



UNIVERSITY OF ALGARVE
FACULTY OF ECONOMICS

**THE CHARACTERIZATION OF SURF
TOURISTS IN THE ALGARVE**

FABIA HANNA FRANK

Dissertation

Master in Tourism Economics and Regional Development

Work made under the supervision of:

Prof. Pedro Pintassilgo
Prof. Patrícia Valle

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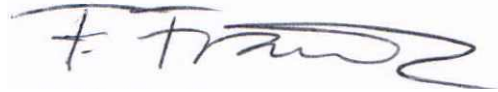
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THE CHARACTERIZATION OF SURF TOURISTS IN THE ALGARVE

Work Authorship Declaration

Fabia Hanna Frank

A handwritten signature in black ink, appearing to read 'F. Frank', written on a light-colored background.

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Abstract

Even though surf tourism in Portugal is an economic activity with a steady growth rate, there are not many assessment studies available. Using a sample of 240 participants, this dissertation aims to characterize surf tourists that stay in surf camps in the Algarve. Nearly half of all respondents (49,2%) are German. A large proportion of respondents are single (69,2%) and 43,4% of all tourists asked are young adults aged between 25 and 31 years. Moreover, one third of the 240 respondents are students. These characteristics help to explain the fact that a large proportion of the individuals have a monthly net household income that does not exceed 2.000€ (46,7%). More than half (52,1%) of all respondents are female, which does not correspond to the image of predominant male participation in surfing. Also this dissertation studies the attitudes of these surf tourists towards an accommodation tax earmarked for environmental protection in the Algarve. The relationship between some socio-demographic attributes and the willingness to pay this accommodation tax is assessed with the cross tabulation process. The willingness to pay an accommodation tax only has a direct relationship with the nationality of a respondent. Besides filling a gap in the literature, this dissertation augments the marketing intelligence for owners and managers of surf camps and surf schools, as well as agencies and organizations promoting surf tourism in the Algarve.

Keywords: surf tourism, surfing, surf camp, environmental protection, accommodation tax, Algarve

Resumo

Embora o turismo de surf em Portugal apresente uma taxa de crescimento estável, trata-se de uma atividade económica ainda pouco estudada. Assim, este estudo responde à necessidade de uma melhor compreensão dos turistas de surf, considerando o caso particular do Algarve, a região mais a sul de Portugal continental e onde o turismo é a principal atividade económica.

As três principais questões de investigação deste trabalho são:

1. Quais as principais características dos turistas de surf no Algarve?
2. Estarão os turistas de surf dispostos a pagar uma taxa, incluída no preço do alojamento, destinada à protecção do meio ambiente?
3. É possível encontrar uma relação entre a predisposição dos turistas para pagar essa taxa e alguns atributos sociodemográficos?

A fim de recolher os dados quantitativos e qualitativos necessários ao estudo aplicou-se um questionário a 240 turistas de surf alojados em campos de surf no concelho de Vila do Bispo, no Algarve. A pesquisa foi realizada em setembro e outubro de 2013. A primeira parte do questionário focava a estada no Algarve e no campo de surf. A segunda parte visava aferir o nível de consciência ambiental dos turistas e questionava se estariam dispostos a pagar uma taxa, incluída no preço do alojamento, que seria usada para arrecadar fundos para a proteção ambiental da zona costeira. A escala do “Novo Paradigma Ambiental (NEP)” foi usada para avaliar a consciência ambiental dos turistas. A última seção incluía questões sobre características sociodemográficas.

O principal objetivo deste estudo é a caracterização dos turistas de surf que permanecem em campos de surf. Uma grande proporção dos entrevistados são solteiros (69,2%) e 43,4% são jovens adultos com idade entre os 25 e os 31 anos. Para além disso, um terço dos 240 entrevistados são estudantes. Estas características ajudam a explicar o facto de uma significativa proporção dos entrevistados apresentar um rendimento não superior a 2.000€ (46,7%). Mais da metade (52,1%) de todos os entrevistados são do sexo feminino, o que não corresponde à imagem de participação masculina predominante no surf. Três dos quatro países mais representados neste estudo são de língua alemã (Alemanha, Áustria e Suíça), o que corresponde a 65,8% de todos os entrevistados. Assim, considera-se que o Algarve, como um destino de surf, deve procurar ajustar as suas campanhas promocionais de turismo a fim de atrair mais turistas de outros países,

onde o Algarve como um destino de surf ainda não é conhecido.

Entre todos os entrevistados, 67,9% são iniciantes e 57,1% fizeram a reserva do campo de surf através da internet. O preço médio pago por uma semana no campo de surf é de 426€. Grande parte dos inquiridos considera esse preço razoável (62,9%), a maioria dos quais (74,6%) indicando que não estaria na disposição de pagar mais. Relativamente à satisfação com a estadia, 55% dos turistas manifestam-se satisfeitos e 32,9% muito satisfeitos. Entre os respondentes, 85,4% manifestou a intenção de voltar e quase todos eles (97,9%) recomendariam a viagem a amigos e familiares.

Uma grande parte dos turistas (85,8%) estaria disposta a pagar uma taxa de alojamento destinada à proteção ambiental, sendo o intervalo de valores mais comum (em 47,5% dos casos) de 2-4 € por noite. Este é um resultado que responde à segunda questão de investigação proposta neste trabalho. Com base na escala NEP, constituída por quinze afirmações sobre a relação entre os seres humanos e o meio ambiente, foi, também, possível verificar que a maioria dos inquiridos neste estudo tem uma visão ecológica.

A relação entre os cinco atributos sociodemográficos e a disposição para pagar uma taxa, incluída no preço do alojamento, destinada à protecção do meio ambiente foi avaliada através de tabulações cruzadas que permitem descrever a relação entre pares de variáveis. Neste estudo a disposição para pagar esta taxa surge independente de todas as características sociodemográficas testadas, com exceção da nacionalidade. Com efeito, os turistas da região de DACH (Alemanha, Áustria e Suíça) estão mais dispostos a pagar a taxa de alojamento do que os turistas dos outros países em análise.

Para além de preencher uma lacuna na literatura, este estudo traz conhecimentos importantes para a gestão de marketing dos proprietários e gerentes de campos de surf e escolas de surf, bem como para as agências e organizações que promovem o turismo de surf no Algarve.

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1 INTRODUCTION

Surfing is defined as “the act of riding an ocean wave while standing on a surfboard and broadly includes other aspects of wave riding, such as riding prone on a ‘bodyboard’ or simply ‘bodysurfing’ (using only one’s body surface to plane across the wave)” (Martin & Assenov, 2012: 257). The sport is practiced in almost all countries worldwide that are bordered with water and even in a few landlocked countries, like Switzerland (Murphey & Bernal, 2008). The surfing industry is a multibillion dollar industry, including the production of soft as well as hard goods, such as clothing and equipment, media publications, surf schools and rentals, surf camps, contests and surf parks (Murphey & Bernal, 2008). Surfing is known as a sport and recreational activity with strong lifestyle associations (Moutinho, Dionísio & Leal, 2007).

Surf tourism is a sub-section of Adventure Tourism and therefore refers to commercial tourism products aimed at adventure seeking travellers looking for a mixture of sport, culture and nature experiences (ASMAA, 2013). The surf tourism sector can be divided into four specific traveller markets: experienced surfers travelling alone, surfers that go on surf packaged safaris and tours, travellers taking surf lessons and travellers seeking for the surf experience in surf resorts or surf camps (ASMAA, 2013).

According to Bicudo & Horta (2009) surf in Portugal is seen not only as a sport but also as an economic activity with a steady growth rate since it was introduced to Portugal in 1958. With over 800km of coastline, high quality beaches and a mild climate with the highest number of sunshine hours per year in Europe (Turismo de Portugal, 2007), Portugal has perfect conditions for surf tourists. Regardless of the steady growth of the sector, research in this area is difficult to perform due to the lack of data and information available. Tourism boards, local governments and the tourism industry have not yet begun to keep accurate records of surf visitation, tourist spending or stay duration. Even though surf tourism is a global phenomenon, research has only been carried out in a few countries and this may show a knowledge gap (Martin & Assenov, 2012). Of 162 countries in which surfing occurs, only 18 countries have conducted research on surf tourism (Martin & Assenov, 2012). This is progressively changing with

more and more universities, especially in Australia, New Zealand and the U.S., offering courses and degrees in surf industry management. This way more research based on the activity is becoming available (Murphey & Bernal, 2008).

Given the growing size of this niche tourism, this study responds to the need for a better understanding of surf tourists in the Algarve. The focus lies on the characterization of tourists that stay in surf camps – small hotels, offering surf tours and surf classes, mostly in the touristic regions and in popular surf spots – in the Algarve. Furthermore the attitudes of these tourists towards the implementation of an accommodation tax used to raise funds for the environmental protection of the coastal zone, which was strongly damaged by the negative effects of mass tourism, are analyzed. Valle, Pintassilgo, Matias & André (2012) refer that unlike many other countries in the world, in Portugal there are no specific taxes levied on accommodation and a reduced value added tax (VAT) rate of 6% is applied to the sector. This matter, combined with the governmental financial problems, makes implementing accommodation taxes a likely outcome in the future.

Based on a survey carried out in the region, one of the aims of this study is to characterize the socio-economic characteristics of tourists staying in surf camps using simple descriptive analysis (Section 4.1). Secondly, in section 4.2, the statistical difference of the means of certain variables are evaluated using the independent samples t-test. Finally in section 4.3 cross tabulation, a two (or more) dimensional table that describes the relationship between variables (Pontius & Cheuk, 2006) is used to determine the responsiveness of this specific tourist segment towards an accommodation tax earmarked for environmental protection. This information can contribute to the management and development of surf activity in the Algarve.

Thus the three main questions of this study are:

1. What are the main characteristics of surf tourists in the Algarve?
2. Are surf tourists willing to pay an accommodation tax earmarked for environmental protection?
3. Is it possible to find a relationship between tourists' willingness to pay an accommodation tax earmarked for environmental protection and socio-demographic attributes?

To strengthen the first main research question two hypotheses are formulated and tested. These are:

1. Older tourists have a more improved surf level than younger tourists;
2. People with a higher income spend more for their stay in the surf camp.

Then another five hypotheses are formulated and tested in order to answer the third main research question. The hypotheses are:

3. There is a relationship between the nationality of a participant and the amount he/she is willing to pay as an accommodation tax used for environmental protection;
4. Women pay more for an accommodation tax used for environmental protection than men;
5. Older participants are willing to pay a higher accommodation tax used for environmental protection than younger participants;
6. The higher the educational level of a participant the more he/she is willing to pay for an accommodation tax used for environmental protection;
7. The higher household income of a participant the more he/she is willing to pay for an accommodation tax used for environmental protection.

This dissertation is structured as follows: in section 2 a literature review about the history of surfing, surf tourism, surf camps, surf tourists, environmental awareness and tourism taxation, is undertaken. In section 3 the methodology is presented, including details about the study area, the survey and the data analysis method. Then, in section 4, the results are presented and discussed. Finally in section 5 the main conclusions are exposed.

2 LITERATURE REVIEW

In this section literature on various topics, that are important for this dissertation, is explored. Starting with the history of surfing, to find out where this sport has its roots. In sub-section 2 literature about surf tourism in general and the development of this sector over the years is explored. As the tourists characterized in this dissertation are tourists that stay in surf camps, surf camps are defined in sub-section 3 and an overview of surf tourists' characteristics worldwide is given in sub-section 4. In the last 2 sub-sections a literature review of the environmental awareness of tourists as well as of tourism taxation are given, as this is another important issue discussed in this dissertation.

2.1 History of surfing

The riding of waves has probably existed since the first humans began swimming in the ocean, which means that bodysurfing is the oldest type of wave-catching (Finney & Houston, 1966). Riding waves standing on surfboards was developed by the Polynesians, a nation that lived in harmony with the ocean. As there is no certainty about the timeline and movements of this nation, we can only guess that surfing is more than 4000 years old (Siggemann, 2011). The first written record of surfing however was made in 1778 by Captain James Cook, who was amazed to see men and women riding long wooden planks across the face of breaking waves, as his ship pulled into Kealahou Bay on the Hawaiian Islands. Travellers that came to Hawaii were admiring the locals playing with the waves and talked about their experience back home (Probst, Schmutz & Eberhard, 2005). Through their stories they brought surfing to other parts of the world. Due to the interest of the tourists, Hawaiian surfers started to teach them how to surf. One of the teachers was known by the name of Duke Kahanamoku (Finney & Houston, 1966). In 1914 he was the first man surfing a wave in Australia and today he is regarded as the father of modern surf (Probst et al., 2005). According to Booth (1995) before the outbreak of World War II, surfing was a recognized leisure activity in the

Pacific Rim region, particularly in Southern California, Australia, New Zealand and Peru, as well as in South Africa. After the war surfing worldwide developed as a recreation and an organized sport (Booth, 1995).

2.2 Surf Tourism

As defined by Dolnicar & Fluker (2003a) surf tourism involves people travelling to either domestic destinations for not more than six months or international destinations for not more than 12 months, who stay at least one night and where the primary motivation for the location selection is the active participation in surfing. This definition also includes travelling to or with surf schools. Surfing as a sport and the act of travelling are two behaviours that suit each other very well. *Searching for the perfect wave* is a belief that is shared by many and it describes the willingness of surfers to undertake travels with the hope to find their personal, perfect wave (Dolnicar & Fluker, 2003a).

With more and more affordable plane travels, lighter surfboards and the image of a surfing culture, which was delivered by the media, the surf travel boom started in the 1960s. (Tantamiarik, 2004). In 1962 surf tourism as a concept was taken globally with the release of the film “The Endless Summer“ by Bruce Brown, a documentary movie showing two young, enthusiastic surfers from California who followed the season around the globe in search of new surf breaks and the “perfect wave”. This film introduced surf tourism to the world, to both surfers and non-surfers (Martin & Assenov, 2011a).

Commercial surf tourism, which has only become popular in the 1990s, is now an important component of the tourism sector worldwide (Buckley, 2002a). Slowly surf tourism has become an important component of the tourism and also the adventure tourism industry (Dolnicar & Fluker, 2003a), generating economic, social and environmental importance to justify academic attention (Buckley, 2002a).

Buckley (2002a) claimed that in 2002 there were over 10 million surfers worldwide, a third of them cash-rich and time poor and therefore potential tour clients. According to Ponting (2008) in 2007 there were 112 countries offering some kind of surf tours or having information available for tourists related to surfing. Even though calculating the size and economic significance of this tourism sector is not an easy project (Buckley,

2003), the aggregate economic value worldwide can be estimated to be around one quarter of a billion U.S. dollars per year, and increases annually (Ponting, 2008).

However, it should be noted that surf destinations in developed and developing countries often have hundreds of small surf tourism operators whose economic value is usually not accounted for (Ponting, 2008). The industry also includes businesses offering supplementary products, like souvenirs and clothing. By offering more specialized services such as surf schools and camps, the surf tourism industry promises additional growth (Moutinho et al., 2007). As stated by Ponting (2008), surf tourism now appears on almost every surfable coast on all continents worldwide. Even though the position of surf tourism on the world tourism stage is steadily growing, there is not yet a significant body of research available (Ponting 2008).

2.3 Surf camps

As mentioned previously, surf tourism started with independent self-guided travels in order to search for the perfect wave (Ponting & McDonald, 2013). Nowadays the majority of surf travellers are no longer backpackers with a lot of free time, but travellers that rely on tour operators to help them coordinate their surf experience (Pitt, 2009). Specialized commercial surfing tours began with basic surf camps in the late 1970s (Nourbakhsh, 2008), whereas today the surf tourism industry has grown profoundly and is represented by various market segments (Martin & Assenov, 2011a). According to Martin & Assenov (2011a) these segments include:

- Highly experienced surfers travelling to locations like Hawaii, Indonesia, South Africa or Western Australia to experience big, high quality waves
- Intermediate surfers who stay in surf camps where lessons, coaching, access to equipment are included
- Beginner surfers looking for surf lessons in a safe wave environment

Surf camps have become a popular surf travel option worldwide for all budgets. They range from budget surf camps, traditional surf camps, remote surf camps, yoga and surf camps, adventure surf camps to luxury surf camps. Surf camps can be held in different locations, ranging from campgrounds and hostels to resorts, luxury villas and even surf charters and yachts (The Surf Camp Adventures Company, 2013).

2.4 Surf tourists

Specific research about characteristics of surf tourists in European surf destinations has not, to the best of our knowledge, been published in the tourism literature. However, there is some research available that advances the understanding of surf tourists worldwide, particularly Dolnicar & Fluker (2003b) and Barbieri & Sotomayor (2013). When reviewing these two studies, both queried socio-demographic characteristics, such as age, gender, education, income level, through questionnaires. Dolnicar and Fluker (2003b) surveyed tourists in Sydney, Australia, while Barbieri & Sotomayor (2013) surveyed tourists worldwide. Nevertheless, both studies exhibit very similar results concerning the socio-demographic characteristics of surf tourists. Dolnicar and Fluker (2003b) and Barbieri & Sotomayor (2013) state that there exists a predominant male participation in surfing with a mean of age of 30 years (Dolnicar and Fluker, 2003b) and 35 years (Barbieri & Sotomayor, 2013). Both studies are consistent with the fact that surf tourists have a high educational and income level.

2.5 Environmental awareness

According to Dolnicar, Crouch & Long (2008) there are many studies about sustainable tourism and eco-tourism available, but not many that explore the profile of tourists that behave pro-environmental. Nevertheless these findings are crucial to understand environmentally friendly tourists. When reviewing empirical eco-tourism studies, Dolnicar (2010) states that socio-demographic as well as psychographic variables could be valuable predictors of pro-environmental behavior. Various studies have examined the possible relationships between socio-demographic variables and pro-environmental behavior, yet without any clear results (Mehmetoglu, 2010). The variables that seem to have the most effect on environmentalism are: age, gender, education, income and political orientation (Dolnicar, 2010). Surprisingly, only one of these variables, a higher level of education, have had the same results in most studies with a generally positive effect (Dolnicar, 2010). Most studies conclude that ecotourists with higher incomes are more concerned about the environment, whereas a small number of studies conclude the exact opposite (e.g. Mehmetoglu, 2010). The conclusions on age are the most contradictory: positive, insignificant and negative effects on pro-environmental behaviour have been found in empirical studies (Dolnicar et al., 2008). Similarly no

clear results have been found from the analysis of the variable gender, even though some studies state that ecotourists tend to be female (Dolcinar, 2010). Finally, according to (Mehmetoglu, 2010) politically liberal orientated ecotourists are more likely to behave environmentally friendly.

The New Environmental Paradigm (NEP), which is used in this dissertation, is probably the most widely used psychometric scale to measure environmental values or attitudes worldwide (Dunlap, 2008). It is used as a survey instrument and the aim is to measure the environmental worldview of people or groups, with 15 statements about humans and the environment (Noblet, Anderson & Teisl, 2013). According to Lundmark (2007) central aspects of NEP include:

- Human domination over nature;
- Human exemptionalism;
- Balance of nature;
- The risk of an eco-crisis;
- Limits to growth.

2.6 Tourism taxation

Tourism taxation has always been an issue and since the 1980s it has spread worldwide (Gago, Labandeira, Picos, and Rodríguez, 2009; Mak, 2006). According to Mak (2006), travelling tourists are confronted with a collection of taxes. This can start with an entry tax when visiting another country and end with an exit tax when leaving (Mak, 2006). During their stay, tourists have to pay general taxes regarding the consumption of different goods and services in their chosen destination (Gago et al., 2009), for example hotel room rentals, restaurant meals, gifts and souvenirs, car rentals and admission to visitor attractions (Mak, 2006). Also they might have to pay specific tourism taxes, like visa fees, entry/exit charges and accommodation tax, which have become more accepted over the past years (Mak, 2006). WTO (1998) refers to more than 40 different specific tourism taxes worldwide. According to Gooroochurn & Sinclair (2005) tourism taxes are charged for two main reasons: to correct market failures (for example monopoly power, public goods and externalities) and/or to generate revenue. The tourism sector is a relatively easy sector to tax and due to its high revenue growth potential it is a popular target for taxation (Durberry & Sinclair, 2001).

LITERATURE REVIEW

Accommodation tax is relatively uncomplicated to collect and inexpensive to administer, and is therefore the most common specific tourism taxation worldwide (Gooroochurn & Sinclair, 2005; Gago et al., 2009). Normally it is charged per night on stays at hotels and other accommodation establishments, either as an ad valorem tax (tax rate as a percentage of the price) or an ad quantum amount (unit tax), and therefore targets most tourists. Because it can be differentiated according to accommodation type, location and season, accommodation tax is a very flexible instrument. The revenue is sometimes set aside to fund projects with the aim of improving the quality of tourist activities and preserving the environment (Gago et al., 2009). Hawaii, one of the most popular surf destinations worldwide, implemented a Transient Accommodation Tax (TAT) (which applies to all transient accommodations) of 7% in 1998 (Bardolet & Sheldon, 2008). Despite protests that non-hotel accommodations evaded the tax, the taxation continues. The additional funds are used to reach sustainability goals, like preservation of the environment, culture and heritage (Bardolet & Sheldon, 2008).

3 METHODOLOGY

3.1 Study area

The Algarve is the most southern region of mainland Portugal, located on Europe's most western tip. It covers an area of 4 996 square kilometers, is segmented into 16 counties and has a coastline of 318 kilometers (Statistics Portugal, 2012). The population of the Algarve is 444 390 inhabitants (Statistics Portugal, 2012). Tourism in the Algarve is extensive and the major economic activity. With around 3 million tourists visiting the Algarve each year (Statistics Portugal, 2012), the region is the most popular tourist destination in Portugal and one of the most popular in Europe. The climate in the Algarve is semi-Mediterranean with a soft winter and a long summer. The annual average temperature is around 18 degrees Celsius (Statistics Portugal, 2012).

Vila do Bispo is located in the south western corner of the Algarve and therefore is the only county in Portugal with two coastlines, the south and west coasts. This location makes the area perfect for surf tourism, as there are nearly no days without any suitable waves at one of the many surf spots on either coast. Both coastlines are known for perfect waves on beautiful beaches. Sagres is the most known town of the county and famous for "Cape Saint Vincent", the south westernmost point of Europe.

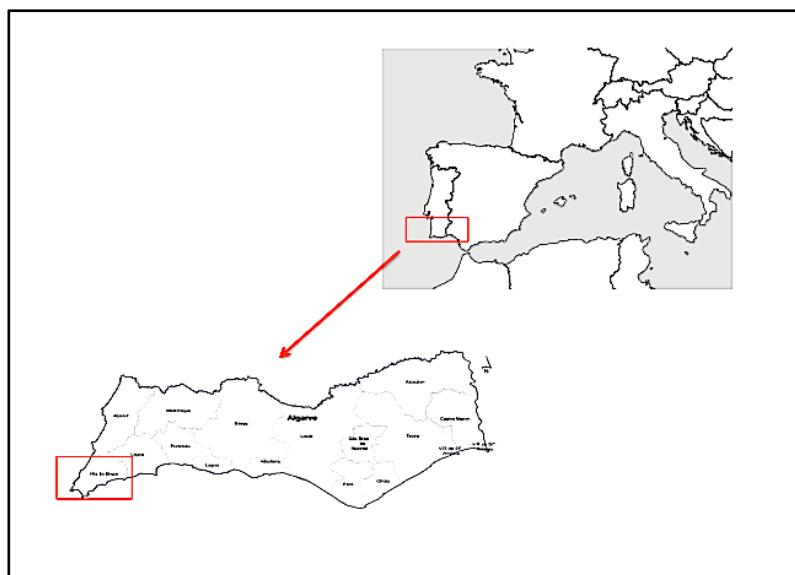


Figure 3.1 Geographic localization of Algarve and the Vila do Bispo county

3.1 The survey

The survey was undertaken during September and October 2013, months of high surf tourism, in eight different surf camps in various locations in the county of Vila do Bispo. The surf camps were chosen randomly, four in Sagres and four in smaller villages in the county. For the surf camps to remain anonymous, further information is not provided.

A survey questionnaire was designed to collect quantitative and qualitative data from tourists staying in surf camps in the study area. The survey aimed to characterize these tourists. The questionnaire was prepared in English (Appendix 1) and German (Appendix 2), included 23 questions and was segmented into three parts. Respondents were firstly asked about their stay in the Algarve and the surf camp, in order to get information such as the length of their trip, their satisfaction with the price paid and their overall satisfaction. The surf stage of each respondent was asked, to get an overview if people mainly visit surf camps to learn surfing or if experienced surfers also stay in surf camps. The second part focused on the environmental awareness of the tourists. The tourists were asked if they would be willing to pay an accommodation tax earmarked for environmental protection. The New Environmental Paradigm (NEP) scale was used to assess information about the environmental attitudes of the respondents. The last survey section queried socio-demographic information, to find out the characteristics of the people that stay in surf camps, such as where they are from, which age group they belong to, what profession they have and what income they have.

The questionnaire was applied evenly at the eight different surf camps and after eight weeks a sample size of 256 tourists was reached. The survey was run in the surf camps at night, rather than in the lunch break at the beach, as the surf tourists are less distracted in the camp and have more time to fill out the questionnaire attentively. A total of 240 valid questionnaires were obtained, corresponding to 93,7%¹ of the selected sample.

¹ This number ensures a maximum margin of error of 6,3% for a 95% confidence interval on a population proportion. Using the most conservative estimate for a single proportion (0,5) the maximum margin of error was computed as $e = \frac{\sqrt{(0.5)(0.5)}}{240}$.

3.2 Data analysis method

After the collection of the surveys, the data was entered into the IBM SPSS Statistics 22 program for analysis. First frequencies of all variables were measured and transferred into tables and charts in order to allow an initial characterization of the sample, describing the profile of the tourist and their trip to the surf camp.

Then, using the New Ecological Paradigm (NEP) scale, the environmental awareness of the respondents was assessed. This was followed by the proposal and testing of seven hypotheses in order to answer the main research questions. Hypothesis 1 (H1) and Hypothesis 2 (H2) were tested with the independent samples t-test, a statistical test that compares the means of two unrelated groups on the same continuous, dependent variable. The aim of this method is to find out if the means of the tested variables are statistically different to each other.

Then another five hypotheses (H3 – H7) were tested to find out about the relationship between some socio-demographic variables (nationality, gender, age, educational level, household net monthly income) and the willingness to pay an accommodation tax. For these hypotheses the interrelation between variables was assessed with the cross tabulation process. Whether or not the variables are statistically independent of the target variable depends on the p-value of the Pearson's chi-squared test. The critical value is set to 5%, the most commonly used value. If the p-value is smaller than 0,05, it is concluded that there is a significant relationship between the variables and therefore one variable is dependent on the other. In the next section cross tabulation tables are only presented for statistically significant relationships.

4 RESULTS AND DISCUSSION

4.1 Simple description

4.1.1 Socio-demographic characteristics

The main socio-demographic characteristics of the surf tourists surveyed is provided in Table 4.1. Nearly half of all respondents are German (49,2%), living in Germany (48,8%). This matter is consistent with the fact that German tourists play an important role in the county of Vila do Bispo. In 2012 Germans rank second in terms of nights spent in hotel establishments in Vila do Bispo (38.240 nights), which is very close to tourists from the UK (41.744 nights) (Statistics Portugal, 2012). As can be seen in Figure 4.1, three out of the four most represented nations in this study are German speaking (Germany, Austria and Switzerland). This can be associated with the fact that surfing is a trend sport in these countries and more and more people want to be part of the surf lifestyle (Probst et al., 2005). Due to this boom, a lot of surf camps in the Algarve focused their advertising and promoting on exactly those three countries. Tables with all frequencies of the variables “nationality” and “country of residence” can be found in Appendix 3 and 4 respectively.

Table 4.1 Socio-demographic characteristics of the sample

Variables	Distribution of answers
Nationality	German: 49,2%; Austrian: 10,8%; Russian: 7,1%; Swiss: 5,8%, others: 27,1%
Country of residence	Germany: 48,8%; Austria: 10,8%; Switzerland: 7,9%; UK: 7,1%, others: 25,4%
Gender	Female: 52,1%; male: 47,9%
Age	<18: 4,6%; 18-24: 30,8%; 25-31: 43,4%; 32-38: 12,5%; 39-45: 1,3%; >45: 1,7% missing: 5,8%; mean: 26,5
Marital Status	Single: 69,2%; divorced/separated: 2,9%; married/living together: 27,9%
Children under 18?	No: 93,3%; yes: 5,4%; missing: 1,3%
Educational level	Primary: 10%; secondary: 28,3%; Bachelor: 29,2%; Master: 27,5%; PhD: 3,8%; missing: 1,2%
Monthly net household income	Lower than 1.000€: 22,1%; 1.001-2.000€: 24,6%; 2.001-3.000€: 17,1%; 3.001-4.000€: 10%; 4.001-5.000€: 3,8%; higher than 5.000€: 5%; missing: 17,5%

RESULTS AND DISCUSSION

More than half of the respondents are female (52,1%), which does not correspond to the idea of a predominant male participation in surfing (Dolnicar & Fluker, 2003b, Nourbakhsh, 2008). A large proportion (43,4%) of respondents are young adults between 25 and 31 years and 30,8% are aged between 18 and 24 years. The average age is 26. Out of all 240 respondents 69,2 % are single and 93,3% do not have children under 18. The educational level shows a widespread distribution with 28,3% of the respondents with secondary education, 29,2% with a Bachelor degree and 27,5% with a Master degree. 17,5% of all respondents were not willing to state their monthly net household income and therefore this variable is the one with the most missing values in the study. The most frequent class of monthly net household income is 1.001-2.000€ (24,6%), followed lower than 1.000€ (22,1%), which is not surprising as one third of the respondents are students.

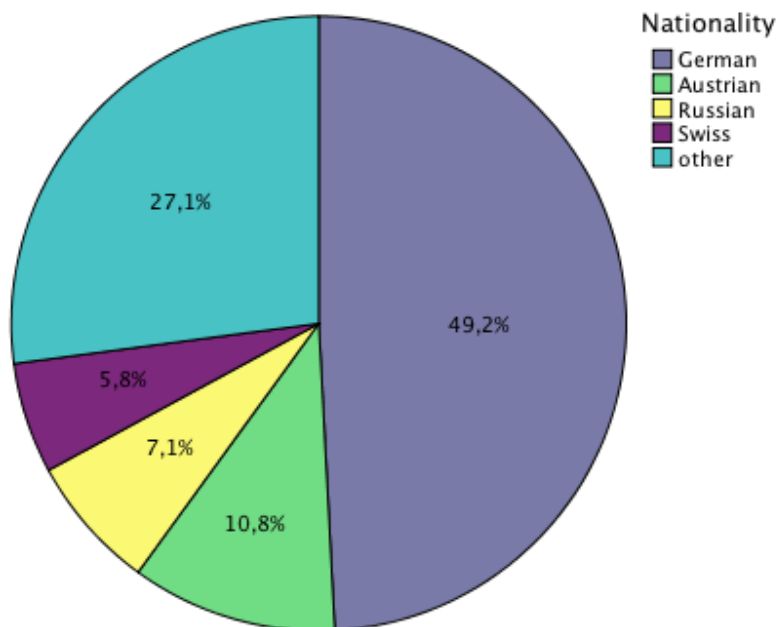


Figure 4.1 Graphical representation of the variable “Nationality”

4.1.2 Trip to the Algarve and surf camp

Table 4.2 shows the behavioral characteristics of tourists concerning their stay in the Algarve and the surf camp.

Table 4.2 Tourists' behavioural characteristics concerning their stay in the Algarve

Variables	Distribution of answers
Days in the Algarve	1-7 days: 36,7%; 8-14 days: 57,9%; > 14 days: 5,4%; mean: 9,975
Travelling...	with friends: 52,5%; alone: 26,7%; with family: 15,4%; other: 5%
First stay?	Yes: 77,9%; no: 20,4%
Surf Stage	Beginner: 67,9%; intermediate: 27,9%; experienced surfer: 3,3%
Decision making through:	Internet: 57,1%, newspapers/magazines: 1,7%; friends/family: 33,3%; included in travel agency package: 0,8%, other: 7,1%
Price for stay per week	<300€: 7,5%; 301-400€: 35,4%; 401-500€: 38,8%; 501-600€: 8,3%; >600€: 5%; missing: 5%; mean: 425,8
Including:	Accommodation: 98,8%; breakfast: 95,4%; other meals: 26,3%; surf lessons: 59,2%, surf equipment: 58,3%; other: 12,5%
The price is...	Very cheap: 3,3%; cheap: 18,3%; reasonable: 62,9%; expensive: 11,7%; very expensive: 2,5%
Willingness to pay more	No: 74,6%; yes: 23,8%
Satisfaction with stay	Very unsatisfied: 1,7%; unsatisfied: 1,3%; not satisfied nor unsatisfied: 7,9%; satisfied: 55%; very satisfied: 32,9%
Intention to return?	Yes: 85,4%; no: 14,2%
Recommendation friends/relatives	Yes: 97,9%; no: 2,1%

Most respondents (57,9%) are staying for 8-14 days in the Algarve, which can also be observed in the Figure 4.2. The mean of the variable is 9,975. According to [Statistics Portugal \(2012\)](#) in 2012 foreign guests in average stayed 5,2 days in the Algarve. The surf tourists in this sample therefore stay nearly twice as long. The majority are travelling with friends (52,5%) and 26,7% alone. 77,9% of the respondents state that this is their first stay in a surf camp in the Algarve, which indicates that there are not many repeaters (20,4%).

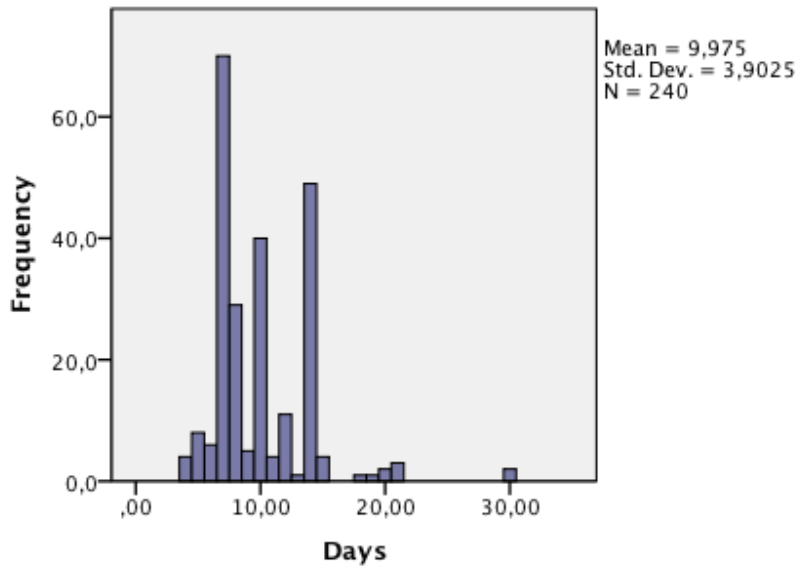


Figure 4.2 Graphical representation of the variable “Length of stay”

As surf camps are mostly booked in packages, including surf lessons for beginners (59,2%), it is not surprising that 67,9% of all respondents are beginners. The advertising of surf camps mainly occurs over the internet, where more than half of the 240 respondents found their surf camp (57,1%). Another third (33,3%) found out about their particular surf camp from family and friends. 38,8% of all tourists paid 401-500€ for their stay in the surf camp, nearly all of them (98,8%) including accommodation and breakfast (95,4%). The average price paid for a week in the surf camp is therefore 426€ and the respondents find the price they paid mostly reasonable (62,9%), most of them (74,6%) stating that they would not be willing to pay more. Regarding satisfaction the most frequent answers are satisfied (55%) and very satisfied (32,9%). Out of all people questioned 85,4% want to return and nearly all of them (97,9%) would recommend their trip to friends and relatives.

4.1.3 Environmental awareness

In Table 4.3 the attitude towards an accommodation tax earmarked for environmental protection in the Algarve can be observed. For that the tourists were confronted with the following scenario:

Suppose an environmental fund were raised to protect the Algarve's coastal area. This would be used to finance among other things:

- *Preservation of natural environments;*
- *Environmental improvements to beaches and other coastal areas.*

Assume further that this fund would be financed through an accommodation tax paid as a fixed amount per day spent in an accommodation establishment in the Algarve.

Would you be willing to pay this? (In affirmative case) How much?

Note that the tax would be collected by the accommodation establishment and paid as a fixed amount per night as part of the total price, independent of other taxes such as VAT. It should be pointed out that according to the Portuguese billing system, the customer is always presented with the final price (after tax) and all relevant taxes are shown in the receipt.

Table 4.3 Attitude towards accommodation tax

Variables	Distribution of answers
Willingness to pay an accommodation tax earmarked for environmental protection	Yes: 85,8%; no: 13,8%; missing: 0,4%
Amount willing to pay	<2€: 23,0% ; 2-4€: 47,5%; 5-7€: 19,1%; >7€: 10,3%

A total of 85,8% of all 240 tourists asked would be willing to pay this kind of accommodation tax. This is a very clear outcome and therefore answers the second main research question. Table 4.3 also shows the distribution of the amount willing to be paid by the tourists. Of the tourists who stated that they would be willing to pay an accommodation tax, 47,5% answered that they would be willing to pay 2-4€ per night. This matter will be further analyzed in part 4.3.

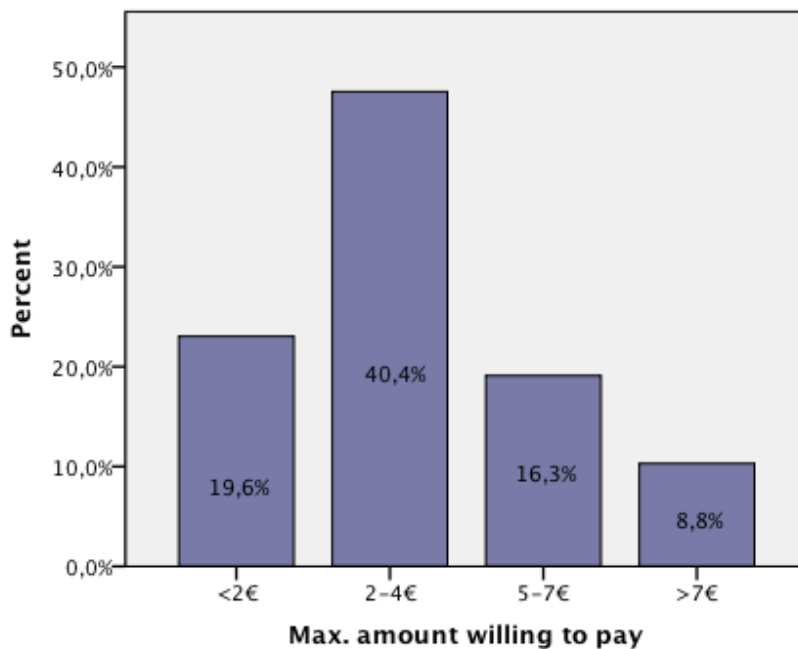


Figure 4.4 Willingness to pay an accommodation tax

Environmental attitudes of the respondents were examined with the NEP using a Likert-type-5-point scale (1= totally disagree; 2= disagree; 3= indifferent; 4= agree; 5= totally agree). For analysis reasons the table was reduced into a Likert-type-3-point scale table (Table 4.4) The table shows the valid percent values. The original table can be found in Appendix 5.

The statements are categorized into eight items (green) assessing an ecological view and seven items (blue) assessing an anthropocentric view (e.g. [Waikato Regional Council Technical Report, 2013/11](#); [Lundmark, 2007](#); [Noblet et al., 2013](#)). For example “Humans are severely abusing the environment” is an ecological item and “Humans will eventually learn enough about how nature works to be able to control it” is an anthropocentric item. Therefore to show a positive environmental attitude the respondents should agree with the ecological statements and disagree with the anthropocentric statements. In this study the average respondents’ attitudes are pro-ecological. For example, 71,6% of respondents agree or strongly agree that “the balance of nature is very delicate and easily upset” (Figure 4.5).

Table 4.4 Environmental awareness Likert-type-3-point

	Completely disagree and disagree	Indifferent	Agree and completely agree
We are approaching the limit of the number of people the earth can support	20,1%	26,8%	53,1%
Humans have the right to modify the natural environment to suit their needs	51,5%	25,1%	23,4%
When humans interfere with nature it often produces disastrous consequences	12,1%	16,7%	71,1%
Human ingenuity/creativity will ensure that we do NOT make the earth unlivable	26,4%	37,2%	36,4%
Humans are severely abusing the environment	3,8%	22,3%	73,9%
The earth has plenty of natural resources if we just learn how to develop them	3,8%	10,9%	85,4%
Plants and animals have as much right as humans to exist	8,4%	10,0%	81,6%
The balance of nature is strong enough to cope with the impacts of modern industrial nations	64,4%	21,8%	13,8%
Despite our special abilities humans are still subject to the laws of nature	7,5%	16,7%	75,8%
The so-called “ecological crisis” facing humankind has been greatly exaggerated	50,0%	34,0%	16,0%
The earth is like a spaceship with very limited room and resources	15,5%	22,6%	61,9%
Humans were meant to rule over the rest of nature	68,2%	20,1%	11,7%
The balance of nature is very delicate and easily upset	13,8%	14,6%	71,6%
Humans will eventually learn enough about how nature works to be able to control it	43,1%	31,8%	25,1%
If things continue on their present course, we will soon experience a major ecological catastrophe	11,3%	26,8%	61,9%

The majority of respondents showed an anthropocentric view only for one statement: 85% agreed or strongly agreed that “The earth has plenty of natural resources if we just learn how to develop them.” This indicates that, overall, the environmental attitudes of respondents show a very strong ecological view but also some anthropocentric aspects.

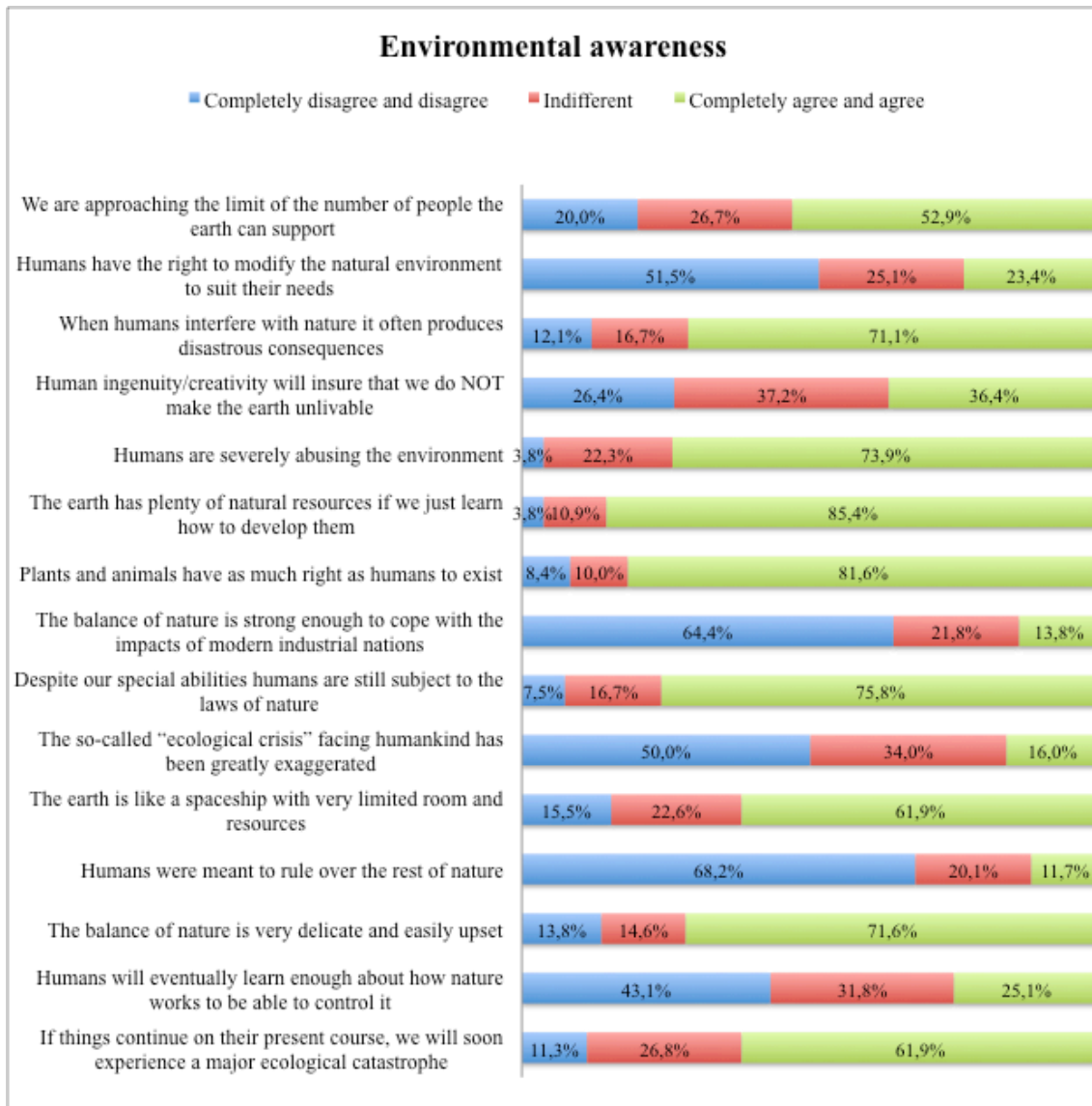


Figure 4.5 Graphical representation of “Environmental awareness”

4.2 Comparing Means

The independent samples t-test, one of the most widely used statistical test, evaluates the statistical difference between the means of two independent or unrelated groups. To find out whether the means for two independent groups are significantly different from each other, in this part two hypotheses were established and tested.

4.2.1 Hypothesis 1

Hypothesis 1: Older tourists have a more improved surf level than younger tourists

$H_0: \mu_1 \leq \mu_2$

The mean of the age of beginners is lower or equal than the mean of the age of intermediate / experienced surfers

$H_A: \mu_1 > \mu_2$

The mean of the age of beginners is higher than the mean of the age of intermediate / experienced surfers

α level: $\alpha = 0,05$

Test: independent samples t-test (one-tailed test)

Used variables: age and surf level

In order to test the statistical difference between the two “age” means, the variable “surf level” was categorized into only two categories. For that the surf level “intermediate” and “experienced surfer” were merged, giving a new distribution of 67,9% beginners and 32,1% intermediate/experienced surfers. To obtain a pure result, the outliers of the variable “age” were then eliminated.

As can be seen in the Groups Statistics in Table 4.5, the mean of the age of beginners is 25,8 (n=149) and the mean of the age for intermediate/experienced surfers is 26,2 (n=68). Using one-tailed 0,05 criterion, the null hypothesis (H_0) is not rejected, since the p-value = $0,554/2 = 0,277 > 0,05$ (Table 4.6). The alpha value indicates that no statistically significant difference exists between the mean of the age of beginners and the mean of age of intermediate/experienced surfers.

4.2.2 Hypothesis 2

Hypothesis 2: People with a higher income spend more for their stay in the surf camp

H₀: $\mu_1 \leq \mu_2$

The mean of the payment for the surf camp for people with a higher income is lower or equal than the mean of the payment for the surf camp for people with a lower income

H_A: $\mu_1 > \mu_2$

The mean of the payment for the surf camp for people with a higher income is higher than the mean of the payment for the surf camp for people with a lower income

α level: $\alpha = 0,05$

Test: independent samples t-test (one-tailed test)

Used variables: income and payment for surf camp

In order to be able to conclude the independent samples t-test the variable “income” was divided into only two categories rather than six. For that the three income categories <1.000€, 1.001-2.000€ and 2.001-3.000€ were merged into group 1 = low income (64,3%) and the three income categories 3.001-4.000€, 4.001-5.000€ and >5.000€ into group 2 = high income (18,9%) with 16,8% missing answers. The outliers of the variable “payment for surf camp” were eliminated.

As can be seen in the Groups Statistics in Table 4.7, the mean of the payment for the surf camp for people with a low income is 424,3€ (n=138) and the mean of the payment for the surf camp for people with a high income is 447,1€ (n= 38).

Using a one-tailed 0,05 criterion, the null hypothesis (H₀) is not rejected, since the p-value = $0,153/2 = 0,0765 > 0,05$ (Table 4.8). The alpha value indicates that no statistically significant difference exists between the mean of the payment for the surf camp for people with a higher income and the mean of the payment for the surf camp for people with a lower income.

Table 4.5 Group Statistics Hypothesis 1

Group Statistics					
	Surf Stage	N	Mean	Std. Deviation	Std. Error
Age	beginner	149	25,7785	4,78009	,39160
	Int. / exp.	68	26,2059	5,22782	,63397

Table 4.6 Independent samples t-test Hypothesis 1

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Age	Equal variances assumed	1,158	,283	-,593	215	,554	-,42736	,72061	-1,84772	,99300
	Equal variances not assumed			-,574	119,975	,567	-,42736	,74516	-1,90273	1,04801

Table 4.7 Group Statistics Hypothesis 2**Group Statistics**

	Income	N	Mean	Std. Deviation	Std.
Price of stay	low	138	424,2971	84,11561	7,1604
	high	38	447,1316	96,03861	15,579

Levene's Test for Equality of Variances

Table 4.8 Independent samples t-test Hypothesis 2**Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Price of stay	Equal variances assumed	,478	,490	-1,436	174	,153	-22,83448	15,89958	-54,21534	8,54639
	Equal variances not assumed			-1,332	53,636	,189	-22,83448	17,14622	-57,21591	11,54696

4.3 Categorical Data Analysis

The following section will answer the third main research question:

“Is it possible to find a relationship between tourists’ willingness to pay an accommodation tax earmarked for environmental protection and socio-demographic attributes?”

For that the relationship between the amount tourists were willing to pay for an accommodation tax used for environmental protection and five different variables was analyzed. Therefore another five hypothesis were formulated, then the statistical independence was tested with the Chi square independence test and finally, if the variables were dependent on each other, a cross tabulation table was shown. Cross tabulation tables (contingency tables) display the relationship between two or more categorical variables and therefore have the purpose of showing the relationship (or lack of the relationship) between two variables.

4.3.1 Hypothesis 3

Hypothesis 3: There is a relationship between the nationality of a participant and the amount he/she is willing to pay as an accommodation tax used for environmental protection

H₀: Nationality is independent of the amount paid for an accommodation tax

H_A: Nationality is dependent on the amount paid for an accommodation tax

α level: $\alpha = 0,05$

Test: Pearson's chi-squared test of independence / Cross tabulation

Used variables: nationality, amount accommodation tax

The independent variable “Nationality” was split into two categories, one with the DACH countries (Germany, Austria, Switzerland) and one with all the other nationalities. The dependent variable “amount accommodation tax” was categorized into four categories, which were 0€, higher than zero but less than 2€, 2-4€ and more than 4€.

As the significance value of the one-sided Pearson's chi-squared test ($0,005/2 = 0,0025$) is smaller than 0,05 the null hypothesis (H_0) is rejected (Table 4.9). The low p-value indicates that there is indeed a relationship between the nationality of a participant and the amount he/she is willing to pay for an accommodation tax earmarked for environmental protection.

Table 4.9 Testing of the relationship between “Nationality” and “Amount tax”

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12,676 ^a	3	,005

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 12,3.

Table 4.10 Cross tabulation Nationality * Amount tax

Nationality * Amount tax Crosstabulation

			Amount willing to pay for accommodation tax (in €)				Total
			0]0, 2[[2, 4]	>4	
Nationality	DACH	Count	15	36	64	43	158
		% within Nationality	9,5%	22,8%	40,5%	27,2%	100,0%
		% within Amount tax	41,7%	76,6%	66,0%	71,7%	65,8%
	others	Count	21	11	33	17	82
		% within Nationality	25,6%	13,4%	40,2%	20,7%	100,0%
		% within Amount tax	58,3%	23,4%	34,0%	28,3%	34,2%
Total		Count	36	47	97	60	240
		% within Nationality	15,0%	19,6%	40,4%	25,0%	100,0%
		% within Amount tax	100,0%	100,0%	100,0%	100,0%	100,0%

The most important question now is: In what group is the willingness to pay an accommodation tax earmarked for environmental protection higher? As can be seen in Table 4.10, 65,8% of all respondents are from the DACH region, whereas 34,2% are from other countries. The respondents from other countries are more likely not to be willing to pay the accommodation tax (25,6%), whereas only 9,5% of the respondents from the DACH region would not be willing to pay the tax. In both groups the most

frequent range of willingness to pay is 2-4€, which represents 40,4% of the sample. 27,2% of the respondents from the DACH region would be willing to pay more than 4€ per night and only 20,7% of all the other countries would be willing to pay that much per night. To sum up, in the DACH region the proportion of respondents not willing to pay the tax is lower than in the other countries, whereas the proportion to pay more than 4€ is higher.

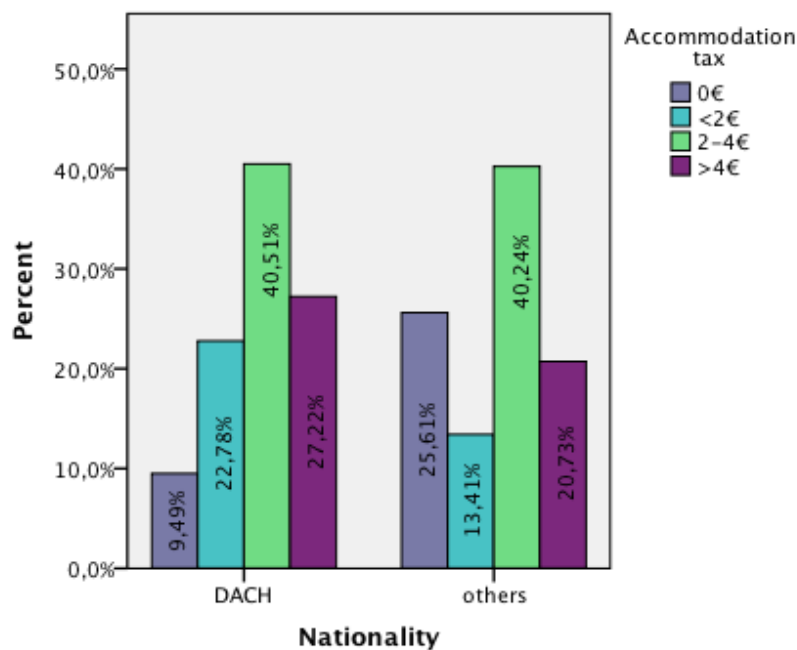


Figure 4.6 Willingness to pay an accommodation tax of DACH and other nationalities

4.3.2 Hypothesis 4

Hypothesis 4: *Women pay more for an accommodation tax used for environmental protection than men*

H₀: Gender is independent of the amount paid for an accommodation tax

H_A: Gender is dependent on the amount paid for an accommodation tax

α level: $\alpha = 0,05$

Test: Pearson's chi-squared test of independence

Used variables: gender, amount accommodation tax

As the significance value of the one-sided Pearson's chi-squared test ($0,177/2 = 0,0885$) is $>0,05$ the null hypothesis (H_0) is not rejected (Table 4.11). The p-value indicates that there is no relationship between the gender of a participant and the amount he/she is willing to pay for an accommodation tax earmarked for environmental protection. The variables do not have a statistically significant relationship. Thus, the cross tabulation table is not provided.

Table 4.11 Testing of the relationship between “Gender” and “Amount tax”

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4,926 ^a	3	,177

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 17,25.

4.3.3 Hypothesis 5

Hypothesis 5: Older participants are willing to pay a higher accommodation tax used for environmental protection than younger participants

H_0 : Age is independent of the amount paid for an accommodation tax

H_A : Age is dependent on the amount paid for an accommodation tax

α level: $\alpha = 0,05$

Test: Pearson's chi-squared test of independence

Used variables: age, amount accommodation tax

As can be seen in Table 4.12, the significance value of the one-sided Pearson's chi-squared test ($0,893/2 = 0,4465$) is larger than 0,05. Therefore the null hypothesis (H_0) is not rejected. The significance value indicates that the age of a participant is statistically independent of the amount he/she is willing to pay for an accommodation tax earmarked for environmental protection. The two variables do not have a statistically significant relationship. Thus, the cross tabulation table is not provided.

Table 4.12 Testing of the relationship between “Age” and “Amount tax”**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	,613 ^a	3	,893

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 5,24.

4.3.4 Hypothesis 6

Hypothesis 6: *The higher the educational level of a participant the more he/she is willing to pay for an accommodation tax used for environmental protection*

H₀: Educational level is independent of the amount paid for an accommodation tax

H_A: Educational level is dependent on the amount paid for an accommodation tax

α level: $\alpha = 0,05$

Test: Pearson's chi-squared test of independence

Used variables: educational level, amount accommodation tax

As can be seen in Graph 4.13, the significance value of the one-sided Pearson's chi-squared test equals $0,132/2 = 0,066$, which is $>0,05$, and therefore the null hypothesis (H₀) is not rejected from a level of significance of 5%. This means the p-value indicates that there is no relationship between the education of a participant and the amount he/she is willing to pay for an accommodation tax earmarked for environmental protection. The variables do not have a statistically significant relationship. Thus, the cross tabulation table is not provided.

Table 4.13 Testing of the relationship between “Education level” and “Amount tax”**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5,621 ^a	3	,132

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 13,59.

4.3.5 Hypothesis 7

Hypothesis 7: The higher household income of a participant the more he/she is willing to pay for an accommodation tax used for environmental protection

H₀: Household income is independent of the amount paid for an accommodation tax

H_A: Household income is dependent on the amount paid for an accommodation tax

α level: $\alpha = 0,05$

Test: Pearson's chi-squared test of independence

Used variables: household income, amount accommodation tax

As the significance value of the one-sided Pearson's chi-squared test ($0,923/2 = 0,4165$) is $>0,05$ the null hypothesis (H_0) is not rejected (Table 4.14). The p-value indicates that the household income of a participant is independent of the amount he/she is willing to pay for an accommodation tax earmarked for environmental protection. The variables do not have a statistically significant relationship. Thus, the cross tabulation table is not provided.

Table 4.14 Testing of the relationship between “Income” and “Amount tax”

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	,480 ^a	3	,923

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 5,00.

5 CONCLUSION

This study responded to the need for a better understanding of surf tourists in the Algarve, given the growing size of this tourism activity and its capacity to produce positive economic impacts in the area. By characterizing surf tourists that stay in surf camps in the Algarve, this study revealed information that could be used to strengthen marketing strategies for capturing or retaining surf tourists or to implement managerial actions to better serve those tourists.

Most of the tourists surveyed (65,8%) are from the DACH region (Germany, Austria, Switzerland). The Algarve has always been a perfect all-year around destination for these countries. More cheap flights and package deals reinforce this fact. A lot of surf camps therefore focused their marketing strategies on these countries and the Algarve as a surf destination became more known and popular. In other countries however the Algarve is still not associated with surf tourism. The Algarve as a surf destination should therefore adjust their tourism promotional campaigns in order to attract more tourists from other countries than the DACH region. In this move it is also important that marketing material integrates the characteristics which are significantly associated with the Algarve region as a surf destination. For example, advertising messages could be crafted to portray the surfing appeal of the destination, especially related to the variety of waves on both coastlines, the consistent weather and the quality of the natural environment. It is also very important to keep a better record of the activity in the region in order to analyze the impact on both the economy and the environment.

Only 20,4% of all tourists stated that it is not their first stay in the Algarve. This suggests a very low return rate of surf tourists, which should be considered by the surf camp managers and should have important managerial implications. Each stay should become unforgettable, for example through better network opportunities for tourists like surf-related parties or surf events.

To further analyze the first main research question two hypotheses were established and tested. In both cases the null hypothesis was not rejected, which means that there is no statistically significant difference between the variables. Therefore older tourists do not have an improved surf level than younger tourists. Furthermore tourists with a higher

net household income do not spend more for their stay in the surf camp than tourists with a lower net household income.

The second part of this study explored the tourists' attitudes towards an accommodation tax earmarked to fund environmental protection in the Algarve. 85,8% of the 240 respondents would be willing to pay for this kind of accommodation tax. This is a large proportion, which can be explained by the fact that the study focused only on surf tourists. A previous study in the Algarve (Valle et al., 2012) reports more negative attitudes of tourists funding environmental protection: only 19% were willing to pay a tax earmarked for environmental protection. However the results cannot be directly compared as a different tourist segment (sun and beach tourists) was surveyed. Surf tourists are mostly physically active and when realizing the sport they are in constant contact with the nature, which can be associated with a pro-environmental behavior. Most surf camps in the Algarve try to share their environmentally friendly behavior with their guests, which includes respecting the ocean and the coastal environment around. It is important for surf tourists to realize that the protection of the coastal area is essential in order to have a nice experience when surfing.

Using cross tabulation tables the relationship between the amount tourists are willing to pay for an accommodation tax used for environmental protection and five different socio-demographic variables (nationality, gender, age, educational level and household net income) was analyzed. The decision of how much each person is willing to pay for the accommodation tax appears to be independent of all socio-demographic variables tested, except nationality. Tourists from the DACH region are more prone to pay the earmarked accommodation tax, compared to tourists from other countries. For a future survey it would be interesting to test which other characteristics actually influence the willingness to pay the accommodation tax. A possible influence could be the environmental education that the participants experience in their daily life.

Considering that the vast majority of respondents in this study would be willing to pay an accommodation tax earmarked for environmental protection, this study has important policy implications. Implementing an accommodation tax in the Algarve however does not only regard the surf tourists. As the majority of other tourist segments (Valle et al., 2012) would not be willing to pay for the tax, the tax could have a negative impact on tourism demand in these segments. Only using the tax in surf accommodations, like surf

camps, could work if a good marketing strategy was used for support. The surf tourists would have to be absolutely sure of the fact that their funds would be only used for the protection of the coastal environment. It would also be important to show the exact projects they would be supporting.

The study exhibits some limitations that should be controlled in future research. Considering the size of the surf industry in the Algarve, the sample size used was relatively small. Due to the limited scope of a master thesis only eight surf camps in the Vila do Bispo county could be considered, which is only a fraction of the around 50 surf camps in the Algarve. The findings can therefore be regarded as a basis for future research studies. Other research studies might be conducted in the same area but with a larger sample size in order to be able to validate the main results. Also it would be interesting to compare the results of this study with other parts of Portugal.

The survey questionnaire used showed some limitations, as follows. In the socio-demographic part of the questionnaire the category “Profession” asked the respondent to write down his/her profession. This limited the evaluation of this category, as the subsequent building of categories is difficult to realize. It would have been better for the evaluation of the questionnaires to ask the respondents to choose between some categories such as student, employee, freelancer or unemployed. Also the tourists were asked if they would be willing to pay more for the same stay in the surf camp and if so, how much. Unfortunately the questionnaire did not make understandable if the willing to pay more should be expressed in a total weekly price or the amount they would actually be willing to pay more. When evaluating the questionnaire this matter led to problems and the category could not be used for further evaluation.

Considering the steady growth rate of surfing as an economic activity in the Algarve, this study responded to the need of gaining a better knowledge of surf tourists staying in surf camps. Avenues for further research include the extension of the survey to other counties in the Algarve and to other coastal areas in Portugal to get a better overview of this growing tourism activity.

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Appendix 1: Questionnaire in English



SURFING IN THE ALGARVE

The following questionnaire is developed by a research team from the University of Algarve. It aims to collect information on tourists staying in surfcamps in the Algarve. It is important for the research that you answer as sincerely and objectively as possible. The responses are confidential and will only be used for research purposes.

Thank you for your time and effort.

STAY IN THE ALGARVE

Numbers of days in the Algarve: _____

Are you travelling:

alone with family with friends other

SURF CAMP

Is this your first stay in a surfcamp in the Algarve? Yes No

Are you: beginner intermediate experienced surfer

What made you decide to go surfing in the Algarve?

Internet newspapers/magazines tv
 friends / family included in travel agency package other _____

How much are you paying for your stay in the surfcamp (per week)? _____ (€)

What is included in the price?

accommodation breakfast other meals
 surf lessons surf equipment other _____

Do you think the price is:

very cheap cheap reasonable expensive very expensive

Would you be willing to pay more for the same stay?

no
 yes **Maximum amount per week:** _____ (€)

Classify your overall satisfaction of your stay in the following scale:

very unsatisfied unsatisfied not satisfied nor unsatisfied satisfied very satisfied

Do you intend to return to a surfcamp in the Algarve in the future? yes no

Would you recommend this type of holidays to your friends and relatives? yes no

ENVIRONMENTAL AWARENESS

Suppose an environmental fund were raised to protect the Algarve's coastal area.

This would be used to finance among other things:

-Preservation of natural environments;

-Environmental improvements to beaches and other coastal areas.

Assume further that this fund would be financed through an accommodation tax paid as a fixed amount per day spent in an accommodation establishment in the Algarve.

Would you be willing to pay this? no yes**What maximum amount? _____ (€)****Do you agree or disagree that:**

	Completely disagree	Disagree	Indifferent	Agree	Completely agree
We are approaching the limit of the number of people the earth can support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Humans have the right to modify the natural environment to suit their needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When humans interfere with nature it often produces disastrous consequences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Human ingenuity/creativity will insure that we do NOT make the earth unlivable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Humans are severely abusing the environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The earth has plenty of natural resources if we just learn how to develop them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plants and animals have as much right as humans to exist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The balance of nature is strong enough to cope with the impacts of modern industrial nations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Despite our special abilities humans are still subject to the laws of nature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The so-called "ecological crisis" facing humankind has been greatly exaggerated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The earth is like a spaceship with very limited room and resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Humans were meant to rule over the rest of nature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The balance of nature is very delicate and easily upset	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Humans will eventually learn enough about how nature works to be able to control it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If things continue on their present course, we will soon experience a major ecological catastrophe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SOCIO-DEMOGRAPHIC CHARACTERIZATION

Nationality: _____ **Country of residence:** _____

Gender: Female Male **Age:** _____

Marital Status:

Single Married/Living together

Divorced/Separated Widowed

Do you have children under 18? Yes No

Education level:

Primary Education Secondary Education Bachelor Degree

Master Degree PhD Degree

Profession: _____

Household net monthly income:

< 1.000€ 1.001-2.000€ 2.001-3.000€

3.001-4.000€ 4.001-5.000€ > 5.000€

Appendix 2: Questionnaire in German



SURFEN AN DER ALGARVE

Der folgende Fragebogen wurde von einem Forschungsteam der Universität der Algarve entwickelt. Das Ziel ist es Informationen über Touristen, die in Surfcamps an der Algarve Urlaub machen, zu sammeln. Es ist wichtig für die Forschung, dass sie so aufrichtig und objektiv wie möglich antworten. Die Antworten werden vertraulich behandelt und nur für wissenschaftliche Zwecke verwendet.

Vielen Dank für Ihre Zeit und Mühe.

Aufenthalt an der Algarve

Anzahl der Tage an der Algarve: _____

Reisen Sie:

- alleine mit Familie mit Freunden sonstiges

SURF CAMP

Ist dieses Ihr erster Aufenthalt in einem Surfcamp an der Algarve? Ja Nein

Sind Sie: Anfänger Fortgeschrittener erfahrener Surfer

Wie kamen Sie auf die Algarve als Surf-Reiseziel?

- Internet Zeitung/Magazine Fernsehen
 Freunde/Familie in einem Reisebüro Paket enthalten sonstiges _____

Wieviel kostet Ihr Aufenthalt im Surfcamp (pro Woche)? _____ (€)

Was ist im Preis mit inbegriffen?

- Unterkunft Frühstück andere Mahlzeiten
 Surfunterricht Surfmateriale sonstiges _____

Finden Sie den Preis:

- sehr preiswert preiswert angebracht teuer sehr teuer

Würden Sie für den gleichen Aufenthalt mehr bezahlen?

- Nein
 Ja Maximaler Betrag pro Woche: _____ (€)

Stufen Sie Ihre allgemeine Zufriedenheit Ihres Aufenthaltes in der folgenden Skala ein:

- sehr unzufrieden unzufrieden weder zufrieden noch unzufrieden zufrieden sehr zufrieden

Haben Sie die Absicht in ein Surfcamp an der Algarve zurückkehren? Ja Nein

Würden Sie diese Art von Urlaub Freunden und Familie empfehlen? Ja Nein

UMWELTBEWUSSTSEIN

Nehmen Sie an ein Umwelt Fond würde angehoben werden um das Küstengebiet der Algarve zu schützen.

Dieser würde unter anderem verwendet werden um folgendes zu finanzieren:

- Die Erhaltung der natürlichen Umwelt;
- Umweltverbesserungen von Stränden und anderen Küstengebieten

Nun stellen Sie sich vor, dass dieser Fond durch eine Kurtaxe, gezahlt in festen Raten pro Tag in den jeweiligen Unterkünften, erhoben wird.

Wären Sie gewillt dies zu bezahlen? Nein

Ja

Welchen maximalen Betrag? _____ (€)

Stimmen Sie diesen Aussagen zu oder widersprechen Sie?

	Trifft überhaupt nicht zu	Trifft nicht zu	Unentschieden	Trifft zu	Trifft voll zu
Wir nähern uns der Grenze der Zahl an Menschen, die die Erde unterstützen kann	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Menschen haben das Recht, die natürliche Umwelt zu ändern, um ihre Bedürfnisse anzupassen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wenn sich Menschen bei der Natur einmischen führt dies oft zu katastrophalen Folgen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Menschliches Einfallsreichtum wird sicherstellen, dass wir die Erde NICHT unbewohnbar machen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Menschen missbrauchen die Umwelt schwerwiegend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Die Erde hat viele natürliche Ressourcen, wenn wir lernen, mit ihnen umzugehen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pflanzen und Tiere haben das gleiche Recht zu existieren wie Menschen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Das Gleichgewicht der Natur ist stark genug, um mit den Auswirkungen der modernen Industrie-Nationen zurechtzukommen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trotz unserer besonderen Fähigkeiten unterliegen Menschen den Gesetzen der Natur	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Die so genannte "ökologische Krise" der die Menschheit gegenübersteht, wurde stark übertrieben	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Die Erde ist wie ein Raumschiff mit sehr begrenztem Raum und Ressourcen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Menschen waren dazu bestimmt über den Rest der Natur zu herrschen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Das Gleichgewicht der Natur ist empfindlich und leicht angreifbar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Schlussendlich werden die Menschen genug über die Natur lernen, um sie kontrollieren zu können	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Falls die Dinge ihren gegenwärtigen Kurs fortsetzen, werden wir bald eine große ökologische Katastrophe erleben	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SOZIODEMOGRAPHISCHE CHARAKTERISIERUNG**Nationalität:** _____ **Aufenthaltsland:** _____**Geschlecht:** Weiblich Männlich **Alter:** _____**Familienstand:** Single Verheiratet/Zusammenleben Geschieden/Getrennt Verwitwet**Haben Sie Kinder unter 18?** Ja Nein**Bildungsgrad:** Primärausbildung Höhere Schulbildung Bachelor Master Dokortitel**Beruf:** _____**Monatliches Netto Haushaltseinkommen:** < 1.000€ 1.001-2.000€ 2.001-3.000€ 3.001-4.000€ 4.001-5.000€ > 5.000€

Appendix 3: Frequencies Nationality**Nationality**

	Frequency	Percent	Cumulative Percent
American	1	,4	,4
Austrian	26	10,8	11,3
Belarus	2	,8	12,1
Belgium	6	2,5	14,6
British	13	5,4	20,0
Croatian	1	,4	20,4
Dutch	6	2,5	22,9
French	10	4,2	27,1
German	118	49,2	76,3
Irish	4	1,7	77,9
Italian	2	,8	78,8
Japanese	1	,4	79,2
New Zealander	3	1,3	80,4
Norwegian	1	,4	80,8
Polish	5	2,1	82,9
Portuguese	1	,4	83,3
Russian	17	7,1	90,4
Scottish	1	,4	90,8
Singaporean	1	,4	91,3
South Africa	1	,4	91,7
Spanish	1	,4	92,1
Swedish	4	1,7	93,8
Swiss	14	5,8	99,6
Ukraine	1	,4	100,0
Total	240	100,0	

Appendix 4: Frequencies Country of residence**Country of residence**

	Frequency	Percent	Cumulative Percent
Austria	26	10,8	10,8
Belarus	3	1,3	12,1
Belgium	4	1,7	13,8
France	10	4,2	17,9
Germany	117	48,8	66,7
Ireland	2	,8	67,5
Italy	3	1,3	68,8
Latvia	1	,4	69,2
Luxemburg	1	,4	69,6
Netherland	1	,4	70,0
Netherlands	4	1,7	71,7
New Zealand	2	,8	72,5
Norway	1	,4	72,9
Poland	5	2,1	75,0
Portugal	1	,4	75,4
Russia	14	5,8	81,3
Scotland	3	1,3	82,5
Singapore	1	,4	82,9
Spain	1	,4	83,3
Sweden	3	1,3	84,6
Switzerland	19	7,9	92,5
UK	17	7,1	99,6
Ukraine	1	,4	100,0
Total	240	100,0	

Appendix 5: Environmental Awareness Likert-type-5-point scale

	Completely disagree	Disagree	Indifferent	Agree	Completely agree
We are approaching the limit of the number of people the earth can support	3,3%	16,7%	26,7%	39,6%	13,3%
Humans have the right to modify the natural environment to suit their needs	12,1%	39,2%	25%	20,8%	2,5%
When humans interfere with nature it often produces disastrous consequences	2,1%	10,0%	16,7%	52,1%	18,8%
Human ingenuity/creativity will insure that we do NOT make the earth unlivable	5,4%	20,8%	37,1%	32,9%	3,3%
Humans are severely abusing the environment	0,4%	3,3%	22,1%	52,1%	21,3%
The earth has plenty of natural resources if we just learn how to develop them	0,8%	2,9%	10,8%	50,8%	34,2%
Plants and animals have as much right as humans to exist	2,5%	5,8%	10,0%	33,3%	47,9%
The balance of nature is strong enough to cope with the impacts of modern industrial nations	18,3%	45,8%	21,7%	9,6%	4,2%
Despite our special abilities humans are still subject to the laws of nature	0,8%	6,7%	16,7%	43,3%	32,1%
The so-called "ecological crisis" facing humankind has been greatly exaggerated	10,8%	38,8%	33,8%	13,3%	2,5%
The earth is like a spaceship with very limited room and resources	4,6%	10,8%	22,5%	44,6%	17,1%
Humans were meant to rule over the rest of nature	32,9%	35,0%	20,0%	8,3%	3,3%
The balance of nature is very delicate and easily upset	1,7%	12,1%	14,6%	45,4%	25,8%
Humans will eventually learn enough about how nature works to be able to control it	10,0%	32,9%	31,7%	22,1%	2,9%
If things continue on their present course, we will soon experience a major ecological catastrophe	0,8%	10,4%	26,7%	45,4%	16,3%