

Vacation destination choice as a positional good

Are individuals' preferences influenced by others?

Jorge Quesada

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**Are individuals' preferences influenced by
others?**

by

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Summary

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The theory of positional goods has been the focus of many researches for years since first introduced in 1976. The theory proposes that positional goods are those whose utility perceived by an individual is influenced by actions and possibilities of others. In this sense, the value of the good is affected by comparing with others. The results of this study can be interpreted as a indication that positionality indeed influences the utility of a destination perceived by potential travelers, and therefore affects their choices.

To do so, the study proposed a set of steps to create insights that could help to draw conclusions the role of positionality in the utility of a destination. First, literature regarding accessibility, theory of positional goods and destination choice models was reviewed. The first stage revolves around the concept of accessibility and the differences between the theoretical definition and how individuals perceive it. Though the differences in both perspectives, some common factors can be extracted from both. For the purpose of the study, accessibility was addressed as the capacity or a location to be reached, or to reach locations, combined with the component of trip purpose or activity based approach. By analyzing both perspectives, one can identify a tendency to move towards the ideas of cost/effort, capacity, possibilities or "travel resistance". This resistance materialized as travel cost and travel time.

Then, a pilot study was designed with the objective of gaining additional first-hand information for a stated preference experiment. The pilot showed that besides travel cost and travel time, the perceived value of a destination, based on qualitative characteristics (such as activities to be performed at destination), represents an important factor for individuals when choosing a vacation destination.

From here, a conceptual model and a proposed utility function of a destination were constructed. The model proposes that utility is composed by the value of a destination perceived by individuals, and the travel resistance components of accessibility, meaning travel cost and travel time. A final component of the utility is the positionality, which could influence the weights of the mentioned attributes. A stated preference experiment was designed, as a suitable case study to test the conceptual model and draw conclusions.

The stated preference experiment was conducted with the participation of 159 respondents, divided in two groups. For each group a different version of the same questionnaire was presented, varying only in the perspective from which questions were asked, first asking participants to chose alternatives based on their own preferences (Own View) and second, by asking them to answer by thinking about what a relative would choose or prefer, when faced with the same situation. The element of positionality was included in the experiment as contexts, presenting different scenarios based on where friends or colleagues are travelling, allowing respondents to compare their options and potential choices with the ones of others.

The study provides a sign of positionality. The interaction between attributes and contexts (destination of others) showed that the utility is more sensitive to the level of a destination when individuals are in situations where the destination of others is better than theirs. Therefore, the destination value has a greater impact when individuals are in a worse situation compared to other and has less weight ("importance") when they are in more favorable situations.

The study also aimed to test if positionality has a different influence among individuals of different age, gender and income groups as well as assessing if the responses of participants were influenced by socially desirable behavior. In the case of the latest, there is no evidence to suggest that this behavior has an influence over the results. In terms of age, there could be a indication of positionality it was revealed that for the respondents older than 41, the value of the destination is more positional than in the case of the other groups. For this group, when they travel to a worse destination in comparison with others, the value of the destination has a greater impact than for the other age groups. Cost shows a possible more positional influence in the utility of a destination for younger travellers, between the ages of 18 and 29. And in the case of travel time, the oldest travellers find it more influential when choosing a vacation destination, as the weight of travel time decreases when they travel to a better destination. For the case of analysis per average household income, the group who experiences more positional effects for the value of the destination is the one with less average income. In a same way, cost is more positional in this group compared to the remaining two groups. When gender groups were analyzed, data shows that the value of a destination has a more positional influence for women than for men. Same situation occurs for travel time. On the other hand, cost induced by traveling to a specific destination appears to be more positional for men. Thought for the case of cost and travel time estimators are not statistically significant, the results could provide a first indication of positionality.

Finally, results suggest that around one third of the respondents are willing to sacrifice a better destination in order to be in a favorable condition when compared to others. This means that they are willing travel to worse locations, as far as others travel to destinations with a less perceived value, or less attractive to them. On the other hand, the study suggests that half of the respondents would travel to a worse destination than others, as far as this trip would cause less impact on the environment.

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Contents

1	Introduction	1
1.1	Research Question	2
1.2	Methodology	3
2	Literature Review	5
2.1	Accessibility	5
2.1.1	Measuring Accessibility	6
2.2	Theory of Positional Goods	7
2.2.1	Previous Studies	7
2.3	Destination choice experiments	9
2.4	Summary of the Literature	10
2.5	Conceptual Model	12
3	Pilot Study	15
3.1	Study Design	15
3.2	Results	16
3.2.1	Demographics	17
3.2.2	Accessibility	17
3.2.3	Sustainability	18
3.2.4	Destination Attributes and Ranking	18
3.2.5	Comparing with others (Positionality)	19
3.3	Summary	19
4	Study Approach - Stated Preference Experiment	21
4.1	Design of the Questionnaire	24
4.1.1	Example of SP experiment questions - Section 3.	25
4.1.2	Example of additional questions - Section 4	26
4.2	Data Analysis Methodology	27
4.3	Sample	28
5	Results Analysis	31
5.1	Base Model	31
5.1.1	Dummy Coding Approach	32
5.1.2	Ranking Approach	33
5.2	Influence of Socially Desirable Behavior	33
5.3	Socio-Demographic Analysis	35
5.3.1	Analysis per Age groups	35
5.3.2	Analysis per Income groups	36

5.3.3 Analysis per Gender	37
5.4 Sustainability and Destination Choice	38
5.5 Summary of the Results	39
6 Conclusions and Discussion	41
6.1 Conclusions.	41
6.2 Discussion and Limitations.	44
Bibliography	47
A Article	49
B Pilot Study Questionnaire	51
C SP Experiment Own View	57
D SP Experiment Others View	63

1

Introduction

“The peasant Ivan is jealous of his neighbour Boris because Boris has a goat. A fairy comes along and offers Ivan a single wish. What does he wish for? That Boris’ goat should drop dead” Landes (1998). This popular Russian joke can raise several questions. Is Ivan jealous because the goat is valuable or, is he jealous because the goat represents value only because he does not have one? We can translate this example to almost any situation in daily human activities or industries. In this case, let us imagine that the goat represents the possibility of both to travel for vacations. Is it possible that in the first place Ivan did not need a goat? Is it possible that he only wants a goat because another individual (in this case an acquaintance) has one?

The theory of positional goods (TPG) has been studied for decades since it has been introduced by Hirsch (1976). Positional goods can be defined as “a sub-set of those things whose utility to an individual depends on the behaviour of others” Hirsch (1976). This means that for instance, the satisfaction of an individual with the absolute value of a good can be affected when the individual compares it with other individuals absolute or relative perceptions. As an economics theory, the theory of positional goods can be applied to several components of society or industries, and has been studied in several of those topics. Nevertheless, air traveling and vacation destination choice had been left out of the research studies. In this case, the study’s interest is to analyze to what extent this theory can be applied for international flying for leisure purposes.

This study aimed to address the concept of positional goods, as seen in in Ivan’s example, applied to transportation, and to be more specific, for vacation destination choices. It intended to answer how are possibilities and choices of others, influencing the utility or the value of a destination perceived by individuals; in other words, if this the component of positionality (comparing with others), influences the weights of the attributes, such as travel time, travel cost or intrinsic value of a destination, that shape a destination’s utility. To do this, the concept of accessibility was introduced, as the capacity of a destination to be reached, or to reach a destination, and the trip purpose. This accessibility was addressed as the travel resistance to reach said destinations. Also the main factors involved in traveller’s destination choices for vacationing were studied. With this information, a Stated Preference experiment was

performed. The experiment consisted of a survey, distributed among respondents residing in Europe, where different travelling scenarios were presented to the participants. Each scenario consisted of a context and a choice set. The contexts were introduced by mentioning the destinations where others (friends or colleagues) are traveling, while the choice sets were conformed by two vacation alternatives from which each respondent was asked which one would he/she choose, depending on the characteristics of the trip (travel time and travel cost) and the destination itself. This forced respondents to face not only with the characteristics of the possible vacations, but also to compare their possibilities with the ones of others.

This technique (Stated preference experiment) was chosen as a suitable case study to explore positionality in vacation destination choices because it provides information regarding the travelers preferences and how these are influenced by introducing an external factor such as the possibility to compare their choices and possibilities with other travelers. The technique proved to be a powerful tool to gather data in a efficient, not expensive way, while also providing flexibility to create different combination of alternatives and contexts, to test if the vacation destination choice behaves as a positional good. Also, this was designed in order to study the interactions of the main accessibility attributes, environmental impact of travelling, and different social context scenarios involved in the decision making process of individuals. An additional goal was to explore the possibility of finding trends in demographic groups regarding positionality.

1.1. Research Question

Do the levels of accessibility for leisure travelling of others have a significant influence on the leisure destination choices of individuals?

In addition to the research question, the following sub-questions built up the knowledge to answer the main research goal, but also helped to explore some other details around positionality.

SQ.1. How is the concept of accessibility perceived by potential travellers?

SQ.2. Which are the most important factors that travellers consider when choosing destinations for leisure travelling?

SQ.3. Are travellers' destination choices affected by the choices or experiences of people in their social environment (what others do)? Do these comparisons have a different impact for each of the components of the destination's utility?

SQ.4. Is there a significant gap between results for two different question-constructing perspectives? Is the data being affected by socially desirable responses? Which modelling approach (e.g. Dummy coding vs Ranking value) reproduces better the choices in an experiment to test positionality?

SQ.5. Are the destination choices more positional for a certain age, income or gender group compared to others?

SQ.6. Are the opinions regarding sustainability of traveller's social environment discouraging individuals from travelling long distances in order to reduce their carbon footprint? Or do destination's value overcome sustainability?

The first sub-question is included in order to introduce the topic (accessibility), but also as a way to

understand what people understand about accessibility and evaluate if they address it from the traveler's perspective (origin or individual based) or from the vacation destination's perspective (destination based). The sub-question 2 serves two purposes, first to understand what do travelers consider as key elements as part of their decision-making process when deciding where to vacation, but also the answers to this question served as outputs for the definition of the utility function and the design of the stated preference experiment. These first two sub-questions were covered by a pilot study.

In the case of sub-question 3, the idea is to test how positionality interacts with the destination's utility and to assess which component of the utility function is more sensitive to positionality.

Following, sub-question 4 is introduced as a methodological aspect. The objective is to assess if people's stated choices are influenced by socially desirable behavior; in other words, if their responses are honest and may not be biased in order to answer questions in a manner that would be viewed favorably by others.

Finally, sub-questions 5 and 6 are included to test if patterns in sociodemographic groups can be found in the data as well as briefly analyze choices regarding sustainability of the traveling and straightforward positionality when evaluating only destination. For SQ 5, the data of the experiment was analyzed for age, income and gender categories, to find trends and draw conclusions about positionality for each of the groups. In the case of SQ 6, the objective is to evaluate if respondents would sacrifice traveling to better destinations in order to have a better destination and have a less environmental impact than others.

1.2. Methodology

To answer the research questions, a methodology composed of four stages was followed.

The first part, **literature review**, serves as background material and helps to identify previous studies (if any) regarding accessibility perception as a positional good or those including accessibility for long-distance travelling. Additionally, another objective is to gain the knowledge regarding the state of the art about stated preferences experiments, questionnaires design and statistical analysis. This step includes the creation of a conceptual model that describes the hypothesis and includes the main considerations regarding the utility function for the destinations and the components that travellers consider for the decision making process, as well as its influences for such decisions.

Because this is a considerably new topic, in unknown situations, an explanatory research step was introduced, in order to include some possible explanatory variables by means of a **pilot study**, interviewing different profiles of travellers. This study provided first-hand insights regarding attributes and contexts that are important for travellers and provided information for the creation of the stated preference experiment. Additionally, it helped to set the grounds for the definition of accessibility for long-distance travellers and how these travellers understand the concept.

The next step consists of the design of a **stated preference experiment** and therefore the questionnaire and the distribution among respondents. Here it was important to account for the sample size (between 100-200 persons), demographic characteristics, and technical aspects (e.g. orthogonality)

that must be included for the purpose of the investigation. Also, as included in the research sub-questions, two different versions of the questionnaire are created to test if the answers are affected by socially desirable responses. Both versions are composed of the same choice sets, and the difference lies in the perspective from which the questions are asked, first asking respondents to answer based on their own perspective or what they prefer, and a second version asking respondents to answer based on the perspective of others, meaning, what they think others would prefer. The stated preference experiment was created online, and dedicated software was used (Ngene) to design the contexts and choice sets.

The final step concludes the study. A **Statistical analysis** was performed in order to find the weights of the parameters for the main attributes of the utility function, and the interaction effects between attributes and the context scenarios, and to answer the question of whether accessibility in this context can be indeed defined as a positional good. Also, analysis was performed for different categories of respondents based on age, yearly income and gender to test if positionality shows a stronger impact on a specific group. For this final step, the software "Apollo" was used to model the data.

2

Literature Review

2.1. Accessibility

“Accessibility is a slippery notion, one of those common terms that everyone uses until faced with the problem of defining and measuring it!” (Gould, 1969). According to Gould (1969), the concept of accessibility is “well known” by people, but it is also interpreted in different ways and varies depending on the context or specific situation. This characteristic of the concept creates the first concern in the present study, what is accessibility?.

(Rodrigue et al., 2017) define accessibility as “the measure of the capacity of a location to be reached by, or to reach different locations”. This concept keeps the definition open in terms of what exactly includes the concept of capacity. Some examples could include capacity in terms of distance, cost, activities, among others. Nevertheless, it gives an understanding that the concept can be addressed as either an origin-based approach or destination-based approach. A similar approach is covered by (Islam et al., 2008), who state that accessibility can be measured in terms of the origin point of the trip, or the potential traveller, or from the perspective of the destination and/or the activities or purposes of the trips.

Moreover, (Páez et al., 2012) introduce the purpose of the trip when studying accessibility. As their study defines accessibility as the potential for reaching spatially-distributed opportunities, these opportunities are indeed activities and can be listed in terms of employment, recreation, social interaction, among others. Each of these activities have specific costs to take into account to reach them. In this case, the study mentions that the concept can be constructed as a combination of the cost of travel (depending on the spatial distribution of individuals and activities) and the quality/quantity of opportunities.

(Geurs and van Wee, 2004) go deeper into the concept of accessibility and propose that it should include the role of land-use and transport systems. In this case they conceive that these two components give the individuals the opportunity to reach activities in different locations. They define accessibility as “the extent to which land-use and transport systems enable individuals to reach activities or destina-

tions by means of transport modes” (Geurs and van Wee, 2004). In this way, they noted the importance of not only using the individuals perspective, but to focus on the location’s perspective.

Finally, (Geurs and van Wee, 2004) identify four components that should be considered: land-use, transportation, temporal and individual. The first one, involves the opportunities supplied at destinations and the demand created at origins. The second is related with the (dis)utility experienced by individuals while travelling from origin to destination, including time, costs and effort. In the third component, temporal constraints are included, meaning time available to perform activities and availability of different times of the day. Finally, the individuals component accounts for needs, abilities and opportunities of individuals. In this fourth component, factors like demographic characteristics, income and education level are included.

2.1.1. Measuring Accessibility

When addressing the methods to measure accessibility, a similar difficulty arises. Different concepts and components included to define accessibility will impact different ways to measure it.

(Geurs and van Wee, 2004) addressed this concern by studying the components of accessibility mentioned before. They do mention the importance of taking into account all the four components when measuring accessibility, nevertheless, accepting that in reality these measures tend to focus or give different importance to certain components, or a combination of them, depending on the needs and perspectives to be studied.

In their study, four different perspectives for measuring accessibility are identified:

- Infrastructure-based measures
- Location-based measures
- Person-based measures
- Utility-based measures

Based on (Geurs and van Wee, 2004), the first perspective, Infrastructure-based measures, aim to measure the functioning of the transport system and its network, focusing on travel times, congestion and speed mainly. This approach is limited for analysis in economic studies. The Location-based measures perspective targets the location of activities and evaluates these in terms of either origins or destinations. These measures include distance and contour, as well as potential measures. The distance and contour provide a simple approach but ignores travel perceptions and interactions of individuals. In the case of potential measures, the most known is the gravity models and balancing factors for interactions. Then, the person-based measures dig from the perspective of individuals and include spatial and temporal constraints for performing activities. While this approach provides advantages in theory, including almost all the components of accessibility, it fails in terms of applicability for practical matters and interpretation or communication.

Finally, the last approach focuses on utility-based measures. This approach introduces the random utility-based multinomial logit model, based on the Random Utility Maximization (RUM) Theory. The

RUM theory uses utility to represent the attractiveness of an alternative by which an individual chooses from a set of alternatives based on its characteristics and therefore, the individual seeks to maximize (Ortuzar, 2019). Additionally, this utility has an observable component, given by the observable and quantifiable characteristics of the alternatives, and a random component, that represents possible errors and variations in the tastes of individuals. These quantifiable characteristics and the random component are represented by a utility function. This approach allows to include all the variables needed to represent the concept of accessibility, including behavioral theory and individuals preferences.

For the purposes of this study, the second (transportation) and fourth (individuals) components represented the baseline to measure accessibility focusing more on possibilities of the individuals to undertake international travelling for leisure purposes. This means that accessibility in this study was a combination of the transport and individual components, studied with utility based measures, by the analysis of "the benefits that people derive from access to the spatially distributed activities" (Geurs and van Wee, 2004), in this case leisure travelling.

2.2. Theory of Positional Goods

The theory of positional goods has its grounds on Hirsch economic investigations. Fred Hirsch first referred to this concept in his book "Social Limits to Growth". Hirsch (1976) studied the reasons why people are so focused on economic growth and why even after achieving it, they remain unsatisfied. He identified two different types of goods, "material" goods and "positional" goods. The first one refers to the value that a good represents regardless of the amount of others also enjoying it. On the other hand, Hirsch (1976) referred to positional goods as those of which value is dependent on actual and potential possessors, because the satisfactions that these goods represent vary due to differences in possibilities to access them because of its scarcity. In other words, positional goods are those that have a variable value, depending on the comparison between individuals and their access to these scarce goods. The idea can be translated to human behaviour and address positional goods as "a sub-set of those things whose utility to an individual depends on the behaviour of others" (Schneider, 2007).

In his study, Schneider takes the concept proposed by Hirsch and adds the social variable to slightly modify it. For him, positional goods are goods "of which it is true that for some of the members of a society part or all of the satisfaction derived from possessing them is the enhancement of social status due to the fact that such satisfaction is possible only for a minority" (Schneider, 2007). The importance of his addition rests on the inclusion of the idea that positional goods represent a consequent enhancement of social status, as they can be observable (and desired) by others.

Following the concepts presented above, past studies that used SP to study positionality were revisited for two objectives. First to dig deeper on how the investigations tackled the idea of introducing the concept of positional goods to different industries and also to explore how these studies developed the stated preference experiments to draw their conclusions.

2.2.1. Previous Studies

Carlsson et al. (2007) studied the importance of relative concerns for people's utility, and that not only

absolute levels matter as the conventional economic theory suggests. Here, a survey-experiment was performed, letting respondents make choices when faced with scenarios or hypothetical states of the world, revealing the importance that they give to certain variables. The study evaluates four different factors related to well-being, such as income, working hours and leisure, market value of owned cars and car safety.

The experiment consisted of four questions, one for each of the factors mentioned before, confronting respondents to only one choice per good investigated. In these questions, the scenarios designed were based on two different hypothetical societies, in which future relatives would be "making the choices". By doing this, Carlsson et al. (2007) separated respondent from their current circumstances in order to avoid inhibition due to shame or guilt about their answers, while keeping them choosing what would be best for a relative (e.g grandchildren).

Finally, for each question, three different versions were created, with different values for the good under study, and to include the relative comparison in the utility function, they used an ordinal ratio-comparison utility function.

Their result proved that "relative income and relative consumption of at least some goods matter" (Carlsson et al., 2007). Also they found evidence that some goods are more positional than others, which in this case, market value of the good (car) proved to be more positional than leisure time and car safeness.

A similar approach of using others (separating the choices from the individuals context) for the choices is also present in Johansson-Stenman and Martinsson (2006). In the study, the results of the questions regarding the self-reported importance of attributes against the results of questions involving importance influenced by social context have significant differences. As they mention, an individual may pretend to behave "better" in accordance to what is socially expected than he/she usually do, or for example, "modify our musical taste in the presence of others". This type of behavior is commonly known as "socially desirable responding", and is defined by Paulhus (2002) as "the tendency to give positive self-descriptions". This would make it likely that respondents could answer questions in certain way, which would be viewed favorably by others.

They consider that being motivated by "status" is perceived to be an unfavorable characteristic, and people would avoid to honestly state the importance of such attribute when deciding on buying a car, therefore, the self-reported concerns would be biased negatively, and characteristics related to social responsibility or sustainability would be biased upwards.

Another example can be observed in Solnick and Hemenway (1998). In this article several aspects regarding relative standing were subject to test with examples that include income, vacation time, approval or disapproval of supervisor, own education or child's intelligence. To design the experiment, they introduced twelve questions with a unique format: a choice between two different states of their reality, one that represents the "positional" case in which they have more than others in society, and the "absolute" case, where the amount are both greater for respondents and society, but they have less than others.

Additionally, two different version of the questionnaire were sent to the respondents, differing only in the

order in which the scenarios A and B were presented. This was introduced by Solnick and Hemenway (1998) to account for the effects of preferences towards sticking to the status quo, as respondents seemed to view the first scenario as the status quo for the context under evaluation.

2.3. Destination choice experiments

One key element of the current study relies on recognizing the motivations people have behind vacations and endeavour in travelling to different locations around the world. Knowing these motivations would be a critical aspect in predicting travel patterns and therefore, destination choices.

In their study, Jang and Liping (2002) used data from the "Pleasure Travel Markets Survey for the United Kingdom" to extract the main pull and push elements that are determinant for individuals when deciding a vacation destination as well as what drives them to travel. As mentioned, they focused on the pull and push factors, referring to these push motivations as the "desires rising within travellers' mind, which trigger actual behavior", pushing them to travel. On the other hand, pull factors are those drawing forces into travel destinations, or destination attributes that appeal persons to travel, attracting them with specific characteristics.

The study revealed that the main push elements were having "novel experiences" or "knowledge seeking" as well as rest and relaxation while escaping from their daily routine, and, finding fun/exciting activities. In a similar way, they found the main pull factors from the destinations being "safety" found at destination, ease to access/economical deals found and natural/historic environments provided by such destinations.

In conclusion, the study showed that on the push side, **travelling to new destinations** ("uniqueness") among other things for **"Knowledge seeking"**, was the most important factor to motivate the British traveling overseas, followed by **escaping routine**. On the pull side, **"safety"** is a key element, as well as **ease to access and the monetary costs** ("accessibility"?) are important factors when deciding to and where to travel, in addition to factors related to having fun and "nice weather" (Jang and Liping, 2002).

This qualitative characteristics of a destination can result in a challenge when trying to translate them into utility or measure them and, when trying to compare from one individual to another. Van Cranenburgh et al. (2014) understood this and defined the utility based on attributes found in literature which can be used to conceptualize a vacation alternative. Such attributes are Destination itself (using distance to origin as the only attribute of a destination that is easily and objectively observed and quantified), length of stay, type of accommodation, mode of transport, travel time and travel time.

Moreover, Lamondia et al. (2010) identifies three main independent variables that are typically present in holiday destination and travel mode studies, these are: personal characteristics (age, education, household composition, income, etc.), destination attributes (weather, activities, expenses at destination, safety, etc.), and trip characteristics (cost, travel time, distance, etc). In addition, it is pointed that nowadays other elements should be considered, such as what exactly travelers look for, motivations for taking a trip or prior expectations and experiences, or so called "inherent desires for leisure travel". (Beerli et al., 2007).

Nevertheless, the present study does not pretend to dig deeper into behavior of the travellers towards selecting the destination only, but it assessed whether the utility of an alternative, and consequent destination choice, are affected by what others are doing. Therefore, such utility was addressed without including such past experiences or expectations, but all those elements were assumed as part of the destination characteristics and preference revealed by participants for a set of predefined list of possible destinations.

Finally, and most importantly for the purpose of this study, the approach used by Van Cranenburgh et al. (2014) proved to be successful to enhance realism and reduce the response error variance, by using a pivoted experimental design. This method also helped them to deal with the little knowledge of the specific preferences or consideration that travellers take into account when facing a decision for a vacation destination.

The study consisted of two parts. The first one, a so called "revealed preference" sections, with the intention of identifying elicited alternatives from respondents in order to include them in the stated preference experiment part. This way, the researchers could focus on relevant (enhancing realism) possibilities or scenarios while avoiding using irrelevant choices that might induce hypothetical bias. In the RP part, the respondents were asked to compose alternatives which they would consider for vacationing, as mentioned earlier to reduce hypothetical bias, and also because contrary to a study where the relevant choices are reduced to a well known -small- set of alternatives that could be easily inferred by the researcher, in this case, this set of alternatives could vary greatly between respondents and would be unknown for the analyst (van Cranenburgh, 2013).

Based on the former responses, the SP part was "tailor-made" for each respondent. The stated preference experiment was constructed by pivoting such alternatives found in the RP part. As mentioned before, this eliminated irrelevant scenarios that could be created from the assumption that all respondents share the same set of alternatives, and realism was enhanced.

2.4. Summary of the Literature

The literature reviewed served the purpose of introducing key concepts, and present a background around accessibility, positionality and destination choice, but fore-mostly to extract key findings that would be used for designing the pilot study and the stated preference experiment, and the subsequent analysis of the data for drawing conclusions.

These main findings from the literature were divided in four categories. These four categories are: accessibility and travel resistance of a destination, social context and how travelers compare with others, destination's utility for the respondents, and finally, design and analysis of stated preference experiments.

Accessibility and travel resistance of a destination

As mentioned in the literature, the concept of accessibility is broad and "well-know", until it is needed to define it. For the purpose of the study, accessibility was based on Rodrigue et al. (2017) which refers to the capacity of a destination to be reached. This capacity could also be defined as the travel

resistance of a destination. In addition, the attraction of a destination was included as well as the purpose of the trip, which in this case is for vacation or leisure purposes. For quantifying this utility, random utility-based multinomial logit model was used, and the attributes, describing the accessibility or travel resistance, taken into consideration are travel time and cost.

As a summary of the main findings regarding the accessibility or travel resistance of a destination, it was found that the most important factors to consider as travel resistance of a destination are: travel time, travel cost and travel mode. Though it was found that travel mode plays a part in defining the concept, for the study this was not considered and it was free for the respondents to imagine the travel mode, but slightly suggesting that it was based mostly on flying.

Social context and how travelers compare with others

Next, the most important findings regarding how to include the social context and how travellers compare their circumstances and preferences with others ("what others do") are listed below:

- The choices that individuals make could be influenced by what others are doing. This comparison and a possible influence on the decision making process might be an indication of positionality, or that the utility of a destination behaves as a positional good for travelers.
- The construction of contexts or scenarios help respondents to imagine specific experiences and compare these with the ones of friends or other people in their social environment.
- Introduce two different perspectives for constructing the questions. These two approaches should cover what respondents state as of what they would choose for themselves and, on the other hand, what they think others would choose under the same circumstances or context. Including the approach of asking the travellers to answer from the perspective of others helps to reduce false statements and assess if people's stated choices are influenced by socially desirable behavior.

The first point is the cornerstone of the study. Including the influence that comparison with other individuals might have on the respondents choices would be an indication of positionality. By including different scenarios in a survey-experiment, positionality has been proved in past studies. These contexts presented different scenarios where respondents were forced to compare their situations with the ones of others, specially, people in their own social environment (e.g. family or friends).

In the case of including two perspectives, this was done to minimize socially desirable behavior from the respondents, and compare the results to assess if this behavior was present in the data.

Destination's utility for the respondents

In terms of the findings regarding the respondents' specific destination utility, literature shows that individuals use specific characteristics of a destination to define its value. The main factors that make a destination attractive to travelers, and therefore, would increase its utility are: activities to be performed at destination, weather, safety and uniqueness of the place.

To quantify this destination's specific utility component for the study, a predefined set of possible destinations were given to the respondents. Then, they were asked to rank the alternatives, as it was done in past studies. These alternatives were extracted from the results of the pilot study.

Design and analysis of stated preference experiments

Finally, for the design and analysis of the SP experiment, the main conclusions obtained from literature are:

- Pivoting approach is fundamental to preserve realism of the context construction and personalize the questionnaires to each respondents personal preferences and traveling likes.
- The most recommended tools for the design of the experiment and further analysis of the results are Ngene & Apollo respectively.
- Importance of considering a Fractional factorial design for efficiency. Preserve Orthogonality by using Basic Plan 2.

The first point was also briefly mentioned in the previous category, since the pivoting would be doing based on a list of predefined destinations. These set of destinations served the purpose of capturing the specific utility of a destination by ranking the options, but also, made it possible to tailor the questionnaire for each of the respondents. By ranking the destinations, the scenarios can be adapted to preserve realism and about the need to use generic labels, such as "destination 1", but personalizing the label, depending on the most or least appealing destination for the respondent.

Also, though not explicitly covered in the literature review, most of the studies rely in the use of dedicated survey for the design and data analysis of the stated preference experiments. From these studies and academic material, both software options (Ngene and Apollo) were selected. In accordance to this last point, the main characteristics of the experiment can be guaranteed. Using such software, a fractional factorial design can be easily created. This characteristic was selected to preserve orthogonality while keeping the design efficient in terms of size and data.

2.5. Conceptual Model

As a framework for the assumptions and bases for the investigation, a conceptual model is presented in figure 2.1. Here, the main logical reasoning behind the study can be observed. This model is composed of three different elements that shape the utility of the destinations to be chosen by the traveller, combining utility theory and the theory of positional goods.

The utility theory was used for measuring accessibility. In this study, accessibility has been referred as the combination of the capacity of a destination to be reached (origin-based) and the attractiveness of the destination for the travelers (destination-based).

The first part of the concept, can also be defined as the travel resistance of a destination. This travel resistance is the first element of the conceptual model. The travel resistance of a destination can be represented by the quantitative attributes that serve as impedance for the travel itself, such as travel cost, travel time, travel mode, among others. For this specific study, only the first two attributes were included, travel cost and travel time, and can be explained as the degree of perceived control of the individuals behavior (travel to a destination), as they could choose how much money to spend and how

much time to spend traveling, to reach a leisure destination. These attributes are easy to quantify in terms of Euros (/€) and hours.

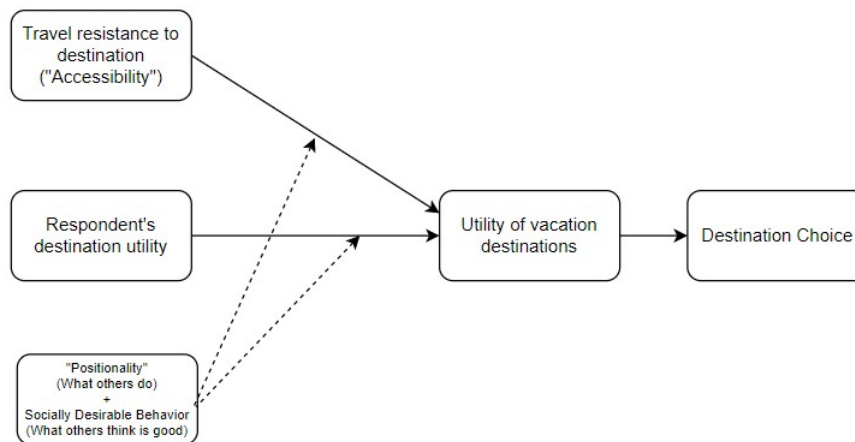


Figure 2.1: Conceptual Model

The other component of accessibility served as the second element of the conceptual model. Each destination provides different characteristics that can be more appealing depending on each traveler and depend on their specific -personal- preferences, and most of these are indeed hard to quantify (e.g. like for activities at destination, "nice" weather, uniqueness, scenery, etc.). Therefore, an element based on the respondent's destination utility was introduced. This element was intrinsic for each of the possible destinations, and was quantified by asking the respondents to rank a set of five predetermined destination, obtained from the pilot study. By ranking the destinations, the respondents would be assigning a value to each destination, in the scale of 1 to 5. The first ranked option was given a 5, because represents more utility for the respondent. accordingly, the fifth ranked destination was assigned with a value of 1, representing that the least favorite option would represent less utility for the respondent.

The first two elements of the model added (or subtracted in the case of time and cost) to the utility of the destination, thus the straight lines in 2.1.

A final element in the conceptual model is based on the social context and the theory of positional goods. "What others do" and the comparison with others, as part of the theory of positional goods, is included to assess if indeed this social environment, has a relevant influence on the destination's utility and therefore, the final destination choice for vacationing.

The positionality element was added in the study as contexts where respondents had to choose from two alternatives, under specific scenarios. This scenarios were based on what others are experiencing or where others are traveling for the same leisure purposes. Context variables may affect the parameters of the attributes in the utility function, by changing the weight of the value of the destination, the weight of the travel cost and/or the weight of the travel time. These contexts variables were referred as interaction effects, and since they are influencing the attributes of the utility "indirectly", this is represented by a dashed line in the conceptual model in 2.1.

Along with positionality, the socially desirable behavior is included to test if the components of utility are

influenced by it. It means, if responses from the participants are different if asked from the perspective of others, making them state more "honest" responses than asking them directly their opinion, because they could be influenced to deny that comparison (envy) affects their own choices.

3

Pilot Study

3.1. Study Design

From the literature, valuable insights were obtained that helped with the design of the stated preference experiment. The main attributes that are used to represent the accessibility, such as travel time and travel cost, as well as the perceived value of a specific destination for travelers. Also, methodological aspects were found, like the inclusion of two different perspectives or the possibility to incorporate positionality as interaction effects derived from scenarios, and the pivoting method in order to preserve realism and have questions tailored to each respondent. These insights extracted from literature was combined with the results obtained from an explanatory research or pilot study.

In order to gather additional information for the design of the stated preference experiment, a preliminary pilot study is conducted. The main objective of the pilot is to obtain first-hand insights from a sample of respondents, by asking them questions related with accessibility, destination choices and influence of social environment.

The study consisted of a survey with two sections. The first section gathers socio-demographic data in order to characterize the sample of the respondents. It is composed by twelve items in order to collect characteristics such as age, gender, level of education, country of residence, and household's annual income, among others.

The second section covers the actual questions that are the aim of the pilot. The first two questions include aspects of accessibility and how respondents understand the concept in the context of traveling for leisure purposes. Also, it includes an open question asking respondents to disclose the three most important aspects that they consider when deciding on their next vacation destination.

The objective of these first two questions is to explore what is the actual understanding of the respondents around accessibility, and how this idea could contrast or resemble the definition of accessibility proposed for this study. Combining it with the second question, it showed the differences from what they theoretically consider accessibility mean to what they express to consider when facing accessibil-

ity of a destination. also, it provided insights on which attributes are important for travelers, compare to what was found in literature.

To continue, question 12 introduces the environmental impact of the trips. Here, respondents are asked to express the level of impact that environmental impact of traveling to a destination has in their vacationing choices. This question was included in order to test if the level of environmental awareness is strong enough to be included in the stated preference study.

Next, question 13 consists of a list of ten given vacation destination characteristics. Respondents are asked to rank these characteristics in order of importance or influence they represent when choosing a destination. The idea behind this question is to provide factors that were found in literature and verify if the ranking provided by respondents also matches with the answers from the open question (second question of the section) referring to three aspects considered by individuals when choosing a vacation destination.

The positionality component is also present in the pilot study. The successive three questions (Q14, Q15, and Q16) aim to characterize how this positional-goods component is present in the reality of respondents. The questions explore what are travelers comparing, with whom they are comparing and how they compare their traveling choices and experiences with others. The results from these questions helped to shape the contexts that need to be included in the stated preference experiment and that could influence the attributes of the utility.

This was important to understand what exactly people are comparing; destination itself, travel mode, activities, expenses or uniqueness of a destination, among other characteristics. Also, it was found with whom people compare their choices and experiences; family, friends, colleagues, neighbors or strangers. Finally, how respondents are comparing with others was explored, whether they do it by sending pictures, via social networks, at parties or social gatherings, at work, with photo albums, or other means.

The last question of the pilot study is a ranking question. In this item, respondents were asked to rank a set of given vacation destinations, from more attractive to less attractive. This list included at least one possible country from each of the regions/continents of the world. The question is pretty straightforward and helped to determine which destinations were included as part of the stated preference experiment.

3.2. Results

The study was conducted between September 25th and October 2nd of 2020 and it was answered by 30 respondents. Respondents were reached via social media.

The first part of the questionnaire included respondents demographic characteristics, such as age, education, income, household composition, gender, among other elements. The second part, included open questions, selection questions and ranking questions. Here respondents were asked regarding aspects such as most important elements when deciding a vacation destination, environmental impact awareness of the trip, importance of given destination characteristics, ranking preferred vacation

destinations and aspects regarding sharing experiences and comparing vacation elements with other people within their social environment. For viewing the whole questionnaire, check the document in appendix B.

The key information obtained from the study is presented below.

3.2.1. Demographics

The profile of the respondents can be summarized as mostly European residents (18 Dutch and 2 German), with an average age of 32 years old. Additionally, the average household was composed of 2,27 people. Almost all the respondents possess a University BSc. or MSc. degree.

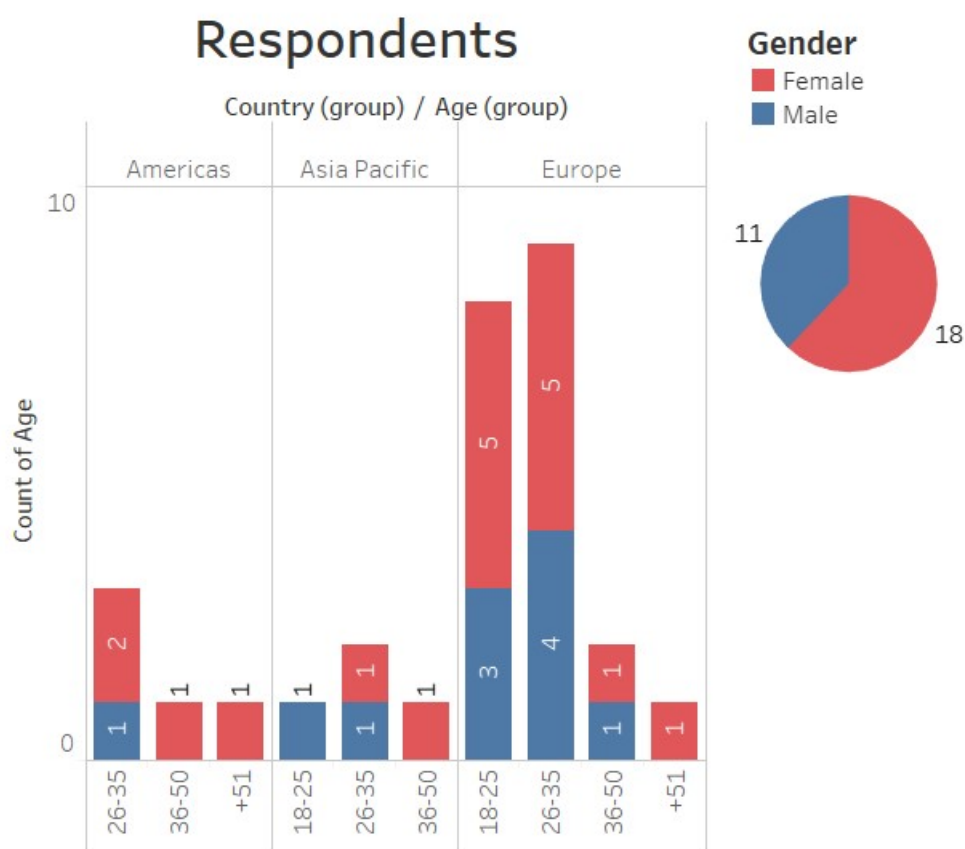


Figure 3.1: Exploratory Research Respondents

3.2.2. Accessibility

An open question asking respondents to express what do they understand from the concept of "Accessibility" in the context of leisure and vacation purposes proved that the general knowledge about the concept is highly variable and every person gives a different definition. Based on the responses, the

main keywords or aspects included were: Easiness to reach destinations, Cost/effort to reach these destinations, the people's possibilities and availability of different alternatives, and in much cases people included the idea of destinations to be accessible for people with disabilities. Finally, some other keywords like travel time, infrastructure and, affordability were included in the responses. Below, a "Word-Cloud" in figure 3.2 illustrates the most common terms included in the definition.



Figure 3.2: Accessibility Keywords

3.2.3. Sustainability

Two questions regarding respondents consideration of environmental impact of their destination choosing were included in the survey. From the responses, it can be observed that almost half (48%) of the respondents do not consider the environmental impact as a decisive aspect when choosing a destination for vacationing and 31% are neutral; leaving only a 21% that, at least to certain degree, consider the environmental impact when choosing a destination.

For the case of the travel mode, 45% of the respondents do not consider it, and 31% stated that they include this variable when deciding which travel mode to choose.

3.2.4. Destination Attributes and Ranking

Three questions of the survey focused on the destinations' most important attributes for the respondents. The first one was an open question where subjects identified the three most important aspects when choosing their next vacation destination, the second one asked respondents to rank ten given characteristics by importance when deciding on vacation destinations. Finally, a selection of eleven different geographical zones were given as possible holiday destinations, asking them to rank these options from more to less attractive.

Based on these questions, the three most important aspects when deciding a vacation destination are: Cost (22%), Travel time/distance (17%), Activities at destination (16%). Additionally, when destination characteristics were ranked, respondents identified Travel Cost, Risk/Safety, Activities at destination, Expenses and travel time, as the most important characteristics of the destinations.

Finally, the ranking of possible vacation destinations revealed that the five most attractive are: Western Europe, Oceania, Eastern Asia, South America and Eastern Europe.

3.2.5. Comparing with others (Positionality)

Finally, respondents were faced with questions to obtain information about circumstances where they compare to others, in the context of leisure traveling choices. Specifically, subjects were asked: what do they consider, to whom and how they compare their vacation choices and experiences with others. From the responses, it is observable that subjects compare the activities performed at destination, cost/expenses, destination distance, travel mode and uniqueness of the destination. Usually they compare these characteristics mostly with friends and colleagues and they do it via social networks and parties or social gatherings.

3.3. Summary

As mentioned in the beginning of the section, the exploratory research examined what is the actual understanding of the respondents around accessibility and how this theoretical understanding differs with practical application. This additionally helped to answer research sub questions 1 and 2. Also, the results served as inputs for the design of the stated preference experiment.

The first conclusion that can be extracted from the pilot study is that there are important differences in what respondents perceive or understand from the term accessibility. Some of the common terms found in the description of accessibility provided by respondents match or are slightly connected with the proposed definition of accessibility given for the purposes of the study. These cases are the ones that included in the definition some terms such as: travel time and cost or effort invested to reach a destination. On the other hand, elements like travelers' possibilities, easiness to reach a destination, availability of many alternatives to travel or possibilities for people with disabilities, differ notably with the used definition.

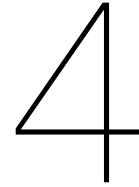
Despite finding some partial similarities in some of the cases, this proves that not only the concept of accessibility is broad, but also that there are relevant differences between the concept used for the purposes of the study and the understanding of the concept by travelers. Also, disparity can be found among respondents, as expected.

In terms of sustainability, the pilot showed that almost half of the respondents do not consider the environmental impact as a decisive aspect when choosing a vacation destination, and only 21% do consider it at least at certain degree. These results corroborate that even though the environmental impact of travelling should represent a major concern, it is still not a key determinant and therefore not included as a relevant attribute of a destination's utility in the stated preference experiment. Still, the

topic was added as an additional question after the main section of the questionnaire.

For the destination attributes and ranking, first, the study revealed that the most important factors that influence the individuals when choosing a vacation destination, match with the ones proposed in literature and that were considered for the creation of the conceptual model. These factors are monetary cost, travel time or distance and the activities at destination. Also, from the last question, concerning the ranking of preferred destination, the top five destination are Western Europe, Oceania, Eastern Asia, South America and Eastern Europe. These five destination were the ones used in the stated preference experiment, in order to increase the realism of choice sets and contexts, and increase "desirability" of the destinations.

Finally, from the pilot, it is clear that people tend to compare with friends or colleagues and they do it via social media and social gatherings. Also, it was found that they normally compare the activities performed at destination, costs or expenses incurred and distance to destination. This matches what was found in previous questions and in literature and could mean a first sign that positionality is present in the utility, since respondents express that they compare certain components of a destination's utility.



Study Approach - Stated Preference Experiment

From the literature it was observed that stated preference experiments are a convenient tool when studying both choice models and positionality. This technique provides an efficient and simple yet reliable method to study individuals' behavior and construct all possible alternatives without the need of large samples to obtain reliable estimates. Also, with the knowledge gathered from the literature and the pilot study, a stated preference experiment can simulate scenarios with any variation required, even for non existing alternatives. This way, the experiment could include any desired combination of attributes or variables that revealed preference experiments would not.

A stated preference experiment was designed with the objective of testing the conceptual model proposed in section 2.5. The model offers a way to represent the utility function of a destination, by incorporating the travel resistance components (travel cost and door to door travel time) and the respondent's destination utility, quantified by means of a prior question intended for respondents to rank a given set of possible alternatives. This was introduced to capture the specific personal preferences of each traveler. In addition to this components, the element of positionality was included as contexts. This contexts can be defined as different situations or scenarios, that were presented to the respondents before choosing between two alternatives, and would provide information about the destinations where others are traveling. This forced respondents to compare their options with the ones of other travelers. The main idea is to evaluate the contribution of each attribute to the utility of a vacation destination and, whether or not the weight of these attributes, and resulting utility, are influenced significantly by comparing with others.

As mentioned above, the three main components of the utility are travel cost, overall duration of trip and destination value. The travel cost is defined as the monetary cost, in Euros, spent in order to reach a destination and the expenses incurred while at the destination. For example, this travel cost could be composed of tickets, taxes, ground transportation, and accommodation expenses per traveler. The travel time, is the time, in hours, elapsed from the origin departure to arrival at destination, including

any possible transfer layover or stop-off time. It can be also expressed as 'overall duration of trip' or 'door to door travel time'. Finally, the respondent's destination value, is obtained from a prior question in the questionnaire. Respondents were asked to rank five given alternatives. This alternatives were obtained from the results of the pilot study. Once the destinations have been ranked by the respondent, from more attractive to less attractive, a value was assigned to each, in a scale from 5 to 1. This value represents the respondents' destination attractiveness, as a aggregate of specific characteristics that make a destination more attractive to the traveler. The value of 5 was assigned to the highest ranked destination, the value of 4 to the second highest ranked alternative, and following a decreasing pattern for the rest of the alternatives respectively. For the purpose of the study, it was assumed that each respondent would find different reasons to prefer a specific destination from the list, based on past experiences, general knowledge of the destination, advertisement or any other of source of information regarding the options.

Finally, the element of positionality was introduced as a context. This context represents a scenario where the possibilities or choices of others are introduced, stating clearly where others are traveling while the respondent faces their vacation decision making process. In this case, the scenarios depicted an assumption that other individuals were also traveling to one of the destinations included in the ranking. This other individual was represented as an average friend or colleague of the respondent.

Therefore, the utility function for the vacation destination was as follows:

$$\begin{aligned}
 U = & [\beta_D + (\beta_{DOD} \cdot \text{Dest.Others})] \cdot \text{Dest.Value} \\
 & + [\beta_C + (\beta_{DOC} \cdot \text{Dest.Others})] \cdot \text{Cost} \\
 & + [\beta_T + (\beta_{DOT} \cdot \text{Dest.Others})] \cdot \text{Time}
 \end{aligned} \tag{4.1}$$

Once the utility function has been defined, the next step is to construct the choice sets. The choice sets are the group of alternatives from which a respondent can chose at a particular moment, or in this case, a particular question. From here, each choice set can be constructed. Each choice set was conformed by a context, the question statement, and two choice alternatives. For each alternative, three attributes were presented, with one of three possible levels per attribute.

A choice alternative is a choice option with scores or levels on each attribute. Attributes are the characteristics of a choice alternative. These correspond to the attributes included in the utility function, destination value, cost and travel time. Then the levels are the particular possible values that an attribute can have. Each attribute can have three levels, to preserve linearity, and were equidistant, to assure orthogonality between attributes. Finally, the context is a description of a the situation or assumption respondents must assume while making choices. In this case, it presented a short description of where others (friends or colleagues) are traveling to.

The levels for each of the attributes are summarized in table 4.1.

For the experiment, three different contexts where created. These are represented by the Destination2, Destination3 and Destination4 from the ranking of alternative that respondents must complete prior to the experiment questions. The levels for the destinations where other are traveling in each context,

Table 4.1: Attributes and levels

Attributes	Levels		
Destination	1	3	5
Cost (€)	1000	1500	2000
Travel time (hrs)	6	9	12

were selected in order to always have the possibility to present better (Destination 1) or worse (Destination 5) destinations, compared to others, to the respondents. This means that by choosing levels 2, 3 and 4, it can be guaranteed to create contexts using destinations 1 or 5 that would represent favorable or unfavorable scenarios for the participants.

Also, in a separate way, the choice alternatives were created using Basic plan 2. Here, the aim was to systematically construct a orthogonal design, preserving attribute level balance, and making sure to minimize correlations among attributes.

Once both the context profiles and the choice alternatives are created, these were systematically combined so that each respondent faced every context and couple every context variable with each relevant choice set, making sure to eliminate dominant alternatives. The resulting choice sets are presented in table 4.2.

Table 4.2: Choice sets for the SP Experiment

Choice Sets							
Context Profiles		Vacation 1			Vacation 2		
Context Profiles	DestOthers	RankDest	Cost	Time	RankDest	Cost	Time
1	4	5	1000	6	1	1000	9
2	4	3	2000	6	1	2000	12
3	4	5	2000	9	5	1500	12
4	3	5	1500	12	3	2000	6
5	3	3	1000	12	3	1500	9
6	3	5	2000	9	5	1500	12
7	2	1	1000	9	1	1500	6
8	2	1	1500	6	3	1000	12
9	2	1	2000	12	5	2000	9
10	4	3	1500	9	5	1000	6
11	4	3	1000	12	3	1500	9
12	4	1	1500	6	3	1000	12
13	3	5	1000	6	1	1000	9
14	3	1	2000	12	5	2000	9
15	3	1	1000	9	1	1500	6
16	2	5	1500	12	3	2000	6
17	2	3	1500	9	5	1000	6
18	2	3	2000	6	1	2000	12

4.1. Design of the Questionnaire

Once the choice sets are completed, the next step is to create the questionnaire as a whole. For the creation and distribution of the survey, the web platform of "Qualtrics" software was needed.

The questionnaire used consisted of five sections. The **first section** is an **introduction**, explaining the objective of the research and how the data was used to draw general conclusions. Next, the **second section** is called **Destination Ranking**. It starts with a filter question, included in order to guarantee responses from people residing in the Netherlands or Europe. If a person accessing the survey is not a Dutch or European resident, the survey concluded. After this, A ranking question follows. Here, respondents were asked to rank five given destinations, from more attractive to less attractive.

For the selection of these five alternatives, the results obtained from the pilot study were used. The list is based on the most preferred destinations expressed by the respondents sample. The given destinations listed below:

- Western Europe
- Oceania
- Eastern Europe
- Eastern Asia
- South America

This ranking served several purposes. First it made it possible to "tailor" the experiment for each of the individuals. A JavaScript code was embedded in order to customize each of the choice set, assigning the ranked alternatives so that the names of the alternatives replace the generic label of the destination. For example, for a particular respondent, if they chose Oceania as his/her most attractive destination, the label "Oceania" replaced the generic label "Destination 1" in the questionnaire text, either for the contexts or the choice alternatives. Also, this approach helped to define which destination is "better" or "worse" for each of case. Lastly, this feature was used for testing positionality and whether or not traveling to a better or worse destination, compared to others, have an impact on the utility of a destination and therefore, in the destination choice.

Additionally to the ranking question, respondents were asked to quantify how attractive each destination is or "how good" they would consider travelling to each destination, in the now re-arranged list. This was included in order to establish a base alternative as the "best one" and use it to weight the difference from the other alternatives with respect to the base option. This helped to analyze the differences both in a linear scale and a (probably) nonlinear scale.

Once the destinations were ranked and quantified, the respondents began **section three** of the survey. In this section, they were presented with 18 different choice sets, presented already in table 4.2. Each of these consist of a context; a scenario represented by the travelling destination of others, and two choice alternatives, each composed by the three selected attributes (destination, cost and travel time).

Two different versions of the questionnaire were created by modifying section three. These two versions were created in order to account for two different perspectives from the respondents, as it was already

explained in the methodology in section 1.2 of the study. This approach was included with the goal of testing if the answers are affected by socially desirable responses, and therefore answer research sub-question 4 of the study. Both versions are composed of the same choice sets, and the difference lies in the perspective from which the questions are asked, first asking respondents to answer based from their own point of view or what they prefer, and a second version asking respondents to answer based on the point of view of others, meaning, what they think others would prefer. In the first case, called from now on "**Own View**" version, asked directly the questions to be answer from the respondents perspective and based on his/her personal choices regarding travel destination choice.

In a second version, called from now on "**Others View**" version, respondents were asked to abstract themselves from their reality and think about a relative (family member) and choose between scenarios depending on what they think would be better for their relatives, or what they think relatives would choose if faced with the scenarios.

After this, **section four** is presented. **Two additional questions** were included in this section, after the experiment questions. These two additional questions were intended for asking the respondents directly what their possible choices would be when faced with scenarios in terms of destination choice, only considering one variable per question. One question was introduced for destination choice only and one for hypothetical environmental impact of the trip. This make it possible to answer sub-question 6 of the study. See example questions below in subsection 4.1.1.

The **fifth section** consists of **general information** questions to gather data about the respondents, such as age, income level, household composition, level of education, among other variables. This data made it possible to characterize the sample of respondents and group respondents in certain socio-demographic categories, in order to analyze the results for positionality for each category. This made it possible to answer research sub-question 5 of the study.

The two versions of the experiment can be reviewed in appendices C and D, respectively, nevertheless, below are two examples of how the questions in each version look like.

4.1.1. Example of SP experiment questions - Section 3

An example of the questions for both versions of the questionnaire for the Stated preference experiment are presented below.

Own View version

In this part of the questionnaire, it is required that you answer which scenario you would choose for vacation purposes. A "better" vacation means the scenario that would make you happier, therefore, you would prefer to choose.

Note that destination characteristics and prices (purchasing power of money) are the same in both scenarios and the same as in current society. Also, cost = ticket + expenses, and travel time = time spent reaching the destination.

For each of the following questions, there is a scenario in which you travel to a destination, while all

your average friends (friends, colleagues, acquaintances) also travel to a destination. You know about your friends' destination choices and travel characteristics while sharing experiences at a party and through social media (e.g. Instagram, Facebook).

Q3.1. Your friends travel to: Eastern Asia.

Which vacation scenario would you choose?

- Eastern Europe; cost = €2000 and travel time = 6 hrs.
- Western Europe; cost = €2000 and travel time = 12 hrs.

Others View version

In this part of the questionnaire, try to think you are answering from the perspective of others, and think about what would they prefer. It is required that you answer which scenario a relative of yours would choose for vacation purposes. A "better" vacation means the scenario that would make your relative happier, therefore, he/she would prefer to choose.

Note that destination characteristics and prices (purchasing power of money) are the same in both scenarios and the same as in current society. Also, cost = ticket + expenses, and travel time = time spent reaching the destination.

In each of the following questions, there is a scenario in which your relative travels to a destination, while all his/her average friends (friends, colleagues, acquaintances) also travel to a destination. Your relative knows about his/her friends' destination choices and travel characteristics while sharing experiences at a party and/or through social media (e.g. Instagram, Facebook).

Q3.1. His/her friends travel to: Eastern Asia.

Which vacation scenario would make your relative happier?

- Eastern Europe; cost = €2000 and travel time = 6 hrs.
- Western Europe; cost = €2000 and travel time = 12 hrs.

4.1.2. Example of additional questions - Section 4

Finally, examples of the two additional questions in section 4, for both versions of the questionnaire, are presented below.

Own View version

Finally, two different vacation scenarios will be presented to you. Answer based on which of the scenarios would satisfy you the most.

Q4.1. Which vacation scenario would make you happier?

- Vacation A: You travel to Oceania. Your friends travel to western Europe.

- Vacation B: You travel to Eastern Europe. Your friends travel to Eastern Asia.

Q4.2. Which vacation scenario would make you happier?

- Vacation A: You travel to Western Europe; CO2 emissions = Very High. Your friends travel to Oceania; CO2 emissions = Intermediate.
- Vacation B: You travel to Eastern Asia; CO2 emissions = Very Low. Your friends travel to Eastern Europe; CO2 emissions = Intermediate.

Others View version

Finally, two different vacation scenarios will be presented to you. Answer based on which of the scenarios would satisfy your relative the most.

Q4.1. Which vacation scenario would make your relative happier?

- Vacation A: Your relative travels to Oceania. His/her friends travel to Western Europe.
- Vacation B: Your relative travels to Eastern Europe. His/her friends travel to Eastern Asia.

Q4.2. Which vacation scenario would make your relative happier?

- Vacation A: Your relative travels to Western Europe; CO2 emissions = Very High. His/her friends travel to Oceania; CO2 emissions = Intermediate.
- Vacation B: Your relative travels to Eastern Asia; CO2 emissions = Very Low. His/her friends travel to Eastern Europe; CO2 emissions = Intermediate

4.2. Data Analysis Methodology

The data analysis is focused in finding the weights of the parameters for each of the attributes of the utility function and the interaction effects from the contexts. This result in a calculation of six parameters, represented by " β " in the utility function in equation 4.1. For the analysis, the software "Apollo" was used to estimate the parameters values, but also the standard errors and t-values in order to test statistical significance of the parameters. Additionally, the software allowed to measure the goodness of fit of the models by a log-likelihood test. This allows to express how well is the model reproducing the choices in the experiment.

The analysis of the results was divided in four sections. The first part allowed to define which of the two proposed modeling approaches is better to represent the main and interaction effects and reproduce the choices. The two approaches are called "**Dummy Coding**" and "**Ranking**". The Estimation of the parameters and the interaction effects are analyzed in order to test positionality, and eventually, which attribute is more sensitive to comparison with others.

The Dummy Coding approach, includes the context as a variable that could have only three values: -1, 0 or +1. Each of these values represent the destination where others are travelling, and it is calculated

by comparing it with the subjects' travelling destination, being -1 if the destination of others is worse than the subject's destination, 0 when both the subject and others travel to the same destination (then no interactions can be determined and only the main effects are influencing the utility) and finally, +1 when the destination of others is better than the subjects destination.

Following, the Ranking approach takes into consideration not only if the destination selected by the respondent is better or worse than the destination of others, but also includes the magnitude of these differences. Meaning that the context (destination of others) can be represented by any value in the range $[-4, +4]$, depending on the difference between the two destinations. These two models were compared, using the complete data set, to define which one has a better goodness of fit (Log-likelihood test).

After this, the second part tested the research sub-question 4, regarding socially desirable responses. Here the two versions of the questionnaire created were compared to account for significant differences and also check which version offers more reliability for the parameters estimation, using a 95% confidence interval.

Next, a socio-demographic analysis was performed by clustering respondents in categories depending on their age, gender and average annual household income. This is performed using only the best model, as a result of the test in the first part of the analysis. The objective here is to test if a specific group is more sensitive to positionality compared to the other (research sub-question 5).

Finally, the two additional questions included after the experiment were analyzed, with the objective of evaluating if there is any sign that could suggest that respondents are willing to sacrifice traveling to a better destination in order to be better with respect to others. Also, this final step made it possible to draw some preliminary conclusions regarding the possibility of sustainability having a role in positionality (research sub-question 6), since respondents were directly asked if they would prefer traveling to a "worse" destination in order to have a lower trip environmental impact compared to others. For both questions, descriptive statistics was used to analyze the data.

4.3. Sample

The data collection for the experiment was conducted from November 12 to November 22 of 2020, using an online questionnaire. Qualtrics web platform was used for the distribution of the questionnaires and for the data managing. Respondents were recruited from own social, professional and academic networks, and also promoting a snowball effect. A total of 205 participants answered the survey. From this amount, 159 were valid responses. The remaining ones were invalid for the purpose of the study either because the respondent's residence country (outside of Europe) or because the survey was not fully completed.

As two different versions of the questionnaire were sent to respondents (Own View and Others View), table 4.3 shows the distribution of respondents for each of the versions. Additionally, one of the objectives of the study is to examine whether positionality influences respondents' choices differently depending on their demographic characteristics, therefore demographics data was collected in the last section of the questionnaire. Some of those characteristics are presented in tables 4.4, 4.5 and 4.6.

Table 4.3: Total participants and valid responses

Participants	Own View	Others View	Total
Total Participants	94	111	205
Valid Responses	79	80	159

Table 4.4: Gender distribution of the respondents per version

Respondents	Male	Female	N/R
Own View	53%	47%	0%
Others View	48%	46%	6%
Total	50%	47%	3%

The average profile of the respondents corresponds to Dutch persons with an average age of 32.3 years. The average household of respondents is occupied by 2.36 people (including the respondent) with an average yearly income between €50,000 and €59,999. Finally, respondents marital status is predominantly married or in cohabitation, and possess a University Graduate Degree (MSc., PhD, etc.).

Table 4.5: Age distribution of the respondents per version

Age Groups	Own View	Others View	Total
18-25	35%	18%	26%
26-35	41%	59%	50%
36-50	13%	21%	17%
51-65	11%	1%	6%
65+	0%	1%	1%
Total	100%	100%	100%

Finally, some other characteristics captured by the questionnaire correspond to personal traveling preferences and important factors present in their lives. Respondents value family, friends and travelling as important factors in their lives more than they do money, environment and status. The top last destinations visited that were stated by respondents correspond to countries located in Northern and Western Europe, as well as destinations such as Costa Rica, USA, Southern Europe and Colombia.

Table 4.6: Income distribution of the respondents per version

Income	Own View	Others View	Total
€0 - €10,000	20%	6%	13%
€10,000 - €19,999	5%	4%	4%
€20,000 - €29,999	5%	13%	9%
€30,000 - €39,999	6%	10%	8%
€40,000 - €49,999	9%	13%	11%
€50,000 - €59,999	14%	19%	16%
€60,000 - €69,999	14%	14%	14%
€70,000 - €79,999	6%	8%	7%
€80,000 - €89,999	3%	3%	3%
€90,000 - €99,999	3%	4%	3%
€100,000 +	15%	9%	12%
Total	100%	100%	100%

Table 4.7: Important factors for respondents

	Own View	Others View	Total
Ranking importance factors	Family	Family	Family
	Friends	Friends	Friends
	Traveling	Traveling	Traveling
	Money	Money	Money
	Environment	Environment	Environment
	Status	Status	Status

5

Results Analysis

5.1. Base Model

As mentioned in the previous section, the analysis of the results derived from the experiment were divided in four sections. First, two modelling approaches were tested to define the goodness of fit with the data and the reliability when estimating the parameters. One of the models was used as the base model for the analysis of socially desirable behavior and socio-demographics analysis, in sections 5.2 and 5.3 respectively.

The two approaches, Dummy Coding and Ranking, differentiate from each other on the way to calculate and represent the contexts in the utility. The Dummy Coding approach, includes the context as a variable that could have only three values: -1, 0 or +1. It only represents if the destination of others is better, same or worse than the respondents' destination, based on the ranking of destinations provided prior to the choice sets. On the other hand, the Ranking approach, not only considers if the destination of others is better, same or worse, but also account for the magnitude of the differences between destinations. These differences are calculated using a linear scale from 5 to 1, with the values assigned to each ranked destination.

The parameter results obtained for each of the models is presented below in table 5.1.

Table 5.1: Parameters for the complete data set (t-ratio in brackets)

Parameter	Dummy Coding	Ranking
β_D	0,734 (17,763)	0,665 (10,544)
β_C	-0,0025 (-15,787)	-0,002 (-10,944)
β_T	-0,114 (-8,327)	-0,081 (-9,736)
β_{DOD}	0,172 (5,352)	0,096 (4,507)
β_{DOC}	-0,0002 (-2,313)	-0,0001 (-2,979)
β_{DOT}	-0,012 (-1,195)	0,0098 (-1,632)

The main effects for each of the versions are presented in the table 5.1 above. When the destination of the respondent is the same as others (therefore context = 0), there is no positionality that could influence the attributes in the utility.

Using the case of Ranking approach as an example, and considering that both travelers fly to the same destination, therefore no positionality present, the parameters of the utility function can be interpreted in a simple way. When an individual improve his/her destination by 1 level, an increase of 1 in the value of a destination, the utility of that destination increases in a magnitude of 0.665. Also, spending €100 extra, would decrease the utility by 0.2. In the case of time, spending an extra hour in travel time would decrease the utility of the destination in -0.0806.

Therefore, an increase or decrease in the value of a destination, has the greatest impact in the utility of its destination, compared to saving €100 or 1 hour of travel time.

The ratio between parameters shown in figure 5.2 indicates the relation between the attributes when there is no influence from positionality, because both the respondent and other travel to the same destination.

Table 5.2: Ratio between parameters when there is no positionality influence

Parameter Ratio	Dummy Coding	Ranking
Dest / Cost	-295,7	-422,6
Dest / Time	-6,5	-8,3
Time / Cost	45,8	51,2

Same as the example before, using the situation of the complete data set, analyzed with the Dummy Coding approach, this means that under no positionality influence, a person would pay €45 for 1 hour less of travel time. In the same way, an improvement of 1 level in their destination would be worth €295 extra or 6,5 hours less travel time.

For the interaction effects with positionality, the results are shown for each of the model, Dummy Coding and Ranking.

5.1.1. Dummy Coding Approach

For the complete data, the utility function with the parameters values is presented below:

$$\begin{aligned}
 U = & [0.73394 + (0.17185 \times \text{Dest.Others})] \times \text{Destination} \\
 & + [-0.00248 + (-0.00016 \times \text{Dest.Others})] \times \text{Cost} \\
 & + [-0.11367 + (-0.01166 \times \text{Dest.Others})] \times \text{Time}
 \end{aligned}$$

By doing the same, the results for the two different contexts, when destination of others is better or worse than respondents' destination, are shown below.

Table 5.3: Components of utility function - Dummy Coding

Component of utility function	Dest. Others Worse	Same Destination	Dest. Others Better
Destination	0.56209	0.73394	0.90578
Cost	-0.00232	-0.00248	-0.00265
Time	-0.10202	-0.11367	-0.12532

Comparing both results, it is noticeable that the utility of a destination for the respondents is more sensitive to the value of the destination when the destination of others is better than the respondents'. This means that travelling to a better destination has a bigger impact when travellers find themselves in a less favorable situation, compared to others, and that impact decreases when they are better than others. This can be interpreted as a sign of positionality since when they are in a better situation, the value of the destination has less impact on the utility.

Also as it was expected, the utility of a destination is less sensitive to both cost and time when an individual travels to a better destination than others. In other words, spending more money or travel time is less relevant when travelling to a better destination, or travellers are willing to pay more or spend more time travelling if going to a better destination than others.

5.1.2. Ranking Approach

The same analysis is performed using the ranking approach. In this case, the results are presented below.

Table 5.4: Components of utility function - Ranking

Component of utility function	2 levels Worse	1 level Worse	1 level Better	2 level Better
Destination	0.474	0.5697	0.7611	0.8568
Cost	-0.0014	-0.0015	-0.0017	-0.0018
Time	-0.1003	-0.0904	-0.0708	-0.0610

A same result was obtained in terms of positionality. But in this case, each improvement in the destination of others compared to the respondents destination is taken into account and, represents an increase of 0.0957 in the impact of the destination component of the utility function. Same for the components of cost and time, each level of improvement in the destination of others, make cost more relevant (-0.00009 units per € spent) and time as well(-0.00982 units per hour increase in the travel time).

5.2. Influence of Socially Desirable Behavior

Prior to analyzing the possible influence of socially desirable behavior, a single model (approach) was selected. To do so, a test of the goodness of fit and statistical significance of the parameters was conducted. The Rho-square value of the Dummy Coding model has a value of 0.196, while in the case

of Ranking approach, the value is slightly better, 0.201. This means that the ranking approach proves to have a better fit with the data. Despite this, when comparing the results of both approaches, most of the cases the estimation of the parameters using the dummy coding approach proved to be more reliable, since parameters have higher statistical significance, with a confidence of 95%.

It was decided to use the Dummy Coding model for the rest of the study. In addition to the higher statistical significance found in the estimation of the parameters, the main goal of the study is to assess if being in a (des)favorable position compared to others, has an influence in the utility of a destination. Therefore, though the magnitude of the difference in between the destination could play a role, the focus was only on analyzing if the destination is better, or worse.

The objective here is to assess whether or not socially desirable behavior has an impact in the results of the study, and positionality itself. Two versions of the same questionnaire were sent to respondents, only varying the perspective from which questions were asked to them. The "Own View" version asked respondents directly about their choices, and in the case of "Others View", respondents were asked what they think a relative (family member) would choose under the same circumstances. This was included in the model by coding a version indicator

For comparing both versions, a t-test was performed with the null hypothesis H_0 that there is no difference between the samples, treating the data as separate samples extracted from each of the questionnaire versions. This would help to determine if the answers from the two groups of respondents are different from one another. With a confidence of 95%, the test confirmed that there is no evidence to reject the hypothesis which suggests that samples are statistically different.

In this case, practically speaking, this proves that in this specific case, there is no evidence to assume that socially desirable behavior influences the results. Colloquially, then it can be assumed that there is no difference between the two versions of the questionnaire.

The estimators of the parameters for both versions of the questionnaire are presented in table 5.5.

Table 5.5: Parameters for the two models (Own View vs. Others View)

Parameter	Own View	Others View
β_D	0,731 (12,488)	0,737 (12,632)
β_C	-0,003 (-11,155)	-0,003 (-11,171)
β_T	-0,113 (-5,818)	-0,115 (-5,956)
β_{DOD}	0,169 (3,724)	0,174 (3,846)
β_{DOC}	-0,0002 (-1,536)	-0,0002 (-1,735)
β_{DOT}	-0,013 (-0,912)	-0,011 (-0,778)

5.3. Socio-Demographis Analysis

5.3.1. Analysis per Age groups

In a similar way as it was done for the versions, the analysis now in three different groups, categorized according to age of the respondents. Here, the age group of the respondents was included in the model by coding a version indicator. A first group, consists of respondents with ages between 18 and 29, the second category formed by respondents from 30 to 40 years old of age and a final group, grouping respondents with age of 41 years or older.

The results obtained for the 6 parameters, for each of the age groups are presented in table 5.6.

Table 5.6: Parameters for each age group

Parameter	18 - 29	30 - 40	41 +
β_D	0,732 (12,952)	0,663 (9,54537)	0,994 (8,007)
β_C	-0,003 (-12,705)	-0,0025 (-9,002)	-0,002 (-5,448)
β_T	-0,121 (-6,558)	-0,110 (-4,638)	-0,150 (-3,792)
β_{DOD}	0,148 (3,406)	0,170 (3,16601)	0,287 (2,826)
β_{DOC}	-0,0002 (-1,505)	-0,0001 (-1,192)	-0,0003 (-1,733)
β_{DOT}	-0,012 (-0,876)	-0,007 (-0,394)	-0,027 (-0,975)

When analyzing the situation with no influence of positionality it shows that the value of the destination has a bigger impact on the destination's utility for respondents in the ages of 41 years or older, and they are "willing" to spend more money to reach those destinations, and/or avoid extra time travel.

Also, as was expected, the cost of travelling to a destination has a bigger impact for respondent between the ages of 18 and 29 years old. This make sense because it is known that normally, these group would have less "economic power" than older respondents.

The analysis of the relevant part of the utility function for each of the attributes (Destination, Cost and Time) is presented in table 5.7, for the modelling approaches Dummy Coding once positionality is included.

Table 5.7: Components of utility function per Age, Dummy Coding Approach

Component of utility	18 - 29		30 - 40		41 +	
	-1	+1	-1	+1	-1	+1
Destination	0.58365	0.87980	0.49220	0.83295	0.70620	1.28087
Cost	-0.00261	-0.00290	-0.00231	-0.00259	-0.00195	-0.00264
Time	-0.10961	-0.13276	-0.10316	-0.11650	-0.12291	-0.17660

First, the positionality assumption holds for each of the age groups and attributes, as the utility of a destination for the respondents is more sensitive to the value of the destination when the destination

of others is better than the respondents' (+1), compared to the context where they travel to a better destination.

Also as it was expected, the utility of a destination is less sensitive to both cost and time when an individual travels to a better destination than others. In other words, spending more money or travel time is less relevant when travelling to a better destination, or travellers are willing to pay more or spend more time travelling if going to a better destination than others.

What is revealing in this case is that for the group of respondents older than 41, the value of the destination is more positional than in the case of the other groups. For this group, when they travel to a worse destination in comparison with others, the value of the destination has a greater impact than for the other age groups.

In the same way, cost has a more positional influence in the utility of a destination for younger travellers, between the ages of 18 and 29. And in the case of travel time, the oldest travellers find it more influential when choosing a vacation destination.

5.3.2. Analysis per Income groups

Following the same approach, the data was modeled for a new group categorization, grouped according to the household's income of respondents. Same as in previous examples, an indicator of the income groups was included in the model. A first group, consists of respondents with an average income lower than €40,000 per year, the second category formed by respondents with an average household income within the range from €40,000 to €80,000 and, finally, a third group of respondents with a yearly income above €80,000.

The results obtained for the 6 parameters, for each of the annual average household income groups is presented in table 5.8.

Table 5.8: Parameters for each income group

Parameter	€0 - €40k	€40k - €80k	€80k+
β_D	0,817 (11,323)	0,745 (12,302)	0,577 (6,186)
β_C	-0,003 (-10,338)	-0,002 (-10,417)	-0,002 (-6,040)
β_T	-0,120 (-5,119)	-0,112 (-5,651)	-0,111 (-3,499)
β_{DOD}	0,241 (4,271)	0,184 (3,889)	0,031 (0,429)
β_{DOC}	-0,0002 (-1,738)	-0,0002 (-2,191)	0,0001 (0,375)
β_{DOT}	-0,020 (-1,194)	-0,008 (-0,562)	-0,007 (-0,299)

For the case of analyzing only the case when there is no influence from positionality in the utility function the results show that the value of the destination has a bigger impact on the destination's utility for respondents in the lowest income levels.

Also, as was expected, the cost of travelling to a destination has a bigger impact for respondent with the lowest average income which makes sense, since they would try to save money while getting the best experience that a destination could provide.

In the case of travel time, the group where this attribute has a greater impact on the utility is the one with incomes between €40,000 and €80,000.

The analysis of the relevant part of the utility function for each of the attributes (Destination, Cost and Time) is presented in tables 5.9 for each of the groups, once the interaction effects were included.

Table 5.9: Components of utility function per Income group, Dummy Coding Approach

Component of utility	€0 - €40k		€40k - €80k		€80k +	
	-1	+1	-1	+1	-1	+1
Destination	0.57607	1.05775	0.56117	0.92890	0.54667	0.60789
Cost	-0.00264	-0.00307	-0.00215	-0.00260	-0.00223	-0.00211
Time	-0.10046	-0.14047	-0.10450	-0.12048	-0.10453	-0.11815

The data shows that for all categories, the utility of a destination is more sensitive to the destination value, in the cases where individuals travel to worse destinations than other people.

Also as in previous situations, the utility of a destination is less sensitive to both cost and time when an individual travels to a better destination than others. In other words, spending more money or travel time is less relevant when travelling to a better destination, or travellers are willing to pay more or spend more time travelling if going to a better destination than others.

In this case, the group who experiences more positional effects for the value of the destination is the one with less average income. In a same way, cost is more positional in this group compared to the remaining two groups.

5.3.3. Analysis per Gender

Finally, the data was modeled for each gender of respondents, Male and Female.

The results obtained for the estimates of the parameters, in the case of modeling per gender, are presented in table 5.10.

Table 5.10: Parameters for each gender group

Parameter	Male	Female
β_D	0,7173 (12,466)	0,7879 (12,500)
β_C	-0,0028 (-12,390)	-0,0023 (-9,878)
β_T	-0,1085 (-5,714)	-0,1194 (-5,785)
β_{DOD}	0,1810 (4,084)	0,1702 (3,434)
β_{DOC}	-0,0002 (-2,339)	-0,0001 (-0,933)
β_{DOT}	-0,0027 (-0,196)	-0,0234 (-1,602)

The data shows that for no positionality influence, the value of a destination has a bigger impact on the

utility of a destination for women than for men. Also, that cost has a greater weight in the utility of a destination for men and, travel time is more relevant for the utility of a destination for women.

The analysis of the relevant part of the utility function for each of the attributes (Destination, Cost and Time) is presented in tables 5.11 for the gender groups once the interaction effects were included.

Table 5.11: Components of utility function per Gender, Dummy Coding Approach

Component of utility	<u>Male</u>		<u>Female</u>	
	-1	+1	-1	+1
Destination	0.53627	0.89830	0.61772	0.95810
Cost	-0.00256	-0.00303	-0.00219	-0.00238
Time	-0.10585	-0.11119	-0.09594	-0.14279

By the results, one can conclude that positionality holds for both genders and for all the attributes of the utility of a destination. Both men and women's destination utility is more sensitive to variations in the value of a destination when other are traveling to "better" destinations. On the other hand, utility is less sensitive to both cost and time, when travellers visit better destination than their counterparts.

Finally, data shows that the value of a destination has a more positional influence for women than for men, as well as travel time. On the other hand, cost induced by traveling to a specific destination is more positional for men.

5.4. Sustainability and Destination Choice

The final part is to analyze the results of the extra questions at the end of the questionnaire.

The first question intends to analyze if travellers are willing to reduce the value of their vacation destination in order to be in a "better" situation compared to others. In other words, the trade-off between travelling to a better self perceived destination, or being in a favorable position, above average, compared to others.

Table 5.12: Additional Question 1. Vacation Destination Choice

Destination Choice		
Alternative	Responses	Percentage
A	109	69%
B	50	31%
Total	159	100%

For the second question, the objective was to study whether people would sacrifice travelling to better destinations in order to have a less environmental impact when compared to others. As the results show in table, only 31% of the respondents are willing to sacrifice a better destination in order to be in a favorable condition when compared to others. On the other hand, this percentage increases to 47%,

when asked if they would travel to a worse destination than others, but at the same time, this trip would cause less impact on the environment.

Table 5.13: Additional Question 2. Environmental Impact of travelling

Sustainability		
Alternative	Responses	Percentage
A	85	53%
B	74	47%
Total	159	100%

5.5. Summary of the Results

The first part of the analysis provides a sign of positionality. The interaction between attributes and contexts (destination of others) showed that the utility is more sensitive to the level of a destination when individuals are in situations where the destination of others is better than theirs. Therefore, the destination value has a greater impact when individuals are in a worse situation compared to other and has less weight ("importance") when they are in more favorable situations.

In addition, when accounting only for main effects, meaning that both the respondent and others travel to the same destination, the value of a destination has a greater impact in utility, compared to saving €100 or 1 hour travel time. Using as an example the case of the Dummy Coding approach, the parameters of the utility function can be interpreted in a simple way. An increase of 1 level in the value of a destination, would increase the utility of that destination in a magnitude of 0.73394, while spending €100 extra, would decrease the utility by 0.248. In the case of time, spending an extra hour in travel time would decrease the utility of the destination in -0.0806.

Therefore, under no interaction effects between attributes and context (only account for main effects), a person would be willing to pay €45 extra for 1 hour less of travel time. In the same way, an improvement of 1 level in their destination would be worth €295 extra or 6,5 hours less travel time.

In the case of the socio-demographics analysis, it is revealing that for the group of respondents older than 41, the value of the destination is more positional than in the case of the other groups. For this group, when they travel to a worse destination in comparison with others, the value of the destination has a greater impact than for the other age groups.

In the same way, cost has a more positional influence in the utility of a destination for younger travellers, between the ages of 18 and 29. And in the case of travel time, the oldest travellers find it more influential when choosing a vacation destination. These last two insights should be interpreted only as a possible indication of positionality, due to the fact that the estimations are not statistically significant with a 95% confidence, and could be the result of the random component of the utility.

For the case of analysis per average household income, the group who experiences more positional effects for the value of the destination is the one with less average income. In a same way, cost is more positional in this group compared to the remaining two groups.

When gender groups were analyzed, data shows that the value of a destination has a more positional influence for women than for men. Same situation occurs for travel time. On the other hand, cost induced by traveling to a specific destination appears to be more positional for men. Here, only an indication could be suggested, since the estimation of the parameters does not show statistical significance for a level of confidence of 95%.

Finally, when respondents were faced with the two additional questions at the end of the experiment, results suggest that 31% of the respondents are willing to sacrifice a better destination in order to be in a favorable condition when compared to others. On the other hand, this percentage increases to 47%, when asked if they would travel to a worse destination than others, but at the same time, this trip would cause less impact on the environment.

Conclusions and Discussion

6.1. Conclusions

A positional good can be understood as those goods whose value is variable, depending on the possibilities to access them or, the comparison between individuals and its possibilities to obtain them. This study aimed to find any indication that the utility of a destination could be influenced by the comparisons that travellers do with respect to other individuals, more specifically, friends or colleagues. If it can be proved that the value of the destination, and the weights of the cost and travel time, are impacted when travelers compare the destinations they are visiting for leisure purposes compared to others, this could be a sign that the utility of the destination behaves as a positional good.

The study followed a structure based on the main research question and six additional sub-questions. The role of this sub-questions was to explore which attributes are important for respondents when choosing a vacation destination and relate this process with the concept of accessibility. Also, this research points set the framework to assess the role of positionality in the utility of a destination, and how it could behave for different demographic groups. Finally, a first look into how sustainability could take a part in destination's utility and subsequent destination choice. With the contributions of each of the questions, knowledge was built up in order to answer the main research interrogation.

Research Sub-Question 1: How is the concept of accessibility perceived by potential travellers?

The first interrogation revolves around the concept of accessibility. The study contrasts the differences between the concept found in literature and how it is addressed in other studies, and the actual understanding or how it is perceived by potential travelers, in the context of traveling for leisure purposes. From the literature that was reviewed, it is clear that accessibility, even though being a common concept that everybody uses, presents several definitions or ways to address it. It includes elements such as the capacity of a location to be reached, or the capacity to reach locations. This first element refers to two different views of the concept, from an origin or destination perspective. A trip purpose makes the concept more clear, and in the case of this study, helps to scope the application. This introduces

the activities to be performed at certain locations. These elements were used as the base to introduce accessibility in the study, in terms of capacity to reach destination, and the activities to be performed at those destination.

On the other hand, the pilot study confirms that several individuals could come with several different definitions of the concept. Respondents associate the concept with aspects such as easiness to reach destinations, Cost/effort invested on reaching these destinations, the people's possibilities and availability of different alternatives. In some cases people included the idea of destinations to be accessible for people with disabilities.

By analyzing both perspectives, one can identify a tendency to move towards the ideas of cost/effort, capacity, possibilities or "travel resistance". This resistance materialized as travel cost and travel time.

Research Sub-Question 2: Which are the most important factors that travellers consider when choosing destinations for leisure travelling?

Also from the pilot study, it was found that the most relevant factors considered by travelers when choosing a vacation destination, apart from travel time and travel cost, is the potential activities to be performed at a destination, and the value they give to a location. Up to this point, the utility of a destination has been formulated only considering travel resistances and the intrinsic value of a destination, perceived by individuals.

The concepts already mentioned were addressed with the purpose of combining these in a utility function and create a conceptual model, to be tested with a stated preference experiment, and draw conclusions. This conceptual model includes one additional variable, positionality. The resulting utility function of a destination can then be quantified by the individual contributions of destination value, travel cost and travel time, and how its weight are influenced by positionality.

Research Sub-Question 3: Are travellers' destination choices affected by the choices or experiences of people in their social environment (what others do)? Do these comparisons have a different impact for each of the components of the destination's utility?

After analyzing the results of the stated preference experiment, the study provides a sign of positionality. The interaction between attributes and contexts (destination of others) showed that the utility is more sensitive to the level of a destination when individuals are in situations where the destination of others is better than theirs. Therefore, the destination value has a greater impact when individuals are in a worse situation compared to other and has less weight ("importance") when they are in more favorable situations. Also, when considering only the main attribute without any influence of positionality (because both the respondent and others travel to the same destination), the value of a destination has a greater impact in utility, compared to saving €100 or 1 hour travel time. Similarly, a person would be willing to pay €45 extra for 1 hour less of travel time. In the same way, an improvement of 1 level in their destination would be worth €295 extra or 6,5 hours less travel time.

Research Sub-Question 4: Is there a significant gap between results for two different question-constructing perspectives? Is the data being affected by socially desirable responses? Which modelling approach (e.g. Dummy coding vs Ranking value) reproduces better the choices in an experiment to test positionality?

The study also proposed in sub-question 4, that socially desirable behavior could have an influence on respondents choices. With a confidence of 95%, the study suggests that there is no evidence to suggest that socially desirable behavior influences the results. Colloquially, then it can be assumed that there is no difference between the two designed versions of the questionnaire.

In the case of modelling approaches, a test of the goodness of fit and statistical significance of the parameters was conducted. The ranking approach proved to have a better fit with the data. Despite this, when comparing the results of both approaches, most of the cases the estimation of the parameters using the dummy coding approach proved to be more reliable, since parameters have higher statistical significance, with a confidence of 95%.

It was decided to use the Dummy Coding model for the rest of the study. In addition to the higher statistical significance found in the estimation of the parameters, the main goal a positionality study is to assess if being in a (des)favorable position compared to others, has an influence in the utility of a destination. Therefore, though the magnitude of the difference in between the destination could play a role, the focus was only on analyzing if the destination is better, or worse and this represents a simpler and more adequate approach.

Research Sub-Question 5: Are the destination choices more positional for a certain age, income or gender group compared to others?

In terms of finding out if individuals grouped in different demographic categories experience this influence of positionality in different weights. In the case of the age groups it was revealed that for the respondents older than 41, the value of the destination is more positional than in the case of the other groups. For this group, when they travel to a worse destination in comparison with others, the value of the destination has a greater impact than for the other age groups. Cost shows a possible more positional influence in the utility of a destination for younger travellers, between the ages of 18 and 29. The weight of travel cost is lower when they travel to a better destination than others. And in the case of travel time, the oldest travellers find it more influential when choosing a vacation destination, as the weight of travel time decreases when they travel to a better destination. These last two insights should be interpreted only as a possible indication of positionality, due to the fact that the estimations are not statistically significant with a 95% confidence, and could be the result of the random component of the utility.

For the case of analysis per average household income, the group who experiences more positional effects for the value of the destination is the one with less average income. In a same way, cost is more positional in this group compared to the remaining two groups.

When gender groups were analyzed, data shows that the value of a destination has a more positional influence for women than for men. Same situation occurs for travel time. On the other hand, cost induced by traveling to a specific destination appears to be more positional for men. Here, only an indication could be suggested, since the estimation of the parameters does not show statistical significance for a level of confidence of 95%.

Research Sub-Question 6: Are the opinions regarding sustainability of traveller's social environment discouraging individuals from travelling long distances in order to reduce their carbon

footprint? Or do destination's value overcome sustainability?

From the analysis of the two additional questions after the stated preference experiment, regarding destination choice and sustainability, results suggest that around one third of the respondents are willing to sacrifice a better destination in order to be in a favorable condition when compared to others. This means that they are willing travel to worse locations, as far as others travel to destinations with a less perceived value, or less attractive to them. On the other hand, the study suggests that half of the respondents would travel to a worse destination than others, as far as this trip would cause less impact on the environment.

6.2. Discussion and Limitations

The last conclusion could play in favor of arguments stating that the climate policy of the International Civil Aviation Organization should set more aggressive emissions reduction targets. Not only do the results indicate that air travel decisions are heavily based on destination characteristics, the results also revealed that air travelers are willing to endure more dis-utility in air travel for experiences more in line with the those of others. While airlines are concerned about decrease in demand from airfare hikes due to greenhouse gas offsetting measures, the results suggest that by serving desirable routes, airfare increase may be possible with minimal effect on utility of passengers.

Also, the idea of cross subsidies for carbon-neutral tickets or for routes with a lower carbon footprint could be discussed. The idea of subsidizing the tickets can be implemented by governments or airlines in order to achieve their carbon neutral goals. The study shows that since half of the respondents would pay more, or sacrifice better destinations in order to contaminate less, they could also reach better destination, while keeping the same price if the CO₂ emissions product of those trips are reduced.

Another possible implication of the study can be related with the current COVID-19 situation or similar situations in the future, where traveling for vacation purposes or to distant destination is restricted or can be perceived as a scarce activity. As the study suggests, the perceived value of a destination is influenced by positionality, therefore travelers take into consideration where other individuals from their social environment are traveling. Two different scenarios could develop. first, that since people are traveling less in terms of trips but also destination, destinations than in the past could be perceived as "less attractive" by travelers, could face an increase in its utility because of the scarce or reduced possibilities to travel. Another scenario is that the weight of the attributes of the utility of a destination perceived by travelers could change, turning travel time or travel cost as more influencing for travelers.

These hypothetical scenarios as well as the operations under "normality" could represent challenges from a business perspective. In terms of airlines, it is an opportunity to market or explore different destination, based on the prior knowledge of the characteristics of the travelers, whereas they are part of an age category, gender or have a specific income. Also it comes as an insight on the need to re-asses their air fare vs destinations pricing program.

One of the limitations of the study is that it lacks the inclusion of an analysis approach taking into

account a nonlinear difference between alternatives ranked. This was included in the questionnaire design, but too many incongruities between the stated ranking preferences for vacation destinations and the actual satisfaction level expressed by the respondents if travelling to such destinations, made it impossible to succeed with the analysis. In the study, it is assumed that the differences between destinations are linear, and including the actual gap in preferences could provide a more robust model.

Additionally, the study only included three attributes for quantifying the utility of a destination; destination value, travel cost and travel time. This approach leaves out some other qualitative attributes such as safety, specific activities at destination and uniqueness of destinations out of the picture, which under specific circumstances could play a larger role. It would be interesting to extend the study of positionality to account for these additional factors, and evaluate their weight relation with the currently used ones.

Also, as suggested in the study, exploring the introduction of sustainability (environmental impact of travelling to a destination) as part of the study could have a large impact on the individuals choices. This would help to reduce carbon footprint of the vacations and study possibilities to sanction or incentive specific destinations or travel modes.

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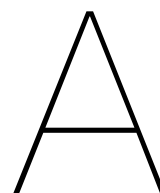
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Article

Vacation destination choice as a positional good. Are individuals' preferences influenced by others?

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Abstract

The theory of positional goods has been the focus of many researches for years since first introduced in 1976. The theory proposes that positional goods are those whose utility perceived by an individual is influenced by actions and possibilities of others. In this sense, the value of the good is affected by comparing with others. The results of this study can be interpreted as a indication that positionality indeed influences the utility of a destination perceived by potential travelers, and therefore affects their choices. To do so, the study proposed a set of steps to create insights that could help to draw conclusions the role of positionality in the utility of a destination. First, literature regarding accessibility, theory of positional goods and destination choice models was reviewed. Then, a pilot study was designed with the objective of gaining additional first-hand information for a stated preference experiment. From here, a conceptual model and a proposed utility function of a destination were constructed. A stated preference experiment was conducted with the participation of 159 respondents. The study provides a sign of positionality. The interaction between attributes and contexts (destination of others) showed that the utility is more sensitive to the level of a destination when individuals are in situations where the destination of others is better than theirs. Therefore, the destination value has a greater impact when individuals are in a worse situation compared to other and has less weight ("importance") when they are in more favorable situations.

Keywords: *Positional Goods, Stated Preference Experiment, Utility, Accessibility, Vacation Destination Choice, Air Traveling*

1 Introduction

"The peasant Ivan is jealous of his neighbour Boris because Boris has a goat. A fairy comes along and offers Ivan a single wish. What does he wish for? That Boris' goat should drop dead" Landes (1998). This popular Russian joke can raise several questions. Is Ivan jealous because the goat is valuable or, is he jealous because the goat represents value only because he does not have one? We can translate this example to almost any situation in daily human activities or industries. In this case, let us imagine that the goat represents the possibility of both to travel for vacations. Is it possible that in the first place Ivan did not need a goat? Is it possible that he only wants a goat because another individual (in this case an acquaintance) has one?

The theory of positional goods (TPG) has been studied for decades since it has been introduced by Hirsch (1976). Positional goods can be defined as "a sub-set of those things whose utility to an individual depends on the behaviour of others" Hirsch (1976). This means that for instance, the satisfaction of an

individual with the absolute value of a good can be affected when the individual compares it with other individuals absolute or relative perceptions. As an economics theory, the theory of positional goods can be applied to several components of society or industries, and has been studied in several of those topics. Nevertheless, air traveling and vacation destination choice had been left out of the research studies. In this case, the study's interest is to analyze to what extent this theory can be applied for international flying for leisure purposes.

This study aimed to address the concept of positional goods, as seen in in Ivan's example, applied to transportation, and to be more specific, for vacation destination choices. It intended to answer how are possibilities and choices of others, influencing the utility or the value of a destination perceived by individuals; in other words, if this the component of positionality (comparing with others), influences the weights of the attributes, such as travel time, travel cost or intrinsic value of a destination, that shape a destination's utility. To do this, the concept of accessibility was intro-

duced, as the capacity of a destination to be reached, or to reach a destination, and the trip purpose. This accessibility was addressed as the travel resistance to reach said destinations. Also the main factors involved in traveller's destination choices for vacationing were studied. With this information, a Stated Preference experiment was performed. The experiment consisted of a survey, distributed among respondents residing in Europe, where different travelling scenarios were presented to the participants. Each scenario consisted of a context and a choice set. The contexts were introduced by mentioning the destinations where others (friends or colleagues) are traveling, while the choice sets were conformed by two vacation alternatives from which each respondent was asked which one would he/she choose, depending on the characteristics of the trip (travel time and travel cost) and the destination itself. This forced respondents to face not only with the characteristics of the possible vacations, but also to compare their possibilities with the ones of others.

This technique (Stated preference experiment) was chosen as a suitable case study to explore positionality in vacation destination choices because it provides information regarding the travelers preferences and how these are influenced by introducing an external factor such as the possibility to compare their choices and possibilities with other travelers. The technique proved to be a powerful tool to gather data in a efficient, not expensive way, while also providing flexibility to create different combination of alternatives and contexts, to test if the vacation destination choice behaves as a positional good. Also, this was designed in order to study the interactions of the main accessibility attributes, environmental impact of travelling, and different social context scenarios involved in the decision making process of individuals. An additional goal was to explore the possibility of finding trends in demographic groups regarding positionality.

1.1 Research Question

Do the levels of accessibility for leisure travelling of others have a significant influence on the leisure destination choices of individuals?

In addition to the research question, the following sub-questions built up the knowledge to answer the main research goal, but also helped to explore some other details around positionality.

SQ.1. How is the concept of accessibility perceived by potential travellers?

SQ.2. Which are the most important factors that travellers consider when choosing destinations for leisure travelling?

SQ.3. Are travellers' destination choices affected by the choices or experiences of people in their social environment (what others do)? Do these comparisons have a different impact for each of the components of the destination's utility?

SQ.4. Is there a significant gap between results

for two different question-constructing perspectives? Is the data being affected by socially desirable responses? Which modelling approach (e.g. Dummy coding vs Ranking value) reproduces better the choices in an experiment to test positionality?

SQ.5. Are the destination choices more positional for a certain age, income or gender group compared to others?

SQ.6. Are the opinions regarding sustainability of traveller's social environment discouraging individuals from travelling long distances in order to reduce their carbon footprint? Or do destination's value overcome sustainability?

1.2 Methodology

To answer the research questions, a methodology composed of four stages was followed.

The first part, **literature review**, serves as background material and helps to identify previous studies (if any) regarding accessibility perception as a positional good or those including accessibility for long-distance travelling. Additionally, another objective is to gain the knowledge regarding the state of the art about stated preferences experiments, questionnaires design and statistical analysis. This step includes the creation of a conceptual model that describes the hypothesis and includes the main considerations regarding the utility function for the destinations and the components that travellers consider for the decision making process, as well as its influences for such decisions.

Because this is a considerably new topic, in unknown situations, an explanatory research step was introduced, in order to include some possible explanatory variables by means of a **pilot study**, interviewing different profiles of travellers. This study provided first-hand insights regarding attributes and contexts that are important for travellers and provided information for the creation of the stated preference experiment. Additionally, it helped to set the grounds for the definition of accessibility for long-distance travellers and how these travellers understand the concept.

The next step consists of the design of a **stated preference experiment** and therefore the questionnaire and the distribution among respondents. Here it was important to account for the sample size (between 100-200 persons), demographic characteristics, and technical aspects (e.g. orthogonality) that must be included for the purpose of the investigation. Also, as included in the research sub-questions, two different versions of the questionnaire are created to test if the answers are affected by socially desirable responses. Both versions are composed of the same choice sets, and the difference lies in the perspective from which the questions are asked, first asking respondents to answer based on their own perspective or what they prefer, and a second version asking respondents to answer based on the perspective of others, meaning, what they

think others would prefer. The stated preference experiment was created online, and dedicated software was used (Ngene) to design the contexts and choice sets.

The final step concludes the study. A **Statistical analysis** was performed in order to find the weights of the parameters for the main attributes of the utility function, and the interaction effects between attributes and the context scenarios, and to answer the question of whether accessibility in this context can be indeed defined as a positional good. Also, analysis was performed for different categories of respondents based on age, yearly income and gender to test if positionality shows a stronger impact on a specific group. For this final step, the software "Apollo" was used to model the data.

2 Literature Review

2.1 Accessibility

"Accessibility is a slippery notion, one of those common terms that everyone uses until faced with the problem of defining and measuring it!" (Gould, 1969). According to Gould (1969), the concept of accessibility is "well known" by people, but it is also interpreted in different ways and varies depending on the context or specific situation. This characteristic of the concept creates the first concern in the present study, what is accessibility?.

(Rodrigue et al., 2017) define accessibility as "the measure of the capacity of a location to be reached by, or to reach different locations". This concept keeps the definition open in terms of what exactly includes the concept of capacity. Some examples could include capacity in terms of distance, cost, activities, among others. Nevertheless, it gives an understanding that the concept can be addressed as either an origin-based approach or destination-based approach. A similar approach is covered by (Islam et al., 2008), who state that accessibility can be measured in terms of the origin point of the trip, or the potential traveller, or from the perspective of the destination and/or the activities or purposes of the trips.

Moreover, (Páez et al., 2012) introduce the purpose of the trip when studying accessibility. As their study defines accessibility as the potential for reaching spatially-distributed opportunities, these opportunities are indeed activities and can be listed in terms of employment, recreation, social interaction, among others. Each of these activities have specific costs to take into account to reach them. In this case, the study mentions that the concept can be constructed as a combination of the cost of travel (depending on the spatial distribution of individuals and activities) and the quality/quantity of opportunities.

(Geurs & van Wee, 2004) go deeper into the concept of accessibility and propose that it should include the role of land-use and transport systems. In this

case they conceive that these two components give the individuals the opportunity to reach activities in different locations. They define accessibility as "the extent to which land-use and transport systems enable individuals to reach activities or destinations by means of transport modes" (Geurs & van Wee, 2004). In this way, they noted the importance of not only using the individuals perspective, but to focus on the location's perspective.

Finally, (Geurs & van Wee, 2004) identify four components that should be considered: land-use, transportation, temporal and individual. The first one, involves the opportunities supplied at destinations and the demand created at origins. The second is related with the (dis)utility experienced by individuals while travelling from origin to destination, including time, costs and effort. In the third component, temporal constraints are included, meaning time available to perform activities and availability of different times of the day. Finally, the individuals component accounts for needs, abilities and opportunities of individuals. In this fourth component, factors like demographic characteristics, income and education level are included.

2.1.1 Measuring Accessibility

When addressing the methods to measure accessibility, a similar difficulty arises. Different concepts and components included to define accessibility will impact different ways to measure it. For the purposes of the study, the approach used focuses on utility-based measures. This approach introduces the random utility-based multinomial logit model, based on the Random Utility Maximization (RUM) Theory. The RUM theory uses utility to represent the attractiveness of an alternative by which an individual chooses from a set of alternatives based on its characteristics and therefore, the individual seeks to maximize (Ortuzar, 2019). Additionally, this utility has an observable component, given by the observable and quantifiable characteristics of the alternatives, and a random component, that represents possible errors and variations in the tastes of individuals. These quantifiable characteristics and the random component are represented by a utility function. This approach allows to include all the variables needed to represent the concept of accessibility, including behavioral theory and individuals preferences.

For the purposes of this study, the second (transportation) and fourth (individuals) components represented the baseline to measure accessibility focusing more on possibilities of the individuals to undertake international travelling for leisure purposes. This means that accessibility in this study was a combination of the transport and individual components, studied with utility based measures, by the analysis of "the benefits that people derive from access to the spatially distributed activities" (Geurs & van Wee, 2004), in this case leisure travelling.

2.2 Theory of Positional Goods

The theory of positional goods has its grounds on Hirsch economic investigations. Fred Hirsch first referred to this concept in his book "Social Limits to Growth". Hirsch (1976) studied the reasons why people are so focused on economic growth and why even after achieving it, they remain unsatisfied. He identified two different types of goods, "material" goods and "positional" goods. The first one refers to the value that a good represents regardless of the amount of others also enjoying it. On the other hand, Hirsch (1976) referred to positional goods as those of which value is dependent on actual and potential possessors, because the satisfactions that these goods represent vary due to differences in possibilities to access them because of its scarcity. In other words, positional goods are those that have a variable value, depending on the comparison between individuals and their access to these scarce goods. The idea can be translated to human behaviour and address positional goods as "a sub-set of those things whose utility to an individual depends on the behaviour of others" (Schneider, 2007).

In his study, Schneider takes the concept proposed by Hirsch and adds the social variable to slightly modify it. For him, positional goods are goods "of which it is true that for some of the members of a society part or all of the satisfaction derived from possessing them is the enhancement of social status due to the fact that such satisfaction is possible only for a minority" (Schneider, 2007). The importance of his addition rests on the inclusion of the idea that positional goods represent a consequent enhancement of social status, as they can be observable (and desired) by others.

Following the concepts presented above, past studies that used SP to study positionality were revisited for two objectives. First to dig deeper on how the investigations tackled the idea of introducing the concept of positional goods to different industries and also to explore how these studies developed the stated preference experiments to draw their conclusions.

2.2.1 Previous Studies

Carlsson et al. (2007) studied the importance of relative concerns for people's utility, and that not only absolute levels matter as the conventional economic theory suggests. Here, a survey-experiment was performed, letting respondents make choices when faced with scenarios or hypothetical states of the world, revealing the importance that they give to certain variables. The study evaluates four different factors related to well-being, such as income, working hours and leisure, market value of owned cars and car safety.

The experiment consisted of four questions, one for each of the factors mentioned before, confronting respondents to only one choice per good investigated. In these questions, the scenarios designed were based on two different hypothetical societies, in which future relatives would be "making the choices". By doing this,

Carlsson et al. (2007) separated respondent from their current circumstances in order to avoid inhibition due to shame or guilt about their answers, while keeping them choosing what would be best for a relative (e.g. grandchildren).

Finally, for each question, three different versions were created, with different values for the good under study, and to include the relative comparison in the utility function, they used an ordinal ratio-comparison utility function.

Their result proved that "relative income and relative consumption of at least some goods matter" (Carlsson et al., 2007). Also they found evidence that some goods are more positional than others, which in this case, market value of the good (car) proved to be more positional than leisure time and car safeness.

A similar approach of using others (separating the choices from the individuals context) for the choices is also present in Johansson-Stenman & Martinsson (2006). In the study, the results of the questions regarding the self-reported importance of attributes against the results of questions involving importance influenced by social context have significant differences. As they mention, an individual may pretend to behave "better" in accordance to what is socially expected than he/she usually do, or for example, "modify our musical taste in the presence of others". This type of behavior is commonly known as "socially desirable responding", and is defined by Paulhus (2002) as "the tendency to give positive self-descriptions". This would make it likely that respondents could answer questions in certain way, which would be viewed favorably by others.

They consider that being motivated by "status" is perceived to be an unfavorable characteristic, and people would avoid to honestly state the importance of such attribute when deciding on buying a car, therefore, the self-reported concerns would be biased negatively, and characteristics related to social responsibility or sustainability would be biased upwards.

2.3 Destination choice experiments

One key element of the current study relies on recognizing the motivations people have behind vacations and endeavour in travelling to different locations around the world. Knowing these motivations would be a critical aspect in predicting travel patterns and therefore, destination choices.

In their study, Jang & Liping (2002) used data from the "Pleasure Travel Markets Survey for the United Kingdom" to extract the main pull and push elements that are determinant for individuals when deciding a vacation destination as well as what drives them to travel. As mentioned, they focused on the pull and push factors, referring to these push motivations as the "desires rising within travellers' mind, which trigger actual behavior", pushing them to travel. On the

other hand, pull factors are those drawing forces into travel destinations, or destination attributes that appeal persons to travel, attracting them with specific characteristics.

The study revealed that the main push elements were having "novel experiences" or "knowledge seeking" as well as rest and relaxation while escaping from their daily routine, and, finding fun/exciting activities. In a similar way, they found the main pull factors from the destinations being "safety" found at destination, ease to access/economical deals found and natural/historic environments provided by such destinations. In conclusion, the study showed that on the push side, **travelling to new destinations** ("uniqueness") among other things for **"Knowledge seeking"**, was the most important factor to motivate the British traveling overseas, followed by **escaping routine**. On the pull side, **"safety"** is a key element, as well as **ease to access and the monetary costs** ("accessibility"?) are important factors when deciding to and where to travel, in addition to factors related to having fun and "nice weather" (Jang & Liping, 2002).

This qualitative characteristics of a destination can result in a challenge when trying to translate them into utility or measure them and, when trying to compare from one individual to another. Van Cranenburgh et al. (2014) understood this and defined the utility based on attributes found in literature which can be used to conceptualize a vacation alternative. Such attributes are Destination itself (using distance to origin as the only attribute of a destination that is easily and objectively observed and quantified), length of stay, type of accommodation, mode of transport, travel time and travel time.

Moreover, Lamondia et al. (2010) identifies three main independent variables that are typically present in holiday destination and travel mode studies, these are: personal characteristics (age, education, household composition, income, etc.), destination attributes (weather, activities, expenses at destination, safety, etc.), and trip characteristics (cost, travel time, distance, etc.). In addition, it is pointed that nowadays other elements should be considered, such as what exactly travelers look for, motivations for taking a trip or prior expectations and experiences, or so called "inherent desires for leisure travel". (Beerli et al., 2007). Nevertheless, the present study does not pretend to dig deeper into behavior of the travellers towards selecting the destination only, but it assessed whether the utility of an alternative, and consequent destination choice, are affected by what others are doing. Therefore, such utility was addressed without including such past experiences or expectations, but all those elements were assumed as part of the destination characteristics and preference revealed by participants for a set of predefined list of possible destinations.

Finally, and most importantly for the purpose of this study, the approach used by Van Cranenburgh et al. (2014) proved to be successful to enhance realism

and reduce the response error variance, by using a pivoted experimental design. This method also helped them to deal with the little knowledge of the specific preferences or consideration that travellers take into account when facing a decision for a vacation destination.

The study consisted of two parts. The first one, a so called "revealed preference" sections, with the intention of identifying elicited alternatives from respondents in order to include them in the stated preference experiment part. This way, the researchers could focus on relevant (enhancing realism) possibilities or scenarios while avoiding using irrelevant choices that might induce hypothetical bias. In the RP part, the respondents were asked to compose alternatives which they would consider for vacationing, as mentioned earlier to reduce hypothetical bias, and also because contrary to a study where the relevant choices are reduced to a well known -small- set of alternatives that could be easily inferred by the researcher, in this case, this set of alternatives could vary greatly between respondents and would be unknown for the analyst (van Cranenburgh, 2013).

Based on the former responses, the SP part was "tailor-made" for each respondent. The stated preference experiment was constructed by pivoting such alternatives found in the RP part. As mentioned before, this eliminated irrelevant scenarios that could be created from the assumption that all respondents share the same set of alternatives, and realism was enhanced.

2.4 Conceptual Model

As a framework for the assumptions and bases for the investigation, a conceptual model is presented in figure 1. Here, the main logical reasoning behind the study can be observed. This model is composed of three different elements that shape the utility of the destinations to be chosen by the traveller, combining utility theory and the theory of positional goods.

The utility theory was used for measuring accessibility. In this study, accessibility has been referred as the combination of the capacity of a destination to be reached (origin-based) and the attractiveness of the destination for the travelers (destination-based).

The first part of the concept, can also be defined as the travel resistance of a destination. This travel resistance is the first element of the conceptual model. The travel resistance of a destination can be represented by the quantitative attributes that serve as impedance for the travel itself, such as travel cost, travel time, travel mode, among others. For this specific study, only the first two attributes were included, travel cost and travel time, and can be explained as the degree of perceived control of the individuals behavior (travel to a destination), as they could choose how much money to spend and how much time to spend traveling, to reach a leisure destination. These attributes are easy to quantify in terms of Euros (/€) and hours.

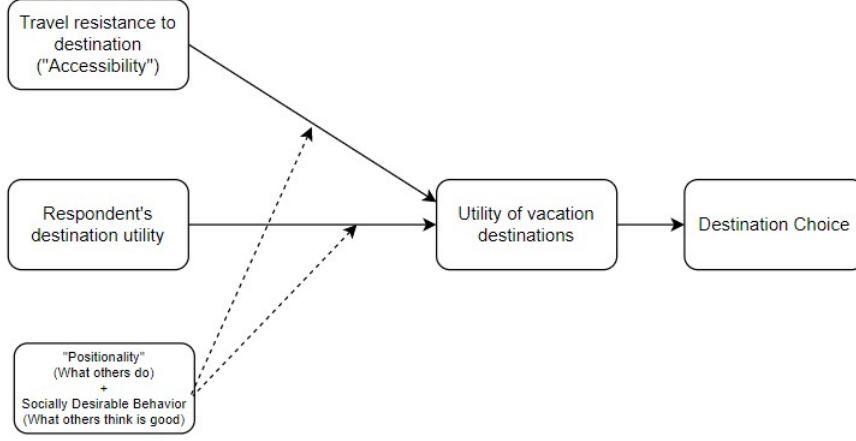


Figure 1: Conceptual Model

The other component of accessibility served as the second element of the conceptual model. Each destination provides different characteristics that can be more appealing depending on each traveler and depend on their specific -personal- preferences, and most of these are indeed hard to quantify (e.g. like for activities at destination, "nice" weather, uniqueness, scenery, etc.). Therefore, an element based on the respondent's destination utility was introduced. This element was intrinsic for each of the possible destinations, and was quantified by asking the respondents to rank a set of five predetermined destination, obtained from the pilot study. By ranking the destinations, the respondents would be assigning a value to each destination, in the scale of 1 to 5. The first ranked option was given a 5, because represents more utility for the respondent. accordingly, the fifth ranked destination was assigned with a value of 1, representing that the least favorite option would represent less utility for the respondent.

The first two elements of the model added (or subtracted in the case of time and cost) to the utility of the destination, thus the straight lines in figure 1.

A final element in the conceptual model is based on the social context and the theory of positional goods. "What others do" and the comparison with others, as part of the theory of positional goods, is included to assess if indeed this social environment, has a relevant influence on the destination's utility and therefore, the final destination choice for vacationing.

The positionality element was added in the study as contexts where respondents had to choose from two alternatives, under specific scenarios. This scenarios were based on what others are experiencing or where others are traveling for the same leisure purposes. Context variables may affect the parameters of the attributes in the utility function, by changing the weight of the value of the destination, the weight of the travel cost and/or the weight of the travel time. These contexts variables were referred as interaction effects, and since they are influencing the attributes of the utility

"indirectly", this is represented by a dashed line in the conceptual model in 1.

Along with positionality, the socially desirable behavior is included to test if the components of utility are influenced by it. It means, if responses from the participants are different if asked from the perspective of others, making them state more "honest" responses than asking them directly their opinion, because they could be influenced to deny that comparison (envy) affects their own choices.

3 Experiment

A stated preference experiment was designed with the objective of testing the conceptual model proposed in section 2.4. The model offers a way to represent the utility function of a destination, by incorporating the travel resistance components (travel cost and door to door travel time) and the respondent's destination utility, quantified by means of a prior question intended for respondents to rank a given set of possible alternatives. This was introduced to capture the specific personal preferences of each traveler. In addition to this components, the element of positionality was included as contexts. This contexts can be defined as different situations or scenarios, that were presented to the respondents before choosing between two alternatives, and would provide information about the destinations where others are traveling. This forced respondents to compare their options with the ones of other travelers. The main idea is to evaluate the contribution of each attribute to the utility of a vacation destination and, whether or not the weight of these attributes, and resulting utility, are influenced significantly by comparing with others.

As mentioned above, the three main components of the utility are travel cost, overall duration of trip and destination value. The travel cost is defined as the monetary cost, in Euros, spent in order to reach a destination and the expenses incurred while at the destination. For example, this travel cost could be com-

posed of tickets, taxes, ground transportation, and accommodation expenses per traveler. The travel time, is the time, in hours, elapsed from the origin departure to arrival at destination, including any possible transfer layover or stop-off time. It can be also expressed as ‘overall duration of trip’ or ‘door to door travel time’. Finally, the respondent’s destination value, is obtained from a prior question in the questionnaire. Respondents were asked to rank five given alternatives. This alternatives were obtained from the results of the pilot study. Once the destinations have been ranked by the respondent, from more attractive to less attractive, a value was assigned to each, in a scale from 5 to 1. This value represents the respondents’ destination attractiveness, as a aggregate of specific characteristics that make a destination more attractive to the traveler. The value of 5 was assigned to the highest ranked destination, the value of 4 to the second highest ranked alternative, and following a decreasing pattern for the rest of the alternatives respectively. For the purpose of the study, it was assumed that each respondent would find different reasons to prefer a specific destination from the list, based on past experiences, general knowledge of the destination, advertisement or any other of source of information regarding the options.

Finally, the element of positionality was introduced as a context. This context represents a scenario where the possibilities or choices of others are introduced, stating clearly where others are traveling while the respondent faces their vacation decision making process. In this case, the scenarios depicted an assumption that other individuals were also traveling to one of the destinations included in the ranking. This other individual was represented as an average friend or colleague of the respondent.

Therefore, the utility function for the vacation destination was as follows:

$$U = [B_D + (B_{DOD} \bullet Dest.Others)] \bullet Dest.Value + [B_C + (B_{DOC} \bullet Dest.Others)] \bullet Cost + [B_T + (B_{DOT} \bullet Dest.Others)] \bullet Time \quad (1)$$

Once the utility function has been defined, the next step is to construct the choice sets. The choice sets are the group of alternatives from which a respondent can chose at a particular moment, or in this case, a particular question. From here, each choice set can be constructed. Each choice set was conformed by a context, the question statement, and two choice alternatives. For each alternative, three attributes were presented, with one of three possible levels per attribute.

Attributes	Levels		
Destination	1	3	5
Cost (€)	1000	1500	2000
Travel time (hrs)	6	9	12

The levels for each of the attributes are summarized

in table above.

For the experiment, three different contexts were created. These are represented by the Destination2, Destination3 and Destination4 from the ranking of alternative that respondents must complete prior to the experiment questions. The levels for the destinations where other are traveling in each context, were selected in order to always have the possibility to present better (Destination 1) or worse (Destination 5) destinations, compared to others, to the respondents. This means that by choosing levels 2, 3 and 4, it can be guaranteed to create contexts using destinations 1 or 5 that would represent favorable or unfavorable scenarios for the participants.

Also, in a separate way, the choice alternatives were created using Basic plan 2. Here, the aim was to systematically construct a orthogonal design, preserving attribute level balance, and making sure to minimize correlations among attributes.

3.1 Design of the Questionnaire

Once the choice sets are completed, the next step is to create the questionnaire as a whole. For the creation and distribution of the survey, the web platform of "Qualtrics" software was needed.

The questionnaire used consisted of five sections. The **first section** is an **introduction**, explaining the objective of the research and how the data was used to draw general conclusions. Next, the **second section** is called **Destination Ranking**. It starts with a filter question, included in order to guarantee responses from people residing in the Netherlands or Europe. If a person accessing the survey is not a Dutch or European resident, he the survey concluded. After this, A ranking question follows. Here, respondents were asked to rank five given destinations, from more attractive to less attractive.

For the selection of these five alternatives, the results obtained from the pilot study were used. The list is based on the most preferred destinations expressed by the respondents sample. The given destinations listed below:

- Western Europe
- Oceania
- Eastern Europe
- Eastern Asia
- South America

This ranking served several purposes. First it made it possible to "tailor" the experiment for each of the individuals. A JavaScript code was embedded in order to customize each of the choice set, assigning the ranked alternatives so that the names of the alternatives replace the generic label of the destination. For example, for a particular respondent, if they chose Oceania as his/her most attractive destination, the label

"Oceania" replaced the generic label "Destination 1" in the questionnaire text, either for the contexts or the choice alternatives. Also, this approach helped to define which destination is "better" or "worse" for each of case. Lastly, this feature was used for testing positionality and whether or not traveling to a better or worse destination, compared to others, have an impact on the utility of a destination and therefore, in the destination choice.

Additionally to the ranking question, respondents were asked to quantify how attractive each destination is or "how good" they would consider travelling to each destination, in the now re-arranged list. This was included in order to establish a base alternative as the "best one" and use it to weight the difference from the other alternatives with respect to the base option. This helped to analyze the differences both in a linear scale and a (probably) nonlinear scale.

Once the destinations were ranked and quantified, the respondents begun **section three** of the survey. In this section, they were presented with 18 different choice sets, presented already in table ???. Each of these consist of a context; a scenario represented by the travelling destination of others, and two choice alternatives, each composed by the three selected attributes (destination, cost and travel time).

Two different versions of the questionnaire were created by modifying section three. These two versions were created in order to account for two different perspectives from the respondents, as it was already explained in the methodology in section ?? of the study. This approach was included with the goal of testing if the answers are affected by socially desirable responses, and therefore answer research sub-question 4 of the study. Both versions are composed of the same choice sets, and the difference lies in the perspective from which the questions are asked, first asking respondents to answer based from their own point of view or what they prefer, and a second version asking respondents to answer based on the point of view of others, meaning, what they think others would prefer. In the first case, called from now on **"Own View"** version, asked directly the questions to be answer from the respondents perspective and based on his/her personal choices regarding travel destination choice.

In a second version, called from now on **"Others View"** version, respondents were asked to abstract themselves from their reality and think about a relative (family member) and choose between scenarios depending on what they think would be better for their relatives, or what they think relatives would choose if faced with the scenarios.

After this, **section four** is presented. **Two additional questions** were included in this section, after the experiment questions. These two additional questions were intended for asking the respondents directly what their possible choices would be when faced with scenarios in terms of destination choice, only consid-

ering one variable per question. One question was introduced for destination choice only and one for hypothetical environmental impact of the trip. This make it possible to answer sub-question 6 of the study. See example questions below in subsection ??.

The **fifth section** consists of **general information** questions to gather data about the respondents, such as age, income level, household composition, level of education, among other variables. This data made it possible to characterize the sample of respondents and group respondents in certain socio-demographic categories, in order to analyze the results for positionality for each category. This made it possible to answer research sub-question 5 of the study.

4 Results

4.1 Base Model

The parameter results obtained for each of the models is presented below in table below for the complete data set (t-ratio in brackets).

Param.	Dummy Cod.	Ranking
B_D	0,734 (17,8)	0,665 (10,5)
B_C	-0,0025 (-15,8)	-0,002 (-10,9)
B_T	-0,114 (-8,3)	-0,081 (-9,7)
B_{DOD}	0,172 (5,4)	0,096 (4,5)
B_{DOC}	-0,0002 (-2,3)	-0,0001 (-3,0)
B_{DOT}	-0,012 (-1,2)	0,0098 (-1,6)

Using the case of Ranking approach as an example, and considering that both travelers fly to the same destination, therefore no positionality present, the parameters of the utility function can be interpreted in a simple way. When an individual improve his/her destination by 1 level, an increase of 1 in the value of a destination, the utility of that destination increases in a magnitude of 0.665. Also, spending €100 extra, would decrease the utility by 0.2. In the case of time, spending an extra hour in travel time would decrease the utility of the destination in -0.0806.

Therefore, an increase or decrease in the value of a destination, has the greatest impact in the utility of its destination, compared to saving €100 or 1 hour of travel time.

For the interaction effects with positionality, the results are shown for each of the model, Dummy Coding and Ranking.

4.1.1 Dummy Coding Approach

For the complete data, the utility function with the parameters values is presented below:

$$\begin{aligned}
 U = & [0.73394 + (0.17185 \times \text{Dest.Others})] \times \text{Destination} \\
 & + [-0.00248 + (-0.00016 \times \text{Dest.Others})] \times \text{Cost} \\
 & + [-0.11367 + (-0.01166 \times \text{Dest.Others})] \times \text{Time}
 \end{aligned}$$

By doing the same, the results for the two different contexts, when destination of others is better or worse than respondents' destination, are shown below. First, the components of utility function for Dummy Coding.

Component	-1	0	+1
Destination	0.56209	0.73394	0.90578
Cost	-0.00232	-0.00248	-0.00265
Time	-0.10202	-0.11367	-0.12532

Comparing both results, it is noticeable that the utility of a destination for the respondents is more sensitive to the value of the destination when the destination of others is better than the respondents'. This means that travelling to a better destination has a bigger impact when travellers find themselves in a less favorable situation, compared to others, and that impact decreases when they are better than others. This can be interpreted as a sign of positionality since when they are in a better situation, the value of the destination has less impact on the utility.

Also as it was expected, the utility of a destination is less sensitive to both cost and time when an individual travels to a better destination than others. In other words, spending more money or travel time is less relevant when travelling to a better destination, or travellers are willing to pay more or spend more time travelling if going to a better destination than others.

4.1.2 Ranking Approach

The same analysis is performed using the ranking approach. In this case, the results are presented below for the components of utility function for ranking approach.

Component	-2	-1	1	2
Destination	0.47	0.57	0.76	0.86
Cost	-0.001	-0.002	-0.002	-0.002
Time	-0.10	-0.09	-0.07	-0.06

A same result was obtained in terms of positionality. But in this case, each improvement in the destination of others compared to the respondents destination is taken into account and, represents an increase of 0.0957 in the impact of the destination component of the utility function. Same for the components of cost and time, each level of improvement in the destination of others, make cost more relevant (-0.00009 units per € spent) and time as well (-0.00982 units per hour increase in the travel time).

4.2 Influence of Socially Desirable Behavior

Prior to analyzing the possible influence of socially desirable behavior, a single model (approach) was selected. To do so, a test of the goodness of fit and statistical significance of the parameters was conducted. The Rho-square value of the Dummy Coding model has a value of 0.196, while in the case of Ranking approach,

the value is slightly better, 0.201. This means that the ranking approach proves to have a better fit with the data. Despite this, when comparing the results of both approaches, most of the cases the estimation of the parameters using the dummy coding approach proved to be more reliable, since parameters have higher statistical significance, with a confidence of 95%.

It was decided to use the Dummy Coding model for the rest of the study. In addition to the higher statistical significance found in the estimation of the parameters, the main goal of the study is to assess if being in a (des)favorable position compared to others, has an influence in the utility of a destination. Therefore, though the magnitude of the difference in between the destination could play a role, the focus was only on analyzing if the destination is better, or worse.

The objective here is to assess whether or not socially desirable behavior has an impact in the results of the study, and positionality itself. Two versions of the same questionnaire were sent to respondents, only varying the perspective from which questions were asked to them. The "Own View" version asked respondents directly about their choices, and in the case of "Others View", respondents were asked what they think a relative (family member) would choose under the same circumstances. This was included in the model by coding a version indicator

For comparing both versions, a t-test was performed with the null hypothesis H_0 that there is no difference between the samples, treating the data as separate samples extracted from each of the questionnaire versions. This would help to determine if the answers from the two groups of respondents are different from one another. With a confidence of 95%, the test confirmed that there is no evidence to reject the hypothesis which suggests that samples are statistically different.

In this case, practically speaking, this proves that in this specific case, there is no evidence to assume that socially desirable behavior influences the results. Colloquially, then it can be assumed that there is no difference between the two versions of the questionnaire.

4.3 Socio-Demographics Analysis

4.3.1 Analysis per Age groups

In a similar way as it was done for the versions, the analysis now in three different groups, categorized according to age of the respondents. Here, the age group of the respondents was included in the model by coding a version indicator. A first group, consists of respondents with ages between 18 and 29, the second category formed by respondents from 30 to 40 years old of age and a final group, grouping respondents with age of 41 years or older.

When analyzing the situation with no influence of positionality it shows that the value of the destination has a bigger impact on the destination's utility for re-

spondents in the ages of 41 years or older, and they are "willing" to spend more money to reach those destinations, and/or avoid extra time travel.

Also, as was expected, the cost of travelling to a destination has a bigger impact for respondent between the ages of 18 and 29 years old. This make sense because it is known that normally, these group would have less "economic power" than older respondents.

When analyzing the relevant part of the utility function for each of the attributes (Destination, Cost and Time) first, the positionality assumption holds for each of the age groups and attributes, as the utility of a destination for the respondents is more sensitive to the value of the destination when the destination of others is better than the respondents' (+1), compared to the context where they travel to a better destination.

Also as it was expected, the utility of a destination is less sensitive to both cost and time when an individual travels to a better destination than others. In other words, spending more money or travel time is less relevant when travelling to a better destination, or travellers are willing to pay more or spend more time travelling if going to a better destination than others.

What is revealing in this case is that for the group of respondents older than 41, the value of the destination is more positional than in the case of the other groups. For this group, when they travel to a worse destination in comparison with others, the value of the destination has a greater impact than for the other age groups. In

the same way, cost has a more positional influence in the utility of a destination for younger travellers, between the ages of 18 and 29. And in the case of travel time, the oldest travellers find it more influential when choosing a vacation destination.

4.3.2 Analysis per Income groups

Following the same approach, the data was modeled for a new group categorization, grouped according to the household's income of respondents. Same as in previous examples, an indicator of the income groups was included in the model. A first group, consists of respondents with an average income lower than €40,000 per year, the second category formed by respondents with an average household income within the range from €40,000 to €80,000 and, finally, a third group of respondents with a yearly income above €80,000.

For the case of analyzing only the case when there is no influence from positionality in the utility function the results show that the value of the destination has a bigger impact on the destination's utility for respondents in the lowest income levels.

Also, as was expected, the cost of travelling to a destination has a bigger impact for respondent with the lowest average income which makes sense, since they would try to save money while getting the best experience that a destination could provide.

In the case of travel time, the group where this attribute has a greater impact on the utility is the one with incomes between €40,000 and €80,000.

The data shows that for all categories, the utility of a destination is more sensitive to the destination value, in the cases where individuals travel to worse destinations than other people.

Also as in previous situations, the utility of a destination is less sensitive to both cost and time when an individual travels to a better destination than others. In other words, spending more money or travel time is less relevant when travelling to a better destination, or travellers are willing to pay more or spend more time travelling if going to a better destination than others.

In this case, the group who experiences more positional effects for the value of the destination is the one with less average income. In a same way, cost is more positional in this group compared to the remaining two groups.

4.3.3 Analysis per Gender

Finally, the data was modeled for each gender of respondents, Male and Female.

The results obtained for the estimates of the parameters, in the case of modeling per gender, are presented in table below.

Param.	Male	Female
B_D	0,72 (12,5)	0,79 (12,5)
B_C	-0,003 (-12,4)	-0,002 (-9,9)
B_T	-0,11 (-5,7)	-0,12 (-5,8)
B_{DOD}	0,18 (4,1)	0,17 (3,4)
B_{DOC}	-0,0002 (-2,3)	-0,0001 (-0,9)
B_{DOT}	-0,003 (-0,2)	-0,02 (-1,6)

The data shows that for no positionality influence, the value of a destination has a bigger impact on the utility of a destination for women than for men. Also, that cost has a greater weight in the utility of a destination for men and, travel time is more relevant for the utility of a destination for women.

The analysis of the relevant part of the utility function for each of the attributes (Destination, Cost and Time) is presented in tables below for the gender groups once the interaction effects were included.

Component	Male		Female	
	-1	+1	-1	+1
Destination	0.54	0.90	0.62	0.96
Cost	-0.003	-0.003	-0.002	-0.002
Time	-0.11	-0.11	-0.096	-0.14

By the results, one can conclude that positionality holds for both genders and for all the attributes of the utility of a destination. Both men and women's destination utility is more sensitive to variations in the value of a destination when other are traveling to "better"

destinations. On the other hand, utility is less sensitive to both cost and time, when travellers visit better destination than their counterparts.

Finally, data shows that the value of a destination has a more positional influence for women than for men, as well as travel time. On the other hand, cost induced by traveling to a specific destination is more positional for men.

4.4 Sustainability and Destination Choice

The final part is to analyze the results of the extra questions at the end of the questionnaire.

The first question intends to analyze if travellers are willing to reduce the value of their vacation destination in order to be in a "better" situation compared to others. In other words, the trade-off between traveling to a better self perceived destination, or being in a favorable position, above average, compared to others.

Destination Choice		
Alternative	Responses	Percentage
A	109	69%
B	50	31%
Total	159	100%

For the second question, the objective was to study whether people would sacrifice travelling to better destinations in order to have a less environmental impact when compared to others. As the results show in table, only 31% of the respondents are willing to sacrifice a better destination in order to be in a favorable condition when compared to others. On the other hand, this percentage increases to 47%, when asked if they would travel to a worse destination than others, but at the same time, this trip would cause less impact on the environment.

Sustainability		
Alternative	Responses	Percentage
A	85	53%
B	74	47%
Total	159	100%

5 Conclusions & Discussion

The study followed a structure based on the main research question and six additional sub-questions. With the contributions of each of the questions, knowledge was built up in order to answer the main research interrogation.

Research Sub-Question 1: How is the concept of accessibility perceived by potential travellers?

The first interrogation revolves around the concept of accessibility. The study contrasts the differences between the concept found in literature and how it is

addressed in other studies, and the actual understanding or how it is perceived by potential travelers, in the context of traveling for leisure purposes. From the literature that was reviewed, it is clear that accessibility, even though being a common concept that everybody uses, presents several definitions or ways to address it. It includes elements such as the capacity of a location to be reached, or the capacity to reach locations. This first element refers to two different views of the concept, from an origin or destination perspective. A trip purpose makes the concept more clear, and in the case of this study, helps to scope the application. This introduces the activities to be performed at certain locations. These elements were used as the base to introduce accessibility in the study, in terms of capacity to reach destination, and the activities to be performed at those destination.

On the other hand, the pilot study confirms that several individuals could come with several different definitions of the concept. Respondents associate the concept with aspects such as easiness to reach destinations, Cost/effort invested on reaching these destinations, the people's possibilities and availability of different alternatives. In some cases people included the idea of destinations to be accessible for people with disabilities.

By analyzing both perspectives, one can identify a tendency to move towards the ideas of cost/effort, capacity, possibilities or "travel resistance". This resistance materialized as travel cost and travel time.

Research Sub-Question 2: Which are the most important factors that travellers consider when choosing destinations for leisure traveling?

Also from the pilot study, it was found that the most relevant factors considered by travelers when choosing a vacation destination, apart from travel time and travel cost, is the potential activities to be performed at a destination, and the value they give to a location. Up to this point, the utility of a destination has been formulated only considering travel resistances and the intrinsic value of a destination, perceived by individuals.

The concepts already mentioned were addressed with the purpose of combining these in a utility function and create a conceptual model, to be tested with a stated preference experiment, and draw conclusions. This conceptual model includes one additional variable, positionality. The resulting utility function of a destination can then be quantified by the individual contributions of destination value, travel cost and travel time, and how its weight are influenced by positionality.

Research Sub-Question 3: Are travellers' destination choices affected by the choices or experiences of people in their social environment (what others do)? Do these comparisons have a different impact for each of the components of

the destination's utility?

After analyzing the results of the stated preference experiment, the study provides a sign of positionality. The interaction between attributes and contexts (destination of others) showed that the utility is more sensitive to the level of a destination when individuals are in situations where the destination of others is better than theirs. Therefore, the destination value has a greater impact when individuals are in a worse situation compared to other and has less weight ("importance") when they are in more favorable situations. Also, when considering only the main attribute without any influence of positionality (because both the respondent and others travel to the same destination), the value of a destination has a greater impact in utility, compared to saving €100 or 1 hour travel time. Similarly, a person would be willing to pay €45 extra for 1 hour less of travel time. In the same way, an improvement of 1 level in their destination would be worth €295 extra or 6,5 hours less travel time.

Research Sub-Question 4: Is there a significant gap between results for two different question-constructing perspectives? Is the data being affected by socially desirable responses? Which modelling approach (e.g. Dummy coding vs Ranking value) reproduces better the choices in an experiment to test positionality?

With a confidence of 95%, the study suggests that there is no evidence to suggest that socially desirable behavior influences the results. Colloquially, then it can be assumed that there is no difference between the two designed versions of the questionnaire.

In the case of modelling approaches, a test of the goodness of fit and statistical significance of the parameters was conducted. The ranking approach proved to have a better fit with the data. Despite this, when comparing the results of both approaches, most of the cases the estimation of the parameters using the dummy coding approach proved to be more reliable, since parameters have higher statistical significance, with a confidence of 95%.

Research Sub-Question 5: Are the destination choices more positional for a certain age, income or gender group compared to others?

In terms of finding out if individuals grouped in different demographic categories experience this influence of positionality in different weights. In the case of the age groups it was revealed that for the respondents older than 41, the value of the destination is more positional than in the case of the other groups. For this group, when they travel to a worse destination in comparison with others, the value of the destination has a greater impact than for the other age groups. Cost shows a possible more positional influence in the utility of a destination for younger travellers, between the ages of 18 and 29. The weight of travel cost is lower when they travel to a better destination than others. And in the case of travel time, the oldest travellers find

it more influential when choosing a vacation destination, as the weight of travel time decreases when they travel to a better destination. These last two insights should be interpreted only as a possible indication of positionality, due to the fact that the estimations are not statistically significant with a 95% confidence, and could be the result of the random component of the utility.

For the case of analysis per average household income, the group who experiences more positional effects for the value of the destination is the one with less average income. In a same way, cost is more positional in this group compared to the remaining two groups.

When gender groups were analyzed, data shows that the value of a destination has a more positional influence for women than for men. Same situation occurs for travel time. On the other hand, cost induced by traveling to a specific destination appears to be more positional for men. Here, only an indication could be suggested, since the estimation of the parameters does not show statistical significance for a level of confidence of 95%.

Research Sub-Question 6: Are the opinions regarding sustainability of traveller's social environment discouraging individuals from traveling long distances in order to reduce their carbon footprint? Or do destination's value overcome sustainability?

From the analysis of the two additional questions after the stated preference experiment, regarding destination choice and sustainability, results suggest that around one third of the respondents are willing to sacrifice a better destination in order to be in a favorable condition when compared to others. This means that they are willing travel to worse locations, as far as others travel to destinations with a less perceived value, or less attractive to them. On the other hand, the study suggests that half of the respondents would travel to a worse destination than others, as far as this trip would cause less impact on the environment.

5.1 Discussion

The last conclusion could play in favor of arguments stating that the climate policy of the International Civil Aviation Organization should set more aggressive emissions reduction targets. Not only do the results indicate that air travel decisions are heavily based on destination characteristics, the results also revealed that air travelers are willing to endure more dis-utility in air travel for experiences more in line with the those of others. While airlines are concerned about decrease in demand from airfare hikes due to greenhouse gas offsetting measures, the results suggest that by serving desirable routes, airfare increase may be possible with minimal effect on utility of passengers.

Also, the idea of cross subsidies for carbon-neutral tickets or for routes with a lower carbon footprint could be discussed. The idea of subsidizing the tickets can be implemented by governments or airlines in order to achieve their carbon neutral goals. The study shows that since half of the respondents would pay more, or sacrifice better destinations in order to contaminate less, they could also reach better destination, while keeping the same price if the CO2 emissions product of those trips are reduced.

Another possible implication of the study can be related with the current COVID-19 situation or similar situations in the future, where traveling for vacation purposes or to distant destination is restricted or can be perceived as a scarce activity. As the study suggests, the perceived value of a destination is influenced by positionality, therefore travelers take into consideration where other individuals from their social environment are traveling. Two different scenarios could develop. first, that since people are traveling less in terms of trips but also destination, destinations than in the past could be perceived as "less attractive" by travelers, could face an increase in its utility because of the scarce or reduced possibilities to travel. Another scenario is that the weight of the attributes of the utility of a destination perceived by travelers could change, turning travel time or travel cost as more influencing for travelers.

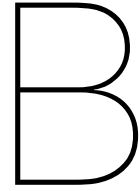
These hypothetical scenarios as well as the operations under "normality" could represent challenges from a business perspective. In terms of airlines, it is an opportunity to market or explore different destination, based on the prior knowledge of the characteristics of the travelers, whereas they are part of an age category, gender or have a specific income. Also it comes as an insight on the need to re-asses their air fare vs destinations pricing program.

Also, as suggested in the study, exploring the introduction of sustainability (environmental impact of travelling to a destination) as part of the study could have a large impact on the individuals choices. This would help to reduce carbon footprint of the vacations and study possibilities to sanction or incentive specific destinations or travel modes.

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Pilot Study Questionnaire

Exploratory Research - Accessibility & Vacation Destination Choice

Introduction

The following questionnaire is the first stage of a thesis research project regarding travel accessibility and leisure destination choices. The purpose of the survey is to explore what are the key elements travelers take into consideration when picking a destination for vacations or any leisure purposes. Additionally, it will inspect some aspects of social interaction when sharing your vacation experiences with others. Finally, I need you to know that I do not want to spam you in any way nor make you worry about how the information will be handled. That is why all the collected data will be used only for this research and will not be shared with anyone else. The conclusions will serve as input for the next stage of the project. Thank you very much for your collaboration!

General Information

Q1) Age: _____

Q2) Gender:

- ☐ Male
- ☐ Female
- ☐ Prefer not to say

Q3) Country of residence: _____

Q4) Highest degree or level of education completed:

- ☐ HighSchool
- ☐ TechnicalDiploma
- ☐ BSc.
- ☐ MSc.

- ☐ *PhD.*
- ☐ *Other :* _____
- ☐ *Prefer not to say*

Q5) Occupation: _____

Q6) Marital Status:

- ☐ *Single, never married*
- ☐ *Married or cohabitating*
- ☐ *Divorced*
- ☐ *Separated*
- ☐ *Widow or widower*
- ☐ *Other :* _____

Q7) Number of people in your household (including yourself):

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ *More than 5*

Q8) Household's Annual Net Income:

- ☐ *Less than €25,000*
- ☐ €25,000 – €50,000
- ☐ €50,000 – €100,000
- ☐ €100,000 – €200,000
- ☐ *More than €200,000*
- ☐ *Prefer not to say*

Q9) Which of the following options describe you better, in terms of political view?

- ☐ *Very Liberal*
- ☐ *Slightly Liberal*
- ☐ *Center*
- ☐ *Slightly Conservative*
- ☐ *Very Conservative*
- ☐ *Prefer not to say*

Questions

Q10) What do you understand from the concept of "Accessibility" in the context of travelling for leisure and vacations purposes?

Q11) When you are deciding on your next vacation destination, what are the 3 aspects that you consider to be more important for your choice ☐

1st aspect _____

2nd aspect _____

3rd aspect _____

Q12) Please rate how strongly you agree or disagree with each of the following statements:

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
I consider the environmental impact as a decisive aspect when choosing a <u>destination</u> for my vacations	☐	☐	☐	☐	☐
I consider the environmental impact as a decisive aspect when choosing a <u>travel-mode</u> (flight, train, car, etc.) for my vacations	☐	☐	☐	☐	☐

Q13) Please rank the influence of the following characteristics, from 1 being the most important, when choosing your vacation destination:

_____ Environmental impact of the trip

_____ Risk/Safeness

_____ Travel cost

_____ Expenses at destination

_____ Trip duration

_____ Travel mode

_____ Distance to destination

_____ Time spent at destination

_____ Weather

_____ Activities at destination

Q14) When you compare your leisure choices with other people, what do you consider? (Select all applicable, ranking from most relevant to less relevant).

Definitely Consider	Do not Consider
_____ Travel Mode (train, car, flight, etc)	_____ Travel Mode (train, car, flight, etc)
_____ Destination/distance	_____ Destination/distance
_____ Activities at destination	_____ Activities at destination
_____ Cost/Expenses	_____ Cost/Expenses
_____ How "exotic" is the destination	_____ How "exotic" is the destination
_____ Popularity of destination	_____ Popularity of destination
_____ Uniqueness of destination	_____ Uniqueness of destination
_____ Other (Please Specify)	_____ Other (Please Specify)

Q15) If you compare your leisure choices with others, to whom do you compare with? (Select all applicable, ranking from most common to less common)

Definitely Compare	Do Not Compare
_____ Family	_____ Family
_____ Friends	_____ Friends
_____ Colleagues	_____ Colleagues
_____ Strangers	_____ Strangers
_____ Neighbors	_____ Neighbors
_____ Other (Please Specify)	_____ Other (Please Specify)

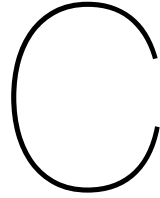
Q16) How do you compare these choices/experiences? (Select all applicable, ranking from most common to less common)

Use to Compare	Do not use to Compare
_____ Send pictures directly (Mail, email, text message, etc.)	_____ Send pictures directly (Mail, email, text message, etc.)
_____ Social networks (Facebook, Instagram, Snapchat, etc.)	_____ Social networks (Facebook, Instagram, Snapchat, etc.)
_____ Parties / Social activities	_____ Parties / Social activities
_____ Work / School	_____ Work / School
_____ Photo albums	_____ Photo albums
_____ Other (Please Specify)	_____ Other (Please Specify)

Q17) Please rank the following holiday destinations from more attractive to less attractive (region and an example of possible countries):

- _____ Neighboring country (sharing borders)
- _____ Oceania (Australia, New Zealand, ...)
- _____ Middle East (United Arab Emirates, Israel, ...)
- _____ Eastern Asia (Thailand, Japan, ...)
- _____ Northern Africa (Egypt, Morocco, ...)
- _____ Central Africa (Rwanda, Tanzania, ...)
- _____ North America (Canada, USA, ...)

- _____ South America (Perú, Argentina, ...)
- _____ Central America (Costa Rica, Guatemala, ...)
- _____ Western Europe (Spain, France, ...)
- _____ Eastern Europe (Romania, Hungary, ...)



SP Experiment Own View

SP Experiment - Own View version

START of Block: Introduction

I. The following questionnaire is part of a thesis research project regarding travel accessibility and vacation destination choices.

The purpose of the survey is to explore the choices you make when facing different scenarios regarding leisure traveling purposes. The insights obtained from your responses will greatly help me draw conclusions for my research, as well as to obtain my Master's degree in Transport, Infrastructure and Logistics at TU Delft. I would like to emphasize that your data will remain completely anonymous and will not be shared with third parties.

Thank you very much for your collaboration!

Jorge Quesada

j.a.quesadapacheco@student.tudelft.nl

Start of Block: Destination Ranking

Q2.1 Country of residence:

- ☐ The Netherlands
- ☐ Other European Country
- ☐ Other

Skip To: End of Survey If Country of residence: = Other

II. In this section, you will be asked to answer two questions regarding how attractive you find a given set of possible vacation destinations. You will be asked to rank those destinations from more attractive to less attractive.

Q2.1 Please rank the following vacation destinations from most attractive (1) to least attractive (5):
(Drag and drop the destinations to arrange them)

- _____ Western Europe
- _____ Eastern Europe
- _____ South America
- _____ Oceania
- _____ Eastern Asia

JavaScript Code for customizing questions depending on the ranking

Q2.2 Based on your previous ranking; how satisfied would you feel by visiting each destination?

- Destination 1 (Scale 1 to 10)
- Destination 2 (Scale 1 to 10)
- Destination 3 (Scale 1 to 10)
- Destination 4 (Scale 1 to 10)
- Destination 5 (Scale 1 to 10)

Start of Block: SP Experiment

III. In this part of the questionnaire, it is required that you answer which scenario you would choose for vacation purposes. A "better" vacation means the scenario that would make you happier, therefore, you would prefer to choose.

Note that destination characteristics and prices (purchasing power of money) are the same in both scenarios and the same as in current society. Also, cost = ticket + expenses, and travel time = time spent reaching the destination.

In each of the following questions, there is a scenario in which you travel to a destination, while all your average friends (friends, colleagues, acquaintances) also travel to a destination. You know about your friends' destination choices and travel characteristics while sharing experiences at a party and through social media (e.g. Instagram, Facebook).

Q3.1 Your friends travel to: Destination 4.

Which vacation scenario would you choose?

- ☐ Destination 3; cost = €2000 and travel time = 6 hrs.
- ☐ Destination 1; cost = €2000 and travel time = 12 hrs.

Q3.2 Your friends travel to: Destination 3.

Which vacation scenario would you choose?

- ☐ Destination 5; cost = €1500 and travel time = 12 hrs.
- ☐ Destination 3; cost = €2000 and travel time = 6 hrs.

Q3.3 Your friends travel to: Destination 2.

Which vacation scenario would you choose?

- o Destination 1; cost = €1000 and travel time = 9 hrs.
- o Destination 1; cost = €1500 and travel time = 6 hrs.

Q3.4 Your friends travel to: Destination 3.

Which vacation scenario would you choose?

- o Destination 3; cost = €1000 and travel time = 12 hrs.
- o Destination 3; cost = €1500 and travel time = 9 hrs.

Q3.5 Your friends travel to: Destination 4.

Which vacation scenario would you choose?

- o Destination 5; cost = €1000 and travel time = 6 hrs.
- o Destination 1; cost = €1000 and travel time = 9 hrs.

Q3.6 Your friends travel to: Destination 2.

Which vacation scenario would you choose?

- o Destination 1; cost = €1500 and travel time = 6 hrs.
- o Destination 3; cost = €1000 and travel time = 12 hrs.

- Remember the ranking you provided in the first question:

1. Destination 1.
2. Destination 2.
3. Destination 3.
4. Destination 4.
5. Destination 5.

Q3.7 Your friends travel to: Destination 3.

Which vacation scenario would you choose?

- o Destination 5; cost = €2000 and travel time = 9 hrs.
- o Destination 5; cost = €1500 and travel time = 12 hrs.

Q3.8 Your friends travel to: Destination 4.

Which vacation scenario would you choose?

- o Destination 3; cost = €1500 and travel time = 9 hrs.
- o Destination 5; cost = €1000 and travel time = 6 hrs.

Q3.9 Your friends travel to: Destination 2.

Which vacation scenario would you choose?

- o Destination 1; cost = €2000 and travel time = 12 hrs.
- o Destination 5; cost = €2000 and travel time = 9 hrs.

Q3.10 Your friends travel to: Destination 4.

Which vacation scenario would you choose?

- o Destination 3; cost = €1000 and travel time = 12 hrs.

o Destination 3; cost = €1500 and travel time = 9 hrs.

Q3.11 Your friends travel to: Destination 3.

Which vacation scenario would you choose?

o Destination 5; cost = €1000 and travel time = 6 hrs.

o Destination 1; cost = €1000 and travel time = 9 hrs.

Q3.12 Your friends travel to: Destination 4.

Which vacation scenario would you choose?

o Destination 1; cost = €1500 and travel time = 6 hrs.

o Destination 3; cost = €1000 and travel time = 12 hrs.

- Remember the ranking you provided in the first question:

1. Destination 1.

2. Destination 2.

3. Destination 3.

4. Destination 4.

5. Destination 5.

Q3.13 Your friends travel to: Destination 2.

Which vacation scenario would you choose?

o Destination 5; cost = €1500 and travel time = 12 hrs.

o Destination 3; cost = €2000 and travel time = 6 hrs.

Q3.14 Your friends travel to: Destination 3.

Which vacation scenario would you choose?

o Destination 1; cost = €1000 and travel time = 9 hrs.

o Destination 1; cost = €1500 and travel time = 6 hrs.

Q3.15 Your friends travel to: Destination 2.

Which vacation scenario would you choose?

o Destination 3; cost = €1500 and travel time = 9 hrs.

o Destination 5; cost = €1000 and travel time = 6 hrs.

Q3.16 Your friends travel to: Destination 2.

Which vacation scenario would you choose?

o Destination 3; cost = €2000 and travel time = 6 hrs.

o Destination 1; cost = €2000 and travel time = 12 hrs.

Q3.17 Your friends travel to: Destination 3.

Which vacation scenario would you choose?

o Destination 1; cost = €2000 and travel time = 12 hrs.

o Destination 5; cost = €2000 and travel time = 9 hrs.

Q3.18 Your friends travel to: Destination 4.

Which vacation scenario would you choose?

- ☐ Destination 5; cost = €2000 and travel time = 9 hrs.
- ☐ Destination 5; cost = €1500 and travel time = 12 hrs.

Start of Block: Block 4

IV. Finally, two different vacation scenarios will be presented to you. Answer based on which of the scenarios would satisfy you the most.

Q4.2 Which vacation scenario would make you happier?

- ☐ Vacation A: You travel to Destination 2. Your friends travel to Destination 1.
- ☐ Vacation B: You travel to Destination 3. Your friends travel to Destination 4.

Q4.3 Which vacation scenario would make you happier?

- ☐ Vacation A: You travel to Destination 1; CO2 emissions = Very High. Your friends travel to Destination 2; CO2 emissions = Intermediate
- ☐ Vacation B: You travel to Destination 4; CO2 emissions = Very Low. Your friends travel to Destination 3; CO2 emissions = Intermediate

Start of Block: General Information

Q5.1 In the last 5 years, how many times have you traveled abroad for vacation purposes?

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ More than 5

Q5.2 Which are the last 3 countries you have visited for vacation purposes?

- ☐ Country _____
- ☐ Country _____
- ☐ Country _____

Q5.3 Age:

Q5.4 Gender:

- ☐ Male
- ☐ Female

☐ Prefer not to say

Q5.5 Highest degree or level of education completed:

☐ Primary School

☐ High School, college, professional education

☐ Undergraduate degree, BSc.

☐ Graduate Degree, M.Sc., MA, PhD or above

☐ Other: _____

☐ Prefer not to say

Q5.6 Marital Status:

☐ Single, never married

☐ Married or cohabitating

☐ Divorced

☐ Separated

☐ Widow or widower

☐ Other: _____

Q5.7 Number of people in your household (including yourself):

Q5.8 Household's Annual Net Income:

☐ Less than €10,000

☐ €10,000 - €19,999

☐ €20,000 - €29,999

☐ €30,000 - €39,999

☐ €40,000 - €49,999

☐ €50,000 - €59,999

☐ €60,000 - €69,999

☐ €70,000 - €79,999

☐ €80,000 - €89,999

☐ €90,000 - €99,999

☐ More than €100,000

Q5.9 Rank the following aspects, based on the importance you give them in your life: (Drag and drop;

1 = most important; 6 = less important)

_____ Money

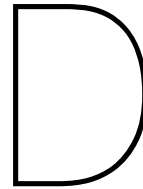
_____ Status

_____ Traveling

_____ Environment

_____ Family

_____ Friends



SP Experiment Others View

SP Experiment - Others View version

START of Block: Introduction

I. The following questionnaire is part of a thesis research project regarding travel accessibility and vacation destination choices.

The purpose of the survey is to explore the choices you make when facing different scenarios regarding leisure traveling purposes. The insights obtained from your responses will greatly help me draw conclusions for my research, as well as to obtain my Master's degree in Transport, Infrastructure and Logistics at TU Delft. I would like to emphasize that your data will remain completely anonymous and will not be shared with third parties.

Thank you very much for your collaboration!

Jorge Quesada

j.a.quesadapacheco@student.tudelft.nl

Start of Block: Destination Ranking

Q2.1 Country of residence:

- ☐ The Netherlands
- ☐ Other European Country
- ☐ Other

Skip To: End of Survey If Country of residence: = Other

II. In this section, you will be asked to answer two questions regarding how attractive you find a given set of possible vacation destinations. You will be asked to rank those destinations from more attractive to less attractive.

Q2.1 Please rank the following vacation destinations from most attractive (1) to least attractive (5):
(Drag and drop the destinations to arrange them)

- _____ Western Europe
- _____ Eastern Europe
- _____ South America
- _____ Oceania
- _____ Eastern Asia

JavaScript Code for customizing questions depending on the ranking

Q2.2 Based on your previous ranking; how satisfied would you feel by visiting each destination?

- Destination 1 (Scale 1 to 10)
- Destination 2 (Scale 1 to 10)
- Destination 3 (Scale 1 to 10)
- Destination 4 (Scale 1 to 10)
- Destination 5 (Scale 1 to 10)

Start of Block: SP Experiment

III. In this part of the questionnaire, try to think you are answering from the **perspective of others**, and think about what would **they prefer**. It is required that you answer which scenario **a relative of yours would choose** for vacation purposes. A "better" vacation means the scenario that would make **your relative** happier, therefore, **he/she would prefer to choose**.

Note that destination characteristics and prices (purchasing power of money) are the same in both scenarios and the same as in current society. Also, cost = ticket + expenses, and travel time = time spent reaching the destination.

In each of the following questions, there is a scenario in which **your relative** travels to a destination, while all his/her **average friends** (friends, colleagues, acquaintances) also travel to a destination. Your relative knows about his/her friends' destination choices and travel characteristics while sharing experiences at a party and/or through social media (e.g. Instagram, Facebook).

Q3.1 His/her friends travel to: Destination 4.

Which vacation scenario would you choose?

- ☐ Destination 3; cost = €2000 and travel time = 6 hrs.
- ☐ Destination 1; cost = €2000 and travel time = 12 hrs.

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Which vacation scenario would you choose?

- ☐ Destination 5; cost = €1500 and travel time = 12 hrs.
- ☐ Destination 3; cost = €2000 and travel time = 6 hrs.

Q3.3 His/her friends travel to: Destination 2.

Which vacation scenario would you choose?

- o Destination 1; cost = €1000 and travel time = 9 hrs.
- o Destination 1; cost = €1500 and travel time = 6 hrs.

Q3.4 His/her friends travel to: Destination 3.

Which vacation scenario would you choose?

- o Destination 3; cost = €1000 and travel time = 12 hrs.
- o Destination 3; cost = €1500 and travel time = 9 hrs.

Q3.5 His/her friends travel to: Destination 4.

Which vacation scenario would you choose?

- o Destination 5; cost = €1000 and travel time = 6 hrs.
- o Destination 1; cost = €1000 and travel time = 9 hrs.

Q3.6 His/her friends travel to: Destination 2.

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- o Destination 1; cost = €1500 and travel time = 6 hrs.
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2. Destination 2.
3. Destination 3.
4. Destination 4.
5. Destination 5.

Q3.7 His/her friends travel to: Destination 3.

Which vacation scenario would you choose?

- o Destination 5; cost = €2000 and travel time = 9 hrs.
- o Destination 5; cost = €1500 and travel time = 12 hrs.

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Which vacation scenario would you choose?

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Which vacation scenario would you choose?

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Which vacation scenario would you choose?

- o Destination 3; cost = €1000 and travel time = 12 hrs.
- o Destination 3; cost = €1500 and travel time = 9 hrs.

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Which vacation scenario would you choose?

- o Destination 5; cost = €1000 and travel time = 6 hrs.
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- o Destination 1; cost = €1500 and travel time = 6 hrs.
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2. Destination 2.
3. Destination 3.
4. Destination 4.
5. Destination 5.

Q3.13 His/her friends travel to: Destination 2.

Which vacation scenario would you choose?

- o Destination 5; cost = €1500 and travel time = 12 hrs.
- o Destination 3; cost = €2000 and travel time = 6 hrs.

Q3.14 His/her friends travel to: Destination 3.

Which vacation scenario would you choose?

- o Destination 1; cost = €1000 and travel time = 9 hrs.
- o Destination 1; cost = €1500 and travel time = 6 hrs.

Q3.15 His/her friends travel to: Destination 2.

Which vacation scenario would you choose?

- o Destination 3; cost = €1500 and travel time = 9 hrs.
- o Destination 5; cost = €1000 and travel time = 6 hrs.

Q3.16 His/her friends travel to: Destination 2.

Which vacation scenario would you choose?

- o Destination 3; cost = €2000 and travel time = 6 hrs.
- o Destination 1; cost = €2000 and travel time = 12 hrs.

Q3.17 His/her friends travel to: Destination 3.

Which vacation scenario would you choose?

- o Destination 1; cost = €2000 and travel time = 12 hrs.

o Destination 5; cost = €2000 and travel time = 9 hrs.

Q3.18 His/her friends travel to: Destination 4.

Which vacation scenario would you choose?

o Destination 5; cost = €2000 and travel time = 9 hrs.

o Destination 5; cost = €1500 and travel time = 12 hrs.

Start of Block: Block 4

IV. Finally, two different vacation scenarios will be presented to you. Answer based on which of the scenarios would satisfy satisfy your relative the most.

Q4.2 Which vacation scenario would make your relative happier?

o Vacation A: Your relative travels to Destination 2. Your relative travels to Destination 1.

o Vacation B: Your relative travels to Destination 3. Your relative travels to Destination 4.

Q4.3 Which vacation scenario would make your relative happier?

o Vacation A: Your relative travels to Destination 1; CO2 emissions = Very High. Your relative travels to Destination 2; CO2 emissions = Intermediate

o Vacation B: Your relative travels to Destination 4; CO2 emissions = Very Low. Your relative travels to Destination 3; CO2 emissions = Intermediate

Start of Block: General Information

Q5.1 In the last 5 years, how many times have you traveled abroad for vacation purposes?

o 0

o 1

o 2

o 3

o 4

o 5

o More than 5

Q5.2 Which are the last 3 countries you have visited for vacation purposes?

o Country _____

o Country _____

o Country _____

Q5.3 Age:

Q5.4 Gender:

o Male

- ☐ Female
- ☐ Prefer not to say

Q5.5 Highest degree or level of education completed:

- ☐ Primary School
- ☐ High School, college, professional education
- ☐ Undergraduate degree, BSc.
- ☐ Graduate Degree, M.Sc., MA, PhD or above
- ☐ Other: _____
- ☐ Prefer not to say

Q5.6 Marital Status:

- ☐ Single, never married
- ☐ Married or cohabitating
- ☐ Divorced
- ☐ Separated
- ☐ Widow or widower
- ☐ Other: _____

Q5.7 Number of people in your household (including yourself):

Q5.8 Household's Annual Net Income:

- ☐ Less than €10,000
- ☐ €10,000 - €19,999
- ☐ €20,000 - €29,999
- ☐ €30,000 - €39,999
- ☐ €40,000 - €49,999
- ☐ €50,000 - €59,999
- ☐ €60,000 - €69,999
- ☐ €70,000 - €79,999
- ☐ €80,000 - €89,999
- ☐ €90,000 - €99,999
- ☐ More than €100,000

Q5.9 Rank the following aspects, based on the importance you give them in your life: (Drag and drop;
1 = most important; 6 = less important)

- _____ Money
- _____ Status
- _____ Traveling
- _____ Environment
- _____ Family
- _____ Friends

