benefits is that it can be easily copied by others so emotional benefits need to be shown as well, the influence of subjective norms for example for consumers is an example of this (Han & Kim, 2010).

Bohdanowicz (2005, p.5) says “the prospects of economic savings and customer demand are crucial to hotel industry environmental awareness and responsible environmental management”. In a later study by Bohdanowicz (2006) it was found that lower operating costs are the most important reason for hotels adopting sustainable or environmental friendly programs.

When looking at economic savings it means for example saving money on electricity and water, but also being able to ask a slightly higher price for a sustainable stay. These are not the only benefits of implementing sustainable practices. According to a study by HVS (2012) sustainability can improve the brand image and it can be beneficial for the marketing of a company, because it can be used as a competitive advantage. This is also confirmed by Han et al. (2009) who says that firms with green products can strengthen their eco-friendly image to attract more attention. Bohdanowicz (2006) found the same result, increasing customer demand is the most important reason to implement sustainability (after cost saving). Hendrie (2006) found that almost one out of four respondents in his research look for and use environmental information when choosing a hotel. Further it can be a benefit to have a sustainable corporate culture when attracting and retaining employees, since most of them want to work in a company with a positive sustainable impact (HVS, 2012). These reasons are confirmed by research from Cometa (2012) who says that the reasons for hotels to choose for green or sustainability are lower operating costs, a competitive advantage and increasing consumer demand.

## **2.4 Ranking sustainability**

To decide if online reviewing of sustainability would be a good option or not, it is useful to look at the ways sustainability is currently 'ranked', and take learning from this. Despite the progress of the industry towards sustainability, hotels are still looking for the best ways to promote their statuses (Peiró-Signes et al., 2014). Labeling programs and certification schemes are the most common ways to do this. Conceptually these two are similar, but Dankers (2003) mentions a difference in that certificates are a form of communication between seller and buyer, whereas labels are a form of communication with the end consumer. Both of them can be seen as a form of 'ranking' sustainability, since it is a way of measuring sustainability, to make it easier for consumers to make sustainable decisions. According to Budeanu (2007) eco-labels are the most frequently used tool by tourism businesses and destinations to promote environmental products and increase customer awareness. An eco-label can be seen as a form of ranking, because in order to receive it a company should 'rank' on certain performance requirements. Further, Millar (2010) found that from a consumers point of view green certification has become the most influential attribute when it comes to preferences for green hotel attributes.

This view is supported by Bohdanowicz (2005) who says that this type of certification can be a valuable marketing tool to reach green consumers. On a worldwide scale, a great amount of green certification schemes and environmental labels exist. There are more than 400 of them in a variety of industries, with more than 100 of them especially aimed at the tourism and hospitality industry (Ecolabel Index, n.d.).

According to the WTO (2003) certification systems can be beneficial for several stakeholders involved, such as society, environment, government, private companies and consumers. Jarvis et al. (2010) say that these benefits for society involve a positive impact on the three aspects of sustainability (society environment, and economy), and further the level of awareness of sustainability will grow. The potential benefits for the environment are that, because of the widespread use of eco-labels and certification systems, environmental awareness increases among both tourists and society. This can result into better attitudes towards sustainability. Further, an obvious benefit would be that strict environmental criteria are good for the local environment. For the government the benefits are that it is an alternative to direct regulation, a flexible approach to monitor the tourism industry and that it can enhance the image of a country. Companies gain benefits by signaling their commitment to sustainability, they can improve the public image, protect the tourism industry for continued prosperity, and environmental strategies (for example energy and water) can generate cost saving for the company. Moreover, there is the marketing benefit of certification for companies, which they can use to claim a competitive advantages and possibly claim a premium price. The certification can be used to show that a hotel brings a certain kind of quality. Finally, there are the benefits of certification and eco-labels to consumers. With more information and guidance about sustainability, consumers are able to make decisions about these subjects easier. Eco-labels and environmental certifications have the benefit that they can be used to enhance customer awareness of a hotels environmental efforts (Schubert et al, 2010). Until recently consumers were a bit skeptical of eco-labels and sustainable certification, but now there is a greater acceptance among customers that these elements can have a positive influence on the performances of hotels (Peiró-Signes et al., 2014). With so many different ways of ranking sustainability and eco-friendliness, the problem that arises here is that consumers get confused and do not know what to believe anymore, since a lot of them are claiming the same. Because there are so many very few tourists are aware of the existence of most of these eco-labels and certifications, thus it can be said there is a lack of customer awareness.

If consumers are not aware of these things, they may not be drawn to an eco-certified hotel (Chafe, 2005). This knowledge and awareness is not only an issue for consumers but also for hoteliers, who have a lack of awareness and understanding about these programs (Budeanu, 2007). One of the main reasons for hoteliers not to choose for certification or labeling is the high investment that is often needed to be part of these programs. This is also the reason why bigger chain hotels implement sustainability more often than small hotels. These high investments are often calculated into the price the consumer pays, so it is less attractive for them to make a purchase since the price of a stay is higher. Because of the popularity of 'being green' another phenomenon has occurred, which is called green wash. Green washing is the case when a company spends more time and money claiming to be green, than actually implementing business practices that minimize environmental impact. The main problems around green washing are that it is misleading and dishonest, that consumers do not know anymore which claims they can believe or not and that illusions in society will be made about sustainability (Green Washing Index, n.d.).

Sustainability is often ranked by a third party whom decides if others are eligible to receive certification or to be part of a label. In this study the research focuses on consumers ranking sustainability. A lot of sustainable efforts are not directly visible to consumers, so are they even eligible to rank sustainability? As Tjolle (2015) says in an article on TravelMole's website sustainable page "visitors cannot usually see and are generally not qualified to judge sustainable efforts". According to a study by Tripadvisor (2012) the top three eco-friendly practices that a hotel can offer involve towel and linen reuse, an adjustable thermostat in the room and water-efficient toilets and showerheads. The top three of eco-friendly practices where customers actually participate in are turning off the lights when they are not in the hotel room, the reuse of hotel linen or towels and recycling. What can be concluded from these elements visible to consumers is that they are only focusing on the environment, and barely on the economic and social impacts of tourism. In paragraph 2.3 it became clear that attitudes and behavior of hoteliers have a main focus on the environmental elements and far less on the economic and social impacts. When companies are communicating transparently, involve consumers and show all the required information needed about their sustainable efforts, sustainability will be easier accepted by consumers and they will be able to make better informed decisions about sustainability.

## **2.5 Conclusion of chapter 2**

After analyzing the importance to consumers and hoteliers, and the current situation of sustainability rankings, this paragraph provides a summary of the most valuable results found. Various conclusions can be drawn to create a good theoretical basis for answering the second research question.

There are many definitions of sustainability, but when looking at most of them it shows that it is all about finding a balance between the environmental, economical and social impacts. Sustainability is also criticized, first of all because measuring sustainability is difficult, that the term 'balance' between the three elements can be a misleading one, that the definition lacks clarity and finally that changes of social and cultural nature can also be beneficial and not only negative. Something that has to be taken into account is that sustainability means something different for every stakeholder involved with sustainability.

'Being green' is not a top priority on the agenda of the consumers. It can be said that they are interested, but up to a certain point. Their knowledge about sustainability is overall limited. When for example other decision factors come to play (for example price) then sustainability has a far lower importance. Studies showed that there are contrasting views about what consumers are willing to do (and what not) when it comes to a sustainable stay. What became clear is that consumers do not want to take the responsibility themselves, but that they think that hotels should be responsible for handling this. Differences between attitude and behavior can be seen when it comes to consumers and sustainability, this can be explained by the attitude-behavior gap, the sensitive nature of the topic, subjective norms and the value action gap.

Hoteliers perceive sustainability as important, but their knowledge varies, and they are a bit scared their actions might negatively affect consumer comfort and satisfaction. High initial costs of implementing sustainability are also seen as an obstacle. A big problem lies in the informing of travelers of sustainable practices, since large percentages of them feel rarely informed about sustainability. Hotels should step-up sustainable education among their guests. For consumers the most important factors when booking a hotel are cleanliness and hygiene. Environmental concerns (in comparison with these factors) are not important. The main reasons for stakeholders to implement sustainability are to create lower operating costs, to improve the brand image (better competitive advantage) and because of increasing

consumer demand. Labeling programs and certification schemes are the most common ways for hotels to show sustainability. There are benefits when using these for all stakeholders involved, such as the higher level of awareness, a better public image and the possibility to claim a competitive advantage. The main problem with these programs is that consumers can get confused due to the amount of programs, that high investments are needed to be a part of this, and that green washing may possibly occur.

## **Chapter 3 Methodology and methods**

*This third chapter focuses on the methodology and methods used in this research. First of all the differences between methodology and methods are discussed (3.1), followed by describing the methods used for both research questions (3.2 and 3.3). Finally, the concept of validity and reliability is explained (3.4).*

### **3.1 Methodology**

To start of this chapter, the difference between methodology and method is explained. Methods are components of research, an example of this would be interviews. Methodology is the justification of using the chosen method, the philosophical basis. Quantitative and qualitative research methods represent different philosophical roots. Although, it is possible to combine both quantitative and qualitative methods this is something which is called triangulation. In the case of this research qualitative research (a document analysis) is combined with a quantitative method (a questionnaire). According to Bryman (2008) and Bergman (2009) combining both of these research methods can be beneficial, because it can preserve the strengths and reduce the weaknesses of both approaches. A strength of combining methods is that a subject gets studied from different angles, so it is possible to produce a more truthful and representative view. However, combining methods has been criticized because more skills are needed to handle these different kind of data analysis methods, and it is difficult to narrow down the topic enough (Silverman, 2013).

According to Silverman (2013) there are three kinds of research reports, which are theoretical, methodological and empirical. A theoretical research focuses on developing theoretical insights, where for a methodological research the main focus is on developing a method. Finally, the goal of an empirical research is to analyze data, expected here is to have an understanding of the strengths and weaknesses of the research strategy, design and methods.

Since the main focus is not on gaining theoretical insights or developing a method, an empirical method is the best choice of report. Empirical research focuses on reality to see what is happening, so in this case by using a document analysis and a questionnaire.

In social science studies there are two main methods of reasoning, which are called inductive and deductive reasoning (Bryman & Bell, 2007). The kind of reasoning in this research is deductive, which means there is a top-down approach way of working. Deductive reasoning starts with general information and then moves on to more specific information. In the case of this research there first is a theory chapter to get to know the literature, then different methods are used to gather the data and analyze it and finally conclusions and recommendations are given. It is not an inductive kind of reasoning, because that works the other way around starting with observations, then finding patterns, and afterwards developing conclusions or theories (May, 2011).

### **3.2 Methods research question 1**

This paragraph describes the method used for the first research question: ‘in what ways are online review websites including sustainability in the review process’. To answer this question a document analysis is carried out by looking at ten online holiday review websites. According to Olery (2015) there are currently 144 websites which offer online reviews of accommodations. The following websites are selected for analysis: Tripadvisor, Booking.com, Trivago, HolidayCheck, Expedia, Zoover, Agoda, Hostelworld, Hotel.de and Hotels.com. The majority of these websites are selected because of their amount of reviews available, the websites HolidayCheck and Zoover are specifically selected based on their language (Dutch), since the other research question in this research focuses on the data from the Dutch online review website HolidayCheck.nl.

These websites are reviewed using the following questions:

- What are the review categories on the website?
- Do they include sustainability in the review process?
- Do they include sustainability on the website?
- How do they display sustainability on the website?
- Are there any future plans regarding sustainability?

Since there is no existing research about sustainability on online review websites, the method document analysis is used to gather information. To be able to answer the questions stated above, the web pages and press releases of these companies are analyzed. When there is no information found about the sustainable policies of a company, an email is sent to the company to be able to gather more information. These websites are accessed on March 23 (2015) and it should be mentioned that the results found here can change over time. The results of the analysis are categorized and based on these conclusions are drawn if online review companies are ready for sustainability. Scott (1990) says that there are four criteria for assessing the quality of documents. These are authenticity, credibility, representativeness and meaning. These criteria are kept in mind with the selection of documents in this research. It has to be kept in mind that questions need to be asked if the data is genuine, from what source the data is coming (primary or secondary), if data has been altered, if authorship can be validated and if documents are dated or not.

According to Bowen (2009) a document analysis is a systematic way of reviewing or evaluating documents. Material is collected from several sources so it can be analyzed, these materials come in a variety of forms ranging from advertisements to notes of meetings. In this research the main focus is on the information from the websites (including press releases) of the online review companies, and if no information is found on the website itself then a follow-up email is sent to the companies. Documents can be used for various purposes. They provide background and context, they can suggest if some additional questions need to be asked, they provide additional research data, they can be a mean to track change and development and they can be used as a verification of findings (Bowen, 2009).

Document analysis, as any other method, has advantages and limitations. One of the advantages of this method is that it takes less time than other methods, since it only requires the selection of data and not the collection of data. Because of this, in general it is also less costly than other research methods. More benefits of document analysis are that it is stable, exact and that it provides broad coverage. When talking about the availability of documents there are mixed views. Many documents are easy to obtain (which can be called an advantage) but some of them are only for internal use so not accessible for the public, which is a limitation of this method. Documents can also be incomplete, which can suggest biased selectivity (Bowen, 2009). Document analysis is mostly used combined with other research methods, something which is also the case in this research. A document analysis can be approached either from a quantitative point of view or a qualitative point of view.

In this case a qualitative approach is used, where the researcher can select the information which is relevant for analysis and then fit it together to create tendencies, sequences and patterns (Creswell, 2007). Therefore the document analysis is part of the qualitative research method.

### **3.3 Methods research question 2**

To find out if sustainability plays an important role for consumers on online review websites a questionnaire is conducted. A questionnaire can be distributed in several ways for example in person, by mail, by email or by using an online survey (Bryman, 2008). In the case of this research an online questionnaire on the website Thesistools.nl is used to collect the data.

It makes sense to do the survey online because the target group can be found here. Compared to other methods an online questionnaire has the benefits that it gives access to unique populations and that it can save time and money (Wright, 2006). In this case a structured questionnaire is developed, to ask all the respondents the same questions in the same order. All respondents are treated alike to make it possible to compare data for the analysis later on, and reliability is also ensured by this action. The population that is targeted in this research are the 4245 receivers of the monthly HolidayCheck.nl newsletter. HolidayCheck.nl is an online hotel review website, so by having access to the database of this website it is possible to reach people who are using online hotel reviews. The confidence level for this research is set to 95%, this means that it is 95% certain that the values contain the true mean of the population. The margin of error range, or also called confidence interval, is set to 4%, this is the percentage that the found results can deviate from reality (Mora, 2012).

On average, 32.41% of the people (1375 in absolute numbers) who receive the HolidayCheck newsletter open this email. The estimated percentage of response for this online questionnaire is 15% of the 4245 receivers (so this would be 636 people), this is based on the average clicking percentages and it should be taken account that there is no incentive for respondents to fill in the survey. According to a sample calculation on the website CheckMarket (n.d.) with a population of 4245 people, a confidence level of 95% and an error range of 4%, 526 respondents are needed in order to have a representative sample of the population. These respondents are needed to be able to make generalizations outside the used population as well. There are two different kind of samples, called a-select samples or select samples. When using an a-select sample every person in the population has the same chance of getting into the sample.

For a select sample the people who get into the sample are dependent on the researcher. Since the chance of getting into the sample is the same for all respondents, this research is using an a-select sample. The questionnaire is conducted in the Dutch language, because the receivers of the HolidayCheck.nl newsletter are Dutch themselves.

There are different types of questions that can be used in a questionnaire. These types are called open, half-open and closed questions. A benefit of open questions is that respondents are free in answering questions, whereas closed questions are easy to categorize and analyze. Half-open questions are in between these two, because respondents can either choose from the answers or write an answer themselves. This questionnaire exists of ten questions, with two different types of questions, closed and half-open. As said before, the questionnaire is distributed by using the database of online hotel review website HolidayCheck.nl. The results of the questionnaire are processed by using the program SPSS (version 22 of IBM), because this statistical program makes it possible to easily find relations between variables and analyze them. A pilot study is developed in order to test the questionnaire. A pilot study is a mini version of a full study, done as a pre-test to see if the questionnaire is working the way it is designed to. This pilot study was sent to 10 people (family and friends) and with the help of their feedback some questions have been formulated differently. The questionnaire with the formulated questions can be found in Appendix I. The questions are formulated with the information in mind that questions should be clear and easy to understand for a broad target group (all newsletter receivers from HolidayCheck.nl). Questions are formulated specifically so it is ensured that respondents interpret questions the same. Before respondents can fill in the online questionnaire, the survey starts with a page with information that respondents need to know before. This includes information about the object of the research, how long the questionnaire will take to fill in (approximately...in minutes) and that the answers of respondents will stay anonymous, so people will have the feeling that they can fill in everything truthfully.

Using a questionnaire in research has several benefits. First of all, it is relatively easy to administer and it is time efficient, especially when comparing it with for example time consuming methods such as interviewing. Since this research follows a strict timeline this is a convenient benefit. Further, it is possible to collect data from a large number of respondents so a broad range of data can be collected. Because of these large number of responses, it is also easier to make statements which can be generalized for an entire population.

Moreover, surveys can be administrated using a variety of ways, so not only in person but also online or by mail. With the available survey software that exists it is possible to analyze data and see if there are significant relations between variables. Finally, surveys in general have a high reliability because of the standardized questions which are the same to everyone (Wyse, 2012). As limitations of this kind of research it may be mentioned that respondents could interpret survey questions differently, that it is not the best method for controversial issues (where you need more in depth information) and that the design could be called inflexible because the questions cannot be changed anymore throughout the data gathering (Sincero, 2012). Sustainability can possibly be called a controversial issue, but in this research the focus is not on finding deep motives and attitudes, but more on making generalizable statements based on data.

### **3.4 Reliability and validity**

Reliability and validity are two important criteria when carrying out research. Reliability is connected with the terms consistency and replicability of the study, which means that if the study would be repeated the outcome would be the same. Validity looks at the accuracy and truthfulness of the findings, if the research measured what you intended to measure (Bryman and Bell, 2007). Reliability and validity are ensured in this study by several actions.

First of all, the use of a structured questionnaire with the same questions for all respondents in the same order, ensures reliability. Researchers would get similar results when repeating the questionnaire afterwards. Secondly, according to May (2011) reliability is best addressed through the construction and piloting of survey questions. In the case of this research, a pilot study was conducted before sending out the questionnaire to the full group of respondents. Finally, in SPSS there is an analysis to measure reliability, which is called the Cronbach Alpha. Cronbach Alpha is mostly used when applying the Likert scale to questions, something that was also the case in this research (Leard Statistics, 2013). While most of these issues focus on the reliability of the questionnaire, the document analysis is more difficult to replicate and to receive the similar results, because websites can change easier over time. This is also due to the fact that a document analysis is part of a qualitative research, whereas the questionnaire belongs to quantitative research. When looking at validity, Yin (2009) says that this topic can be divided into three categories which are construct validity, external validity and internal validity.

Merriam (2009) says that internal validity concerns how well the findings of the research display reality. Merriam says that the best way to guarantee internal validity is to make use of triangulation. This research uses triangulation, by combining both qualitative research and quantitative research (multiple methods), so by the use of this the internal validity is high. External validity concerns the generalizability of the findings of the research. Because the needed sample size is not reached (something that will be discussed further in paragraph 4.3) generalizations can only be made for the 204 people who answered the questionnaire of this research, but not for the entire population. Finally, there is something called construct validity left. Yin (2009) describes construct validity as being about identifying the correct operational measures for the concepts studied. He suggests that there are several ways to improve construct validity, such as using multiple sources of evidence, establishing a chain of evidence and letting stakeholders review the draft of the study report. In this research the first two mentioned actions are used to improve the construct validity.

## **Chapter 4 Results**

*This chapter shows the main empirical results of the documents analysis (4.1) and the results of the questionnaire (4.3). After both of these paragraphs a summary is given with the most interesting results (4.2 and 4.4).*

### **4.1 Results document analysis**

As explained in the previous chapter a document analysis is used to answer the research question ‘in what ways are online review websites including sustainability in the review process’. For this document analysis ten online hotel review websites are analyzed based on their current review categories, if they include sustainability in the review process and/or on the website, how they display sustainability on the website and if there are future plans or goals mentioned on their websites about sustainability. When the information found is not sufficient to determine the sustainable status of the review website, an email is sent out to the companies as a ‘follow-up’ with the same questions as mentioned above. After the analysis of these websites, a summary is given in a table to give an overview of the results. Finally, a conclusion of the document analysis is provided.

## **1. Tripadvisor**

Tripadvisor is the largest travel review websites in the world, with more than 225 million reviews on their website (Olery, 2015). The review categories on the website are ‘location’, ‘rooms’, ‘service’, ‘value’, ‘hygiene’ and ‘sleep quality’. Tripadvisor is currently not including sustainability as a ranking category, but it does play a big role on the website. The inspiration for this research started with the campaign Dear Tripadvisor. This campaign by Nordic Choice Hotels and Rainforest Foundation Norway has a vision that if sustainability was a rating choice on Tripadvisor, hotels in the entire world would have to change to be more sustainable (Dear Tripadvisor, 2014). Tripadvisor does have something that comes close to reviewing sustainability, which is their program called GreenLeaders. GreenLeaders shows a variety of eco-friendly accommodations, all committed to green practices such as recycling, local and organic food and electric charging stations. To be able to be ranked as a GreenLeader all participating accommodations must meet a minimum set of requirements and there are five different levels of expertise in total. The main goal of the program is to make it easier for travelers to find and book a greener stay. On the website itself accommodations which are part of GreenLeaders are marked with a badge, but it is not possible to find green hotels separately by filling in for example ‘green hotels’ or ‘sustainable hotels’. Tripadvisor is ensuring integrity of the program by offering transparency, travelers can see a full list of green practices by clicking on the GreenLeaders badge. Further, it is possible for travelers to comment on green practices. Finally, an independent expert organization looks into participating hotels (Tripadvisor, 2015). One remark about this is that GreenLeaders is primarily focusing on the environment, and not on the other factors of sustainability. There is no information available about the further plans of Tripadvisor regarding sustainability.

## **2. Booking.com**

Booking.com is one of the largest online travel agencies in the world (Olery, 2015). Besides the opportunity to book accommodation, almost 50 million people have also shared their reviews on Booking.com. The review categories on the website are hygiene, comfort, location, facilities, staff, price/quality and free WiFi. Only people who actually stayed in an accommodation of Booking.com can share reviews online, to guarantee honest reviews. Sustainability is not a ranking category on the website, but it does play a role on the website of Booking.com. On their webpage ‘working at Booking.com’, it is mentioned that Booking.com is not just looking to put destinations on the map, but also looking for ways to contribute to growth and sustainability of destinations.

Booking.com says they care outside the office for the needs of the environment, cultural heritage and sustainable tourism (Booking.com, 2015). Further, Booking.com works together with a website called 'bookdifferent'. This website is primarily focusing on green hotels. Every green hotel is labeled and shows up as a top result when someone is looking for accommodation. Their goal is to share information about green hotels in a accessible way, so that green travel can be simple. Bookdifferent also gives 25 percent of their revenue to charity. Their green hotels are not more expensive, because they offer the same 100% best price guarantee as Booking.com (bookdifferent, 2015). There is no information available about the further plans of Booking.com regarding sustainability.

### **3. Trivago**

Trivago is a hotel price comparison website (owned by Expedia) with more than 140 million reviews (Olery, 2015). Trivago works with something that is called the Trivago Rating Index, which combines all available rating sources across the web to create an algorithm, providing a dependable and impartial score. Trivago is currently not including sustainability as a ranking category, but it does play a role on the website itself. Trivago mentions it is about giving back, about getting involved. They are supporting schools in Myanmar and Rwanda and support children with Operation Christmas Child (Trivago, 2015). An email was send on March 23 to Trivago, to find more information about the topic of sustainability. But in this email, they only responded with the information on the webpage that was found before. On the additional questions no answers were given.

### **4. HolidayCheck**

HolidayCheck is the largest review website for Germany and other German-speaking countries. Currently it has more than 10 million online hotel reviews (Olery, 2015). The review categories on the website of HolidayCheck are 'hotel in general', 'location', 'service', 'food', 'sport/recreation/pool', and 'room'. HolidayCheck is currently not including sustainability as a ranking category, and no information regarding this topic can be found on the website. To find this information an email was send out on March 23, but no additional information was gathered. HolidayCheck mentioned in this email that they do not have policies regarding sustainability, and no future plans yet.

## **5. Expedia**

Expedia is a large online travel organization, with almost 300.000 reviews (Expedia, 2015). The review categories on the website Expedia are 'hygiene of the room', 'service and staff', 'comfort of the room' and 'state of the hotel'. Expedia is currently not including sustainability as a ranking category, but it does play a role on the website. Expedia offers travel guides on the website, where different themes can be found. One of these themes is #sustainability, where people can find hotels and destinations related to sustainability. Further on the website of Expedia there is a page called the 'Green Travel Guide'. On this page it is mentioned that they are committed to create green travel initiatives that address environmental and social concerns. They specifically show green hotels, national parks and tips for green travel. Furthermore, they show other green travel programs such as how to reduce your carbon footprint, world heritage, volunteer vacations and their partnership with Sustainable Travel International. Moreover, when a hotel is certified by Green Globe (a global certification for sustainable tourism) it is mentioned on Expedia with a text saying 'green/sustainable accommodation' and an explanation of what this means (Expedia, 2015). An email was send on March 23 about the future plans with regards to sustainability, but Expedia did not want to share information about their future plans. However, they said they will publish new plans with regards to sustainability soon.

## **6. Zoover**

Zoover is a online review website for the Dutch market, owned by HolidayCheck. It has more than 1.7 million online reviews (Olery, 2015). The review categories on the Zoover website are 'location', 'food', 'pool', 'service', 'rooms', 'price/quality' and 'child friendly'. Zoover is currently not including sustainability as a ranking category, but it does play a role on the website. Zoover recently signed the Green Deal Sustainable Tourism, a project with the Dutch government to support sustainability. Zoover offers the possibility to rate destinations on sustainability, but for hotels this is not yet the case. The goal is to inform people better about sustainable tourism, by showing which destinations are very involved with sustainability (Zoover Weblog, 2014). An email was send out on March 23 to find out if Zoover has any future plans for sustainability, and they said they want to continue to make sustainability a more important topic on the website, but for now only for destinations.

## **7. Agoda**

Agoda is a leading and fast growing online hotel reservation website in Asia, with more than 4 million reviews (Olery, 2015). The review categories on the website of Agoda are 'price/quality', 'location', 'staff', 'hygiene of the hotel', 'comfort of the room' and 'breakfast/food'. Agoda is currently not including sustainability as a ranking category, but it does play a role on the website. On Agoda's 'in the news' page it shows that Agoda supports green hotels initiatives with top ten pick lists. For more specific information about Agoda's list of green hotels an email address is mentioned on the website which is [green@agoda.com](mailto:green@agoda.com). They also have conducted a survey to ask Agoda customers how they felt about environmental efforts by hotels (Agoda, 2007). An email was send out on March 23 to Agoda to find out more about their sustainable policies. Since the information found on the website was rather narrow. Agoda responded that they do not have specific policies regarding sustainability.

## **8. Hostelworld**

Hostelworld is the world's number one hostel booking website, with more than 3.5 million reviews (Olery, 2015). The review categories on the website of Hostelworld are 'value for money', 'security', 'location', 'staff', 'atmosphere', 'cleanliness' and 'facilities'. Hostelworld is currently not including sustainability as a ranking category, and no information can be found about sustainability. To find this information an email was send on March 23 to Hostelworld. They responded that all information on the website is provided by the properties themselves. If a property is green, they will normally mention this themselves in their main description. Further, they have a category in their Hoscar Awards (yearly awards for hostels) called 'Best Green Hostel'. They do not have future plans yet to implement sustainability more on the website (Hostelworld, 2015).

## **9. Hotel.de**

Hotel.de is a major online travel agency in the German market, with more than 2 million reviews (Olery, 2015). The review categories on the website of Hotel.de are 'room quality', 'sound level of the room', 'hygiene', 'price/quality' and 'staff'. Hotel.de is currently not including sustainability as a ranking category, and no information can be found about the sustainable policies of this company.

To find this information an email was send on March 23 to Hotel.de, and they responded that sustainability does not play a role yet on the website of Hotel.de. There is also no information yet about future plans for sustainability (Hotel.de, 2015).

### 10. Hotels.com

Hotels.com is a big worldwide online hotel booking website, owned by Expedia. The website has about 6.5 millions review (Olery, 2015). The review categories on the website of Hotels.com are ‘cleanliness’, ‘service’, ‘comfort’, ‘condition’, and ‘neighborhood’.

Hotels.com is currently not including sustainability as a ranking category, and no information can be found on the website about sustainability. To find this information an email was send on March 23 to Hotels.com and they responded that sustainability does not play a role yet on the website of Hotels.com. There is also no information yet about future plans for sustainability (Hotels.com, 2015).

#### Summary of sustainability status on review websites

Website	Review categories	Is sustainability included in/on: The review process? The website?	How is this displayed on the website?	Future plans/goals?
<b>Tripadvisor</b>	Location, rooms, service, value, hygiene, sleep quality (5)	Review process? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> <b>No</b> Website? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	- Tripadvisor Greenleaders program	Not available
<b>Booking.com</b>	Hygiene, comfort, location, facilities, staff, price/quality, free WiFi (7)	Review process? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> <b>No</b> Website? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	- Working at Booking.com: sustainable -Bookdifferent website	Not available
<b>Trivago</b>	Trivago rating index	Review process? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> <b>No</b> Website? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	- Supporting schools and children	Not available
<b>HolidayCheck</b>	Hotel in general,	Review process?	<b>X</b>	Not available

	location, service, food, sport/recreation/pool, room (6)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> <b>No</b> Website? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> <b>No</b>		
<b>Expedia</b>	Hygiene of the room, service and staff, comfort of room, state of hotel (4)	Review process? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> <b>No</b> Website? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	- Theme guides sustainability - Green Travel Guide	Did not want to share information about their future plans regarding sustainability
<b>Zoover</b>	Location, food, pool, service, rooms, price/quality, child friendly (7)	Review process? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> <b>No</b> Website? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	- Ranking of destinations on sustainability	Expand the ranking of destinations further
<b>Agoda</b>	Price/quality, location, staff, hygiene hotel, room comfort, breakfast/food (7)	Review process? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> <b>No</b> Website? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	- Researches/survey about green travel	Not available
<b>Hostelworld</b>	Value for money, security, location, staff, atmosphere, cleanliness, facilities (7)	Review process? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> <b>No</b> Website? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> <b>No</b>	-Hotels themselves provide information about sustainability. -Hoscar awards: best green hostel	Not available
<b>Hotel.de</b>	Room quality, level of sound room, hygiene, price/quality, staff (4)	Review process? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> <b>No</b> Website? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> <b>No</b>	<b>X</b>	Not available
<b>Hotels.com</b>	Cleanliness, service, comfort, condition, neighborhood (5)	Review process? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> <b>No</b> Website? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> <b>No</b>	<b>X</b>	Not available

## **4.2 Conclusion of document analysis**

*In what ways are online review websites including sustainability in the review process?*

None of the online hotel review websites have sustainability currently included as a rating choice. On average, review websites have five categories and the most common categories are location, hygiene, service, staff, price/quality and room. Four out of ten online review websites do not have any information about sustainability on their pages. The six websites who do have information about sustainability, display this in different ways. Tripadvisor has the strongest connection with sustainability with their Greenleaders program. Followed by this, Expedia comes on a 'second' place with their theme guides for sustainability specifically and their Green Travel Guide. After this follows the website Zoover, who offers ranking of destinations on sustainability, and Booking.com which is supporting the website Bookdifferent, for hotels with a green/sustainable stay. Trivago is showing their sustainable efforts by supporting schools and children. The information from Agoda and Hostelworld about sustainability was more difficult to find. Agoda mainly mentions researches and surveys about sustainability in their press releases. Finally, Hostelworld makes it possible for hotel owners to provide information themselves about sustainability and has the yearly 'Hoscar awards' with the best green hotel as a category. Almost all companies do not have clear future goals or policies for the future of sustainability on their websites, or they did not want to share this information. It was also found that the frontline staff does not have much knowledge about sustainability, so it is most probably a top management issue for most companies. As expected before, most of the sustainable efforts focus on the environment, and only a few on the cultural and social impacts of sustainability. Thus, from all of this it can be concluded that sustainability currently does not play a big role for online hotel review websites.

### **4.3 Questionnaire**

The results of this questionnaire are processed with the statistics program SPSS (version 22 of IBM). First of all, the descriptive statistics are discussed. As the word suggests these are used to describe the basic features. They are the basis of a quantitative analysis of data, since they describe what the data shows. With descriptive statistics an univariate analysis is mostly used, where only one variable is described (Trochim, 2006).

#### **Descriptive statistics**

As mentioned before in the methodology chapter, the population used for this questionnaire are the 4245 receivers of the monthly HolidayCheck newsletter. In total 204 people responded to the questionnaire, before it was estimated that 526 people would answer the questionnaire. 31,88% (1353 in absolute numbers) of the people who received the email of HolidayCheck.nl opened it, and 4,9 % (204 in absolute numbers) of that percentage actually clicked on the link in the email to answer the questionnaire. This difference between the estimation and the actual result can be explained by several reasons. First of all, because people only sign up for information about holidays and reviews (and not for questionnaires), and there is no incentive to fill in the questionnaire. Also, since people nowadays receive a lot of emails from companies, there is an overload of information for them. A final reason for not reaching the intended responses is because the researcher does not know the respondents personally. When reaching out to family, friends or colleagues for example it can be expected that responses would be significantly higher. The negative side of not reaching enough respondents is that results cannot be generalized, because the population is not evenly distributed. This means that the statements and findings from this questionnaire only are applicable for the 204 people who answered this questionnaire, but not for the entire population.

Out of these 204 respondents 52.9% of them are male, and 47.1% female, so 5.8 % more males answered this questionnaire. Table 1 (appendix II) shows the age categories of this research, most of the respondents (32,70%) are in the category of 55-64 years old, and the categories 45-54 years old and 65-74 years old together make up more than 50% of the respondents. This can also be seen in figure 5 (appendix II) where a histogram graph is created. The line in the histogram stands for a normal distribution, but as can be seen the age in this questionnaire is not evenly distributed. It does show a good representative image of the target group of HolidayCheck. When looking at age and gender (table 1, appendix II), more females are younger than 25 years old and between 45-54 years old, compared to males.

There are more males in the age category 65-74 years old and in the category older than 75 years old. For the other age categories, the distribution is almost the same when it comes to gender and age.

More than half of the respondents (60.59%) go on holiday as a couple, followed by going on holiday with friends (15.27%), family with kids (10.34%), family without kids (6.42%) or different. The least popular way of traveling is alone, since only ten (4.44%) respondents choose for this kind of holiday. One third of the respondents (32.02%) spend more than 2000 euro on their holidays per person per year. Followed by this is 1001-1500 euro per year (26.11%), 1501-2000 euro (17.73%) and 501-1000 euro (16.26%). 6.4% of the respondents did not want to share this information, most probably due to privacy issues. Only 1.48% of the respondent are spending the lowest amount of 100-500 euro on holidays per person per year.

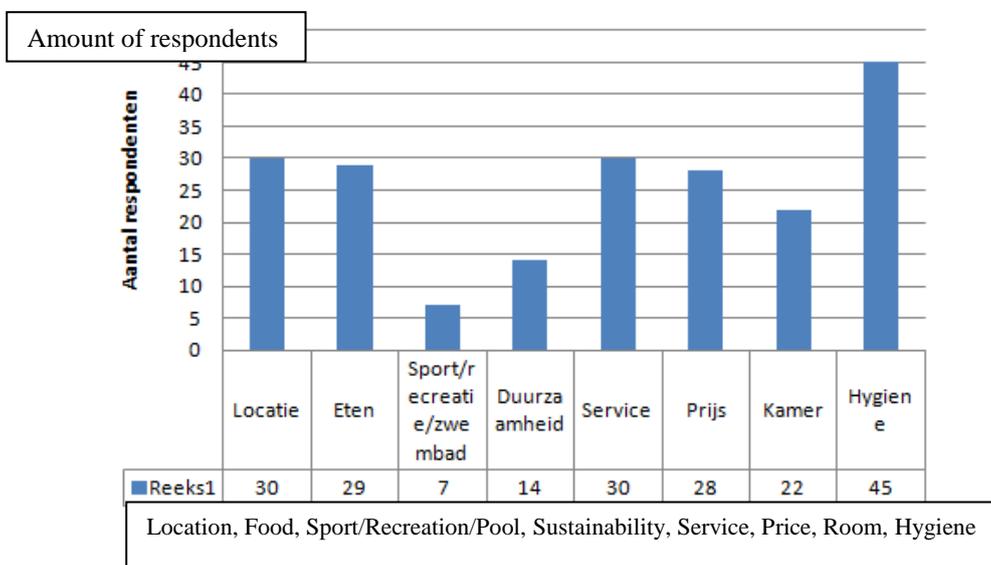
When looking at the composition of someone's holiday (so with whom people are going on holiday with), it is also interesting to see if valuable conclusions can be drawn when combining this variable with another one. First, in table 2 (appendix II) it is possible to see the relations between the composition of someone's holiday with their age. For the age category younger than 25 years old, the most common way to go on holiday is together with friends, and as a couple. For the age category 25-34 going on holiday as a couple is the most popular, followed by a holiday with friends. The smallest age category is 35-44 years old with only five respondents in this category, for them going on holiday with children is the most popular way of traveling. People in the age category 45-54 years old mostly go on holidays as couples, followed by going on holiday as a family with children. For the 55 to 64 year olds going on holiday as a couple is by far the biggest category, followed by with friends. The 65-74 year olds follow the same pattern. For the people older than 75 years old a couple holiday is the most popular choice as well. These patterns of the composition of holidays clearly show the life cycle of people, at first going on holiday with friends, then as a couple, then as family with kids, and finally going back as a couple or with friends again.

Secondly, it would be interesting to look at age and the amount people are spending on holidays (table 3, appendix II). The smallest category when it comes to respondents and amount is 100-500 euro, with only 4 respondents, but most of them in the category younger than 25 years old. People younger than 25 years old also show a quite relatively high response for spending 501-1000 euro.

For 45-54 and 55-64 year olds the spending in the category 1001-1500 euro per person per holiday is the largest. 65-74 year olds spend most in the category 1501-2000 euro and also in the more than 2000 euro category. The older age categories are also the most hesitant to give answers on this question, especially the 55-64 years old.

When looking at the question ‘how often do you review hotels on online review websites’, it is remarkable to see that 34 respondents (17,44%) have never written a review online, but that they do receive the monthly HolidayCheck.nl newsletter. Most of the respondents (62,05%) write 1-3 reviews per year, followed by 4-7 times a year (11,79%), 8-11 times a year (4,1%), every month (3,08%) and multiple times a month (1,54%). It can be said that most of the respondents trust reviews of other travelers (45,64%) or have a neutral viewpoint about this subject (39,49%). Only 17 respondents (8,3%) out of the total of 205 do not trust reviews of other people. More than half of the respondents (58,97%) find sustainability either very important or important when booking a holiday. Further, a lot of respondents do not care or do not know much about sustainability, so this explains that 34,36% of the respondents are ‘neutral’ about the issue of sustainability when booking a hotel. Only 6,67% of the respondents do not find sustainability important when booking a holiday. Thus, based on these results it can be said that sustainability plays an important role for the respondents. When respondents had to rank various elements of a hotel stay (service, price, location, food, sport/recreation/pool, sustainability, room and hygiene) the hygiene of a hotel turned out to be the most important factor, followed by location, service, price, food, room, sustainability and as a least important factor follows sport/recreation/pool (figure 4).

**Figure 4 Ranking elements hotel stay based on importance**



People use various platforms to find information about sustainability. Most of them look on online review websites for this information (41,58%) and the other important source is the website of the hotels (24,21%). Although, in one of the questions it became clear that sustainability plays an important role when booking a holiday, the question ‘where do you find information’ shows that 30,53% of the respondents is not even looking for information about the topic. The most trusted source with information about sustainability are reviews from other travelers by far, with 43,68% of the respondents trusting this source the most. After this, information from third independent parties follows (30%) and information from the hotel itself (18,95%). The opinions about reviewing sustainability are spread out. About 55,26% of the respondents are very interested or interested in reviewing sustainability on online review websites. On the other hand, 44,73% of the respondents are not interested in reviewing sustainability.

### **Inferential statistics**

Besides the descriptive statistics, there are inferential statistics which are used for conclusions that extend beyond describing the data alone (Trochim, 2006). To understand which kind of analyses are possible in SPSS, first the differences between variables have to be described. There are categorical and continuous variables, both with different sub-categories. For the categorical variables there are nominal variables, dichotomous variables and ordinal variables. For the continuous variables category, there are interval and ratio variables (Leard Statistics, 2013). With inferential statistics a bivariate analyses is mostly used which involved two variables (X and Y), which are analyzed in order to see relationships between both variables.

The inferential statistics focus on the topics below, to be able to gain insight to answer the research question ‘is it important for consumers that sustainability becomes a ranking option on online review websites’:

- Gender and the importance of sustainability;
- Age and the importance of sustainability;
- Composition of the holiday and the importance of sustainability;
- Gender and amount people are spending on holidays;
- Amount people are spending on holidays and the importance of sustainability;
- Amount of reviewing and interest to review sustainability;
- Age and amount people are spending on holidays;

- Importance of sustainability and interest to review sustainability;
- Factors that determine if sustainability is important;
- Reliability of the questionnaire.

Two of these questions are not directly related to the concept of sustainability (age and amount spending and gender and amount spending) but it is interesting to see correlations between these variables to draw conclusions later on.

### Gender and the importance of sustainability

As said before in the descriptive statistics analysis, 5.8% more males answered this questionnaire in comparison with females. When looking if there is a difference between females or males (table 4, appendix II) and the importance of sustainability it does not really show remarkable results. Females slightly tend to answer ‘very important’ more compared to males, where males answer ‘very unimportant’ more. Further, it is possible to conduct a Mann-Whitney test in SPSS to see if there are significant differences in gender when it comes to the importance of sustainability. Normally data like this would be analyzed with a T-test, but the data in this case is not normally distributed and is ordinal, so this is the alternative method which does not require a normal distribution. Table 5 shows that men have a slightly higher score in their sum of ranks, thus that means that sustainability plays a more important role for them. Although, this result is not statistically significant ( $p=0.063$ ), something that can be seen in table 6.

**Table 5 Gender and importance of sustainability with sum of ranks**

Ranks				
	Geslacht	N	Mean Rank	Sum of Ranks
Belang van duurzaamheid (importance of sustainability)	Man (male)	108	109.35	11809.50
	Vrouw (female)	96	94.80	9100.50
	Total	204		

**Table 6 Gender and importance of sustainability with Mann-Whitney**

**Test Statistics<sup>a</sup>**

	Belang van duurzaamheid (importance of sustainability)
Mann-Whitney U	4444.500
Wilcoxon W	9100.500
Z	-1.860
Asymp. Sig. (2-tailed)	.063

a. Grouping Variable: Geslacht (Gender)

**Age and the importance of sustainability**

When testing for a correlation between the variable age and the variable importance of sustainability, the variable age is a nominal variable (which means categorical) and the variable importance of sustainability is an ordinal variable so categorical as well. To see if there is a relationship between the two variables, a Spearman Rho test is conducted in SPSS (table 7). It shows a weak negative correlation ( $r = -.200$ ), with a significant result of ,005.

**Table 7 Age versus importance of sustainability**

Correlations				
			Leeftijd	Belangduur
Spearman's rho	Leeftijd	Correlation Coefficient	1,000	-,200**
		Sig. (2-tailed)	.	,005
		N	204	196
	Belangduur	Correlation Coefficient	-,200**	1,000
		Sig. (2-tailed)	,005	.
		N	196	196

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Categories: age (leeftijd) and importance of sustainability (belangduur).

Further, age and gender and their interest to review sustainability might provide interesting results. This is also interesting information for the online review websites, so they know if there perhaps is a special target group they should focus on with their sustainable efforts.

When looking at the correlation between gender and the interest to review sustainability, there is no significant relation between the variables (-,022). When switching the variable 'gender' for 'age' it does show a significant result of -,140 (table 8, appendix II).

### Composition of the holiday and the importance of sustainability

When testing for a correlation between the variable composition of holiday (the independent nominal variable), and importance of sustainability (the dependent ordinal variable), a Spearman Rho test is conducted in SPSS. It shows a very weak correlation ( $r = -.015$ ) with no significance (table 9). Thus, it can be said that it does not matter in what kind of composition (family with kids, couple, with friends, alone or different) people go on holiday and their views about the importance of sustainability, there is no link between these variables.

**Table 9** Holiday composition and importance of sustainability

Correlations				
			Belangduur	Samenstelling
Spearman's rho	Belangduur	Correlation Coefficient	1,000	-,015
		Sig. (2-tailed)	.	,833
		N	196	196
	Samenstelling	Correlation Coefficient	-,015	1,000
		Sig. (2-tailed)	,833	.
		N	196	204

Categories: importance sustainability (belangduur) and composition (samenstelling).

### Gender and amount people are spending on holidays

It would be interesting to see if there is a difference between males and females and their spending on holidays. This can be done with a Mann-Whitney test in SPSS. Table 10 shows that the value of  $p$  is 0.005, so this means that there is a significant difference between males and females and the average amount they spend on holidays. To determine how this significance is made up, the rank numbers can be used (table 11). Men have a higher average ranking, so they are spending more. The exact average can be seen in table 12 (appendix II), which is a score mean of 3.98 for men, and 3.48 for female. A score of three ranges from 1001-1500 euro and a score of four from 1501 to 2000 euro. It can be concluded there is a significant difference between the amount that men and women are willing to spend on holidays, where men want to spend more.

**Table 10 Males and females & spending on holidays**

Average amount spent on holidays	Gemiddeld bedrag vakantie D.P.D.V
Mann-Whitney U	3935.500
Wilcoxon W	8400.500
Z	-2.839
Asymp. Sig. (2-tailed)	.005

a. Grouping Variable: Geslacht

Grouping Variable: Gender (geslacht)

**Table 11 Rank numbers amount & gender**

	Geslacht	N	Mean Rank	Sum of Ranks
Gemiddeld bedrag vakantie D.P.D.V	man	108	112.06	12102.50
	vrouw	94	89.37	8400.50
	Total	202		

Categories: average amount spent holidays per person (gemiddeld bedrag vakantie). Gender: male (man) & female (vrouw).

Further, it is interesting to look at correlations between the importance of sustainability and the average amount spent on holidays, the correlation between the amount of review writing and the interest to review sustainability, the correlation between age and average amount spent on holidays and finally the correlation between the importance of sustainability for people and their interest to review sustainability. A test of the correlation between the *importance of sustainability and the average amount spent on holidays*, shows a very weak negative correlation (-0,32) with no significance (table 13, appendix II). Thus, it can be said that it does not matter how much someone is spending on holidays , their views on the importance of sustainability does not change. The correlation between the *amount that people write reviews with the interest of people to review sustainability* can be determined with a Spearman Rho analysis, since these are two categorical variables. This shows that there is a weak negative correlation (-,113) with no significance (table 14, appendix II). It can be said that it does not matter if someone writes a lot of reviews or not, their interest to review sustainability stays the same.

When looking at *age in correlation with the average amount people are spending*, there is a significant result. Age in this case is the independent variable, and the average amount spending the dependent variable. There is a positive correlation between both variables ( $.197$ ) with a significance level of  $.005$  (table 15). This means the older people are, the more money they spent on average on holidays per person. This is a result that could have been expected beforehand, since older people have more money to spend in general because they are in a different life cycle and they have more free time. Finally, there is a highly positive correlation ( $.429$ ) *between the importance of sustainability for people and their interest to review sustainability* (ordinal variable), with a significance at the  $0.01$  level (table 16). This mean that people who find sustainability important, also are interested in reviewing sustainability on online hotel review websites.

**Table 15** Age versus average amount spent

Correlations			Leeftijd	Gem bedrag
Spearman's rho	Leeftijd	Correlation Coefficient	1,000	,197**
		Sig. (2-tailed)	.	,005
		N	204	202
	Gem bedrag	Correlation Coefficient	,197**	1,000
		Sig. (2-tailed)	,005	.
		N	202	202

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Categories: age (leeftijd) versus average amount spent (gem bedrag).

**Table 16** Importance of sustainability and interest to review sustainability

Correlations			Belangduur	Intrsduur
Spearman's rho	Belangduur	Correlation Coefficient	1,000	,429**
		Sig. (2-tailed)	.	,000
		N	196	191
	Intrsduur	Correlation Coefficient	,429**	1,000
		Sig. (2-tailed)	,000	.
		N	191	191

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Categories: importance of sustainability (belangduur) and interest in sustainability (intrsduur).

## Factors that determine if sustainability is important

Finally, it is also interesting to see which factors determine if a consumer finds sustainability important or not. The factors gender, composition of holiday, age and average spend amount on holidays will be looked into (table 17). First of all, it is good to check for correlations between them.

- *Gender with age and with average amount*: the significant result of gender and age together is most probably a coincidence (-.300). Gender with average amount spent on holidays is not a surprise correlation, since it was already found that males spend more money than females do on holidays (-.198).
- *Age with average amount*: a problem can occur with determining the factors, because the significance of age and average amount spent (.240) is most probably because older people make more money, or pay more because they go on holiday as a family. An option to avoid this is by proving interaction.
- *Composition of holiday*: the variable composition does not show correlations with other variables.

**Table 17 Correlations between age, gender, composition & amount**

		Correlations			
		Geslacht	Leeftijd	Samenstelling vakantie	Gemiddeld bedrag vakantie p.p.p.v
Geslacht	Pearson Correlation	1	-.300**	.046	-.198**
	Sig. (2-tailed)		.000	.509	.005
	N	204	204	204	202
Leeftijd	Pearson Correlation	-.300**	1	.010	.240**
	Sig. (2-tailed)	.000		.892	.001
	N	204	204	204	202
Samenstelling vakantie	Pearson Correlation	.046	.010	1	-.114
	Sig. (2-tailed)	.509	.892		.107
	N	204	204	204	202
Gemiddeld bedrag vakantie p.p.p.v	Pearson Correlation	-.198**	.240**	-.114	1
	Sig. (2-tailed)	.005	.001	.107	
	N	202	202	202	202

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Categories: gender (geslacht), age (leeftijd), composition (samenstelling vakantie) and average amount spent (gemiddeld bedrag vakantie p.p.p.v).

As mentioned, now it needs to be proven which are the determining variables for importance of sustainability. When looking at table 18 results show that none of them are significant.

Right now this test will continue by moving the interaction term.

**Table 18 Test of Model Effects I**

Tests of Model Effects			
Source	Type III		
	Wald Chi-Square	df	Sig.
Geslacht	10.419	1	.001
Leeftijd	9.442	6	.150
Samenstelling	2.966	5	.705
Gem bedrag	2.984	1	.084
Leeftijd * Gem bedrag	8.748	6	.188

Dependent Variable: Belang van duurzaamheid

Model: (Threshold), Geslacht, Leeftijd, Samenstelling, Gem bedrag,

Leeftijd \* Gem bedrag

Categories: gender (geslacht), age (leeftijd), compositon (samenstelling), average amount (gem bedrag), age \* average amount (leeftijd \* gem bedrag).

**Table 19 Test of Model Effects II**

Tests of Model Effects			
Source	Type III		
	Wald Chi-Square	df	Sig.
Geslacht	8.781	1	.003
Leeftijd	29.834	6	.000
Samenstelling	4.322	5	.504
Gem bedrag	.020	1	.887

Dependent Variable: Belang van duurzaamheid

Model: (Threshold), Geslacht, Leeftijd, Samenstelling,

Gem bedrag

Categories: gender (geslacht), age (leeftijd), compositon (samenstelling), average amount (gem bedrag).

Table 19 now shows that gender and age are the significant factors. The next step is removing the least significant value every time, until everything is significant. This method is called ‘backwards elimination’. Average amount is the least significant value with .887, so this one will be removed. And finally, composition (right now with a value of .499) is still not significant (table 20) so will be removed.

**Table 20 Test of Model Effects III**

**Tests of Model Effects**

Source	Type III		
	Wald Chi-Square	df	Sig.
Geslacht (gender)	8.859	1	.003
Leeftijd (age)	30.539	6	.000
Samenstelling (composition)	4.358	5	.499

Dependent Variable: Belang van duurzaamheid

Model: (Threshold), Geslacht, Leeftijd, Samenstelling

Categories: gender (geslacht), age (leeftijd), composition (samenstelling).

**Table 21 Test of Model Effects IIII**

**Tests of Model Effects**

Source	Type III		
	Wald Chi-Square	df	Sig.
Geslacht (gender)	8.344	1	.004
Leeftijd (age)	27.406	6	.000

Dependent Variable: Belang van duurzaamheid (Importance of sustainability)

Model: (Threshold), Geslacht, Leeftijd (Gender, age)

Categories: gender (geslacht), age (leeftijd).

This leaves the variables gender and age (table 21). It can be concluded that gender and age are the significant variables when it comes to predicting how important sustainability is. Table 22 and table 23 show the parameters, so the predicted values for the predictors of sustainability. The mean shows the average score for the importance of sustainability. From the tables the following results can be found, first of all for gender; females have a mean score of 2.16 and men a score of 2.59, so men value sustainability slightly higher than females do. When looking at the means for age, the results show that <25 years old and 25-34 years old show the highest scores, so the most interest in sustainability and the transition point of age is around 34 years old.

**Table 22 Estimated gender****Estimates**

Geslacht (gender)	Mean	Std. Error	95% Wald Confidence Interval	
			Lower	Upper
Man (male)	2.59	.114	2.36	2.81
Vrouw (female)	2.16	.122	1.92	2.40

**Table 23 Estimated age****Estimates**

Leeftijd (age)	Mean	Std. Error	95% Wald Confidence Interval	
			Lower	Upper
Jonger dan 25 jaar oud (younger than 25 years old)	2.96	.243	2.49	3.44
25-34 jaar oud	3.38	.306	2.77	3.98
35-44 jaar oud	2.56	.388	1.80	3.32
45-54 jaar oud	2.28	.130	2.02	2.53
55-64 jaar oud	2.01	.106	1.80	2.21
65-74 jaar oud	2.14	.117	1.91	2.37
Ouder dan 75 jaar oud (older than 75 years old)	1.29	.360	.58	1.99

The new ANOVA, table 24, (based on the model effects) can be found in Appendix II. It can be concluded from this, that men and females differ significantly from each other, where men have a higher value for sustainability. The people younger than 35 years old differ significantly from the people older than 35 years old, where people younger than 35 years old value sustainability higher. Thus, sustainability would be recommendable as an indicator on websites which have men younger than 35 years old as a target group. An important remark here is that a linear outcome variable is used, whereas this actually is an ordinal outcome variable. The size of this effect is unknown.

**Reliability of the questionnaire**

Cronbach's alpha is the most common measure of internal consistency (reliability). It is most commonly used when you using multiple Likert questions in a questionnaire that form a scale and be able to determine if the scale is reliable (Leard Statistics, 2013).

In this questionnaire for three questions (question 6,7 and 11 of the questionnaire) a Likert scale is used, so it is possible for these questions to measure the internal consistency. The Cronbach alpha score of the items is ,643 (table 25) which shows an acceptable reliability of the scale.

**Table 25 Cronbach Alpha**

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,643	,642	3

**4.4 Conclusion questionnaire**

So to summarize, what valuable information did this questionnaire produce?

The average person who answered this questionnaire goes on a holiday as a couple, spends more than 2000 euro while doing this and is between 55 and 64 years old. When looking at which kind of holiday and age, we can see a clear lifecycle pattern: people first go on holiday as friends, then as a couple, followed by as family with kids, and finally back as a couple or with friends again.

The older people are, they more money they are spending on holidays per person. Most people write 1-3 reviews per year, and the majority trusts reviews of other travelers. An interesting finding of this questionnaire is that more than half of the respondents (59%) find sustainability either very important or important when booking a holiday. Further, a lot of respondents do not care or do not know much about sustainability, so this explains that 34,36% of the respondents are neutral about the issue of sustainability when booking a hotel. Only 6,67% of the respondents do not find sustainability important when booking a holiday. Thus, based on these results it can be said that sustainability plays an important role for the respondents. When comparing sustainability with other elements of a stay at a hotel, hygiene turned out to be the most important factor when choosing a hotel, followed by location, service, price, food, room, sustainability and sport/recreation/pool as the least important factor. It is interesting to see that initially sustainability is very important for consumers when booking a hotel, but when other factors come to play it suddenly moves to the second to last place. Most of the people look on online review websites for information about sustainability.

Respondents are not very interested in the topic, since about one third never even searches for information about sustainability. The most trusted source with information about sustainability are reviews from other travelers, with 43,68% of the respondents trusting this source the most. Opinions from the respondents about actually reviewing sustainability themselves are almost spread out 50-50 percent.

When looking back at the research question ‘is it important for consumers that sustainability becomes a ranking option on online review websites’, in the inferential statistics the focus was on the importance of sustainability with regards to gender, age, composition of the holiday, spending and the determining factors. When looking at the interest to review sustainability, the questionnaire focused on the amount of reviewing and the importance of sustainability with regards to the interest to review sustainability. Finally, reliability and correlations between age and spending were discussed.

From the inferential statistics the following things can be concluded

- Sustainability plays a more important role for men but this result is not statistically significant
- It can be said that it does not matter with whom someone goes on a holiday, views about the importance of sustainability do not change.
- It does not matter how much someone is spending on holidays their views on the importance of sustainability stay the same.
- The older people are the more money they spent on average on holidays per person;
- People who find sustainability important are also interested in reviewing sustainability on online holiday review websites.
- Gender and age are the significant variables when it comes to predicting how important sustainability is.
- Males and females differ significantly from each other, where men have a higher value for sustainability. People younger than 35 years old differ significantly from people older than 35 years old, where people younger than 35 years old value sustainability more. Thus, sustainability would work best on websites which have men younger than 35 years old as a target group. Before it was claimed with the Mann-Whitney test (table 5 and 6) that sustainability plays a more important role for men, but that the result is not statistically significant. The pair wise comparisons (table 22) do show a significant result between males and females. There are different outcomes between these tests (Mann-Whitney and pair wise comparisons) , since pair wise comparisons

look at the original values so they are sensitive for outliers of skewness. In this situation the Mann-Whitney test is more reliable, because ranking numbers are used. Thus, in this case it can be said that websites should still focus more on men with their sustainable efforts, because for both tests it shows that men find sustainability more important than females do.

- The Cronbach alpha shows that the questionnaire has an acceptable reliability of the scale.

## **Chapter 5                      Discussion, conclusion, recommendations & limitations**

### **5.1                      Discussion**

In this discussion the literature about online reviews and sustainability is compared with the results of the research and overarching conclusions are drawn. This paragraph follows the same structure as the theory chapter (chapter 2), starting with the topic sustainable tourism, followed by the importance of sustainability for consumers and hoteliers and finally with the topic ranking sustainability.

#### **Sustainable tourism**

One of the limitations of sustainability is that the main focus goes out to the environment and only a few to the cultural and social impacts of sustainability. In the document analysis results consistent to this are found, results show that most of the sustainable efforts of hoteliers and online review websites have a main focus on the environment.

#### **Importance to consumers**

Consumers highly trust online reviews (Nielsen, 2012), something that was found in the questionnaire as well. The questionnaire shows that the majority trusts reviews of other travelers, and reviews from other travelers are also the most trusted source when it comes to information about sustainability. Most of the people look on online review websites for information about sustainability. When it comes to gender and age and importance of sustainability, it was found in the theory that women are more concerned, willing to pay and more likely to show sustainable behavior (Laroche et al., 2001; UNDP, 2012; Han et al., 2009). Although, Kang et al. (2011) found that males are inclined to pay more.

The empirical research of this study found that males value sustainability higher than females do. So it can be concluded that contrasting views exist when it comes to gender and sustainability. When looking at age it was found by Nielsen (2014), Han (2010) and Andereck (2008) that younger people (under 30 years old) find sustainability more important, and show more behavior towards this phenomenon. This questionnaire in this research shows that age and gender are the two factors that determine the importance of sustainability. In this case people under 35 years old value sustainability higher, so the results are consistent with what was found in the theory before. So it can be concluded that males under 35 years old are the best target group for online review websites when it comes to sustainability.

The topic sustainability is highly sensitive for gaps between attitude and behavior. This depends for example on experience (Rajecki, 1982), social desirability bias (Roxas and Linsey, 2011) subjective norms (Ajzen, 1991) and the value-action gap (Pickett-Baker and Ozaki, 2008). This is something that has to be kept in mind when reading the results in the questionnaire, respondents filled in the answers, but their behavior could still be different.

### **Importance to hotels**

When looking at review categories, it was found in the theory that cleanliness is the most important determinant for hotel selection (Lockyer; 2005, Ramanathan and Ramakrishnan, 2011; Dolnicar and Otter, 2003). Dolnicar and Otter (2003) found that none of the top priority elements of a hotel stay are related to the environment, and Bohdanowicz (2006) found that hotel guests find location, quality of services, price and hotel image more important than environmental concerns. This research shows results consistent to this, hygiene (which can be called a synonym to cleanliness) turned out to be the most important factor when choosing a hotel, followed by location, service, price, food and room. After this comes sustainability on a second to last place and sport/recreation/pool as the least important factor.

What is remarkable here is that more than half of the respondents find sustainability very important or important when booking a holiday, but when other factors come to play sustainability is suddenly not top priority anymore for consumers. The document analysis showed that most review websites have the categories location, hygiene, service, staff, price/quality and rooms. Sustainability is not a review category on any of these websites.

When it comes to the communication of sustainable efforts, Huegel et al. (2013) found that the communication of sustainability efforts are not well regulated and that there are large differences in reporting. Bohdanowicz et al. (2004) says that there is not only a lack of environmental knowledge and awareness among consumers, but also among hoteliers. The same result was found by Mensah (2013) who says that hotels should step-up environmental education among their guests. Not even twenty percent of the respondents in Mensah's research agree that hotels educate their guests on environmental responsibility enough. Further, front line staff should be educated about the topic. When looking at the results of this research, the document analysis showed that the front line staff does not have enough knowledge about sustainability. Also, the knowledge of the consumer about sustainability can improve, since one third of the respondents never even looks for information about sustainability. Almost 35% of the respondents of the questionnaire have a neutral standpoint about the issue of sustainability when booking a hotel. This could mean that either they do not care, or that they do not know much about sustainability. Thus, it can be said that there is still a lot of progress possible when it comes to knowledge (on both sides) of sustainability. When people have better knowledge about the topic, their attitude and behavior towards it are most likely to change as well. So knowledge improvement can be called as a first step towards more sustainability.

### **Ranking sustainability**

The issues right now with ranking sustainability are confusion, lack of awareness, the fear of high prices and green washing (Chafe, 2005; Budeanu, 2007; Green Washing Index, n.d.). Online ranking of sustainability on review websites can be a possible solution for these problems. First of all since online review websites are very popular and influencing, the awareness of sustainability will raise among consumers when sustainability becomes a ranking option. This is also the main argument of the Dear Tripadvisor campaign. Since most online review websites also offer prices besides reviews of hotels, it is convenient that consumers can directly see and compare prices so that they do not have to fear of high prices that much. Further, green washing will almost not be possible anymore, since consumers are reading reviews of others how sustainable the situation is, and not just from the hotel. Since the online ranking of sustainability will be the same as the current ranking of for example location, people will not easily be confused because they are used to the system. With the possibility to solve these problems that ranking sustainability is currently facing, ranking online of sustainability on review websites could be of high value for customers.

A limitation of online ranking on review websites also became evident which is that a lot of sustainable practices are not visible to consumers, or that they are not qualified to judge some of them. It can be said that hoteliers should be responsible for the communication about their efforts about these elements that are not visible to consumers. But, as could be seen earlier in this research, hoteliers should step-up more when it comes to informing consumers about sustainability. The contributions of this research show that opinions are spread out about reviewing sustainability online. The questionnaire showed that more than half of the respondents find sustainability either very important or important when booking a holiday, and almost the same percentages of respondents are very interested or interested in reviewing sustainability on online review websites.

Another negative side of possible implementation are the high initial costs. Not for all accommodations it will be a possibility to implement sustainability on a more advanced level, since high investments are needed which can be difficult for small companies.

## **5.2 Conclusion**

The aim of this research is to determine if sustainability is an important topic in online reviews. This research looked at both the supply side (the online review websites) and the demand side (the consumers) with the following two research questions:

1. In what ways are online review websites currently including sustainability in the review process?
2. Is it important for consumers that sustainability becomes a ranking option on online hotel review websites?

To answer the first question the main research method used is a document analysis. The first research question looked for answers in what ways sustainability is currently included in the review process. It can be concluded that sustainability does not play a big role for online holiday review websites. First of all, on none of the ten researched online hotel review websites sustainability is included as a rating choice. Information about sustainable policies is included on only six out of ten websites, four websites do not have any information about sustainability. When information is included, most of these efforts focus on the environmental elements of sustainability. Future plans with regards to sustainability are not available or are not shared by the online review websites.

From these findings in the document analysis it can be concluded that sustainability is still at the 'beginning' on online hotel review websites, with possibilities to grow further because of its importance to all stakeholders involved.

To answer the second research question the theory chapter and the questionnaire provided the necessary input. The second research question focused on the importance of sustainability becoming a ranking option, for consumers. It can be concluded that it is important for some people (but not all) that sustainability becomes a ranking option on online holiday review websites. First of all when looking at the importance of online review websites, online reviews play an important role for consumers and are a highly trusted source. The people who look for information about sustainability (around 70%) mostly look for information about it on online review websites (41%).

When looking at the importance of sustainability, more than half of the people find sustainability very important or important when booking a holiday. Further a big group (34%) is 'neutral' about the topic of sustainability. Only a bit more than 6% finds sustainability not important when booking a holiday. Especially for males younger than 35 years old sustainability is an important topic. Compared to other ranking categories sustainability ranks behind hygiene, location, service, price, food and room in importance. Thus as said before, when other factors come to play, sustainability becomes less important for consumers. Finally, people who find sustainability important are also interested in reviewing sustainability on online review websites About half of the people in this research would be interested in reviewing sustainability on online review websites.

As an overall conclusion it can be said that sustainability is not an important topic for online holiday review websites yet. For consumers and hoteliers it is an important topic, but it is not a top priority for them. There is still a gap between the attitudes towards sustainability and the actual behavior.

### **5.3 Recommendations to stakeholders**

This paragraph focuses on the recommendations for online review websites and for hoteliers, based on the results found in this research. First of all the online review websites are discussed. It is recommendable to make sustainability more visible on the websites. During the document analysis it became clear that it is difficult to find information about sustainability, it is always a bit hidden on the web pages.

Also, it can be said that there is a bit of a knowledge gap when it comes to sustainability. Every email that was sent out during the document analysis (as a follow-up when no or little information about sustainability was found), most of the time received a general response without much additional information about sustainability. It is important that an entire company is involved in sustainability, and not just the top management. When online holiday review websites choose to implement sustainability more on their websites, their main target group should be males under 35 years old, since this group values sustainability the highest. This research showed that right now around 50% of the respondents is interested in reviewing sustainability online just like any other category right now (for example price or location), and it is predicted that in the future sustainability will only become more and more important.

Secondly, there are the recommendations for the hoteliers.

It became clear in this research that there lies a big gap in the informing of consumers about the sustainability of hotels. Communication of sustainability efforts are not well regulated and there are large differences in the way of reporting. It was found that there is not only a lack of environmental knowledge and awareness among consumers, but also among hoteliers. Right now the efforts are mainly focusing on environmental impacts, and far less on economic and social impacts. Hoteliers should communicate transparently, involve consumers in their plans, and show all the necessary information about their sustainable efforts. Also, it is important that the economic and social impacts of tourism are not forgotten. To motivate consumers it is important to emphasize the importance of the decisions of individual consumers, when they choose for sustainability they make a difference. People should be convinced that everyone is responsible for sustainability, and not just the hoteliers or other stakeholders. There is one recommendation the same for the online review websites as the hoteliers, concerning knowledge about sustainability. Employees throughout the companies should be informed about sustainability, and it should not be just as a top management concern. If hoteliers choose to implement sustainability more, they can receive benefits such as economic savings, a better brand image, a competitive advantage, and higher customer demand.

## **5.4 Limitations of research and future research**

Although this research was designed to be as complete as possible, as every research it does have limitations which have to be taken into account. Therefore in this paragraph the limitations of this research are critically reflected on and suggestions are given for future research.

First of all, there is the limitation with regards to the sample size. The needed sample size in theory was 526 people, to be able to make generalizations about the entire population. But in this actual research only 204 people responded to the questionnaire. Because of this it is not possible to make statements about the entire population, so statements in this questionnaire are only applicable for the 204 people who actually answered this questionnaire.

This could have been evaded by doing a pilot study among a small group of the population, to test how many people would actually respond to the questionnaire. Right now the pilot study (among friends and family) only tested if all the questions were formulated in the right way.

Secondly, there is the limitation of using a document analysis. On the online review websites not a lot of information about sustainability could be found. In this case an email was send out (as a follow-up) to receive more information about the topic. But in most cases, the responses were quite general and not really specific. From these answers it became obvious that not every employee has the same knowledge about the topic and that some companies did not want to share information about this topic. Because of these issues, the document analysis did not really provide rich information suitable for a deep analysis. If this research would be repeated, it would be recommendable to perhaps change to another method such as interviews, to gain more rich material and deeping information.

Furthermore, for the questionnaire it should be taken in mind that sustainability is a sensitive topic, and that there is gap between the attitudes of consumers towards green initiatives and their actual behavior. As mentioned before in this research, it is possible that people answer questions differently because they keep in mind what other people might think. Socially accepted behavior and pressure from society may cause people to say something, but behave in a different way. This is not really a limitation of the research, but something that is inevitable when researching a topic such as sustainability.

The questionnaire in this research mainly looked at the characteristics of consumers with regards to their age and gender. For future research it would be interesting to look at the level of education and the yearly income of people, to see if this has effects on sustainability. Next time when creating a questionnaire it would be good to create more continuous variables, instead of nominal variables. An example of this would be to make it possible to fill in an amount, instead of choosing from categories. Further, it is recommendable to include scale variables, because they are more reliable since they have a natural zero point and quantitative intervals. And finally, there are the limitations if ranking sustainability on online review websites would become more than just a theoretical concept. As mentioned before in this research, a lot of sustainable practices are not visible to consumers, or they are not qualified to judge them. So ranking of sustainability for consumers alone will be very difficult. External parties are needed to verify information that consumers are not able to see. This goes against the concept of consumers reviewing accommodations, but is the only way to guarantee 'true' information on online holiday review websites.

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## **Appendix I                      Questionnaire**

### **1. What is your gender?**

- Male
- Female

There are two categories for this closed question, which are male and female. This question is included in the questionnaire to determine (by comparing various variables) if there are differences between males and females.

### **2. How old are you?**

- younger than 25 years old
- 25-34 years old
- 35-44 years old
- 45-54 years old
- 55-64 years old
- 65-74 years old
- older than 75 years old

There are seven categories for this closed question, ranging between younger than 24 years old and older than 75 years old. This question is included in this questionnaire to be able to do a correlation later on to determine if there are differences in age and how people think and act towards sustainability.

### **3. In what kind of composition do you mostly go on holiday?**

- Family with kids
- Couple
- With friends
- Alone
- Different, ..... (fill in yourself)

There are five categories where respondents can choose from, which are 'family with kids', 'couple', 'with friends', 'alone' or 'different: ...'. This last answer makes this question half-open because respondents can fill in something themselves or choose from the answers that are already there. This question is included to see if there are differences with whom people are going on holiday and the way they think about sustainability.

**4. What is the average amount you spend per holiday per person?**

- 100 – 400 euro
- 401-700 euro
- 701-1000 euro
- 1001-1300 euro
- More than 1300 euro

There are five categories for this closed question ranging from 100 euro to more than 1300 euro. This question is included in this questionnaire to see when people are for example spending more money on holidays, if they would find sustainability more important or the other way around.

**5. How often do you review hotels on online review websites?**

- 1-3 times a year
- 4-7 times a year
- 8-11 times a year
- Every month
- Multiple times a month

There are five categories for this closed question, ranging from 1-3 times a year to multiple times a month. This question is included to determine if there is a relationship between the usage of online review website and views towards sustainability.

**6. What do you think about this statement? ‘I trust reviews of other travelers on review websites’.**

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

Using the Likert scale respondents can choose answers ranging from ‘strongly agreeing’ to ‘strongly disagreeing’. This closed question is created to determine the trust that respondents have in reviews of other travelers.

**7. How important is sustainability for you when booking a holiday?**

- Very important
- Important
- Neutral
- Unimportant
- Very unimportant

There are five categories, ranging from very important to very unimportant which respondents can choose from. This closed question is included to determine how important sustainability in general is to respondents when booking a holiday.

**8. Rank the following elements ‘service’, ‘price’, ‘location’, ‘food’, ‘sport, recreation & pool’, ‘sustainability’ ‘room’, and ‘cleanliness’ on importance when choosing a hotel. 1 from being most important, to 8 being least important.**

	1	2	3	4	5	6	7	8
Service								
Price								
Food								
Sport/recreation/pool								
Sustainability								
Room								
Cleanliness								
Location								

This question is included to see how sustainability ranks between the other factors when choosing a hotel.

**9. Where do you find information about the sustainability of an hotel?**

- Website of hotel
- Review website
- Different ....(fill in yourself)
- I do not look for information about sustainability

To find out where respondents currently find their information about sustainability, and if respondents are looking for it at all. The 'different' option makes this a half-open question, because respondents can fill in other options themselves.

**10. From which source do you trust information about sustainability the most?**

- Information from the hotel
- Information from third independent source
- Information from reviews of other travelers

To determine which of the sources above is the most reliable source for respondents.

**11. Would you be interested to review sustainability yourself to help other travelers?**

- Very interested
- Interested
- Uninterested
- Very uninterested

To see if respondents are interested in reviewing sustainability themselves, answers are ranging from very interested to very uninterested.

## Appendix II Tables and figures

**Table 1 Age and gender in absolute numbers and percentages (%)**

**Leeftijd \* Geslacht Crosstabulation**

			Geslacht		Total
			man	vrouw	
Leeftijd	Jonger dan 25 jaar oud	Count	3	10	13
		% within Leeftijd	23.1%	76.9%	100.0%
	25-34 jaar oud	Count	4	4	8
		% within Leeftijd	50.0%	50.0%	100.0%
	35-44 jaar oud	Count	3	2	5
		% within Leeftijd	60.0%	40.0%	100.0%
	45-54 jaar oud	Count	14	32	46
		% within Leeftijd	30.4%	69.6%	100.0%
	55-64 jaar oud	Count	35	32	67
		% within Leeftijd	52.2%	47.8%	100.0%
	65-74 jaar oud	Count	43	16	59
		% within Leeftijd	72.9%	27.1%	100.0%
	Ouder dan 75 jaar oud	Count	6	0	6
		% within Leeftijd	100.0%	0.0%	100.0%
Total		Count	108	96	204
		% within Leeftijd	52.9%	47.1%	100.0%

(Age categories: younger than 25 years old, 25-34 years old, 35-44 years old, 45-54 years old, 55-64 years old, 65-74 years old, older than 75 years old). (Gender: male, female).

**Table 2 Holiday composition and age**

**Leeftijd \* Samenstelling vakantie Crosstabulation**

Count		Samenstelling vakantie						Total
		Alleen	Met vrienden	Koppel	Familie met kinderen	Familie zonder kinderen	Anders, namelijk	
Leeftijd	Jonger dan 25 jaar oud	1	5	4	1	2	0	13
	25-34 jaar oud	0	3	4	0	1	0	8
	35-44 jaar oud	0	0	2	3	0	0	5
	45-54 jaar oud	2	2	25	13	2	2	46
	55-64 jaar oud	2	13	43	2	4	3	67
	65-74 jaar oud	3	7	38	3	7	1	59
	Ouder dan 75 jaar oud	1	0	4	0	1	0	6
Total		9	30	120	22	17	6	204

Age categories: younger than 25 years old, 25-34 years old, 35-44 years old, 45-54 years old, 55-64 years old, 65-74 years old, older than 75 years old. Composition of holiday categories: alone, with friends, couple, family with children, family without children, different (...).

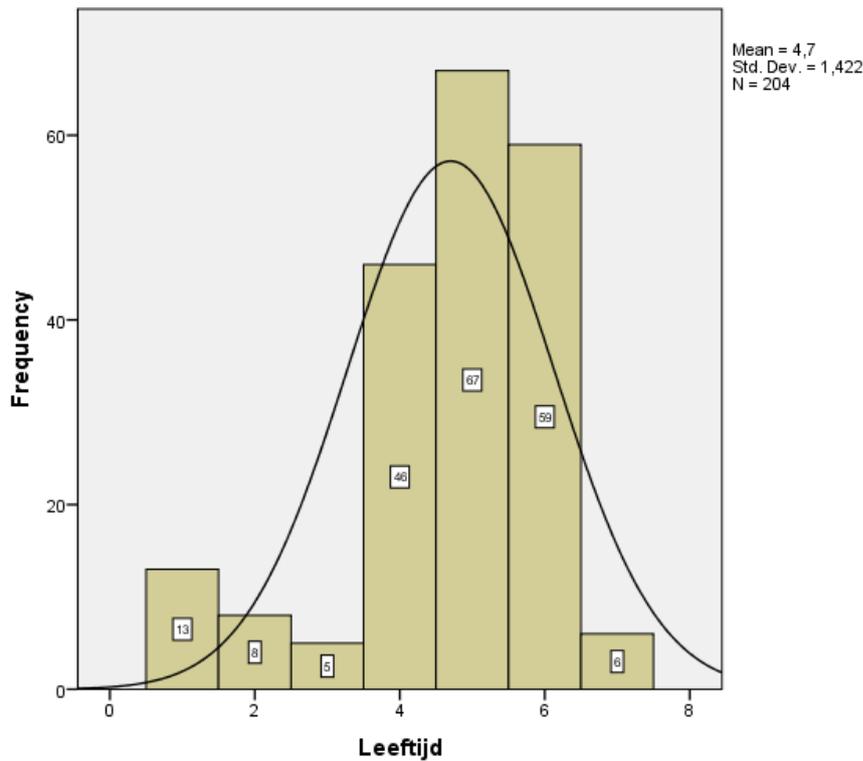
**Table 3 Spending on holidays and age**

**Leeftijd \* Gemiddeld bedrag vakantie p.p.p.v Crosstabulation**

Count		Gemiddeld bedrag vakantie p.p.p.v						Total
		100-500 euro	501-1000 euro	1001-1500	1501-2000 euro	Meer dan 2000 euro	Geen antwoord	
Leeftijd	Jonger dan 25 jaar oud	2	5	3	2	1	0	13
	25-34 jaar oud	0	3	2	2	1	0	8
	35-44 jaar oud	0	0	0	2	3	0	5
	45-54 jaar oud	1	7	17	7	13	1	46
	55-64 jaar oud	1	7	23	10	18	6	65
	65-74 jaar oud	0	10	9	12	24	4	59
	Ouder dan 75 jaar oud	0	3	0	0	3	0	6
Total		4	35	54	35	63	11	202

Age categories: younger than 25 years old, 25-34 years old, 35-44 years old, 45-54 years old, 55-64 years old, 65-74 years old, older than 75 years old. Spending: 100-500 euro, 501-1000 euro, 1001-1500 euro, 1501-2000 euro, more than 2000 euro, no answer.

**Figure 4 Histogram age distribution**



**Table 4 Difference gender & importance sustainability**

		Geslacht		Total
		man	vrouw	
Belang van duurzaamheid	Zeer belangrijk	14	19	33
	Belangrijk	47	36	83
	Neutraal	39	28	67
	Onbelangrijk	5	6	11
	Zeeronbelangrijk	2	0	2
Total		108	96	204

Importance of sustainability: very important, important, neutral, unimportant, very unimportant.

Gender: male & female.

**Table 8 Age versus interest to review sustainability**

**Correlations**

			Interesse duurzaamheid beoordelen	Leeftijd
Spearman's rho	Interesse duurzaamheid beoordelen	Correlation Coefficient	1,000	-,140
		Sig. (2-tailed)	.	,046
		N	205	204
	Leeftijd	Correlation Coefficient	-,140	1,000
		Sig. (2-tailed)	,046	.
		N	204	204

\*. Correlation is significant at the 0.05 level (2-tailed).

Interest to review sustainability versus age.

**Table 12 Average amount & gender**

			Descriptives		
Geslacht			Statistic	Std. Error	
Gemiddeld bedrag vakantie p.p.p.v	man	Mean	3.98	.115	
		95% Confidence Interval for Mean	Lower Bound	3.75	
			Upper Bound	4.21	
		5% Trimmed Mean	3.99		
		Median	4.00		
		Variance	1.420		
		Std. Deviation	1.192		
		Minimum	1		
		Maximum	6		
		Range	5		
		Interquartile Range	2		
		Skewness	-.403	.233	
		Kurtosis	-.898	.461	
	vrouw	Mean	3.48	.135	
		95% Confidence Interval for Mean	Lower Bound	3.21	
			Upper Bound	3.75	
		5% Trimmed Mean	3.46		
		Median	3.00		
		Variance	1.715		
		Std. Deviation	1.309		
Minimum		1			
Maximum		6			
Range		5			
Interquartile Range	3				
Skewness	.253	.249			
Kurtosis	-.892	.493			

Average amount spent on holidays per person. Gender: male & female.

**Table 13 Spending on holidays & importance of sustainability**

			Correlations	
			Belangduur	Gembedrag
Spearman's rho	Belangduur	Correlation Coefficient	1,000	-,032
		Sig. (2-tailed)	.	,657
		N	204	204
	Gembedrag	Correlation Coefficient	-,032	1,000
		Sig. (2-tailed)	,657	.
		N	204	204

Importance of sustainability versus average amount spent.

**Table 14 Amount of reviewing and interest to review sustainability**

Correlations			Vkbeoordeel	Intrsduur
Spearman's rho	Vkbeoordeel	Correlation Coefficient	1,000	-,113
		Sig. (2-tailed)	.	,121
		N	196	191
	Intrsduur	Correlation Coefficient	-,113	1,000
		Sig. (2-tailed)	,121	.
		N	191	191

Amount of reviewing & interest to review sustainability.

**Table 24 ANOVA based on new estimates**

Pairwise Comparisons							
(I) Geslacht	(J) Geslacht Gender	Mean Difference (I-J)	Std. Error	df	Sig.	95% Wald Confidence Interval for Difference	
						Lower	Upper
man	Vrouw (female)	.43 <sup>a</sup>	.131	1	.001	.17	.69
vrouw	Man (male)	-.43 <sup>a</sup>	.131	1	.001	-.69	-.17

Pairwise comparisons of estimated marginal means based on the original scale of dependent variable Belang van duurzaamheid (importance of sustainability)

a. The mean difference is significant at the .05 level.

(I) Leeftijd	(J) Leeftijd	Mean Difference (I-J)	Std. Error	df	Sig.	95% Wald Confidence Interval for Difference	
						Lower	Upper
Jonger dan 25 jaar oud (younger than 25 years old)	25-34 jaar oud	-.41	.391	1	.290	-1.18	.35
	35-44 jaar oud	.40	.459	1	.378	-.49	1.30
	45-54 jaar oud	.68 <sup>a</sup>	.272	1	.012	.15	1.22
	55-64 jaar oud	.96 <sup>a</sup>	.265	1	.000	.44	1.48
	65-74 jaar oud	.82 <sup>a</sup>	.273	1	.003	.29	1.36
	Ouder dan 75 jaar oud	1.68 <sup>a</sup>	.439	1	.000	.81	2.54
25-34 jaar oud	Jonger dan 25 jaar oud	.41	.391	1	.290	-.35	1.18
	35-44 jaar oud	.82	.494	1	.098	-.15	1.79
	45-54 jaar oud	1.10 <sup>a</sup>	.333	1	.001	.44	1.75
	55-64 jaar oud	1.37 <sup>a</sup>	.324	1	.000	.73	2.00

	65-74 jaar oud	1.24 <sup>a</sup>	.328	1	.000	.59	1.88
	Ouder dan 75 jaar oud	2.09 <sup>a</sup>	.473	1	.000	1.16	3.02
	Jonger dan 25 jaar oud	-.40	.459	1	.378	-1.30	.49
	25-34 jaar oud	-.82	.494	1	.098	-1.79	.15
35-44 jaar oud	45-54 jaar oud	.28	.410	1	.498	-.53	1.08
	55-64 jaar oud	.55	.402	1	.170	-.24	1.34
	65-74 jaar oud	.42	.404	1	.301	-.37	1.21
	Ouder dan 75 jaar oud	1.27 <sup>a</sup>	.527	1	.016	.24	2.30
	Jonger dan 25 jaar oud	-.68 <sup>a</sup>	.272	1	.012	-1.22	-.15
	25-34 jaar oud	-1.10 <sup>a</sup>	.333	1	.001	-1.75	-.44
45-54 jaar oud	35-44 jaar oud	-.28	.410	1	.498	-1.08	.53
	55-64 jaar oud	.27	.168	1	.103	-.06	.60
	65-74 jaar oud	.14	.179	1	.434	-.21	.49
	Ouder dan 75 jaar oud	.99 <sup>a</sup>	.387	1	.010	.24	1.75
	Jonger dan 25 jaar oud	-.96 <sup>a</sup>	.265	1	.000	-1.48	-.44
	25-34 jaar oud	-1.37 <sup>a</sup>	.324	1	.000	-2.00	-.73
55-64 jaar oud	35-44 jaar oud	-.55	.402	1	.170	-1.34	.24
	45-54 jaar oud	-.27	.168	1	.103	-.60	.06
	65-74 jaar oud	-.13	.157	1	.394	-.44	.17
	Ouder dan 75 jaar oud	.72	.375	1	.055	-.01	1.45
	Jonger dan 25 jaar oud	-.82 <sup>a</sup>	.273	1	.003	-1.36	-.29
	25-34 jaar oud	-1.24 <sup>a</sup>	.328	1	.000	-1.88	-.59
65-74 jaar oud	35-44 jaar oud	-.42	.404	1	.301	-1.21	.37
	45-54 jaar oud	-.14	.179	1	.434	-.49	.21
	55-64 jaar oud	.13	.157	1	.394	-.17	.44
	Ouder dan 75 jaar oud	.85 <sup>a</sup>	.373	1	.022	.12	1.58
	Jonger dan 25 jaar oud	-1.68 <sup>a</sup>	.439	1	.000	-2.54	-.81
Ouder dan 75 jaar oud	oud (older than 75 years old)	2.09 <sup>a</sup>	.473	1	.000	-3.02	-1.16
	35-44 jaar oud	-1.27 <sup>a</sup>	.527	1	.016	-2.30	-.24
	45-54 jaar oud	-.99 <sup>a</sup>	.387	1	.010	-1.75	-.24

55-64 jaar oud	-.72	.375	1	.055	-1.45	.01
65-74 jaar oud	-.85 <sup>a</sup>	.373	1	.022	-1.58	-.12

Pairwise comparisons of estimated marginal means based on the original scale of dependent variable Belang van duurzaamheid (importance of sustainability).

a. The mean difference is significant at the .05 level.

#### Pairwise Comparisons

(I) Geslacht	(J) Geslacht Gender	Mean Difference (I-J)	Std. Error	df	Sig.	95% Wald Confidence Interval for Difference	
						Lower	Upper
man	vrouw	.43 <sup>a</sup>	.131	1	.001	.17	.69
vrouw	man (male/female)	-.43 <sup>a</sup>	.131	1	.001	-.69	-.17

Pairwise comparisons of estimated marginal means based on the original scale of dependent variable Belang van duurzaamheid (importance of sustainability)

a. The mean difference is significant at the .05 level.