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Distance as a Positive Attribute in Tourism Travel: Exploring the 'Value of Distance'

Centre for Sustainability, Tourism, and Transport (CSTT)

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Introduction

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Preface

Before you lies the thesis 'Distance as a Positive Attribute in Tourism Travel: Exploring the Value of Distance'. This research is conducted on behalf of the Centre of Sustainability, Tourism, and Transportat (CSTT) and Radboud University. It is the result of a personal interest in tourism and sustainability, and in particular how people can be moved to behave more environmentally sustainable. It is the final part of the Master's programme 'Cultural Geography & Tourism' and it is intended for everyone who is interested in tourism, discrete choice modelling, sustainability, and the role of distance in tourism travel.

This thesis is the result of a rather challenging 8-month research endeavour. Since this topic falls partly under transport sciences and econometrics, getting knowledge on discrete choice modelling and analysis of this data took extra effort and time. Without the help of several people, I would not have been able to finalise this thesis.

First and foremost I would like to thank dr. Ing. Paul Peeters for the opportunity to conduct this research and for his supervision. He found the balance between challenging me and helping me out, which demonstrates a high level of professionalism. This also helped to significantly improve the quality of this thesis.

Next, I owe special thanks to Prof. Huib Ernste, my first supervisor for his feedback and for exchanging ideas. Furthermore I could always plan in a consult on short notice, which helped me tremendously in the process of writing this thesis.

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I hope you enjoy your reading.

Ivar Neelis

Nijmegen, October 27, 2019.

Introduction

Executive summary

The topic of sustainability is more socially relevant than ever before. Also in tourism concerns about the environmental impact of travelling are rising, since both its absolute relative contributions to the total global emissions are growing, while other industries are reducing their emissions (Larsen & Guiver, 2013). Since the authors argue that voluntary behaviour change is unlikely and/or insufficiently capable of reducing emissions, the creation of a broad basis from which mitigation is possible, is of utmost importance. The focus of this thesis is on the positive Value of Distance, which is assumed to be one of the drivers of tourism and one of the causes of the increasing average distances travelled.

There is a large number of perceptions on distance, such as distance as a use of resources or as an experience and it can be viewed in absolute and relative terms. Other research investigates the role of other factors which alter the role of distance, or can partly explain the (increasing) desire for distance, such as novelty-seeking. Existing research on the role of distance in tourism travel either only implicitly includes distance in quantitative statistical models, or uses qualitative approaches, such as discourse analysis, to describe its role in tourism travel. The contribution of this thesis to this field of research is the inclusion of distance as a autonomous, quantitative variable, which is used to derive a monetary Value of Distance, similar to Value of Travel Time calculations. This thesis aims to form a basis from which future research on the Value of Distance can depart, with the hope to eventually inform policy measures which can mitigate climate change.

A survey, which includes a discrete choice experiment, is used to collect data. In a series of choice tasks, generated by the Robust Design Generator, respondents are asked to trade off absolute distance (in kilometres) and travel costs (in euros). In the next part of the survey, a series of statements is provided, which collectively form Crompton and Lee's (1992) novelty-instrument. In brief, this instrument measures the extent to which respondents prefer to go on an adventurous, exotic trip to a culturally different destination. Lastly, respondents are asked to provide details of a number of personal characteristics, such as the level of income and the size of the city of residence.

The survey is filled out 330 times, which is more than satisfactory. The first part of the analysis consists of fairly simple scatterplots of variables which are expected to be related. Some of these relationships are indeed visible in the scatterplots. The second part of the analysis consists of a factor analysis of the novelty-instrument. It is found that the novelty-instrument, despite small alterations to the original model, still yields satisfactory results. The third part of the analysis consists of a Multinomial Logistic Regression, which is executed with Latent Gold, since this software takes into account changes in absolute distance and travel costs *between* choice tasks. The short-haul model yields insignificant and nihil results, which means that a Value of Distance cannot be calculated for this model. Oppositely, the long-haul model does yield significant results. It is found that the Value of Distance of this model is €38.19 per 500km, which is similar to the air travel industry's average. The

last part of the analysis consists of a Binary Logistic Regression with interaction effects. Since variables such as personal characteristics cannot be included in Latent Gold, and the main effects of absolute distance and travel costs are insignificant in the short-haul model, it is deemed useful to perform this analysis. Some main effects of explanatory variables are insignificant, but when the same variables are paired with other explanatory variables, some of the interaction effect of these variables *are* significant. In some cases the opposite is true, where main effects are significant and interaction effects are not.

The main research question is as follows: *What is the Value of Distance in leisure tourism for Dutch students and what role does it play in choosing a destination?* Based on the results, this research question cannot be answered with confidence, since the Multinomial Logistic Regression only partly yields significant results and does not include other explanatory variables. However, since the Value of Distance of the long-haul model is similar to the air travel industry's average, it does show that the research method and experimental design are a suitable way to calculate a Value of Distance and therefore this thesis is a useful contribution to a better understanding of travellers' trade-offs.

Recommendations for future research are focussed on the methodology (e.g. using a wider sample, revisiting the selection of explanatory variables, and conducting a pilot study) and the analysis (e.g. performing more advanced analyses, such as the Nested Logistic Regression or Mixed Logistic Regression or revisiting the Value of Distance calculation method).

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Glossary

BLR = Binary Logistic Regression

MNL = Multinomial Logistic Regression

RP = Revealed Preference

RRM = Random Regret Minimisation

RUM = Random Utility Maximisation

SP = Stated Preference

VoD = Value of Distance

VoTT/VOTT/VOT = Value of Travel Time

1 Introduction

1.1 Introduction

“Eat less meat!”; “Travel with public transport more often!”; “Avoid disposable plastics!”. These are all often mentioned measures to reduce our environmental impact. That sustainability nowadays is a hot topic, may need no further elaboration. Initiatives from as small as individual efforts to as big as international agreements (e.g. the Paris Agreement) show the magnitude of climate change. Mitigation goals are getting closer and closer and the need not only for a thorough mapping of the issue, but also for the creation of a broad basis from which mitigation is possible, is of utmost importance. However, Larsen and Guiver (2013) argue that voluntary changes in behaviour is unlikely and/or insufficiently capable of reducing emissions. The focus of this research is on Milieucentraal’s (2018) second behavioural change: less far trips. Opposed to fields of science such as transport sciences, distance in tourism travel is not only viewed as something negative, but also as an attraction itself. This obstructs attempts to voluntarily plan less far trips. It furthermore raises the question from what point does distance become an attraction, and from what distance will campaigns aimed to reduce the distance travelled lead to opposition? These questions indicate that it is worthwhile to analyse the interaction between distance as an attraction, and distance as a use of resources (money, time, physical effort, and emissions). Knowledge on this interaction can help to determine under which circumstances measures to reduce the travelled distance are most effective.

Current research in this field often focusses on either travel motivations, or destination attractiveness. What is innovative about the approach in this research, is that it combines external factors (outside the traveller’s influence, similar to pull-factors), such as destination features, with internal factors (within the traveller’s influence, similar to push-factors), such as personal considerations when it comes to a destination choice. In this thesis, the focus is on the Value of Distance (VoD) for Dutch student leisure travellers. The expectation is that distance adds certain value to a tourist experience, and therefore business travellers and visiting friends and relatives (vfr) are excluded from this research, since it can be expected that their valuation of distance (and travel time and costs) differs substantially from that of leisure tourists (as also shown in Wardman et al., 2012). Additionally Crompton and Lee’s (1992) novelty instrument is added to the model to account for the ‘exotic’ value of far-away destinations for tourists.

1.2 Societal relevance

Tourism is one of the biggest economic sectors worldwide and since it heavily relies upon transportation, its emissions are substantial as well. Larsen and Guiver (2013, p. 968) summarise the report of UNWTO-UNEP-WMO (2008) as: "Although tourism [as a whole] is currently only responsible for ca. 5% of global greenhouse gas emissions, both its absolute and relative contributions [to the total global emissions] are growing while other industries are reducing their emissions". Additionally, since flying has become widely used for tourism travel, the average distances travelled by tourists are increasing (Peeters et al., 2007). Total passenger-kilometres are projected to increase by 122% between 2000 and 2022, whereas the number of trips will 'only' increase by 57% (Peeters, 2007). Air travel accounts for only a small portion of tourist trips, but it has a high environmental impact, since its travel distance and emission is usually high (Larsen & Guiver, 2013). "Travel accounts for 75% of tourism's GHG emissions, the majority from flying" (Larsen & Guiver, 2013, p. 968). Therefore, reducing the distance travelled, particularly by air, is a high priority, if tourism's emissions are to be reduced (Peeters, 2007).

From the point of view of the tourist, in the transportation part of the trip, three main ways to reduce emissions can be distinguished, namely: less frequent trips, more sustainable modes of transportation and less far trips (Milieucentraal, 2018). Each of these in isolation cannot sufficiently alleviate environmental pressure. Peeters (personal communication, February 8, 2019) argues that, for instance, the sole focus on more sustainable modes of transportation can have unwanted effects. He assumed taxes on car use in a global tourism and transport model, and expected a reduction in the emissions of car use. This indeed was the outcome, but surprisingly, the overall emissions of tourism and travel appeared to increase. This was caused by a shift from car to plane and a shift towards longer distances, because that is much easier and less costly when one is using an aircraft. If we focus on the reduction of the distance of touristic trips, Peeters concluded – based on a number of experiments conducted during lectures with his students - that the majority of students tend to opt for the destination furthest away when time of travel and travel costs were similar, which indicates that these students ascribe a certain value to travel distance. The autonomous role of distance in tourism travel has been investigated before, for example by Larsen and Guiver in 2013, but in publications, distance is mainly linked to other dimensions, such as travel time and length of the trip (Lee et al., 2012), and travel motivations (Nicolau, 2008; Peeters, 2017, among others). It is further understated by McKercher and Ahn (2015), who argue:

> "While [absolute] distance is not a deterministic variable per se, it can be used as a valid proxy measure to reflect the combination of a number of factors that affect demand, including time availability, cost considerations, referred transport mode, travel budget, and the likely willingness or ability to engage with different cultures" (p. 95).

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Although distance can be, and is, used as a proxy of other factors, as mentioned by Ahn and McKercher (2015), the first part of their notion is questionable. The increasing average distances travelled may be an indicator of a Value of Distance, and the size of the industry makes it worthwhile to research if distance in itself has a value. Peeters (2017) constructed a model that looks at external factors which enable travel, and internal (psychological) factors leading to trips. However, Peeters (personal communication, February 8, 2019) notes that, although he only briefly explored this factor in his PhD, 'distance' was mainly seen as a travel motivator and the degree in which it plays a role was not quantified and statistically tested.

Air travel's total emissions in the Netherlands are similar to that of cars. However, since distances in air travel are significantly higher than that of road travel (specifically car travel), its share of trips may not be big, but its share of emissions is. Therefore it is important to gain insight in why travellers show an increasing interest in more distant destinations, thus what value they ascribe to distance. At a later stage these insights may inform measures that can alleviate environmental pressure. Of course, alleviation of environmental effects will not directly result from this thesis. It can only offer a modest contribution, by improving our insight in the trade-offs that leisure travellers make between travel costs and absolute distance in their destination choice. In addition, the scope of the research, as well as the boundedness of the group of respondents, needs to be expanded in order to get more generalisable results, which can justify certain policy measures. Nevertheless, improved insight is very relevant, since Larsen and Guiver (2013) established, that the scope for significant voluntary changes in travel behaviour towards less far holidays is minimal. This is due to air travel's advantageous combination of travel time and cost coupled with tourists' desire to experience and meet that which is different, which they often link with long physical distances. Besides that, Peeters (personal communication, July 23, 2019) argues that reducing the averages distance travelled, potentially is the most effective emission-reducing measure.

1.3 Scientific Relevance

Travel behaviour has been investigated as a distinguished sociological subject-field since the 70s (Uriely, 1996). Contributions in this field have explored factors which enabled travel throughout history (e.g. technological and economic advancements)(Peeters, 2017). Besides that, research has been conducted on psychological factors which inform travel (e.g. contributions to travel motivation research by Boorstin (1961), MacCannell (1973), push and pull factors etc.). In addition to pull factors, the perspective of the destination is further researched by means of a destination attractiveness model. Hu and Ritchie (1993), for example, list a number of factors, such as natural and recreational factors, which contribute to the perceived destination attractiveness. However, this model leaves little room for flexibility and differentiation of personal preference.

Although the inclusion of the Value of Distance, which is central in this research, is a rather new phenomenon, similar research has been conducted before on the so-called Value of Time (VoT) or Value of Travel Time (VTT/Value of Travel Time), with and without a focus on tourism. This phenomenon describes trade-offs that people or travellers make between travel cost and travel time. Contributions in this field of research have also explored differences between different modes of transportation (Bates, 2013) and tried to refine the methods of investigating these (Börjesson et al., 2012). Fezzi et al. (2013) further note that Value of Travel Time is activity-specific and Small (2012) notes that this seemingly simple trade-off is more convoluted than it seems, since complex and subtle processes play a role in a decision-making process. Distance is implicit in these publications and is also mostly viewed as a negative aspect (disutility), rather than a positive aspect (utility), which tourists seek. In this research the focus is on investigating this positive aspect in the travel decision-making process.

Another perspective from which distance is viewed as a disutility, is the phenomenon ‘distance decay’. “The concept is enshrined in the geographer Waldo Tobler’s [(1970)] famous dictum that all things are related, but those that are nearest to one another are more related than those located at a greater distance” (Hanks, 2011, p. 103), also viewed as the First Law of Geography. The concept was initially used in transport geographic research and soon expanded to other research areas (Pun-Cheng, 2016). Distance decay also exists in tourism, as Lee et al. (2012) and McKercher et al. (2008), among others, argue. From this perspective, distance is mostly viewed in absolute terms (kilometres or miles) and as a negative aspect (disutility). The latter authors, however, add that distance decay overlooks “differences in market appeal, tourism infrastructure, level of development, ease of entry, and a host of other factors affecting tourism flows” (p. 208).

The aforementioned interplay between travel cost and travel time is described by Gehlert et al. (2013) as objective outcomes of travel choice. The choice between alternatives in this case heavily relies on a kind of cost-benefit analysis (Emberger et al., 2008), based on Random Utility Theory

(RUT OR RUM), assuming that travellers balance travel costs against travel time to maximize personal advantage (utility) when making travel choices (Ben-Akiva and Lerman, 1985). However, as mentioned in the above paragraph, this seemingly simple utility calculation is not as clear-cut in and of itself. Prospect Theory tries to take this into account, as Van de Kaa (2004) provided a set of additional assumptions, such as loss aversion (losses are valued higher than gains equivalent in size), which again shows the complexity behind choice behaviour. Additionally, Random Regret Minimisation, proposed by Chorus et al. (2008), again shows differences with the original RUM, in that people may be driven by avoidance of negative emotions rather than the maximisation of some form of payoff. Furthermore "This notion [Random Utility Theory] has been frequently criticized for neglecting subjective outcomes of travel choice such as comfort, convenience, and social interactions" (Ben-Akiva et al., 1999; Gärling, 1998; Gärling et al., 1998; Svenson, 1998; van Wee, 2012).

In the debates about the Value of Travel Time, the corresponding distance, is only dealt with implicitly (longer distance *generally* means longer travel time and higher travel costs). Distance is, however, inherent and core to tourism, since UNWTO's (2014) definition includes not only a temporal dimension (between 1 day and 1 year), but also a spatial one (outside of one's usual environment). Lumsdon and Page (2004), and Larsen and Guiver (2013) argue that distance is more than a factor to be overcome, which they further exemplify by arguing that the perception of distance can be different for each traveller (in quantitative terms, such as kilometres and time, and in qualitative terms, such as cultural difference, and here and there). Distance in terms of cultural distance is often researched from a qualitative perspective, but hardly ever from a quantitative perspective. The desire to explore that which is different, or novel, is researched by the aforementioned authors and instrumentalised by Crompton and Lee (1992), who tried to take these qualitative aspects into account and further developed the concept of 'novelty' of a destination, as means to address the attractiveness of distance to tourists. With this method it is possible to place travellers in a continuum, ranging from novelty-avoiding to novelty-seeking.

The additional value that this research holds, is the introduction of the new concept 'Value of Distance' and subsequently a new method of measuring it. Furthermore I try to link between psychological and sociological research on personality traits and characteristics, with a simplified, latent approach to the value of tourist destinations (using absolute distance and travel costs as manifest indicators). Travel costs are pivoted around several distances, in order to derive a Value of Distance. The novelty-construct, as well as other personal characteristics, are included to account for destination preferences. If travellers look for novel places and associate novelty with bigger distances, distance becomes a utility and this is expected to have an effect on how much travellers are willing to pay for these distances (i.e. how travellers trade off absolute distance and travel costs). The combination of the two approaches can overcome shortcomings of each approach. Simple, quantitative Value of Distance calculations would lack explanatory power in terms of why and how travellers trade off travel costs and absolute distance. A qualitative approach to distance, as used by Larsen and Guiver (2013), adds more context to how people view distance, in addition to metric or imperial units, but it lacks integration potential for tourism transportation models, such as that of Peeters (2017). Crompton and Lee's (1992) novelty construct, as well as the use of trade-offs between absolute distance and travel costs are new (a thorough search of the relevant literature yielded no results, apart from its initial development by the authors) and therefore can lead to scientific development of tourism decision-making models. These models, in turn, can inform emission reducing measures, as mentioned in Section 1.2. Discrete choice experiments in the context of travel are not uncommon. However, the inclusion of 'distance' as a positive feature is new. The aforementioned emission-reducing measures may only be developed if the current knowledge gap is bridged.

1.4 Research Problem, Objectives, and Questions

Climate change is a major problem and, as mentioned in Section 1.2, tourism plays a part in this. Although much research has been done on the causes and effects of tourism, no quantitative research has been conducted on a positive value of distance. The main goal of this research is to contribute to closing this knowledge gap, by looking at how travellers trade off absolute distance and travel costs, in order to derive a Value of Distance. Furthermore, as hinted in Section 1.3, more complex, subtle and subjective factors can play a role in vacation choice. Therefore another objective of this thesis is to test if personal characteristics and novelty-seeking characteristics can (partly) explain the Value of Distance.

The research goal is to gain insight in Dutch students' perceived Value of Distance and to identify factors that affect this value. These insights contribute to a theoretical understanding of how Dutch students trade off absolute distance and travel costs and what factors affect these trade-offs.

Specific objectives:

- Gain knowledge about the role of distance in tourism travel.
- Gain knowledge about the role of novelty-seeking in tourism travel.
- Gain knowledge about factors that affect the perception of and desire for distance.

The research questions below are similar to the variables used in this research. The main relationships are described in these questions, as well as in the conceptual framework (Figure 1 in Section 2.10.5).

Main research question: *What is the Value of Distance in leisure tourism for Dutch students and what role does it play in the decision-making process?*

What is the Value of Distance in tourism travel for Dutch students? (in other words, how do Dutch students trade off distance and travel costs?

- Hypothesis (h0): There is no Value of Distance (no significant relationship between absolute distance and travel costs)

What is the effect of the novelty construct on the Value of Distance?

- Hypothesis (h0): There is no significant effect of the novelty-instrument on the Value of Distance.

What is the effect of demographic characteristics on the Value of Distance?

- Hypothesis (h0): There is no significant effect of personal characteristics on the Value of Distance.

1.5 Thesis Outline

Chapter 2 provides an overview of the state-of-the-art in this field of research and is an extension of Section 1.3. The main focus is on the central theme of this thesis: distance. It sheds light on the role of distance in geography and tourism, how distance is viewed, and how it is affected. The chapter furthermore includes research on the Value of Travel Time, which is the source of inspiration of the methodology that is used in this thesis. The final part of Chapter 2 focusses on the role of novelty in tourism. In Chapter 3 an explanation is given about the methods that are used in this thesis. The chapter starts with relatively general considerations, such as the research design, and gradually moves to considerations that are more specific to this thesis, such as the design of the experiment and the content of the survey. Chapter 4 contains the data analysis. In the first part of the chapter, the data is described in terms of frequencies and means. In the second part, the reliability and components of the novelty-instrument are tested. In the main part of the analysis, Multinomial Logistic Regressions (MNL) and Binary Logistic Regressions (BLR) are performed to derive a Value of Distance. The last chapter, Chapter 5, contains a conclusion of the results, recommendations for praxis, and limitations of this thesis.

2 Literature Review

2.1 Distance in geography

"Arguably, the concept of distance is one of the key building blocks of human geography… [Yet,] distance is also an idea. Personal experiences of distance are varied" (Pirie, 2009, p. 1). Half-a-century ago, distance was seen as one of geography's basic elements (Pirie, 2009). The author notes that distance indicated to what extent objects have adapted or dominated the environment. As geography mainly dealt with regional diversity and dissimilarity, distance was seen as something that could explain this difference. Therefore, they included this dimension in the 'first law of geography': "…nearby places and phenomena are more similar than those far apart" (Pirie, 2009, p. 2). Distance is also an integral part of travelling, since UNWTO (2014) not only includes a temporal dimension to its definition of a tourist ("…for less than a year…" (p. 13)), but also a spatial one. This spatial dimension involves "The activity of a visitor or tourist taking a trip to a main destination outside his/her usual environment…" (UNWTO, 2014, p. 13). Although this definition can be seen as problematic (what is the difference between a visitor and a tourist? What is a main destination? Can one be a tourist in one's own environment?), combined with a motivational dimension that the UNWTO (2014) also includes, ambiguity in the spatial dimension is resolved, since this motivational dimension involves "… any main purpose (business, leisure or other personal purpose) other than to be employed by a resident entity in the country or place visited" (UNWTO, 2014, p. 13). Furthermore, the UNWTO makes a distinction between tourists and visitors based on presence of an overnight stay, where tourists' (or overnight visitors') trips include an overnight stay and (same-day) visitors' (or excursionists') trips do not. A tourist thus can be defined as follows:

> "A person taking a trip to a main destination outside his/her usual environment for more than one night and for less than a year, for any main purpose (business, leisure or other personal purpose) other than to be employed by a resident entity in the country or place visited" (UNWTO, 2014, p. 13).

Peeters (2017) coined, that distance plays an important role in tourism travel. Rapid developments caused the total volume of tourism transport (passenger kilometres) to increase at a much higher pace than the number of trips (Peeters, 2017). These developments include the introduction and further development of airplanes, the increase in travel speeds of normal and high-speed trains, and the increasing density of infrastructure networks. Aside from the decreased travel cost and travel time that are consequences of these developments, it is obvious that travellers are internally driven to bridge (increasingly large) distances to fulfil their intrinsic needs. Additionally, simple experiments, conducted in lecture rooms, show that destination alternatives which are further away are often more preferred when travel costs and travel times between the alternatives are equal.

Classical views on travel distance consider this to be a mere dimension to overcome. Gunn (1994) for instance, argues that "… transportation is not usually a goal; it is a necessary evil of tourist travel" (p. 69). Lumsdon and Page (2004) add that the degree of satisfaction in this utilitarian view on transport is dependent on travel time and consequently, on travel cost. This classical, sedentary worldview ascribes little to no intrinsic value to a touristic trip itself. Therefore, Prideaux (2000) argues, "…in terms of tourism economics, travel has been traditionally modelled as a cost rather than a benefit." Taylor and Knudson's (1973) notion is in line with this, as they argue that the "… displacement of an individual to the destination entails physical, temporal, and monetary costs" (as cited in Nicolau, 2008, p. 43). Lumsdon and Page's, and Prideaux's observations are a clear result of Sheller and Urry's (2000) notion of 'mobilities', which goes against the sedentary worldview. The latter worldview fails to examine the significance of the car in transforming the time-space 'scapes' of the modern (sub)urban dweller. Mobility is playing an increasingly large role, as "… people, machines, images, information, power, money, ideas, and dangers are 'on the move', making and remaking network at increasingly rapid speed across the world" (Sheller & Urry, 2006, p. 221). Although classical, sedentary worldviews perceive distance as a disutility rather than a dimension with intrinsic value, Lumsdon and Page (2004) mention that there is a trade-off between "…time spent and cost of resources expended on a journey in relation to a willingness to travel a given distance in order to enjoy recreation at a destination" (p. 5). The latter notion of 'willingness', paradoxically, implicitly hints at a desire, no matter how small or big, that drives travellers to go against the convenience of little travel time and cost. Although a trade-off between travel time and travel cost still mostly rings true in regular travel (e.g. commuting or freight), Lumsdon and Page (2004) argue that in tourism, transport can be seen as a continuum, ranging between travel as a mere disutility and travel as a (part of the) travel experience (exemplified by the notion of "…the cruise ship is not only a form of transport, but the destination itself" (Wood, 2004, p. 134)). Thus, it can be concluded that all forms of tourism transport contribute (negatively or positively) to the overall tourism experience (Lumsdon & Page, 2004). The authors furthermore illustrate that since different modes of transport are designed to serve different purposes, it is important to determine which factors make up the tourism transport experience (e.g kayaking to show a different perspective of a destination versus a taxi to get to an attraction, see Appendix A.1 (tourism transport continuum*)* for a graphical representation of this continuum)(Lumsdon & Page, 2004).

2.2 Distance decay

The aforementioned classical views on travel distance as a (dis)utility are frequently expressed in trade-offs between travel time and travel cost. The usual result of such trade-offs is the notion of distance decay, derived from Tobler's (1970) First Law of Geography. Lee et al. (2012) define this phenomenon as the decrease in demand as a consequence of an increase in distance. In their empirical research on this phenomenon, Greer and Wall (1979) found that demand increases with distance to a certain level, after which this demand decreases. However, research by Lee et al. (2012) on this phenomenon in the context of international leisure tourism originating from Hong Kong, found that distance decay only partly holds true. Since China and Macau were excluded from this research (due to the ambiguous political situation between the regions), the first peak in demand was found between 1,000-1,500 miles from Hong Kong (Japan, Korea, Thailand), with two additional peaks between 4,500-5,000 miles (Australia) and 5,501-6,000 (France, Italy, Switzerland). The latter two peaks exemplify that travel time and cost alone inadequately explain travel destination choice, since there also seems to be attraction value in farther-away peak destinations. In the same publication, Lee et al. (2012) speak of trade-offs between perceived benefits and costs which are assumed to form the foundation of destination choice. In relation to the assumptions of distance decay, farther-away destinations thus require more attraction value to make up for extra costs (travel time and costs) that are inherent in long-haul travel. The notion of 'intervening opportunities' (Stouffer, 1940; Hall, 2005) could also possibly explain this. In essence an elaboration on gravity models, this model describes that the level of interaction between two places not only depends on the distance between them, but also on the number of intervening opportunities between them. Rather than only viewing gravity from the original destination, 'intervening opportunities' also looks at attributes of other destinations (named 'opportunities'). According to this model, a tourist destination which offers a similar experience (similar opportunities) to other destinations, but is in closer proximity, will be the preferred destination. Rather than physical distance, proximity in this model mainly relates to additional monetary, temporal, and effort related distance, as interviewees in Larsen and Guiver's (2013) study often expressed 'closer' in terms such as cheaper or quicker.

2.3 Determinants of distance sensitivity

Nicolau (2008) conducted research on determinants of the individual sensitivity to distance. The author found for example that the level of income has an impact on tourist behaviour, as people with higher incomes tend to participate in and spend more on tourist activities. Nicolau (2008) also argues that the number of children has a negative effect on vacation decisions, "… as it restricts vacation spending and reduces individuals' freedom of movement. Therefore, vacations with children tend to be associated with closer destinations" (p. 44). Another relation was found between distance and the size of the city of residence (Nicolau, 2008). The key finding by S.G.T (1992) (in Nicolau, 2008) is that tourist activities are lowest in towns with lower populations, fuelled by the idea that people from larger cities have a greater desire to escape in search of relaxation (Eymann & Ronning, 1997). Age has also been found to have an effect on vacation demand (Mieczkowski, 1990). Effects vary from linear relationships to bimodal relationships, of which the modi of the latter type tend to focus around younger and older people (Nicolau, 2008). Moreover the author describes that the use of intermediaries has an impact on vacation decisions. Nicolau (2008) argues that long-haul trips are generally booked via intermediaries, based on the assumption that these organisations take away uncertainties and simplify booking a higher number of travel components (flights, transfers, activities) that are often ingrained in long-haul travel. In line with earlier observations, Nicolau (2008) found that the transport mode also relates to distance. The author links this to the varying physical, temporal, and monetary effort inherent in different modes. Besides the aforementioned demographic and trip characteristics, Nicolau (2008) argues that psychographic factors may also play a role in explaining tourist behaviour. The author describes novelty-seeking, or the natural drive of people to discover or explore, as an important factor in travel. Quite in line with this, Mokhtarian and Salomon (2001) argue that variety-seeking can also influence the effect of distance, "… as it can increase the utility of more distant destinations and if it allows one to satisfy this trait" (Nicolau, 2008, p. 45). Kemperman et al. (2000) make a distinction between a more coincidental diversifying behaviour (e.g. caused by excess in demand) and intentional diversifying behaviour, where a change in destination is a goal in itself. Lastly, Nicolau (2008) argues that travel motivations can have an effect on the choice of destinations. The search for certain destination attributes (or friends and family) can influence the distance a person is willing to cross. More about travel motivations in Section 2.5.

2.4 Perceptions of distance

As mentioned before, distance, negatively or positively, influences tourism travel. Furthermore it is shown that ‘distance’ is often viewed by researchers as a proxy for other variables (e.g. combination of travel time and cost). Although distance in this respect is frequently researched, Larsen and Guiver (2013) argue that the way tourists perceive this dimension has largely been unexplored in the academic world. The authors note that the dimension is mostly viewed in quantitative terms, thus a subjective understanding of distance is often left aside. Pirie (2009) notes that there is a wide variety of uses of the word ‘distance’. It is used in metaphors (go the distance; go the extra mile; miles away; keep your distance), or as mentioned at the start of this section, in combination with other dimensions (e.g. ten-minute drive away). Therefore, Pirie (2009) notes: “Distance can indeed be ambiguous, both figurative and real… Not only have units of length baring the same name varied according to period and locality, but human history is also littered with locally unique and purpose-specific distance measures” (p. 5-6).

In line with the Value of Travel Time-paradigm (which is further explained in Section 2.7), Pirie (2009) notes that time distance, the time it takes to cover distance, may be a more common measurement of geographical distance than physical distance. Technological advancements have mediated between the two, effectively reducing distance between places. If the starting point of the discussion is: the more distance (in any form, including time distance), the more exotic the destination, time distance, the most common way to express geographical distance, does not explain the increase in average distances travelled. Slower modes of transport, although ‘slow travel’ is a recent trend, do not seem to provide the traveller with the same sense of novelty that physical distance provides.

Similar to time distance, cost distance expresses distance in terms of costs made (Pirie, 2009). Although less common in the linguistic context (the expression of a destination two dollars away is uncommon) and policy, it is not strange to think that the reduced cost distance is one of the explaining factors of the rise in popularity of short city trips (often operated by low-cost carriers) and the increase in average distances travelled. Both developments hint at a certain utility connected to distance, since the (hypothesised) positive utility connected to physical distance is no longer overshadowed by the relatively high cost distance from before.

A less relevant typology in terms of calculations or modelling, ‘effort distance’ initially referred to the physical energy required to cross distance (Pirie, 2009). Also influenced by the compression of time and distance, this typology recalibrates real distance against the fuss and strain of crossing it (e.g. transits at airports are assumed to increase the effort distance). However, standardisation within this typology is almost impossible, since multiple subjective and experiential variations are involved in measuring and comparing inconvenience (Pirie, 2009).

Larsen and Guiver (2013) empirically tested travellers’ perceptions on ‘distance’. They found that distance is mainly seen as a use of resources, as an experience, and is often expressed in ordinal and zonal terms. The first category resonates with earlier findings by Pirie (2009), as time distance is found to be the most frequently used way of measuring distance. Besides that, cost is mentioned, as travellers have a limited budget to work with. However, not the price of the journey is most important, but rather the total price of the holiday. Accessibility is found to be an important factor too, as respondents link this to additional travel time, costs and effort (Larsen & Guiver 2013).

Similar to Lumsdon and Page (2004), Larsen and Guiver (2013) found that travellers relate distance as experience to the mode of transport, where slower, and surface modes generally contribute more to the experience of distance than air travel. On the other hand, Larsen and Guiver (2013) note that distance as experience is also related to the destination, where travellers correlate physical distance with the possibility of experiencing something different or dissimilar. Pirie (2009) also mentions this in his discourse analysis. Desire for distance, Larsen and Guiver (2013) conclude, can be found in the journey, as well as in the destination.

Lastly, travellers use ordinal and zonal distance to distinguish between far and close (ordinal) or here and there (zonal) without necessarily measuring absolute or relative dimensions (Larsen & Guiver, 2013). However, travellers do relate these dimensions to ordinal or zonal distance, and often use relative dimensions, which they in turn express in ordinal or zonal terms. An example: based on the level of dissimilarity (relative dimension), Canada is closer to (ordinal dimension) the Netherlands than Algeria. Larsen and Guiver (2013) state that zonal expressions are common when travellers speak about wanting to go away from home. In this respect, differences in perceptions on distance relate to the traveller’s travel motivation(s).

2.5 Travel Motivations

2.5.1 Social psychology versus sociology

Ever since its emergence in the 1960s, travel motivation research has seen contributions that include a spatial dimension (or distance) as a factor determining travel decisions. Various academic disciplines have focussed on single motivation hypotheses (e.g. MacCannell (1973)), dual motivation hypotheses (e.g. Dann (1977)) or multi-motivational hypotheses (e.g. Pearce (1982); Maslow (1970)) with differing results. However, Jamal and Lee (2003) argue that many of these hypotheses can be categorised into two major areas which have contributed to this field of research: social psychology and sociology. The former sees choice as a result of internal processes (Jamal & Lee, 2003); the latter places it in a wider frame, where social processes are at the core of decision-making (Britton, 1991).

A major contribution to the social psychology of travel behaviour is that of Iso-Ahola (1982). The author argues that travel motivations are strictly psychological and a result of "… an awareness of potential satisfaction in a future situation" (Jamal & Lee, 2003). Once this awareness arises, Iso-Ahola (1982) argues, two motivational factors influence travel behaviour: the desire to leave the everyday environment and the desire to obtain intrinsic rewards. Especially the former desire is of relevance, since this explicitly describes a spatial movement. Iso-Ahola (1982) distinguishes between 'personal environment' and 'interpersonal environment'; the former involving personal issues, problems, or failures; the latter involving co-workers, family, friends, and relatives. This research, however, only describes that people want to escape their (inter)personal environment and not why they would want that. Travel and daily life, from this perspective, are on opposing sides of a dichotomy, where distance, in whichever form (physical, temporal, activity-related etc.), plays a mediating role.

Another contribution from a social psychological perspective is that of Crompton (1979). This author argues that people are moved to break from a routine, consciously or unconsciously, when they reach a state of disequilibrium. Travelling, he argues, is only one of the alternatives to restore disequilibrium. Crompton and Lee (1992) furthermore conceptualised the role of novelty-seeking motivations in the destination choice process, where the extent to which a destination's attributes are perceived as novel is related to travellers' level of novelty-seeking motives. Similar to Iso-Ahola's conceptualisation, distance plays a role in this conceptualisation, although in a more figurative way (moving away from routine). Though physical distance surely serves a role as medium in moving away from routine, the instrument's statements which measure the level of novelty-seeking do not include spatial dimensions. A traveller's association between physical distance and novel destinations, which would add this dimension, is not included in Crompton and Lee's (1992) conceptualisation. Furthermore, just like Iso-Ahola's (1982) contribution, this psychological model lacks explanation as to why people are unable to internally regulate their equilibrium of needs, and why people have different levels of novelty-seeking motives.

A major contribution from the other side of the spectrum, the sociological perspective, comes from Dann (1977), who introduced the push-pull model. This model defines pull-factors as destination-related factors, such as nice weather or beaches. Opposed to the aforementioned psychological models, this sociological model includes a dimension that could possible explain why people move from their usual environment. Dann (1977) makes use of Durkheim's notion of 'anomie', which describes a state of normlessness and meaninglessness in society (Jamal & Lee, 2003). "A possible 'push' factor for travel lies in the desire to transcend the feeling of isolation obtained in everyday life, where the tourist simply wishes to 'get away from it all'" (Dann, 1977, p. 187). Although this model is widely applied, due to its simplicity and inclusion of social factors, the terminology used is sometimes ambiguous. Dann (1977), as well as Uysal et al. (2008), see push-factors as internal to the subject and pull-factors as external. However, Dann (2018) adds to his former work that the search for adventure, for instance, can be seen as a factor that drives people away from their 'meaningless' life. At the same time it can be an example of a pull-factor, since adventure can relate to a destination's features. Notwithstanding its ambiguity, the main insight of this model is the realisation that there are things that drive people away from their usual environments and that there are things that attract people to a certain environment. The role of distance, as concluded from this model, is similar to the previous contributions by Iso-Ahola (1982) and Crompton (1979).

A classical contribution from the sociological perspective, is MacCannell's (1973) search for authenticity as the main tourist motivation. Similar to Dann's (1977) use of Durkheim's notion of 'anomie', MacCannell (1973) claims that modernity caused society to become more fragmented and inauthentic, which in turn drives people to look for authenticity outside of their everyday lives (Jamal & Lee, 2003). Similar to the latter two contributions, distance from this perspective is related to the similarity between routine (or daily life) and the travel activity performed. Additionally, distance in MacCannell's (1973) notion heavily relies on cultural difference. His target group, consisting mainly of relatively affluent respondents, shows an interest in travelling to exotic places to experience more primitive societies, which are assumed to be inherently more authentic.

Jamal and Lee's (2003) main critique on the contributions to psychological and sociological research is the lack of integration between the two. The authors propose a production-consumption matrix which incorporates both perspectives. Economic, political, ecological, and cultural practices are influenced or sparked by intermediaries (e.g. media, technology, marketing) and together form tourism 'products' to be consumed. Additionally, this tourism production system has a reciprocal relation with social change, similar to Giddens' (1984) notion of 'duality of structure', where individuals (agents) are shaped by a system, but collectively shape the system. Besides these linkages between macro- and micro-perspectives, Jamal & Lee (2003) furthermore stress the importance of integrating everyday life, of which they argue that this is more connected to tourism than previously thought.

2.5.2 Tourist motivation research in perspective

On top of ambiguous definitions and different scales of impact, complexities in this field of research are further increased when considering the place of this field of research in tourism research. Van Vuuren and Slabbert (2012) argue that this field of research can contribute to the prediction of travel behaviour, which can be relevant to commercial parties that wish to attract tourists. However, Mansfeld (1992) argues that "The various lists of travel motives that they [case studies] yielded did not reflect a consistent picture of the main determinants of travel behaviour" (p. 403). The author adds to this that a greater number of motivators complicate the predicting power of travel motivations, since different motivators can overlap, and can hardly be distinguished (Mansfeld, 1992). Pearce (1982) adds that research on tourist motivation is focussed on motivators which are detectable through traditional, common research methods. In line with this, Schutz (1972) argues that people sometimes give answers depending on what they expect the researcher wants to hear or expect. Ajzen's (1991) Theory of Planned Behaviour describes that behaviour is the result of the intention towards a behaviour, which in turn is the consequence of one's own attitude towards a behaviour, the social norm towards a behaviour, and one's perceived behavioural control. Although this model is frequently critiqued for its assumption of rational human behaviour, it does show that even if a travel motivation is established, the result, in varying degrees, still depends on the social norm or perceived behavioural control. Taking into account all these complexities, it comes as little surprise that Mansfeld (1992) concludes: "Despite the awareness of the oversimplification of travel motivation theories and their insufficient contribution to the understanding of travel behaviour, it is surprising that researchers still use such theories to account for the generation of tourist flows" (p. 405).

2.6 Cognitive distance research

Cognitive distance questions the importance of absolute distance. This typology assumes that people make decisions based on their perception of distance to a visible destination, or their cognition of distance to an unseen destination (Pirie, 2009). It is the mental representation of actual distance moulded by an individual's social, cultural, and general life experiences (Ankomah et al., 1996). It should not be viewed as a way to look at distance (or a measurement of distance, such as the other typologies mentioned by Pirie (2009)), but as a way to look at the world in general. Over- or underestimations are assumed to occur more on least travelled routes.

In their research on the influence of cognitive distance in vacation choice, Ankomah et al. (1996) conclude that individuals order a large list of destinations into three categories: late set, inert set, and reject set (see Appendix H.1). The first category consists of places which a traveller considers as probable destinations. A further distinction within this category can be made between action and inaction sets, where the difference lies in whether a person has (action) or has not (inaction) taken action to explore this phenomenon, such as looking up information about that destination (Spiggle & Sewall, 1987). The second category contains places which an individual evaluates neither negatively nor positively, due to a lack of knowledge about these places. The reject set is comprised of places that are excluded from consideration, due to past negative experiences or negative information. Ankomah et al. (1996) argue that in each stage of choice (forming an initial set, categorising sets, taking action, and eventually selecting a destination), social psychological processes, situational constraints, and destination stimuli act as evaluative criteria. Social psychological processes include travel motives, benefits sought, values and attitudes, and personal characteristics. Situational constraints involve cognitive distance, budget, time, and health. Destination stimuli are not further specified by Ankomah et al. (1996), but this criterion does overlap with other criteria, as aforementioned pull motivations are derived from destination attributes. Distance in these two publications is mostly seen as a disutility, since the authors link distance to additional monetary expenditures, physical effort, and time resources (Ankomah et al., 1996; Crompton & Lee, 2001). However, the authors conclude that the level of disutility associated with distance, depends on the cognitive distance.

Mansfeld's (1992) conclusion, cited in the previous section (Section 2.5.2), and Ankomah et al.'s (1996) acknowledgement that there are different stages in a choice process, demonstrate similarities with Gollwitser's (1999) notion of 'implementation intention'. He argues: "Goals or resolutions stand a better chance of being realised when they are furnished with implementation intentions that link anticipated suitable opportunities to intended goal-directed behaviours" (Gollwitser, 1999, p. 501). In short, a plan is needed to convert future opportunities (if…) into achieving goals (then…), since there is little correlation between intentions and behaviour.

Whereas Ankomah et al.'s (1996) research excluded students, Crompton and Lee's (2001) follow-up study was solely based on students. A frequently mentioned concern about the inclusion of this group is that students are likely to generate atypical results, and Crompton and Lee (2001) did this study to test the robustness of the original study. The first hypothesis both studies use, is "There is a significant positive relationship between respondents' mental ordering of destinations in the late set and the degree of preference for those destinations [placing five favourable destinations on a 5-point scale]". In both studies, this hypothesis is supported. Additionally, a Duncan's Multiple Range test in Ankomah et al.'s (1996) study found that the first listed destination in the late set is significantly more preferred than the second destination, and the second destination is significantly more preferred than the third, fourth and fifth. In Crompton and Lee's (2001), the same test found that the first and second listed destination's mean preference was significantly higher than the third and fourth listed, whose mean preference in turn was significantly higher than the fifth listed destination. In general, it can be concluded that mental ordering of destinations is an accurate indicator of an individual's preference of that destination relative to other destinations. The second hypothesis proposes that "Cognitive distance estimates to destinations in the late set will be significantly more accurate than those to destinations in the inert and reject sets". Both studies generally supported this hypothesis, as they found that the differences between cognitive distance and actual distance were smallest in the late set, and biggest in the reject set. Furthermore Ankomah et al. (1996) found that the accuracy of cognitive distance varies significantly between the type of choice set (late, inert, reject), and that the actual distance is not significantly related to the accuracy of cognitive distance. The third hypothesis suggests that "Destinations in the late set will be associated with cognitive distance underestimates, while those in the inert and reject sets will be associated with overestimates". In both studies this hypothesis was rejected, but there were differences between the studies. Ankomah et al. (1996) conclude that respondents' tendency to overestimate distance in the reject set is significant, but the underestimates in the late set and overestimates in the inert set do not vary enough from zero to be considered significant over- or underestimates. Crompton and Lee (2001) conclude the same from the reject set, but extend this to the inert set. The authors still reject the hypothesis, since the hypothesised underestimation in the late set is not significant. The fourth and last hypothesis assumes that "The degree of cognitive distance underestimation will be significantly higher for destinations in the action subset of the late set than in the inaction subset of the late set". Whereas Ankomah et al.(1996) conclude that cognitive distance underestimation of destinations in the action subset (information sought) is significantly higher than the inaction subset (no information sought), Crompton and Lee (2001) find no significant differences between the two subsets.

Both studies conclude that cognitive distance plays an important role in vacation choice sets, since hypotheses are generally supported. Surveys in Ankomah et al.'s (1996) research are accompanied by interviews, where respondents list three factors that influence destination choice, in order to test the underlying premise of the study. Distance is found as the most important factor, which confirms this premise. Overestimation is found to increase distance constraints, and consequently the probability of this destination being visited is lower. Underestimation reduces distance constraints, making visitation more likely. Yet, it can eventually lead to dissatisfaction, since the expectations of a short trip will not be matched by the actual length of the trip.

2.7 Value of Travel Time

As mentioned in Section 2.4, 'distance' is often viewed as proxy for other variables. Although distance is implicit in these publications, calculations by the name of Value of Time (VoT) or Value of Travel Time (VoTT/VTT) measure the trade-offs that people make between travel cost and travel time. Calculations of the Value of Distance are inspired by calculations of the Value of Travel Time. Value of Travel Time calculations are frequently used in transport research, since distance has little intrinsic positive value in this context. Bates (2013) added the dimension 'reliability' in his research on the Value of Travel Time in passenger and freight transport in the Netherlands. Value of Travel Time in passenger transport, which is more relevant in the context of this research, is found to vary according to the mode of transport. Value of Travel Time is lowest with bus, tram, and metro and highest with airplanes. Furthermore, differences are found in the purpose of the trip, where business purposes generate higher Value of Travel Times than commuting, which in turn generates higher Value of Travel Times than leisure purposes. The aforementioned additional dimensions also inspire the addition of the novelty instrument of this research. Wardman et al. (2012) furthermore find that the Value of Travel Time is also dependent on the GDP per capita and the distance of the overall journey. These values are often expressed as an amount of money per hour of travelling, or as a percentage of the hourly income (or wage rate). Bates (2013) concludes that the average Value of Travel Time for car travel is €9, but for leisure purposes specifically, the Value of Travel Time is €7,50. Fezzi et al. (2014) show that the Value of Travel Time of leisure car travel is between €8,40 and €9,40. The latter study concluded that this margin is around ¾ of the wage rate (calculated as €12 gross per hour.

2.8 The effect of travel costs and distance on travel behaviour

A study that touches upon a Value of Distance, is that of Van Cranenburgh et al. (2014). The study uses a choice experiment to investigate vacation behaviour under high travel cost conditions. Absolute distance, as well as travel cost are included in this research. A vacation choice is conceptualised as a bundle of attributes, which consists of the distance to the destination, the length of stay, the type of accommodation, the mode of transport, travel costs, and travel time. The authors concluded that destinations at larger distances are associated with higher utility, and that travellers experience a diminishing marginal percentile disutility of travel costs. However, in absolute terms, an increase in travel costs at high travel cost levels has a bigger impact than at low levels (Van Cranenburgh et al., 2014). In the context of this thesis, this would mean that farther destinations will generally be preferred, since their corresponding distance is associated with higher utility, but the height of the corresponding travel costs affect this preference, since higher travel costs are associated with lower utility.

2.9 Novelty-seeking in tourism travel

As mentioned by Pirie (2009), nearby places are more similar than those further apart. Furthermore Larsen and Guiver (2013) found that experiencing foreign places and cultures is a driver for some people's holidays. If the same people associate physical distance with dissimilarity, distance becomes valuable to them. This potential longing for the unknown is also included in Crompton and Lee's (1992) pleasure travel destination choice model (Appendix H.2). In this model the authors describe the role of arousal-seeking and novelty-seeking in pleasure travel. According to Crompton and Lee (1992) predispositions of a tourist, in the context of arousal-seeking and novelty-seeking, have an effect on how tourism motive constructs and destination attributes are evaluated. This evaluation is consequently moderated by situational constraints, such as time, money, and health. It is easy to see the overlap between Ankomah et al.'s (1996) model (where Crompton is a contributor as well) and Crompton and Lee's (1992). Whereas the former publication puts more focus on the evaluation process, the latter directs more attention to what Ankomah et al. (1996) describe as social psychological processes. Crompton and Lee (1992), influenced by Welker (1961), view novelty as a relative concept, since assessing it involves relating it to present and past stimuli. "The more time with an object, environment or people, and the more recent the exposure to it, the less novel (or the more familiar) that stimulus becomes" (Crompton & Lee, 1992, p. 733). Hirschman (1984) describes four dispositions about the role of novelty in the tourism experience. First, genetics may play a role in consumers' overall capacity or desire to obtain novel experiences. Some tourists may therefore desire to experience a lower level of novelty, while others desire a higher level. Second, these genetic predispositions can originate from and be altered by sociological processes. Third, different destinations may serve to satisfy similar desires for novel experiences. Fourth, the level of desire for novelty may make it possible to predict the preferred types of tourist destinations. Especially the latter is relevant for this research, since it shows that the novelty construct provides an explanation of why travellers are predisposed to choose certain destinations. Crompton and Lee (1992) developed and empirically tested the first novelty-seeking instrument, organised into a 21-scale instrument, divided into four dimensions. This instrument is the result of a survey, feedback from experts, and tests of dimensionality and internal reliability. Dimensionality tests suggest that the four dimensions are interrelated, but individually distinctive, measurable, and independent of the nature of the respondents (students or nonstudents). Reliability and validity tests furthermore found that the instrument is reliable and internally consistent, and valid on different grounds respectively (Crompton & Lee, 1992). The only exceptions are discriminant validity tests with other, non-tourism related, novelty instruments, which further underpins the importance of a pleasure tourism specific instrument. The instrument is depicted in Appendix H.3. The four dimensions of this instrument are thrill, change from routine, boredom alleviation, and surprise. Thrill is defined by Hornby et al. (1974) and Mayo and Jarvis (1981) as an experience in which excitement is the essential element. Adventure, which is part of this dimension, is defined as an exciting experience, involving strange, dangerous, unusual activities with unknown or unpredictable risks. Mayo and Jarvis (1981), as cited in Crompton and Lee (1992) define change from routine as "…altered or different conditions of environment, psychological outcomes, and/or lifestyle" (p. 735). For the dimension 'boredom alleviation' Hill and Perkins' (1985) definition is used, and is as follows: "…a search for additional or alternative stimulation of a more varied nature to achieve a high degree of need satisfaction" (p. 237). Although this definition, originating from modernist times, relies heavily on a modernist dichotomy between tourism and daily life, it can still ring true in current times. The last dimension, surprise, is defined by Smock and Holt (1962), as cited in Crompton and Lee (1992), as "…a feeling caused by unexpected features resulting from a discrepancy between what an individual believes and the reality of environmental stimuli" (p. 736). The corresponding items that measure the four dimensions are depicted in H.3. A five point scale (strongly disagree to strongly agree) was used by Crompton and Lee (1992). Arousal-seeking, though added in the authors' model, is not further elaborated in the publication. However, arousal-seeking and novelty-seeking show overlap. Both phenomena are used in one sentence as an overlapping motive for people's desire to leave their usual environment: "One frequent explanation is an individual's desire for novelty, arousal, or stimulation" (Crompton & Lee, 1992, p. 733). In addition, novelty-seeking and arousal-seeking are also linked to sensation-seeking and risk-seeking (Lepp & Gibson, 2008). The authors found that sensation-seekers prefer more novel activities and sensation-avoiders are more likely to pre-plan much of their trip. The latter highly resonates with the 'surprise' dimension in Crompton and Lee's (1992) novelty-seeking instrument. Lepp and Gibson (2008) furthermore argue that sensation-seekers and sensation-avoiders perceive risk similarly, but sensation-seekers have often travelled more internationally, and to places deemed more risky. Mehrabian and Russel (1974) developed an instrument to measure arousal-seeking (or sensation seeking) and found four factors: thrill and adventure seeking, experience seeking, disinhibition, and boredom susceptibility. Again these dimensions resonate with Crompton and Lee's (1992) dimensions. Therefore questions arise whether both phenomena are distinct enough to be used separately. Although novelty-seeking is occasionally referred to as a travel motivation, the flexibility of the instrument (meaning: can all participants be included in this model?) is relatively high. As mentioned before, the instrument results in a continuum, ranging from novelty-avoider to novelty-seeker. Therefore practically all travellers fit within this continuum.

2.10 Conclusion of Literature Review

2.10.1 Current state of existing literature

The purpose of this literature review was to investigate existing literature in the field of research. The main focus was on investigating the concept ‘distance’, and the role it plays in tourism travel. It is clear from the researched literature that distance is at the core of geography. It is a multifaceted phenomenon that is perceived in various ways. Contrary to how distance is usually measured (in km or mi.), people most frequently associate distance with the temporal or monetary effort involved in crossing it (Pirie, 2009; Larsen & Guiver, 2013). In these instances, distance is seen as a negative aspect (disutility). However, in tourism travel, distance can hold positive utility, as the process of crossing distance; the journey, is (part of) the tourist experience itself. In addition, travellers may associate crossing long distances with the possibility of encountering that which is different (Larsen & Guiver, 2013).

Another important finding is that cognitive distance, like Larsen and Guiver’s (2013) conclusion, questions the importance of absolute distance. Cognitive distance is the mental representation of absolute distance, shaped by social, cultural, and general life experiences (Ankomah et al., 1996). Ankomah et al. (1996) and Crompton and Lee (2001) generally conclude that the distance to less favourable destinations tends to be overestimated, and that overestimates increase the disutility of distance. The consensus in this field of research is that distance is often viewed in dimensions other than those of the physical world (such as km or mi.). As a result, distance is not only seen as a disutility.

Along with these findings, it is clear that in the field of travel decision process modelling, personal characteristics, situational constraints (e.g. limited budget), and novelty-seeking have an effect on travellers’ evaluation of personal motivations and destination attributes. Nicolau (2008) argues that a number of personal characteristics have an effect on how distance is perceived, for example income, usual mode of transport, and the size of the city of residence. There seems to be some consensus on a number of broad dimensions which are part of a tourist’s decision-making process, such as travel motivations, situational constraints, and destination attributes. However, it is unclear if travel motivations can be objectively measured, to what extent travel motivations lead to actual travel, and what role novelty-seeking plays in travel behaviour. In addition, Small (2012) concludes that the decision-making process is complex and dynamic, involving many choice dimensions, within a context of habit, attitudes, and learning. This notion questions the effectiveness of modelling the travel decision-making process.

2.10.2 Flaws or gaps in existing literature

Literature on the definition and typologies of distance is rather extensive. However, contributions hardly ever use quantitative data, and qualitative data is rarely used again in other research. Similarly, the novelty-instrument by Crompton and Lee (1992) has not been empirically tested after the authors concluded that the instrument is statistically significant.

2.10.3 Areas for future study

More research on a quantitative Value of Distance is needed to gain a better understanding of why people cross increasingly large distances for their leisure trips. The concept of novelty-seeking needs empirical testing to determine its role in the travel decision-making process.

2.10.4 Link between this thesis and existing literature

My thesis adds a quantitative approach to measuring the Value of Distance, based on the method of determining the frequently researched Value of Travel Time. The travel decision-making process model of Crompton and Lee (1992) is used as a means of organising data collection, in order to derive a Value of Distance.

2.10.5 Conceptual Framework

The conceptual framework below (Figure 2.1) is a graphical representation of the variables that are used in this thesis. It can be seen that the end point (or goal) is to find a Value of Distance. This is done by means of a discrete choice experiment in which absolute distance and travel costs are variated in a series of choice tasks. Furthermore a novelty-instrument and personal characteristics (depicted here as situational constraints) are added to possibly account for differences in the Value of Distance. The decision to add explanatory variables is partly inspired by Ankomah et al.'s (1996) travel behaviour model, which focusses on the role of cognitive distance in tourism (depicted Appendix H.1). Besides that, Crompton and Lee's (1992) travel behaviour model, which focusses of the role of novelty in tourism travel (depicted in Appendix H.2), informed the decision to include the novelty-instrument in the conceptual framework of this thesis.

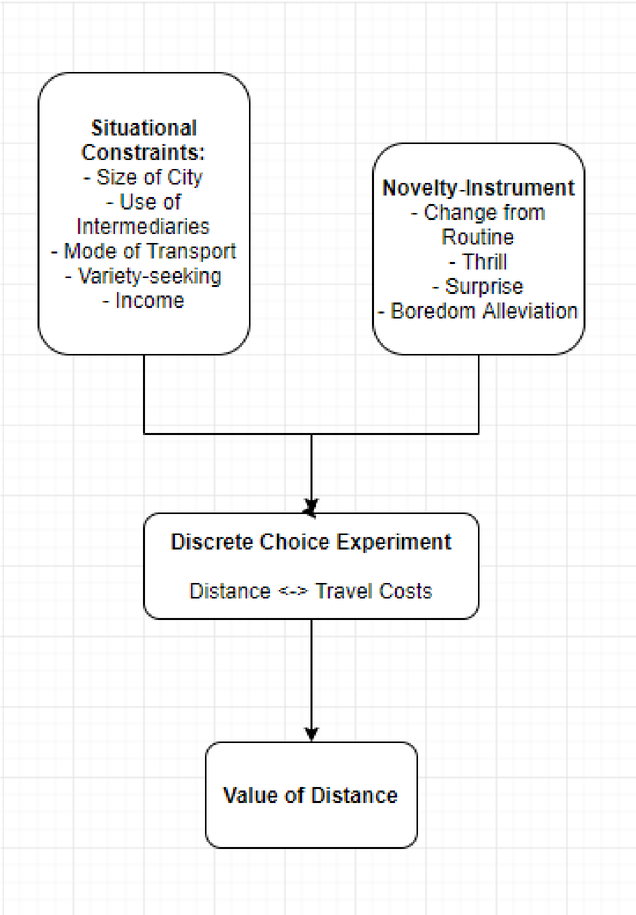

Figure 2.1: Conceptual Framework

3 Methodology

According to Verschuren (1994) research can be defined as purposively and methodically searching for new knowledge in the form of answers to pre-defined questions according to a pre-defined plan. Williams (2007) argues that this pre-defined method is supposed to be based on existing guidelines, which provide a researcher "… with an indication of what to include in the research, how to perform the research, and what types of inferences are probable based on the data collected" (p. 65). This section gives insight in methodological considerations that have taken place that inform a proper execution of this thesis. This chapter starts with relatively broad and generic considerations and moves towards more specific, in-depth considerations.

"Research approaches are plans and the procedures for research that span the steps from broad assumptions to detailed methods of data collection, analysis, and interpretation" (Creswell, 2014, p. 31). Besides the often-used comparison between qualitative and quantitative research in terms of using words (qualitative) rather than numbers (quantitative), basic philosophical assumptions of a research, the type of research designs, and research methods of data collection, analysis, and interpretation provide more nuance to differences between these research approaches.

3.1 Research design

3.1.1 Qualitative versus quantitative

The current scientific debate on the effect of tourism travel costs and travel distance is based on both quantitative and qualitative approaches. Travel costs are primarily expressed in quantitative terms (e.g. travel costs in Euros). Research on this aspect produces different quantitative results, which are dependent on the different methods used and the contexts of the studies. Contributions on the effect of distance in tourism travel have used both qualitative and quantitative methods, but have often not empirically rigorously tested and quantified the Value of Distance in relation to travel cost. To partly fill this gap, I used a quantitative approach for this thesis. "Quantitative research is an approach for testing objective theories by examining the relationship among variables" (Creswell, 2013, p. 32). By quantifying these variables the data can be analysed using statistical procedures (Creswell, 2014). On the other end of the spectrum is qualitative research, which looks at the meaning which individuals or groups ascribe to a social phenomenon (Creswell, 2014). Although a part of the literature review is dedicated to analysing the meaning that individuals ascribe to 'distance', which plays a large role in this research, the definition of distance used in this study is operationalised to fit with a more quantitative data collection approach. As mentioned at the beginning of Section 1.4 the goal is to find a numerical Value of Distance, which is a relationship among the variables 'travel costs' and 'absolute distance', suspected to have an effect on destination choice. This process of describing causality is in line with Korzilius (2008) who argues that in surveys phenomena are described and explained based on theories and on a way of thinking where variables play a central role. "Quantitative researchers seek explanations and predictions that are generalisable to other persons and places. The intent is to establish, confirm, or validate relationships and to develop generalisations that contribute to theory" (Leedy & Ormrod, 2001, p. 102). The latter sentence is especially relevant in this research, because of Paul Peeters' proposition that a Value of Distance has either been researched qualitatively, or incomprehensively empirically tested from a quantitative perspective, apart from a simple, 1-question experiment with students during a lecture.

3.1.2 Philosophical assumptions

Creswell (2014) argues that philosophical assumptions, though often implicit in research, influence the execution of research and therefore need to be mentioned. He distinguishes between four philosophical starting points. The (post-)positivist worldview is a rather deterministic philosophy in which it is assumed that causes determine effects or outcomes. Creswell (2014) qualifies it as reductionistic, as the intent is to reduce ideas into small, discrete sets of testable hypotheses. Researchers from this worldview start with a theory, collect data supporting or rejecting this theory and makes possible adjustments based on the results from the data.

A constructivist (social constructivism or interpretivism) approach, is on the other hand, more linked to qualitative research, and is based on subjective meanings that individuals or groups allocate to phenomena. Instead of reducing ideas to measurable variables, constructivists look for the complexity of things. They look for historical and social norms and often include respondents' specific contexts. Instead of looking at a phenomenon from a supposedly objective, distanced position, constructivist researchers include themselves in the field they are trying to investigate and acknowledge that their own context also influences their interpretation. Rather than starting with a theory, a constructivist develops a theory (or pattern of meaning making) (Creswell, 2014).

The transformative worldview is a critique on (post-)positivist structural views that are supposed to be oppressing alternative possibilities. Inquirers from this worldview for example also believe that constructivists did not go far enough to help marginalised and oppressed peoples, hence they advocate that research should be intertwined with politics. Research often starts with social issues and participants are often asked to help design the research to further benefit them.

The last worldview that Creswell (2014) describes, is the pragmatic worldview. Researchers focus on the research problem and use the approaches that are expected to be most suitable to understand the problem. It is not linked to any philosophy or reality: truth is what works at the time. This worldview is often linked with a mixed methods approach, since this relates to using multiple approaches to get the information one wants.

The philosophical assumption or worldview that is implicit in this thesis is the (post-)positivist worldview, since different ideas are reduced to variables, which are attempted to be measured as objectively as possible. The destination decision-making process is reduced to trade-offs between travel costs and absolute distance and participants are reduced to demographic and psychographic characteristics. Furthermore this research starts with a theory that there is a Value of Distance and that this value has an effect on travel decisions. The next step is to collect data to find out if this indeed is true, after which adjustments can be made in future research projects. As mentioned in Section 3.1.1 the inclusion of literature on the meaning that individuals ascribe to distance can be regarded as constructivist, but since it is then reduced to measurable variables, it resembles the (post-)positivist worldview more. By essentially combining both these approaches for the definition of 'distance', it uses people's own perceptions which are then made more objective by means of operationalisation. The transformative worldview is somewhat relevant in this research, since it aims to provide more knowledge to enable more sustainable tourism. However, this aim is a bit far-fetched and the more direct objective of this research is to find out if there is a Value of Distance, and to see what role it plays in the choice of destination. Furthermore research questions are formulated objectively, without any substantial value judgment.

3.1.3 Research Methods

Creswell (2014) makes a distinction between several quantitative research methods, boiling down to two basic (not totally exclusive) rough categories, namely experimental research and survey research. The former involves interventions or treatments randomly provided to a group and withheld from a control group to determine its effects. Survey research, on the other hand, provides a quantitative description of trends, attitudes, or opinions of a population using interviews or questionnaires (Creswell, 2014). Samples are used with the intent of generalising from a sample to a population (Fowler, 2009). For this thesis, a survey research seems most suitable. Looking at trade-offs that travellers make between travel cost and absolute distance (thus what value they ascribe to distance), as mentioned before, has not been done before, therefore this research has to be kept as simple as possible. It is possible to include interventions, such as choosing between the same alternatives after including another variable (such as the name of the destination), but this would introduce a plethora of other variables (such as preference for certain destination attributes), which could cloud the effect of travel costs and absolute distance.

Creswell (2014) furthermore makes a distinction between cross-sectional and longitudinal studies. The former involves collecting data at one point in time, the latter involves collecting data over time. In this thesis, cross-sectional survey research seems more suitable, since additional data collection moments will not yield any extra benefits. The goal is to find out if there is a Value of Distance and to measure its effect on destination choice. It would be possible to collect the data from the same group in a few years, to see the differences, but pragmatic considerations do not allow that for this thesis, because of its limited timeframe.

Appendix B.1 shows the discussed methods of this chapter. It is now determined that a quantitative approach is most suitable for this research. It is specified what kind of data will be collected in this research, namely data of trade-offs between travel costs and absolute distance, the level of novelty-seeking characteristics, and a selection of relevant demographic characteristics used as control variables. This data is collected through close-ended questions, meaning there is a list of options to choose from. The type of data is numeric, and gives insight in travellers' attitudes towards tourism travel. The data collection is followed by statistical analysis to test relationships among variables.

3.1.4 Advantages and disadvantages of survey research

As mentioned before, data is collected through survey research. This type of data collection has advantages and disadvantages and it is important to take these into account, since it can give insights in limitations of this research and can possibly inform decisions in follow-up research.

An advantage of survey research is the external validity. In short this means that results found in this type of research can be generalised from the sample to the population. Besides that, this type of research is relatively reliable, since it uses a large number of participants. The systematic set-up, data collection and data-analysis provides objective, reliable, replicable, quantifiable, and generalisable results. Furthermore this type of research has a wide reach, where several themes are in one overview and correlational relationships can be researched. Lastly, this type of research can be executed relatively quickly, which is suitable for the limited timeframe of this thesis (Korzilius, 2008).

According to Korzilius (2008) a disadvantage of survey research is the limited depth. By simplifying ideas into measurable variables, nuances and underlying dynamics are overlooked. Mentioned in Section 1.3 destination choice is a result of complex, embedded, and dynamic processes which are not part of this research. However, since measuring a Value of Distance has not been done before, it is decided that this research stays as close to this task as possible. Future research can possibly shed more light on these processes in relation to the Value of Distance. Another disadvantage of survey research is the limited usability for practical applications (Korzilius, 2008). Results from this research will not directly lead to a major shift in practices. However, its results could possibly provide added value for current tourism mobility models that are used in practice. Furthermore insight in the level of novelty-seeking can inform measures that reduce emissions from tourism travel (e.g. promoting nearby beach destinations to beach vacationers). Another disadvantage of survey research is the limited internal validity. There is limited control over who participates and since there is one moment of data collection, determining cause and effect is more difficult. Including a clear description of the requirements of the participants can give back some of the control. The degree of validity of this thesis is further discussed in Section 3.7. Korzilius (2008) argues that socially desirable responses are a risk when doing survey research. To prevent this, questions are formulated objectively, without value judgment. Furthermore, the long-term goal of this research (reducing the environmental impact of tourism travel) is not made public, so that responses are not informed by a sense of benevolence (assuming that people do not intend to impact the environment). Publishing the survey online rather than taking them face-to-face also reduces the chance of socially desirable responses, since the level of anonymity is higher. Lastly Korzilius (2008) points out that survey research generally yields a low response. The size of non-response is hard to determine in online surveying, but there is a number of measures to reduce non-response. To reduce non-response, attention is paid to the size and lay-out of the questionnaire. Besides that, attention is paid to the sequence of questions. According to Korzilius (2008) respondents are less willing to answer personal questions at the start of the questionnaire. Doing pre-tests can also decrease non-response, since it can take away confusion about questions. Furthermore, participants can win a prize of €25, which can also incentivise participation.

3.2 Data characteristics

Since researching a whole population is impossible due to costs, time, effort and inevitable non-response, a sample is used to generalise results to the whole population (also called: inferential statistics). A population is defined as the collection of participants that are relevant for a research (Korzilius, 2008). In this research, the population that is relevant consists of travellers. However, since there exist many different characteristics within this group, a selection is made. Pragmatic considerations inform the decision to target travellers residing in the Netherlands, since they are easier to reach within my social network. Another advantage of the Netherlands as a country of origin is that there are many potential international travel destinations at a broad spectrum of distances. As Lee et al. (2012) for example show in their study on distance decay from Hong Kong, there hardly exists international travel demand within 1,000km, since only Taiwan and parts of the Philippines and Vietnam are within this radius, and China and Macau were excluded. This shows that the country of residence has an impact on the distances travelled to international destinations (other examples could be places like Australia or New Zealand). Therefore, to stick to only one place of origin, with a broad spectrum of possible destinations, seems reasonable. In this research travellers' trade-offs between 'travel costs' and 'absolute distance' based on the degree in which they seek 'exotic' destinations, also denoted as their 'novelty-seeking', play a central role. Highly varied geographical locations of origin would disturb relationships among these variables. In addition, Peeters (2017) argues that different sized countries lead to differences in *domestic* distances travelled and blur the relative shares of 'international' and 'domestic' trips. Furthermore, from a methodological standpoint, a more homogeneous group of participants puts more focus on the aforementioned relationship among variables, and makes it easier to draw conclusions and generalise, since the difference between the sample and the population in that case is smaller (Korzilius, 2008). Since results from a non-probability sample cannot be easily generalised to a whole population (explained later in this section), a limited difference between the sample and population is preferred. Moreover Nicolau's (2008) study on distance sensitivity shows that several characteristics have an influence on an individual's sensitivity to distance. Among others, the level of income and the number of children are found to have an effect and therefore, it is decided that the group of participants in this research are as similar as possible with respect to these characteristics. On the other hand, a group which is varied based on these characteristics could confirm Nicolau's (2008) findings, but since the focus of this research is not on confirming his hypotheses, but is on the Value of Distance, adding additional variables can possibly cloud this effect. Since this type of research is relatively new, the focus is on one single group to first establish (or rather: explore) the phenomenon of Value of Distance, rather than confirm it for a group as varied as possible. In this research the population is therefore reduced from travellers residing in the Netherlands to Dutch students residing in the Netherlands. This reduces the difference within the sample, and therefore the effect of possible disturbing variables. Cranenburgh (2014) adds that a popular way to ensure more realistic choice situations is to pivot choice tasks around a participant's knowledge base. It is expected that non-travellers have less knowledge of travel costs and absolute distances, since they make less (or no) use of these trade-offs. Since there is no sampling frame for this research population (a sampling frame is a list with contact details of a research population, which can be used to systematically contact participants (Korzilius, 2008)), pure random sampling is impossible. Therefore non-probability sampling is used in this research. Results from this research can, therefore, not be generalised to the whole research population, but are limited to the group of participants. Within this type of sampling, Korzilius (2008) makes a distinction between an availability sample and a quota sample. The former involves choosing respondents based on their convenience and availability (Creswell, 2014). In a quota sample, the sample is organised based on various characteristics (Korzilius, 2008). If a sample consists of 500 participants, the goal can be to include 250 male and 250 female participants. In this thesis availability (or convenience) sampling is used. This method is less desired, since certain characteristics of people within a population can be excluded, but time and money constraints limit the possibility of applying a different sampling method. In this case, exploring the Value of Distance has a higher priority than investing additional time and money in a sampling method that allows results to be generalised to a whole research population. An overview of the data characteristics can be found in table 3.1

Other characteristics (or variables) that are found to significantly impact distance sensitivities are the size of the city of residence, the use of intermediaries in the organisation of a vacation, transport mode, novelty-seeking, variety-seeking, and travel motivations. These variables are discussed in Section 3.3.

Research population	Dutch students residing in the Netherlands. Participants can indicate if they are willing and able to go on a long-haul trip.
Sample method	Availability sampling.
Participants	Dutch students residing in the Netherlands who are willing and able to fill out the questionnaire.
Why this group of participants?	More specific than travellers in general. Geographical location, level of income, and number of children matters.
Advantages	Relatively cheap and time-efficient method of sampling. Fits the time and money constraints of a thesis research.
Disadvantages	Non-probability sampling does not allow for generalisation to a whole research population.

Figure 3.1: Overview Data Characteristics

3.3 Inclusion and exclusion of variables

The size of the city of residence is found to significantly influence distance sensitivity and is therefore included as a separate variable in this research. However, choosing a specific size of city limits the number of people that can participate in this research. Nicolau (2008) included this variable in his research, since it was found that urban residents feel a bigger need to escape in search for relaxation (Eymann & Ronning 1997). It is assumed that this brings about a tendency to travel further distances in search of relaxation.

The use of intermediaries is included as a separate variable in this research, since Nicolau (2008) found a relationship between the use of intermediaries and trips to more distant destinations. However, in this research, this question is asked after the discrete choice experiment (explanation in Section 3.4.1), since not doing so could steer participants into choosing a certain alternative (answering 'yes' to the use of intermediaries can create a tendency to choose for alternatives that one finds suitable for the use of intermediaries, rather than being one's preferred choice in general). Furthermore this question aims to gain insights into the usual way of booking, since no specific trip or destination is specified in the choice experiment.

The mode of transport is included as two separate variables, similar to the use of intermediaries. According to Nicolau (2008), physical, temporal and financial efforts are related to distance travelled. Participants are asked what their usual and last used mode of transport is after completing the discrete choice experiment to prevent predispositions towards certain responses.

Novelty-seeking is found to have a positive effect on the distance travelled (Nicolau, 2008). In this thesis I make use of Lee and Crompton's (1992) novelty-seeking instrument, since it is the only one in the context of tourism, and its measurement scales used are empirically tested and confirmed.

"Variety-seeking can increase the utility of distant destinations if distance allows one to satisfy this trait" (Nicolau, 2008, p. 45). Since this experiment uses Stated Preferences, only intentional diversifying behaviour can be tested (purposively choosing a different destination every time instead of influenced by high demand or other external factors).

As mentioned in Section 2.5, travel motivation research is complex and therefore it is excluded from this research. Adding this complex phenomenon requires a large additional number of variables, some of which not suitable for quantitative research. This can lead to too much diversification from the main focus of this research: exploring the Value of Distance.

3.4 Design of Stated Preference experiment

3.4.1 Discrete choice experiment

As mentioned, the first part of the survey is a discrete choice experiment. Discrete choice experiments (or models) are mathematical models which describe how people choose from a collection of alternatives with varying characteristics (Den Boer, 2015). The use of the word ‘experiment’ in this context is not to be confused with the definition of ‘experiment’, mentioned in Section 3.1.3, in which interventions are used to determine differences between two groups of participants. In this research respondents are asked to indicate their preferred alternative in each choice task (Hensher et al., 2005) and no special treatment is used to distinguish between groups. In the context of this research, the preferred alternative refers to the combination of absolute distance and travel costs which together represents a destination.

Since there is a huge variability in the reasoning underlying decisions made by a population of individuals, observing and measuring heterogeneity is the goal of choice experiment analysis (Hensher et al., 2005). The challenge is to maximise the amount of measured variability (or observed heterogeneity) and minimise the amount of unmeasured variability (or unobserved heterogeneity). In choice experiments, the central theme is the level of utility (or satisfaction), which is the accumulation of the aforementioned observed and unobserved sources of influence (the attributes, which in this research are for example ‘absolute distance’ and ‘travel costs’). The utility level is a *relative* measure and the only relevant information is the level of utility of an alternative *compared* to that of another alternative in the same choice set (Hensher et al., 2005). The level of utility associated with an alternative (in this case alternative ‘i’) can furthermore be divided into the components that are observed (*Vi)* and the other not-observed (εi) (also called the error term). The equation based on Random Utility Maximisation (RUM) for alternative ‘i’ is as follows:

$$\boldsymbol{U_i = V_i + \varepsilon_i,}$$

Equation 1

Equation 1 represents a simple utility function in which every attribute is assumed to contribute equally and similarly to the total level of utility. However, this is rarely the case, hence a weight (called a parameter or coefficient) is added to establish the relative contribution of each attribute to the observed sources of relative utility (Hensher et al., 2005). In this research, for instance, absolute distance is expected to positively contribute to utility whereas travel costs are expected to negatively affect utility. The observed contribution *Vi* can be expressed as the following:

Equation 2

$$\boldsymbol{V_i = \sum_{m=1}^{M} \beta_{m_i} * X_{m_i}}$$

where X_{m_i} refers to the attributes m (e.g. absolute distance and travel costs) of alternative i and βm refers to the weight associated with the respective attribute m. Equation 2 represents the observed attributes and the unobserved variables end up in the error term, which is included in Equation 1. The average role all unobserved sources of utility ($\beta 0$) ends up in the alternative-specific constant (Hensher et al., 2005). The complete utility function looks as follows:

Equation 3

$$\boldsymbol{U_i = \beta_{0_i} + \sum_{m=1}^{M} (\beta_{m_i} * X_{m_i}) + \varepsilon_i}$$

The basic equation for the Random Regret Minimisation decision rule is similar to that of RUM (Equation 1), consisting of an observed part of regret considering alternative 'i', denoted by Ri, and an error term, denoted by **ε**i.

$$\boldsymbol{RR_i = R_i + \varepsilon_i} \qquad \textbf{Equation 4}$$

The difference between RUM and RRM, however, is the function of Ri. "This function maps the difference between the levels of attributes 'm' of the competitor alternative 'j' and the considered alternative 'i' onto regret" (Van Cranenburgh & Collins, 2019, p. 3). The function is expressed as the following:

$$\boldsymbol{R_i = R_{ijm} = f(\beta m\,,\ X_{jm} - X_{im})} \qquad \textbf{Equation 5}$$

3.4.2 Stated Preference (SP) vs. Revealed Preference (RP)

The trade-offs between absolute distance and travel costs are central in this research and the approach towards measuring these trade-offs can affect the Value of Distance. Two main ways to approach a discrete choice experiment are Stated Preference and Revealed Preference. Put bluntly, the difference between Stated Preference and Revealed Preference is the difference between words and actions respectively. "In SC [Stated Choice = Stated Preference] experiments respondents are presented with choice tasks involving two or more hypothetical alternatives, which are described by a set of attributes and attribute levels" (Van Cranenburgh & Collins, 2019, p. 1). "Stated Preference (SP) designs have the advantage that the analyst can carefully design the choice tasks and thereby allow for a design that enables a relatively straightforward identification of effects" (Van Cranenburgh et al., 2014, p. 107). "The major deficiency of Stated Preference data is that people often do not actually do what they say they would do under hypothetical circumstances" (Ben-Akiva and Lerman, 1985, p. 368). However, in the context of this research, a Revealed Preference survey would complicate data collection. The number of trips included in the data would decrease, since only actual trips would be included. Furthermore this approach would require more of the participant, since they would have to look up trip details. Additionally, attribute levels of an Stated Preference design in this context are more likely to coincide with Revealed Preference data. The absolute distance is based on popular destinations for Dutch outbound tourists. According to Ankomah et al. (1996) distances to preferred destinations are more likely to be estimated correctly, compared to less preferred destinations. This so-called cognitive distance (see also Section 2.6) also plays a role in this survey, albeit contrariwise. Opposed to Ankomah et al.'s (1996) research, where participants estimated distance between their home and their provided destination, participants in this research are asked to imagine a destination (or rough image) based on the distance (and travel costs) provided, and base their decision on this mental image. Rose et al. (2008) argue that there are several strategies to create an efficient design (the difference between an orthogonal and efficient design is explained in Section 3.5.2). One of these strategies is using predicted average attribute levels. Therefore the levels that are used for travel costs are based on the average minimum air travel prices, published by Peeters (2010), since it is expected that students are more likely to opt for the lowest prices than for the average air travel price. The formula is as follows: $y = 0.0772x + 145.82$. The air travel price (y) is the ticket cost per return and x denotes absolute distance in kilometres per 1-way great circle distance. It is expected that the use of this formula increases participants' familiarity with the price levels. Lastly, the combinations of attribute levels in the choice tasks are calibrated to expected preferences of participants. Prices are expected to have a negative effect on the choice of alternative, whereas distance is expected to have a positive effect (Peeters, P., personal communication, May 22, 2019).

3.4.3 Decision rules

The way in which decision-makers make choices is dependent on the decision rule they follow (Van Cranenburgh & Collins, 2019). Simple Value of Travel Time calculations are often based on Utility Theory (UT or extensions, such as Expected Utility Theory or Random Utility Theory). The basic assumption of Utility Theory is gaining the highest satisfaction within one's budget constraints (Van de Kaa, 2010). The author furthermore argues that a person's decisions are independent of time and context and consumers are seen as insatiable, thus a person will apply the same strategy every time, and this person will not choose just a good option, but the best option. As a reaction to this theory, Kahneman and Tversky (1979) developed the Prospect Theory (PT), which is a set of assumptions alternative to UT. Van de Kaa (2004) posed that what distinguishes PT from UT is the assumption that preferences are context dependent. People furthermore view options in terms of change, rather than its state (getting or losing the money rather than owning an x amount). Besides that, people make use of a reference point when valuing options (e.g. a certain degree of happiness/wealth that will increase/decrease as a result of a decision). Losses are valued higher than gains equivalent in size, but the marginal value of losses and gains decreases with their magnitude (Kahneman & Tversky, 1979). Lastly people tend to over-weight outcomes with low probabilities (e.g. popularity of lotteries) and under-weight outcomes with high probabilities (e.g. preferring guaranteed over probable gains but preferring probable over guaranteed losses) (Tversky & Kahneman, 1992). A choice model alternative to Random Utility Theory is Random Regret Minimisation. Whereas Random Utility Maximisation aims to maximise utility gained from a choice (utility can be viewed as benefits), Random Regret Minimisation assumes that people's primary urge is to minimise regret when making choices (RRM, n.d.). "… The regret model predicts that people will happily choose compromise alternatives, that is, options that score reasonably well on all factors [attributes] and not extremely well or badly on any of them" (RRM, n.d, para. 1). The amount of regret is conceptualised as the emotion experienced when the chosen alternative scores worse than other alternatives on one or more attributes (Chorus, 2012). In conclusion, there are various decision rules that are implicit in decision-making. To account for differences between these decision rules, the choice experiment is generated by Van Cranenburgh and Collins' (2019) Robust Design Generator (more in Section 3.5.3).

3.5 Constructing the survey

Elaborated in Section 3.6 and 3.7, many elements from the conceptual framework of this research originate from other research. Crompton and Lee's (1992) framework of the destination choice process is the main inspiration of the survey. The survey can be divided into two categories: destination attributes (Section 3.5.1 to Section 3.5.4) and socio-demographic factors (Section 3.5.5). The final version of the survey (in Dutch) can be found in Appendix D.

3.5.1 Destination attributes and levels

Although some researchers (e.g. Hu & Ritchie, 1993) use complex and elaborate models to measure destination attractiveness based on various destination attributes, these destination attributes are reduced to absolute distance and travel costs in this research. On the one hand, these two attributes form a Value of Distance, similar to Value of Travel Time (as explained in Section 2.7) and therefore are the main focus. On the other hand, more elaborate models, although they allow for the observation of more variables that can have an influence on decisions, can also introduce a variety of additional variables that are hard to measure. For instance, Hu and Ritchie (1993) argue that natural, social, historical, recreational and shopping factors, and infrastructure, food, and shelter influence the perceived destination attractiveness. However, the relative importance of these factors can differ between trips and at different moments in time. Small (2012) mentions that trade-offs are embedded within a complex, dynamic decision-making process, involving many choice dimensions, all within a context of habit, attitudes, and learning. However, Van Cranenburgh et al. (2014) argue that attributes such as these, are hard to objectively measure.

Besides studies on destination attractiveness, studies on travel motivation have shown that this dimension can have an effect on destination choice. However, other studies have also shown that travel motivations are also hard to measure (Dann, 2018), are time-bounded (Lindberg et al., 2014), are unable to explain the need to travel, and can be ambiguous in their origin (Jamal & Lee, 2003). These findings alone are adequate proof that providing more concrete choice alternatives in terms of destination attributes (pull factors) and including many travel motivations would introduce a plethora of additional unobserved heterogeneity (Section 3.4.1); the latter which Hensher et al. (2005) deem undesirable in a choice experiment.

The attribute levels of absolute distance were initially based on real destinations. Five destinations, ranging from London to Ho Chi Minh, were chosen, but due to incompatibility with the Robust Design Generator (explained in Section 3.5.3), the set of choice tasks is split into two. The first set of choice tasks consists of relatively small distances, ranging from 750 to 2,000 km. The second set ranges from 5,000 to 7,500 km. The gap between the two sets covers an area with low tourism demand from the Netherlands (Peeters, P., personal communication, May 22, 2019) and additionally allows for the second set of choice tasks to contain bigger distances to cover long-haul tourism travel.

3.5.2 Orthogonal vs. Efficient design

According to Choice Metrics (2014) the distribution of attribute levels over the course of an experiment plays a big part in whether the contribution of different attributes can be independently measured. Furthermore the allocation of the attribute levels within the experiment can have an effect on the statistical power of the experiment of detecting relationships between attributes. This distribution and allocation of attribute levels can lead to an orthogonal or an efficient design. The former is based on the assumption that the correlation between all attributes is zero (Choice Metrics, 2014). "Whilst orthogonality is an important criterion to determine independent effects in linear models, discrete choice models are not linear" (Train, 2003, as cited in Choice Metrics, 2014, p. 52). In models of discrete choice, not the correlation between attributes is of importance, but the correlations of the differences in the attributes (Choice Metrics, 2014). Huber and Zwerina (1996) therefore advocate the use of efficient (or optimal) designs. This type of stated choice (or stated preference) experiment attempts to reduce the asymptotic standard error of parameter estimates. This results in an improved reliability of parameters estimated from data (D-error) and reduces the sample size required to produce a level of reliability in the parameter estimates (S-estimate) (Choice Metrics, 2014). In short: fewer respondents are needed to obtain reliable correlations of differences in attributes.

3.5.3 Robust Design Generator

An efficient design can be created in various statistics programmes. The efficient design in this research is created with the Robust Design Generator (Van Cranenburgh & Collins, 2019). This tool can create an efficient design with a mixture of decision rules. Other software often rely on Random Utility Maximisation (RUM) as the only decision rule, even though new research shows that other decision rules are often used (Van Cranenburgh & Collins, 2019). With this tool, the number of choice tasks can be chosen, up to six attribute levels, and up to four attributes can be entered. Subsequently the prior parameters can be set and boxes for a Bayesian D-efficient design can be ticked. The latter is a relevant feature in case of uncertainty regarding the underlying decision rule (RUM or Random Regret Minimisation (RRM)) and uncertainty regarding the prior parameters (Van Cranenburgh & Collins, 2019). Lastly the underlying decision rule can be chosen. Options are RUM, RRM, and Mixture of RUM-RRM. When a design is generated, combinations of distance and travel costs, as well as corresponding probabilities based on RUM and RRM decision rules appear on the right side of the screen. An efficient design has a low D-error (preferably close to zero), a low S-estimate and substantial probabilities (Van Cranenburgh & Collins, 2019). Choice options are ordered from lowest (answer a) to highest (answer c). In this thesis, option a is always the cheapest and most nearby and option c the farthest and most expensive. The difference in attribute levels between the choice options are not evenly distributed, since they are generated by the Robust Design Generator. In this research there is uncertainty regarding the decision rule, as well as prior parameters, hence both designs are fitted to the Mixture of RUM-RRM and Bayesian D-efficiency. As mentioned in Section 3.5.1, the discrete choice part of the survey is split into two. The high variance in attribute levels in a single set of choice tasks (distance ranging from 250-10,000km and travel costs €50-€820) led to skewed probabilities. Tests with lower variances gave better results.

The first design is presented in Table 3.1 and its input in the Robust Design Generator can be found in Appendix I.1. The input for distance is 7.50-10.00-12.50-15.00-17.50-20.00 and rounded travel costs based on Peeters (2010) are 22.0-24.0-26.0-28.0-30.0-32.0. Attribute levels for absolute distance and travel costs are divided by 100 and 10 respectively, to reduce variance within these attributes. By experimenting with these numbers, it is found that smaller numbers generate better designs. Zeros are added to represent the actual values (7.50=750km and 22.0=€220 etc.). The D-error of this design is 0.03149, which is relatively low for a Bayesian design. The S-estimate is 0.7818. Molin, E (personal communication, May 17, 2019) argues that the number of observations required is the S-estimate multiplied by the number of choice sets (=choice task). In this case 8 observations per choice task are needed to obtain all parameters to be significant. Furthermore, in most choice tasks in this design probabilities of at least two alternatives are relatively even, which means that the choice tasks are sufficiently demanding.

	Alternative 1	**Alternative 2**	**Alternative 3**	**Probability option 1 RUM|RRM**	**Probability option 2 RUM|RRM**	**Probability option 3 RUM|RRM**
Choice task 1	750km | €220	1,000km | €300	1,250km | €320	0.45 | 0.18	0.10 | 0.34	0.45 | 0.48
Choice task 2	1,250km | €220	1,500km | €300	1,750km | €320	0.45 | 0.18	0.10 | 0.34	0.45 | 0.48
Choice task 3	750km | €220	1,000km | €240	1,250km | €320	0.15 | 0.06	0.69 | 0.91	0.15 | 0.02
Choice task 4	750km | €220	1,000km | €240	1,500km | €320	0.06 | 0.06	0.25 | 0.83	0.69 | 0.11
Choice task 5	1,250km | €220	1,500km | €240	2,000km | €320	0.06 | 0.06	0.25 | 0.83	0.69 | 0.11
Choice task 6	1,500km | €220	1,750km | €300	2,000km | €320	0.45 | 0.18	0.10 | 0.34	0.45 | 0.48
Choice task 7	1,000km | €220	1,250km | €260	1,750km | €320	0.07 | 0.08	0.11 | 0.61	0.82 | 0.31
Choice task 8	1,250km | €220	1,500km | €240	1,750km | €320	0.15 | 0.06	0.69 | 0.91	0.15 | 0.02
Choice task 9	750km | €220	1,000km | €260	1,500km | €320	0.07 | 0.08	0.11 | 0.61	0.82 | 0.31
Choice task 10	1,000km | €220	1,250km | €240	1,500km | €320	0.15 | 0.06	0.69 | 0.91	0.15 | 0.02

Table 3.1: Short-Haul Design

The second design is presented in Table 3.2 and its input can be found in Appendix I.2. This design represents long-haul destinations. In the survey respondents are given the option to indicate whether they have experience with and/or would like to go on a long-haul trip. The reason this option is added, is that "…the added costs, time commitment, and cultural distance involved in long-haul travel effectively exclude some groups" (Ahn & McKercher, 2015, p. 95-96). The input for distance is 50.00-55.00-60.00-65.00-65.00-70.00 and rounded travel costs based on Peeters (2010) are 54.0-58.0-62.0-66.0-70.0-74.0. In order to include more long-haul destinations, variance within attributes is bigger. Furthermore Ankomah et al. (1996) argue that variance between cognitive and actual distance increases as the absolute distance increases. Therefore small differences between distances in this long-haul design would complicate comparing alternatives for respondents. However, bigger variances mean that a Bayesian-design yields skewed probabilities. Therefore, in this design only a mixture of RUM & RRM is used (non-Bayesian design). For this design the realism of the choice experiment is prioritised over uncertainty regarding prior parameters. Again the attributes for absolute distance and travel costs are divided by 100 and 10 respectively. The D-error of this design is 0.00780 which is a very good value. The S-estimate is 0,8587 which means that only 9 observations per choice task are needed to obtain all parameters to be significant. “However, clearly to make inferences about a target population, a sample needs to be substantially larger than that” (Van Cranenburgh & Collins, 2019, p. 11).

	Alternative 1	**Alternative 2**	**Alternative 3**	**Probability option 1 RUM|RRM**	**Probability option 2 RUM|RRM**	**Probability option 3 RUM|RRM**
Choice task 1	5.500km | €540	6,000km | €700	7,500km | €740	0.50 | 0.40	0.00 | 0.05	0.50 | 0.55
Choice task 2	5,000km | €540	5,500km | €660	7,500km | €740	0.08 | 0.29	0.00 | 0.15	0.92 | 0.56
Choice task 3	5,000km | €540	5,500km | €580	7,500km | €740	0.07 | 0.12	0.11 | 0.87	0.82 | 0.02
Choice task 4	5,000km | €540	5,500km | €660	7,000km | €740	0.49 | 0.53	0.01 | 0.27	0.49 | 0.20
Choice task 5	5,000km | €540	6,000km | €700	6,500km | €740	0.88 | 0.16	0.04 | 0.61	0.07 | 0.23
Choice task 6	5,500km | €540	6,000km | €660	7,500km | €740	0.49 | 0.53	0.01 | 0.27	0.49 | 0.20
Choice task 7	5,000km | €540	6,000km | €620	7,500km | €740	0.06 | 0.02	0.17 | 0.94	0.77 | 0.05
Choice task 8	5,500km | €540	6,500km | €700	7,000km | €740	0.88 | 0.16	0.04 | 0.61	0.07 | 0.23
Choice task 9	5,000km | €540	5,500km | €700	7,000km | €740	0.50 | 0.40	0.00 | 0.05	0.50 | 0.55
Choice task 10	6,000km | €540	7,000km | €700	7,500km | €740	0.88 | 0.16	0.04 | 0.61	0.07 | 0.23

Table 3.2: Long-Haul Design

3.5.4 Opt-out option

Discrete choice experiments often include an opt-out option, since this is more in line with the participant’s choice in real life (Veldwijk et al., 2014). However, the goal of the choice experiment should be taken into account. Veldwijk et al. (2014), in the context of medical treatment, argue that when the goal is to estimate the potential number of participants in any programme, an opt-out option is preferred. Oppositely, when the goal is to determine which components define the most preferred programme, which is the case in this research, an opt-out option may become a threat to efficiency. To account for the reduced realism of the choice experiment, only Dutch students who make long trips (at least 1.5 weeks) are asked to participate and base their answers on a long trip. In the survey respondents are first asked if they consider both short-haul and long-haul destinations for their long vacation. Consequently, respondents only perform choice tasks that are in line with their preferences.

Veldwijk et al. (2014) furthermore state that participants often wish to opt-out when choice tasks are too complex. In this research, however, participants are asked to trade-off only two variables, absolute distance and travel costs, which is not too complex. The generated efficient designs of this research aim to make decisions as difficult as possible, but within the limits of these two variables.

3.5.5 Sociodemographic factors

As mentioned in Section 2.3 and 3.2, several sociodemographic factors have an effect on distance sensitivity. Novelty-seeking is found to have a positive effect on the distance travelled (Nicolau, 2008). In this research Lee and Crompton's (1992) 21-item novelty-seeking instrument is used, since it is the only one in the context of tourism, and its scales are empirically tested and confirmed during its development. Opposed to Crompton and Lee's (1992) five point scale, this research makes use of a three point scale (disagree-neutral-agree), since it considerably reduces exhaustion in responding to the questionnaire on the side of the participant. Garland (1991) argues that including or excluding a mid-point is dependent on the goal of the research. In this survey a mid-point is kept, since Crompton and Lee (1992) view the novelty construct as a continuum, ranging from novelty-seeking to novelty-avoiding, with 'indifferent' being the centre. One item from the instrument is not included in the survey, since the item shows to much overlap with other items. "I like to travel to adventurous places" from the dimension 'change from routine' is excluded, since it insufficiently differs from "I seek adventure on my vacation". Adventure is almost exclusively linked to the dimension 'thrill' by Crompton and Lee (1992) and is therefore retained in this dimension.

In accordance with Paul Peeters a 'safety question' is added. In case the Value of Distance calculation does not yield significant and/or notable results, the results of this question can possibly indicate that there is, in fact, a Value of Distance. A situation is presented where the respondent wins a free surprise vacation for two weeks in an apartment at a beach destination. The only variable which variates, is the distance between home and the destination. To include destinations from the short-haul and long-haul design, the distances are set to 1,000km, 2,500km, 5,000km, and 10,000km.

"Variety-seeking can increase the utility of distant destinations if distance allows one to satisfy this trait" (Nicolau, 2008, p.45). As mentioned before, only intentional diversifying behaviour is included in this research. Participants are asked if they purposely visit a different destination in every trip, which can be answered by 'yes' or 'no'.

The size of the city of residence is found to significantly influence distance sensitivity and is therefore included as a separate variable in this research. In this research a scale by Bosatlas (2016) is used. City sizes are distributed as follows: <50,000; 50,000-100,000; 100,000-250,000; 250,000-500,000; >500,000. Although this scale is rather undetailed, especially at the lower end, this scale is preferred above CBS's (2014) scale. CBS's (2014) scale is a more detailed, 11-item scale. However, it is deemed unlikely that respondents are aware of the exact size of their place of residence. This means that respondents have to look up this fact which makes the survey more exhausting. Besides that, it is not very likely that a 500 or 1,000 citizen difference between cities has a huge effect on the need to escape, as mentioned by Nicolau (2008).

The use of intermediaries is included as a separate variable in this research, since Nicolau (2008) found a relationship between the use of intermediaries and trips to more distant destinations. In this survey, the question involves the usual booking method for a long trip and is answered by yes or no.

The mode of transport is included as two separate variables: the last used and the usual mode of transport. According to Nicolau (2008), physical, temporal and financial efforts are related to distance travelled. Participants are asked what their usual mode of transport is after the discrete choice experiment to prevent predispositions towards certain responses. This research makes use of NBTC's (2018) scale, since this scale includes less popular modes, such as by foot or by bicycle. Other modes of this scale are car (own, rented or borrowed), train, boat (own, ferry or cruise), touring car or shuttle bus, plane, and other. Answers to this questions ought to be based on the mode that covers the longest distance during a long trip.

Income is included in this research, since Nicolau (2008) found that the negative effect of travel costs is lower for high-income travellers. The scale that is used for this research is not used in any other research (to my knowledge). Since students have considerably lower incomes than the income scales used in other research, lower income levels are used. Incomes are distributed as follows: <250; 250-500; 500-750- 750-1,000->1,000. Since students in the Netherlands can take loans and possibly have mandatory expenses, such as rent, income can vary a lot. Therefore, in this research discretionary income is included. "Discretionary income is the amount of an individual's income that is left for spending, investing or saving after taxes & personal necessities have been paid" (Kenton, 2018, discretionary income).

3.6 Reliability

According to Korzilius (2008) reliability and validity decrease when errors are made in research. Reliability is about the presence of accidental errors. The usual question asked, is: “Does a repetition of research yield the same results?”. In reliable research, the approach and results are independent of the moment when the research was done, the researcher, and the instrument (Korzilius, 2008).

In this thesis most of these criteria are met. The moment of conducting this research can have an effect on the results. The current Swedish movement of flight shaming predisposes people to choose transport modes alternative to planes. Absolute numbers have not been researched, and it is uncertain if this trend has moved or will move to the Netherlands, so therefore the actual effect of this trend on the reliability of this research cannot be substantiated. The reliability of the number of participants is less relevant in this research, since it is already concluded that a non-probability sampling does not allow generalisation to the whole research population. However, the smaller the difference between the sample and the research population, the higher the chance that results are similar to that of the whole research population (Korzilius, 2008). Furthermore Korzilius (2008) argues that a research instrument is reliable when key concepts are well operationalised. Novelty-seeking is included in this research and if this key concept would be defined by only one survey question, different respondents would have a different perception of this concept. However, since this research makes use of Crompton and Lee’s (1992) empirically and statistically tested definition which consists of four sub groups, it is more likely that participants perceive this key concept the same way. Many considerations have led to the final version of the survey, where trade-offs between travel costs and absolute distance play a big role. Although it has become clear from the Literature Review that distance is rarely viewed in absolute terms, the addition of novelty-seeking and the association between physical distance and dissimilarity increases the coverage of the variety of perceptions of ‘distance’. Larsen and Guiver (2013) distinguish three frequently mentioned perceptions, namely as a use of resources, as an experience and in ordinal and zonal terms. The former is frequently used, also in transport sciences. The second perception is often related to the complex phenomenon of travel motivations and the latter is a way of expressing distance. Distance in this research includes characteristics of all three. It is related to a use of resources, since it includes trade-offs between travel costs and absolute distance. Furthermore the addition of the novelty construct gives insight in the sort of experience travellers are looking for (novelty-seeking characteristics) and to what extent distance plays a role in this (association between physical distance and dissimilarity). Since this research includes the three main perceptions on distance, it is more likely that repetition of this research yields similar results. Moreover, the control variables which are included in this research have been empirically and statistically tested and confirmed, which highly increases the reliability of this part of the instrument. To statistically test the internal consistency of the used instrument, a Cronbach’s α-test is executed. This statistical test checks if responses to a question are coherent with responses to other questions that measure the same concept (Korzilius, 2008). Lastly, this experiment is based on Stated Preference. The disadvantage is that it is based on words, rather than (past) actions, which means that it can be less realistic. However, the advantage in relation to the reliability of this research is that real-life trade-offs are embedded within a complex, dynamic decision-making process, involving many choice dimensions, all within a context of habit, attitudes, and learning (Small, 2012). This thesis may simplify the decision-making process, but the additional variables that are inherent in Revealed Preference research can decrease reliability, since Small (2012) speaks of ‘learning’, which would alter results.

3.7 Validity

Korzilius (2008) argues that reliable results are not necessarily valid results. The author defines validity as measuring what was intended to be measured; defining and explaining the reality. Creswell (2014) distinguishes two types of validity: internal and external validity. Korzilius (2008) adds to this content validity and construct validity.

The former relates to the ability to draw correct conclusions from the data, affected by research procedures, treatments, or experiences of the participants. In this research, the main relationship studied is that between travel cost and absolute distance. However, since Nicolau (2008), among others, concluded that several characteristics have an effect on how travellers perceive distance, these characteristics are included in the survey as well. This enhances the internal validity, since these so-called control variables can offer alternative explanations of why travellers trade off absolute distance and travel costs in a certain way. Another way in which the internal validity is increased in this research is the order in which questions are asked and the level of abstraction of the questions. Questions that measure novelty-seeking characteristics and the association between physical distance and dissimilarity are placed after the choice tasks where travel costs and absolute distance are the only variables. The motive for this is to prevent participants from performing the choice tasks based on their provided answers. The questions that measure novelty-seeking characteristics and participants' association between physical distance and dissimilarity therefore also act as control questions which validate earlier performed trade-offs. Questions about novelty-seeking characteristics are randomised in order, as well as placed separately in the second part of the questionnaire to prevent or at least reduce bias. Since novelty-seeking consists of four internally consistent categories, placing the whole instrument in one place, and in order, can lead to biased results. Participants can gain knowledge of the intention of the questions and this influences the results. Furthermore Van der Pligt and Blankers (2013) speak of the recency and primacy effect, where participants are more likely to choose or remember the first and last item of a list. To prevent participants from paying more attention to one question or the other, the discrete choice part and novelty-instrument are randomised and separated, in order to promote constant attention.

External validity relates to the scope in which conclusions can be drawn (Korzilius, 2008; Creswell, 2014). Since this research makes use of a non-probability sample, the external validity is relatively low. As mentioned in Section 3.2, conclusions from data from a non-probability sample cannot be generalised to the whole research population. Furthermore, since the used sample has several distinct characteristics, a smaller group is researched, which means that the scope in which conclusions are drawn, is smaller. Time and budget constraints limit the possibility to increase the external validity. Since research on a Value of Distance is relatively new, the goal is to explore this phenomenon, rather than confirm it for a wide population. Therefore, in this research external validity is relatively less important.

Korzilius (2008) argues that content validity serves to determine if all aspects of the key concepts are measured correctly. The translation from concept to survey question is the main indicator of content validity. The conceptual framework is derived from Crompton and Lee's (1992) research on novelty-seeking. The authors argue that a destination is selected, based on the novelty construct of a tourist (a function of his or her preferred arousal level (Mehrabian & Russell, 1973)), other tourism motive constructs, perceived destination attributes and situational constraints. The novelty construct is empirically tested and confirmed in their research. Furthermore tourism motive constructs have proven to be too complex to measure (as Section 3.5.2), especially in quantitative research. Travel costs and absolute distance represent perceived destination attributes in this research. These variables are purposely kept abstract, since concrete destination attributes can lead to biased results. For instance, a participant can have a preference for long-haul destinations, but since the short-haul option includes a picture of one's bucket-list item, the participant prefers the short-haul option. The goal of this level of abstraction is to let participants translate the combination between travel costs and absolute distance to actual destinations, and to base their choices on the image they have of these combinations. Furthermore situational constraints relate to the personal characteristics that, according to Nicolau (2008), are expected to have an effect on the perception of distance. Most of the scales used within these variables are based on other Dutch research in the context of tourism travel. This increases the content validity, since it is expected that frequently used scales describe a variable more accurately. Another advantage is that Dutch resident students are more likely to be familiar with the scales or options that are provided in the questions, which makes answering these questions easier.

Lastly, Korzilius (2008) argues that construct validity is a test to see if the instruments measure what they were intended to measure. The construct validity is expected to be relatively high, since this research makes use of empirically confirmed instruments. However, the different context of this research can change this; hence Cronbach's Alpha is executed for each dimension of the novelty-instrument and a factor analysis is performed for the instrument as a whole.

3.8 Data analysis plan

3.8.1 Descriptive analysis

In the first part of the analysis, the personal characteristics (social-demographic factors) are described, by means of frequency tables and the mean and median, if possible. Subsequently, this data is compared to the statistics of the total population (of students, if possible) in the Netherlands.

3.8.2 Testing the Novelty-Instrument

As mentioned in Section 1.3 and Section 1.4, Crompton and Lee's (1992) novelty-instrument has not been empirically tested, apart from its initial development in 1992. In order to make valuable judgments about its possible effect on the Value of Distance, the instrument is tested on its internal consistency.

First, each dimension of the novelty-instrument (change from routine, thrill, surprise, and boredom alleviation) is separately tested on its internal consistency, where the Cronbach's α is the coefficient of reliability. This test looks at how related the items within a dimension are, thus how coherent a dimension is.

In the second stage, a principal component analysis is executed to test if the items that make up each dimension according to Crompton and Lee (1992), also show this statistically. This part of the analysis is not executed for each dimension separately, but for the model as a whole

3.8.3 Value of Distance calculation

The main goal of this thesis is to derive a Value of Distance from the collected data. The method of deriving such a value, is inspired by Value of Travel Time calculations. Most frequently a Multinomial Logistic Regression is used to first derive coefficients (or: parameters). Parameters can be interpreted as having a positive or negative effect (for coefficients higher or lower than zero respectively) on the utility of the corresponding attribute. For instance, a positive parameter for absolute distance indicates that a higher absolute distance is associated with higher utility. Based on Random Utility Maximisation (RUM), the Biogeme input of the utility functions for the three choice options in each choice task are as follows (Equation 6-8):

$$\boldsymbol{Alternative\ 1 = betaCOST * COST1 + betaDISTANCE * DISTANCE1} \qquad \textbf{Equation 6}$$

$$\boldsymbol{Alternative\ 2 = betaCOST * COST2 + betaDISTANCE * DISTANCE2} \qquad \textbf{Equation 7}$$

$$\boldsymbol{Alternative\ 3 = betaCOST * COST3 + betaDISTANCE * DISTANCE3} \qquad \textbf{Equation 8}$$

where the betas (coefficients/parameters) for both attributes are the same between choice options, whereas the values travel costs and absolute distance differ between choice options. According to the RUM decision rule, the alternative with the highest amount of utility associated with it, will be picked.

One of the more simple methods of deriving a VoTT, is used by Athira et al. (2014), where the value is the ratio between the coefficient of travel time and the coefficient of travel costs. The only difference is the use of absolute distance in this research, opposed to travel time in VoTT research. Athira et al. (2014) add to this that both coefficients need to be statistically significant in order to derive a meaningful VoTT (or Value of Distance in this thesis). Since the two designs are developed separately and not all respondents performed the second series of choice sets (as they are not willing and/or able to go on long-haul trips), the analysis is also done separately. As mentioned, the coefficients are found by means of a Multinomial Logistic Regression (MNL) and the formula for the VoTT calculation looks as follows:

$$\textit{Value of Travel Time} = \frac{\text{ß}TravelTime}{\text{ß}TravelCost} \qquad \textbf{Equation 9}$$

where both coefficients are derived from a MNL analysis and the Value of Travel Time indicates the amount of money a person is willing to pay for a minute travel time saving. As this thesis replaces the travel time dimension with absolute distance, the formula for this research only changes slightly, and is as follows

$$\textit{Value of Distance} = \frac{\text{ß}AbsoluteDistance}{\text{ß}TravelCost} \qquad \textbf{Equation 10}$$

where both coefficients are derived from a MNL analysis and the Value of Distance indicates the amount of money a person is willing to pay for an extra kilometre of absolute distance. As the short-haul and long-haul design (Table 3.2 and 3.3: designs) make use of increment sizes of 250km and 500km respectively, in order to conclude how much people are willing to pay for one level of absolute distance higher, '* 250km' or '* 500km' can be added behind the fraction of the formula in Equation 10.

Normal MNL analysis (in SPSS or Stata) looks at choice tasks separately. Since there are 2 series of 10 choice tasks in this thesis, different software needs to be used. Biogeme software is able to 'merge' choice tasks after the attribute levels are entered in the programme, so that increases or decreases in travel costs and/or absolute distance between choice tasks can be recognised. Biogeme also requires a .MOD file to be created, where utility functions and other details need to be specified. Its additional functions, opposed to SPSS and Stata, also require more precise specification, and formatting of data.

4 Data Analysis

4.1 Descriptive statistics

This part of the analysis describes the collected data. In Appendix G.1 and G.2 descriptive statistics of the sample size and frequency tables of explanatory variables are provided. It is good practice to first read this is order to get a better view of the collected data.

4.1.1 Sample Size

According to Johnson and Orme (2003), the minimal number of respondents for discrete choice modelling depends on the number of choice tasks, alternatives, and analysis cells, depicted in Equation 11 below

$$\boldsymbol{N > 500 * \frac{C}{T*A} = 500 * \frac{6}{10*3} = 100} \qquad \textbf{Equation 11}$$

Where N is the minimum required number of respondents, C is the largest number of any of the used attributes, T equals the number of choice tasks, and A equals the number of alternatives (Johnson & Orme, 2003).

The Stated Preference survey yielded 446 results, of which 116 were deleted, since they were either only partially completed, or responses from the trial phase. The remaining number of responses, 330, is more than satisfactory. In accordance with supervisor Paul Peeters (personal communication, June 24, 2019) and in relation to the university requirements of a thesis and the time availability the goal was set on 250 responses and also this number is surpassed. The link to the survey was shared via Facebook and LinkedIn. Furthermore SurveySwap was used. This website uses a credit system where responses can be collected after filling out others' surveys. Lastly, QR-codes which linked to the survey, were passed around in the university cafeteria. Although this type of distribution was face-to-face, the respondents were not accompanied by the researcher when filling out the survey (in order to promote anonymity).

Before entering the choice experiment, 73 out of the 330 respondents (22.1%) indicated that they are not willing or able to go to faraway destinations. Therefore, they only partook in the first part of the choice experiment.

4.1.2 Scatterplots Short-Haul Model

The focus of the following two sections is on the dispersion of the given answers to provide a first look at the results. This sections contain scatterplots of the expected relationships between variables, sorted by short-haul and long-haul. The sections make use of variables which calculate the average distance or travel costs that were chosen in the discrete choice experiment and these variables are plotted against the explanatory variables. The goal of these scatterplots is to provide a graphical overview of the relationships rather than to statistically confirm relationships. The figures to which is referred in this section and Section 4.1.3 can be found in Appendix G.3 and G.4 respectively.

In Figure 4.1 below a scatterplot is depicted which shows the average chosen distance and price on the x-axis and y-axis respectively. This scatterplot is a simple depiction of the Value of Distance. There is much variety in average distance and price, given the fact that there are only six attribute levels with a relatively small range. Most respondents are grouped together along a virtual line, which runs from 1000km and €220 to roughly 1600km and €320, which is not surprising, since price and distance usually show a positive relationship (higher distance usually means higher price). The fact that most responses are grouped together on the lower side of the line (a relatively high average distance coupled with a relatively low average price), indicates that respondents value travel costs highly, thus have a relatively low Value of Distance. There are a couple responses with a relatively high Value of Distance, which is shown by the relatively high average price and a relatively low average distance (outliers, upper left of the scatterplot). By this scatterplot it can be concluded that respondents have an as low as possible Value of Distance (as possible by the boundaries of the experimental design), since most responses centre around the lower side of the virtual line in the scatterplot.

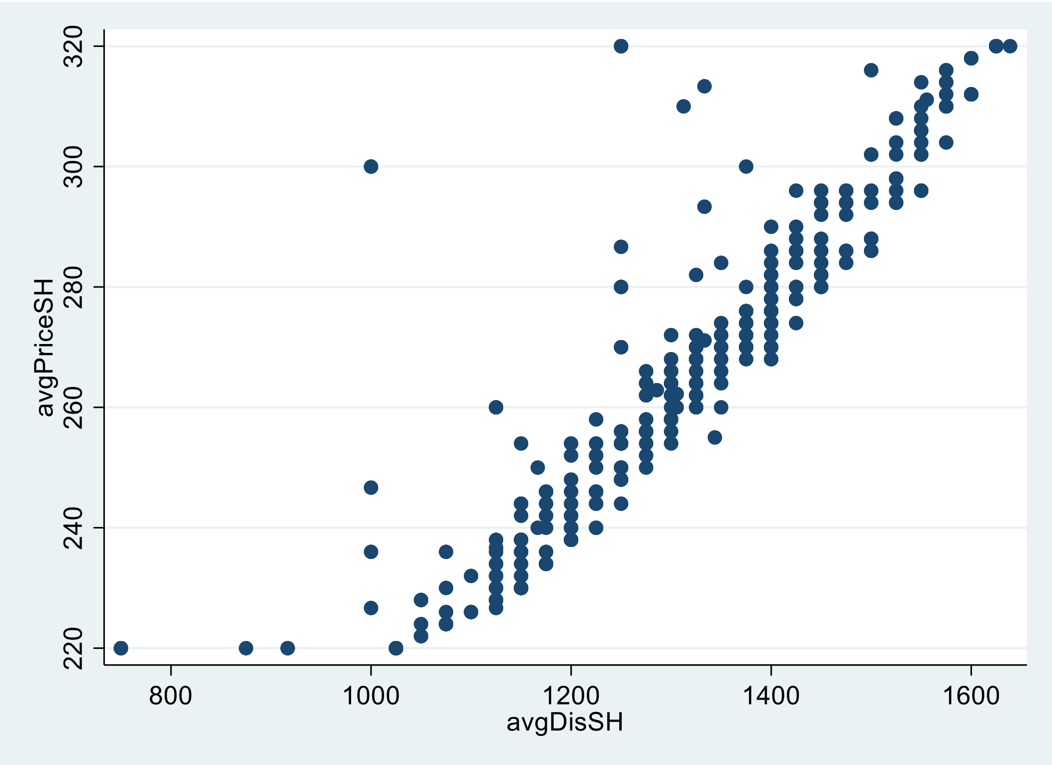

Figure 4.1: Scatterplot Average Distance and Average Travel Costs Short-Haul Model

The surprise vacation question was added to provide proof of a Value of Distance, in case the other analyses would yield insignificant or nihil results. If a respondent picks the farthest option, it is assumed that this person has a higher Value of Distance. Consequently, it is expected that this person's average chosen distance is higher. In Figure 0.3 (Appendix G.3) a scatterplot is depicted in which answers to the surprise vacation question (x-axis) are plotted against the average distance of that respondent (y-axis). The figure indicates that respondents who choose to go on a surprise trip 1,000km or 2,500km away generally have a lower average distance, since most responses are on the lower end of the y-axis. The opposite is not true for the other options, however. Rather than centre around the higher end of the y-axis, the groups of respondents who picked the 5,000km or 10,000km surprise trip option show a bigger variance in average distance. These findings are in line with Ahn and McKercher (2015), who argue that "…added costs, time commitment, and cultural distance involved in long-haul travel effectively excludes some groups" (p. 95-96). Respondents who picked the more nearby options seem to exclude themselves from the farthest options, even the ones in the short-haul model.

The variety-seeking question was added, since Nicolau (2008) argues that variety-seeking can increase the utility of distant destinations. However, as can be seen in Figure 0.4, there is no visible difference between the average distances of variety-seekers and variety-avoiders.

The size of the city of residence is expected to have an effect on distance sensitivity. Urbanites are expected to have a greater desire to escape in search of relaxation (Eymann & Ronning, 1997). In Figure 0.5 it can be seen that this is mostly true in the short-haul model. Responses on the right half of the x-axis generally have higher average distances. However, the average distances of respondents from small towns or cities (1 or 2 on the x-axis) are more varied and also include average distances as high as the ones from big city residents.

The use of intermediaries is expected to have an effect on distance sensitivity, since it is assumed that trips far away are often more complex, since they consist of more travel components (flights, transfers, activities etc.), and therefore are more difficult to book. Using intermediaries can relieve these difficulties. Results from Figure 0.6 are in line with this. Respondents who do not make use of intermediaries in their booking process have average distances between as low as ±1,000 and as high as ±1,650, whereas respondents who make use of intermediaries have average distances of as low as ±1,100 and as high as ±1,650. Responses from non-users are more varied, whereas users' average distances tend to centre around the upper half of the scatterplot.

The last used and usual mode of transport are expected to have an effect on distance sensitivities, since there are varying physical, temporal, and monetary efforts inherent in different modes (Nicolau, 2008). Figures of both variables show similar results. Figure 0.7 and Figure 0.8 indicate that the car and airplane are not only the most frequently used mode of transport, but also allow for travel to various places, since the variation in average distance of these modes is relatively large. Rather surprisingly (since, to an extent, the relative effort of air travel decreases as distance increases), the variation in average distance of respondents who usually use or last used an airplane for their trip is similar to that of respondents who usually travel or most recently travelled by car.

However, air travel's low prices make for advantageous conditions, even on short distances. Comparing these modes to the less frequently used modes is rather difficult, since only a handful respondents opted for these modes.

Income is expected to have an effect on the average picked price of the respondents, since Nicolau (2008) argues that people with higher incomes tend to participate in and spend more on tourist activities. The results from Figure 0.9 are not in line with this statement. The scattering is relatively even in all income groups and even the highest and lowest average price is similar across all income groups.

Novelty-seeking is expected to have an effect on distance sensitivities, since the desire to visit novel places is associated with a greater willingness to travel further (Nicolau, 2008). The results from Figure 0.10 are quite in line with this statement. The small number of respondents with relatively weak novelty-seeking characteristics picked relatively small average distances. However the variation within the group of novelty-seeking respondents is relatively large. The scattering in the right side of the scatterplot is relatively random, which could indicate that novelty-seekers do not necessarily associate absolute distance with novel destinations.

From the scatterplots from the short-haul model it can be concluded that most relationships found are in line with expectations. In cases which deviate from expectations, relationships are not visible (variation and minimum/maximum similar), rather than having the wrong sign (e.g. a negative relationship rather than a positive relationship between two variables). These results are not conclusive, since scatterplots only provide limited insights, but it does give insight in the general response tendency.

4.1.3 Scatterplots Long-Haul Model

The scatterplot of the average picked distances and travel costs in Figure 4.2 below shows the same variation as the same scatterplot of the short-haul model. However, at each average distance, there is a higher variety in average travel costs, shown by the bigger distance between the dots (observations). Opposed to the short-haul model, the observations do not centre around the lower end of the virtual line in the scatterplot, which indicates that respondents have a more varied Value of Distance than the discrete choice experiment's minimum.

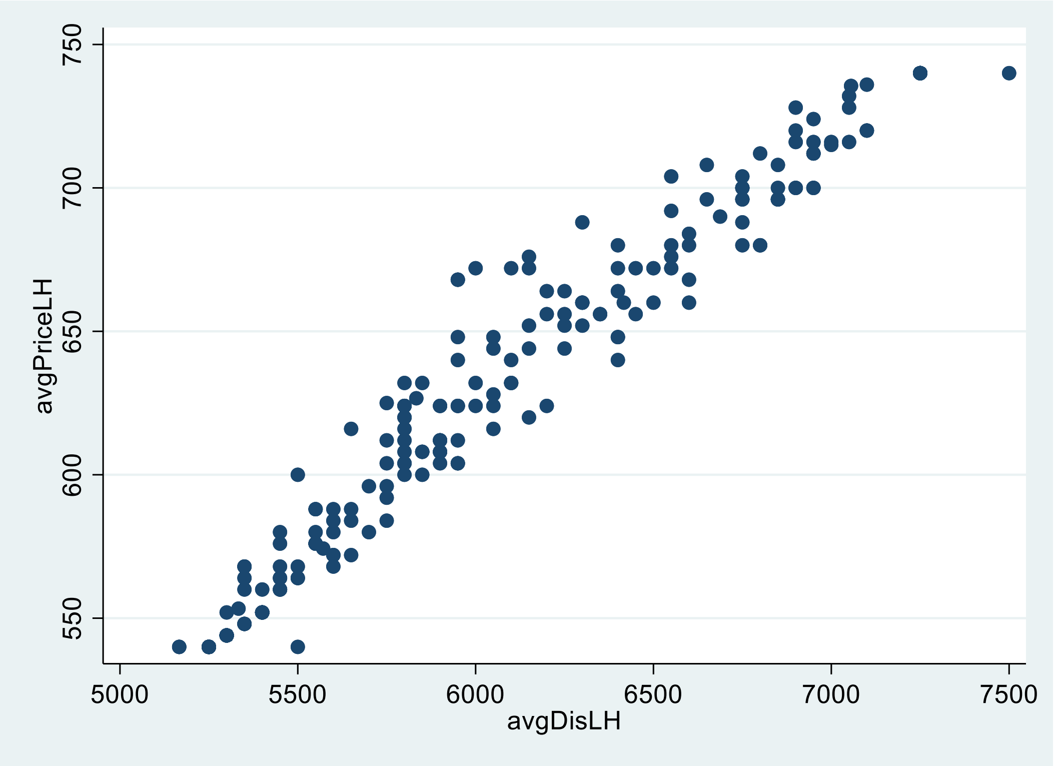

Figure 4.2: Scatterplot Average Distance and Average Travel Costs Long-Haul Model

In Figure 0.11 a scatterplot is depicted, which shows the average distance of the long-haul model plotted against the answers to the surprise vacation question. Similar to the short-haul model, the average picked distances of respondents who picked the more nearby options (1 or 2) for a surprise trip are generally lower than that of those who picked farther options (3 or 4). The variance in average distance is greater in groups of respondents who picked farther options (lowest average distance of ±5,250 and highest average distance of ±7,250 for category 3 and 4) than in groups who picked nearby options (lowest average distance of ±5,250 for category 1 and 2 and highest average of ±6,400 for category 1 and ±6,900 for category 2, which is also an outlier).

Similar to the scatterplot of the short-haul model, the scatterplot of variety-seeking and the average picked distance of this model shows no visible difference between variety-seekers and variety-avoiders (Figure 0.12). The lowest and highest average picked distances are similar and so is the scattering.

The scatterplot of the size of the city of residence and the average picked distances of the long-haul model is depicted in Figure 0.13. Unlike the scatterplot of the short-haul model, this scatterplot shows no notable relationships. Distance averages of respondents from small towns (category 1) tend to centre around the lower half of the y-axis, but there is also a number of respondents in the upper half. In this model, distance averages of big city residents (category 3-5) are scattered relatively evenly. Therefore little can be concluded about the effect of the size of the city of residence on the average picked distance in this model.

In Figure 0.14 a scatterplot of the use of intermediaries and the average picked distances is depicted. In this model, the expected relationship between the use of intermediaries and higher average distances is not visible. Although the number of observations in each category differs, there is no difference in the scattering. Besides that, the lowest and highest averages are similar between the two categories.

The average picked distances in the long-haul model are plotted against the last used and usual mode of transport in Figure 0.15 and Figure 0.16 respectively. Again both figures show similar results. However, opposed to the results from the short-haul model, there are differences between car users and airplane users. Averages of car users tend to centre around the lower half of the y-axis of both scatterplots, whereas those of airplane users tend to vary more evenly. In the case of respondents who *usually* travel by car, this can be explained by the relatively big temporal effort involved in travelling great distances, opposed to the much faster airplane.

In Figure 0.17 the distance averages are plotted against the monthly income. Similar to the short-haul model, the scattering in this model is relatively even across the five categories. On top of that, the lowest and highest averages are similar between the categories.

The average picked distances in the long-haul model are plotted against the novelty-instrument in Figure 0.18. The average distances of the small number of ‘novelty-avoiders’ (on the left half of the x-axis) tend to be relatively low, compared to novelty-seekers. The variance on the right half of the scatterplot is much larger, but is somewhat centred around lower averages of around 5,300km. Similar to the short-haul model, this could indicate that novelty-seekers do not necessarily associate absolute distance with novelty.

From the scatterplots of the long-haul model it can be concluded that only a few relationships are in line with expectations. The majority of relationships in the scatterplots are rather vague and therefore comparisons with expectations are difficult to make. However, similar to the short-haul model, in cases in which there *is* a relationship visible, the sign of the relationship (positive or negative) is in line with expectations.

4.2 Testing the Novelty-Instrument

As mentioned in Section 3.8.2, in this section the reliability of Crompton and Lee's (1992) novelty-instrument is tested. In the first part each dimension is individually tested on its internal consistency and in the second part the dimensionality of the whole instrument is tested. The tables to which is referred in this section can all be found in Appendix C. For convenience, the relevant cells within each of these tables are marked white.

4.2.1 Reliability analysis on the novelty-instrument

Based on 333 responses, the Cronbach's α of the first dimension, change from routine, is 0.731 (Table 0.1). This coefficient is acceptable, since "…a reliability coefficient of .70 or higher is considered 'acceptable' in most social science research situations" (UCLA IDRE, n.d.(b)). Additionally, the inter-item correlation matrix of this dimension (Table 0.2), apart from three cells, shows correlations of between 0.20 and 0.40, which, according to Piedmont (2014), are ideal numbers. Moreover, as can be seen in Table 0.3, the Cronbach's α will be lower for six out of seven items if this item were to be deleted, which means that the internal consistency of this dimension would be lower if any of these items were deleted. 'ROUTINE7', the item which would increase the Cronbach's α, would only cause a minor increase and therefore is not excluded from further analysis. It can be concluded that this dimension yields satisfactory results in terms of internal consistency.

The second dimension of the novelty-instrument, thrill, has yielded 334 responses. The Cronbach's alpha for this dimension is 0.821, which is more than satisfactory (Table 0.4). The inter-item correlation matrix (Table 0.5) shows higher correlations between the items of this dimension. However, the majority falls within Piedmont's (2014) ideal range. Lastly, deleting any of the dimension's seven items would lower the Cronbach's α, which means that the selection of seven items leads to a good internal consistency of this dimension (Table 0.6).

Based on 335 responses, the reliability coefficient (Cronbach's α) of the third dimension, boredom alleviation, is 0.688 (Table 0.7). Although UCLA IDRE (n.d.(b)) states that a coefficient of above 0.70 is acceptable, according to Tavakol and Dennick (2011) the number of items holds a positive relationship with the reliability coefficient. Since this dimension only contains three items, the reliability coefficient is relatively low, although it is still close to the desired minimum of 0.70. As shown in Table 0.8, the inter-item correlations of this dimension mostly fall within Piedmont's (2014) ideal range. Rather unsurprisingly, since the dimension contains only three items, the reliability coefficient is lower if any of the items were to be deleted (Table 0.9). It can be concluded that this dimensions shows satisfactory results, although the possibility of adding one or multiple items could be researched, in order to increase the reliability coefficient of this dimension.

The last dimension, surprise, yielded 333 responses. Table 0.10 (Cronbach surprise) shows that the Cronbach's α of this dimension is 0.708 which is satisfactory according to UCLA IDRE (n.d.(b)) (especially since the dimension consists of only three items). The inter-item correlation matrix (Table 0.11) shows correlations that range between 0.402 and 0.496. Each of the three correlations do not deviate much from Piedmont's (2014) ideal range. Lastly, deleting any of the three items would result in a lower reliability coefficient, which means that this dimension should contain (at least) three items (Table 0.12).

4.2.2 Factor analysis novelty-instrument

Since the novelty-instrument is sufficiently reliable, it is possible to execute a factor analysis to test if the variance in the observed variables (20 items) can be explained in terms of underlying variables, called factors (four dimensions).

First, a factor analysis is executed with an oblique rotation. Opposed to an orthogonal rotation, an oblique rotation assumes that the factors in the analysis are correlated (Corner, 2009). In this thesis it can be assumed that factors are correlated, since they cumulatively measure novelty. Therefore, a direct Oblimin rotation is used for this part of the analysis, since this is also the most common method of oblique rotation. The correlation between factors is checked in the component correlation matrix and off-diagonal values of higher than 0.32 indicate that factors are indeed correlated (Tabachnick & Fiddell, 2007). As can be seen in the output (Table 0.13), however, no value exceeds this number. According to Corner (2009) this means that an orthogonal rotation could just as well be run. Kim and Mueller (1978) add that "…employing a method of orthogonal rotation may be preferred over oblique, if for no other reason than that the former is much simpler to understand and interpret" (p. 50).

In the main part of the factor analysis a varimax rotation is used, since it is the most common method of orthogonal rotation. The suitability of the data for structure detection is indicated by two tests: the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's test of sphericity. The former is a statistic that indicates the proportion of variance in the variables that might be caused by underlying factors, where a value of (much) higher than 0.50 is preferred. The latter tests the (un)relatedness of the variables, where a value of less than 0.05 indicates that variables are (somewhat) related a factor analysis may be useful with the data (IBM, n.d.). In Table 0.14 it is shown that the values of both tests are satisfactory. The KMO statistic is 0.839, thus much higher than 0.50 and Bartlett's test of sphericity is 0.000, which is smaller than 0.05.

The proportion of each variable's variance that can be explained by the factors (dimensions) is shown in Table 0.15. Variables with high values (closer to 1) are well represented in the common factor space, while variables with low values (closer to 0) are less well represented (UCLA IDRE, n.d.(a)). Table 0.15 indicates a mixture of high and somewhat low values (minimum of 0.415), which means that not all variables are equally well represented in the common factor space.

The percentage and cumulative percentage of variance that can be explained by each factor can be viewed in the third and fourth column of Table 0.16. Factors with an eigenvalue of more than 1 are kept, since they account for more variance than the original variable (UCLA IDRE, n.d.(a)). Five components (or dimensions) are extracted, which is more than the original novelty-instrument. These five factors account for 57.9% of the total variance. Figure 0.2 is a visual representation of the eigenvalues plotted against the component number. In this plot, it can be seen that five factors have eigenvalues above 1, but the fifth factor is only slightly above 1 and is a lot lower than the first four. Therefore it is questionable if the fifth factor accounts for an adequate amount of variance to include it. If this component were to be excluded, 52.7% of the total variance is accounted for by four factors.

Table 0.17 helps to determine what the factors represent. In order to make this matrix easier to interpret, values lower than 0.3 are excluded (hence the empty cells). In the matrix it can be seen that almost all factors load on the variables that they belong to, as conceptualised by Crompton and Lee (1992). The matrix even corrects the order of the factors to the order of Crompton and Lee's (1992) initial instrument (where 'thrill' is the first factor). Similar to the original research, most variance is explained by the dimension 'thrill'. However, the 'thrill' dimension shows some irregularities, especially on the third item. This item describes the willingness of respondents to be a little bit scared while on vacation. Feedback from respondents indicates that the concept of 'fear' was found to be ambiguous and therefore it comes as little surprise that this item only loads on a factor that is not conceptualised by Crompton and Lee (1992).

4.2.3 Conclusion Novelty-Instrument

Although testing the reliability of the instrument is not the main aim of this thesis, Crompton and Lee's (1992) novelty-instrument has proven to be reliable. Each separate dimension shows satisfactory to good results in terms reliability coefficients (Cronbach's α), inter-item correlation, and the number of items included in each dimension. Furthermore, a factor analysis has shown that the dataset is suitable for structure detection and factor analysis. Not all 20 items are equally well represented in the common factor space, but these items show no extremely low values. This means that the proportion of variance of the variables is relatively well, but not excellently, accounted for by the factors. 57.9% of total variance is accounted for by five factors (or 52.7% by four factors). This can be classified as satisfactory. Lastly, most factors load on the same items that were also conceptualised by Crompton and Lee (1992). All in all the novelty-instrument yields satisfactory results, which makes it a suitable method of measuring novelty-seeking characteristics in the context of tourism.

4.3 Multinomial Logistic Regression (MNL)

Several sessions with Dr. Ir. Kroesen (TU Delft) have not been successful in specification and formatting of the dataset and therefore the analysis is not performed with Biogeme, as originally planned, but with Latent Gold. Since access to this software is limited, only limited context can be provided about its exact workings. Latent Gold, like Biogeme, takes into account multiple choice tasks and attribute levels can be entered, so that increases or decreases in travel costs and absolute distance between choice tasks can be included in the calculation. However, only choice task-specific attributes can be entered, which means that personal characteristics and the novelty instrument are not included in this part of the analysis. The relevant input of Latent Gold for this analysis can be found in Appendix E.1, whereas the other tables of this chapter are included in the main text.

4.3.1 Results short-haul design

As mentioned in Section 3.8.1, the MNL analysis is executed separately for the short-haul and long-haul design. Table 4.1 below shows that the parameter for absolute distance (‘afstandSH’) is 0.0000 and has a p-value of 0.86. The parameter for travel costs (‘prijsSH’) is 0.0002 and has a p-value of 0.76. This means that the short-haul design yields insignificant and nihil results. Based on these results, the existence of a Value of Distance cannot be discussed. It indicates, however, that based on the design of the discrete choice experiment, respondents’ individual parameters for absolute distance and travel costs can be positive and negative, but collectively are near zero. Since the results are also insignificant, there is a high degree of variance between respondents. Besides the limited usefulness of executing one, due to insignificance, a Value of Distance-calculation for this design cannot be made, since the parameter for absolute distance is zero. Therefore, conclusions can only be drawn about the design of the choice experiment. It allows for too much unobserved utility, which, in this case, leads to relatively random results.

Model for Choices					
	Class1	**Overall**			
R^2	0.0000	-0.0013			
$R^2(0)$	0.0014	0.0001			
Attributes	**Class1**	**Wald**	**p-value**	**Mean**	**Std.Dev.**
afstandSH					
	0.0000	0.0297	**0.86**	0.0000	0.0000
prijsSH					
	0.0002	0.0924	**0.76**	0.0002	0.0000

Table 4.1: Output Latent Gold Short-Haul Multinomial Logistic Regression

4.3.2 Results long-haul design

Opposed to the short-haul design, the long-haul design does yield significant results. As can be viewed in Table 4.2, the long-haul efficient design yields rather small parameters (0.0011 and -0.0144 for absolute distance and travel costs respectively). However, with p-values of 5.8^-56 for absolute distance and 2.7^-101 for travel costs, these parameters are significant. These parameters, albeit relatively small, also indicate the same type of relationship as expected. The positive parameter for absolute distance indicates that distance has a positive effect on the utility associated with increased travel distance, whereas the negative parameter for travel costs shows a negative effect on the utility associated with increased travel costs. Based on this experimental design it can be concluded that the disutility associated with increased travel costs is bigger than the utility associated with increased absolute distance.

Model for Choices					
	Class1	**Overall**			
R^2	0.0186	0.0186			
$R^2(0)$	0.1330	0.1330			
Attributes	**Class1**	**Wald**	**p-value**	**Mean**	**Std.Dev.**
afstandLH					
	0.0011	248.3976	**5.8e-56**	0.0011	0.0000
prijsLH					
	-0.0144	456.5391	**2.7e-101**	-0.0144	0.0000

Table 4.2: Output Latent Gold Long-Haul Multinomial Logistic Regression

Since both parameters are statistically significant, the Value of Distance calculation for this efficient design can be executed and can be found in Equation 12 below. Since a negative, monetary Value of Distance is meaningless, the parameter for travel costs is made positive.

$$\boldsymbol{Value\ of\ Distance = \frac{0.0011}{0.0144} = 0.076} \qquad \textbf{Equation 12}$$

Equation 8 indicates that based on the long-haul efficient design, the Value of Distance is 0.076 per kilometre. In Equation 13, the Value of Distance is multiplied by 500 (km), in order to better compare this to the increment size that is used for this design.

$$\boldsymbol{Value\ of\ Distance = \frac{0.0011}{0.0144} * 500 = 38.194} \qquad \textbf{Equation 13}$$

As can be seen in Equation 13, the Value of Distance of the long-haul design is €38.19 per 500 kilometres. The attributes levels were initially selected, based on the formula delineated in Section 3.4.2. According to this formula, based on increments of 500 kilometres, the additional costs associated with this increase in distance would be around €40. Since this number is rounded up, it can be concluded that respondents are willing to pay the increase in travel costs associated with the increase in absolute distance, as per the air travel industry's average.

4.3.3 Conclusion Multinomial Logistic Regression

The main goal of this thesis is to test if there is a Value of Distance. For the short-haul model, this is not the case, since the MNL coefficients from the model, which are the building blocks of the Value of Distance calculation, are not significant. This does not mean that these respondents do not have an internal Value of Distance, but rather that the variance between respondents is too big for it to yield significant results. Furthermore, the fact that the MNL coefficients from the short-haul model are near nihil, does not mean that absolute distance and travel costs have no effect on the utility associated with different options. It does, however, mean that, based on the experimental design, some respondents perceive absolute distance and travel costs as a utility, whereas others perceive it as disutility.

Consequently, the effect of the sample as a whole, in the case of the short-haul model, is close to zero (Kroesen, personal communication, October 3, 2019).

Opposed to the short-haul model, the MNL coefficients of the long-haul model *are* significant. This means that there is evidence that there is, in fact, a Value of Distance. Since the coefficients of both attributes are significant, the Value of Distance for this model can be calculated. It is found that the Value of Distance *between 5,000km-7,500km* of this model is €38.19 per 500 kilometres, which is only slightly lower than the airline industry's average. The assumption that all choice options in this model can only be visited by airplane (distance of 5,000km and up), coupled with air travel's advantageous combination of travel time and cost (Larsen & Guiver, 2013) and a relatively low price per kilometre, makes the results somehow surprising. As mentioned in Section 1.1, the average distance travelled is increasing and therefore a somewhat higher Value of Distance was expected. However, since this choice experiment only consists of two attributes, there is a relatively big difference between travellers' usual travel considerations and the two considerations in this choice experiment. Nonetheless, the ratio between observed and unobserved utility in this choice experiment yields results that are similar to reality.

4.4 Binary Logistic Regression with interaction effects

Since personal characteristics and the novelty-instrument cannot be included in the MNL in Latent Gold, a Binary Logistic Regression is executed. In this analysis absolute distance and travel costs, as well as personal characteristics and the novelty-instrument are included and the dependent variable is picking a destination (=1) or not (=0). The main limitation of this analysis, opposed to the MNL in Latent Gold, is that the dependent variable in the Binary Logistic Regression is the binary option of choosing or not choosing, where respondents make this choice up to 60 times (20 choice tasks times 3 options per choice task). Therefore this type of analysis does not capture the effect of increases or decreases in attribute levels between choice tasks. Results from a Binary Logistic Regression can only be expressed in terms of odds or odds-ratios, which says something about the change in the natural log odds of the logarithm rather than actual correlations/causations between variables. However, the relative randomness of especially the short-haul MNL analysis can possibly be explained by the interaction effects between the main attributes (absolute distance and travel costs) and the other explanatory variables. All tables to which is referred in this section, can be found in Appendix F. For convenience, all cells that are relevant to the analysis are in white.

4.4.1 Results short-haul model

4.4.1.1 Statistics short-haul model

In the short-haul model, 7710 out of the total 9810 cases are included. Since there are 30 rows, thus 30 cases, per respondent, the number of respondents that is included in this analysis is 257. In Table 0.19 the classification table of the model without any explanatory variables can be found (baseline model). Unsurprisingly, since there are always three options of which one is chosen, the empty model correctly predicts 66.7% of choices. This table has no substantial value in itself, but it is compared to the full model (including attributes, personal characteristics etc.) in the next paragraph.

Table 0.20 compares the -2 Log likelihood for the current model with the baseline model. The statistically significant result of 0.000 indicates that the model which includes explanatory variables is better at predicting the outcome than the baseline model.

Table 0.21 shows two Pseudo R^2 measures, the Cox & Snell R^2 and Nagelkerke R^2. Since both measures are approximations, the Pseudo R^2 values need to be used with caution (Sieben & Linssen, 2009). The R^2’s for the full model of the short-haul design are 0.077 and 0.107 for Cox & Snell and Nagelkerke respectively. Based on the Nagelkerke R^2 it can be concluded that the full model explains almost 11% of the variance. This number is relatively low, compared to the maximum value of 1, but according to Hosmer et al. (2013), low numbers are normal with these measures.

In Table 0.22 a Hosmer and Lemeshow test is executed. This statistic tests the null hypothesis that the data is a good fit for the model. Since the p-value in table 4 (0.000) is smaller than 0.05, the null hypothesis is rejected, which indicates that there is evidence that the model is not correctly specified and does not fit the data well.

The next table, Table 0.23 shows a classification table, similar to table 1. However, it can be seen that the model which includes explanatory variables correctly predicts 68.1% of choices, which is better, albeit slightly, than the baseline model.

4.4.1.2 Main effects of the short-haul model

For the part of the analysis about the main and interaction effects of the model, it is good practice to also keep the survey Appendix D at hand so that references to survey question numbers and value codes are more easily understood.

The final table of this model, Table 0.24, describes the main effects and interaction effects of the explanatory variables on the odds of the dependent variable (picking a destination). As expected, since the MNL yielded insignificant results, the main effects of absolute distance and travel costs are not significant in this model, with p-values of 0.577 and 0.098 respectively. The overall main effects of the personal characteristics and novelty-instrument (baseline categories of each explanatory variable) are almost exclusively highly significant, with the exception of variable Q47 (use of intermediaries), which has a p-value of 0.626. The odds-ratios that are described in this section can be interpreted as the effect of the specific independent variables on the dependent variable, with all other independent variables controlled for.

For the first explanatory variable, Q59 (choice of free surprise trip to a destination at 1,000, 2,500, 5,000, and 10,000km), the coefficients of all categories are statistically significant. Furthermore it can be seen that the odds-ratio of picking an option opposed to not picking that option for respondents who chose to go to a destination 1,000km away is 2154. This person is ±2154 times more likely than someone who chose to go to a destination 10,000km away, to pick an option. This odds-ratio gradually declines the farther away the destination is, that the respondent chose in variable Q59 (±100 and ±35 for 2,500 and 5,000km respectively). This indicates that there is quite a difference between the preferences of people who prefer a free vacation at a destination 1,000km away and those who prefer the destination 10,000km away.

Variety-avoiding respondents (respondents who do not visit a different destination for each trip) are almost three times more likely than variety-seeking respondents to pick a destination (Q45). The odds-ratio is 2.748 at a confidence level of 0.003.

Not all coefficients of categories from the third explanatory variable (Q46) are statistically significant. This variable is about the size of the city of residence, where ‘more than 500,000 citizens’ is the base category. It can be seen that the odds-ratio of picking an option relative to not picking one is approximately 71 for respondents who live in a city of between 50,000 and 100,000 citizens compared to those who live in a city of more than 500,000 citizens. Similar to the first explanatory variable, the odds-ratio is smaller for the category with values that are more similar to the base category (±27 for cities between 100,000 and 250,000 citizens compared to cities larger than 500,000 citizens).

Using or not using intermediaries to book a vacation (Q47) does not significantly affect the likelihood of picking or not picking a destination, since the p-value of this variable is 0.626. Therefore, no conclusion can be drawn with confidence.

The last used transport mode for a trip exists of six categories (Q57). Since no respondent used the transport mode ‘other’ for their last vacation, SPSS automatically excluded this category from analysis and the base category for this variable is ‘airplane’. Dummy category 1, which is transport mode ‘car’, shows a significant odds-ratio of 0.282. This means that respondents who used a car for their last trip are less likely than respondents who went by airplane, to pick an option, relative to not picking one. Similar to respondents who went by car, but even more extremely, respondents who went by bus are less likely than respondents who used an airplane to pick an option, relative to not picking one (significant odds-ratio of 0.019).

Table 0.24 also indicates that only two categories of variable Q48 differ significantly from the base category: ‘airplane’ and ‘other’. Respondents who usually travel by airplane, are less likely than ‘car travellers’ to pick an option than to not pick that option. Furthermore respondents who travel by transport mode ‘other’ are far more likely (significant odds-ratio of ±4,655) to pick an option relative to not picking that option.

The level of income, Q49, mostly shows insignificant effects. However, a respondent who earns between €250-€500 per month opposed to more than €1,000 per month has an increased likelihood to pick a destination (significant odds-ratio of ±4).

Lastly, the novelty-instrument has a significant effect on the accuracy of the model (p-value of 0,000). The variable that is used for this instrument consists of the cumulative number for the 20 statements, where a score of 0, 1, and 2 are given for disagree, neutral, and agree, respectively. The odds-ratio is 0.878, which means that respondents with novelty-seeking characteristics of one unit higher are less likely to pick an option than their more novelty-avoiding fellows.

4.4.1.3 Interaction effects short-haul model

In the lower part of Table 0.24 interaction effects can be found. For absolute distance (afstandSH), the main interaction effects, as well as the effects between categories of variables are all insignificant. The interpretation is that all interaction effects between absolute distance and personal characteristics have no significant effect on the odds of picking a destination. For categorical independent variables, this difference is only calculated for each dummy category relative to the base category of that variable, so not between dummy categories. However, since not a single variable or variable category shows a significant interaction effect with absolute distance, it can be concluded with fair confidence that the main effect of distance, as well as interaction effects which include distance, do not have a significant effect on the odds of picking a destination. Since the interaction effects of dummy categories are relative to the reference category, these interaction effects are excluded from further analysis.

Oppositely, almost all main interaction effects which include travel costs (prijsSH) are statistically significant. Apart from the variable 'use of intermediaries', all main interaction effects have a maximal p-value of 0.024. The interaction effects of travel costs and the choice of surprise vacation are statistically different between each dummy category and the reference category (10,000km). Furthermore, similar to the main, non-interaction effect of this variable, the odds-ratio of choosing a destination for each dummy category gets closer to 1, the farther away the destination is, that the respondent chose at this survey question (odds-ratios of 0.972, 0.983, and 0.987 for 1,000, 2,500, and 5,000km respectively).

The significant odds-ratio of the interaction effect between travel costs and variety-seeking (Q45) is 0.996. This means that at the same level of travel costs, the odds of picking a destination are somewhat higher for someone who purposely picks a different destination for every trip (reference category) than for someone who does not (dummy category).

The interaction effect of the size of city (Q46) and travel costs is only significantly different between the reference category 'more than 500,000 citizens' and dummy categories '50,000-100,000' and '100,00-250,000'. The odds-ratios for these categories are 0.984 and 0.986 respectively, which means that at the same level of travel costs, the odds of picking a destination are lower for someone who lives in a city between 50,000-100,000 or 100,000-250,000 than for someone who lives in a city which is larger than 500,000 citizens.

The interaction effect of the last used mode of transport (Q57) and travel costs is only significant between the reference category 'airplane' and dummy categories 'car' and 'bus'. The odds-ratio of both categories is higher than 1 (1.005 and 1.015 respectively), which means that at the same level of travel costs, the odds of picking a destination are higher for someone who used a car or bus for their last trip than for someone who travelled by airplane.

The interaction effect of the usual mode of transport (Q48) and travel costs is significant between the reference category 'car' and the dummy category 'other'. The odds-ratio of this interaction effect is 0.972, which means that at the same level of travel costs, the odds of choosing a destination is lower for someone who usually travels by transport mode 'other' than someone who usually travels by car.

The interaction effect of monthly dispensary income (Q49) and travel costs is only significant between the reference category ‘more than 1,000 euros per month’ and dummy category ‘between 250-500 euros per month’. The odds-ratio of this interaction effect is 0.995, which means that at the same level of travel costs, the odds of choosing a destination are lower for someone who earns between 250-500 euros per month than for someone who earns more than 1,000 euros per month.

Lastly, the interaction effect of the novelty-instrument and travel costs is significant. However, its odds-ratio is 1, which means that at the same level of travel costs, someone with novelty-seeking characteristics has the same odds of choosing a destination than someone with novelty-avoiding characteristics.

4.4.2 Results long-haul model

4.4.2.1 Statistics long-haul model

Just like the short-haul model, the number of observations for this model is 7710. A total number of 9810 responses was collected, of which 2100, or 70 individual respondents, were not included in the analyses, due to missing values. Besides that, the model without explanatory variables, unsurprisingly, correctly predicts 66.7% of choices (Table 0.25). This empty model is again compared to the full model in the next paragraph.

In Table 0.26, the -2 Log likelihood for the current model (with all explanatory variables) is compared to the baseline model. The statistically significant result of 0.000 indicates that the full model is better at predicting outcomes than the baseline model.

The next table, Table 0.27, describes the share of variance explained by the model, based on the two aforementioned Pseudo R^2 measures. Compared to the short-haul model, this model shows relatively high values. The Cox & Snell R^2 has a value of 0.172 and the Nagelkerke R^2 has a value of 0.238, which indicates that the model explains 23.8% of variance. Although these values have to be used with caution, it can be concluded with fair confidence that the long-haul model better explains variance than the short-haul model.

Opposed to the Hosmer and Lemeshow test of the short-haul model, the statistic of the long-haul model is insignificant at a p-value of 0,081 (Table 0.28). This indicates that there is insufficient evidence that the model is incorrectly specified. Therefore the null hypothesis that the data is a good fit for the model, is accepted.

In the classification table, depicted in Table 0.29, it can be seen that the full model again is an improvement on the empty model, in terms of correctly predicting choices. Compared to the empty model, which correctly predicts 66.7% of choices, the full model correctly predicts 72.4%.

4.4.2.2 Main effects of the long-haul model

Table 0.30 describes the main effects and interaction effects of the long-haul model. In this model, the main effects of absolute distance and travel costs are significant. With an odds-ratio of 1.001, an increase in absolute distance slightly increases the odds of picking an option. The opposite is true for travel costs. Its odds ratio of 0.982 indicates that an increase in travel costs decreases the odds of picking an option. The size, as well as the direction of the relationship is similar to the results from the MNL. Absolute distance, in both instances, contributes positively to the utility, and thus the odds of picking an option, whereas travel costs contribute negatively to the utility of a choice option and thus decreases the odds of picking that option. The negative effect of travel costs is bigger than the positive effect of absolute distance. Furthermore it can be seen that the main effects of six out of the eight explanatory variables are significant. With p-values of 0.934 and 0.252 respectively, the main effects of the use of intermediaries (Q47) and the usual mode of transport on the odds of picking a destination is not significant.

The coefficients of the first explanatory variable, Q59 (choice of surprise trip), are all significant. Similar to the short-haul model, the odds-ratio for someone who chose to go on a surprise trip 1,000km away is very big (±1114) and gradually declines, the closer the distance between the dummy category and the base category (distance = 10,000km). The odds-ratios for 2,500km and 5,000km are ±853 and ±53 respectively.

Variety-avoiders are almost three times as likely to pick an option than variety-seekers (Q45). The odds-ratio is 2.720 at a confidence level of 0.018.

Coefficients for two out of the four dummy categories of the third explanatory variable (Q46) are statistically significant. The odds-ratio of picking a destination relative to not picking that option is approximately 24 for respondents who live in a city of between 100,000 and 250,000 citizens relative to respondents who live in a city larger than 500,000 citizens. For respondents who live in a city of between 250,000 and 500,000 the odds-ratio is around 13 relative to the base category (larger than 500,000 citizens).

Similar to the short-haul model, the effect of the use of intermediaries on the odds of picking a destination is not significant. Therefore, no conclusion can be drawn with confidence.

Coefficients of two categories of the last used mode of transport are significant. The odds of picking a destination are a lot higher (±128,899) for respondents who travelled by bus for their last trip than for respondents who travelled by airplane. Oppositely, the odds of picking a destination are lower for a respondent who travelled by train than for the base category (airplane).

The main effect of the usual mode of transport on the odds of picking a destination is not significant. Therefore no conclusions can be drawn with confidence about the nature and sign of the effects.

The level of income, Q49, shows insignificant effects, apart from the first dummy category 'less than €250 per month'. The odds-ratio indicates that this category has lower odds of choosing a destination, compared to a respondent who earns more than €1,000 per month.

Lastly, the coefficient of the novelty-instrument is significant at 0.010. The odds of a respondent picking a destination decreases by 9,1% at a one unit increase in novelty-seeking characteristics.

4.4.2.3 Interaction effects long-haul model

In the lower part of Table 0.30 the interaction effects of the model can be found. Unlike the short-haul model, the long-haul model does show some significant main interaction effects between absolute distance (afstandLH) and personal characteristics, albeit in only two instances. At the same level of distance, the odds of picking a destination are slightly lower (0.999) for someone who picked the surprise trip destination at 1,000km than for the reference category (10,000km). The interaction effect is also significant for the group of respondents who picked the destination 5,000km away. However, the odds-ratio is exactly 1 and therefore no difference in odds of picking a destination can be observed between this group and the reference category at the same level of distance.

Unlike the results from the short-haul model, the main interaction effects between travel costs and personal characteristics are mostly insignificant. The only significant main interaction effects of personal characteristics (and travel costs) are surprise vacation, size of city of residence, and the level of income.

The interaction effects between the first two dummy categories (2,500km and 5,000km) of Q59 (surprise trip) and travel costs are significantly different from the reference category (10,000km). The odds-ratios of respectively 0.995 and 0.993 indicate that at the same level of travel costs, the odds of picking a destination are lower for respondents who picked the a destination at 2,500km or 5,000km for their free surprise trip, relative to respondents who picked a destination at 10,000km.

Similar to the results of the non-interaction effects of this variable, the interaction effects between travel costs and 'size of city of residence' are only significant for cities of between 100,000-250,000 citizens and between 250,000-500,000 relative to cities of over 500,000 citizens. At the same level of travel costs, the odds of picking a destination are lower for respondents from the two categories of smaller cities (odds-ratios of 0.991 and 0.989 for 100-250k and 250-500k respectively), than for respondents from a city of over 500,000 citizens.

Lastly, the interaction effects between travel costs and the level of income only show significant results between the lowest and the highest level of income. At the same level of travel costs, the odds of picking a destinations are higher for a respondent with a low level of income (less than €250 per month than for a respondent with a high level of income (more than €1,000 per month)

4.4.3 Conclusion Binary Logistic Regression

Since personal characteristics could not be included in the MNL analysis, a BLR was executed to measure the effect of these factors on the Value of Distance. However, results from a Binary Logistic Regression can only be interpreted and expressed in terms of odds and odds-ratios. Therefore the effects of personal characteristics on the odds of choosing a destination are described, rather than the effects on the Value of Distance. The non-interaction effects are not discussed in this part, since measuring the interaction effects between the personal characteristics and the perception of distance and/or travel costs are the main motive for performing the BLR.

Interaction effects between absolute distance and the other explanatory variables (novelty-instrument and personal characteristics) are not significant for the short-haul model. This means that the variance which caused the MNL coefficient for absolute distance to be insignificant, cannot be accounted for by (groups of respondents with) different personal characteristics and level of novelty-seeking characteristics.

Interaction effects between travel costs and the other explanatory variables in the short-haul model yielded predominantly significant results. At the same level of travel costs, the odds of picking a destination are lower for respondents who did not choose the furthest option for the surprise holiday than for those who did. This means that the apparent willingness of respondents to travel to distant destinations increases their odds of picking a destination. Similar to Nicolau's (2008) conclusions, at the same level of travel costs, the odds of choosing a destination are higher for someone who purposely visits a different destination every trip than for someone who does not. Nicolau (2008) argues that there is an increased utility in distant destinations if one has not visited this place before. Therefore, the disutility associated with increased travel costs is relatively lower. Moreover, Nicolau (2008) argues that urbanites experience a bigger desire for relaxation and are willing to pay more in search of this relaxation. The interaction effects between size of city and travel costs from the short-haul model also demonstrate this, since at the same level of travel costs, the odds of picking a destination are higher for someone from a city of over 500,000 citizens that for someone from a city of between 50,000-100,000 and 100,000-250,000 citizens. Interaction effects between travel costs and mode of transport are mostly insignificant. However, at the same level of travel costs, the odds of choosing a destination are higher for someone who travelled by car or bus for their last trip than for someone who travelled by plane. This can be explained by the fact that for relatively short distances, such as in the short-haul model, more modes of transport are viable options and that respondents in this sample tend to opt for a car or bus more easily. Furthermore, at the same level of travel costs, the odds of choosing a destination are higher for someone with a dispensary income of more than €1,000 per month than for someone with an dispensary income of between €250 and €500 per month. This is similar to Nicolau's (2008) findings, since he argues that people with higher income experience less disutility from higher travel costs. Oppositely, although the interaction effect between travel costs and the novelty-instrument is significant, the odds-ratio is exactly 1, which means that a change in novelty-seeking characteristics, at the same level of travel costs, does not affect the odds of picking a destination. Harrison-Hill (in Nicolau, 2008) argues that novelty facilitates the selection of far-away destinations. Firstly, a point can be made that the short-haul model does not include far-away destinations, in which case the odds-ratio would be below 1. Secondly, it could be expected that novelty-seekers are more likely to select any destination, since they look for novel places, much more than novelty-avoiders, in which case the odds-ratio would be more than 1. Since the odds-ratio is exactly 1, neither of these cases ring true.

In the long-haul model, two interaction effects between absolute distance and other explanatory variables are significant. At the same level of distance, the odds of picking a destination are slightly lower (odds-ratio of 0.999) for someone who picked the surprise vacation destination at 1,000km than for someone who chose the option at 10,000km. For someone who picked the option at 5,000km, the odds-ratio *is* significant, but amounts exactly 1. Both odds-ratios deviate only slightly from 1, which means that the interaction effects between the surprise vacation and absolute distance are not very strong.

The interaction effects between travel costs and other explanatory variables in the long-haul model are mostly insignificant, in contrast to the short-haul model. At the same level of travel costs, the odds of picking a destination are higher for someone who picked the surprise vacation destination at 10,000km than for those who picked the 2,500km or 5,000km option. Similar to the short-haul model, the apparent willingness to travel to distant places increases the odds of picking a destination. Another similarity can be found with the interaction effects with include the size of city. In the long-haul model, at the same level of travel costs, the odds of picking a destinations are higher for someone who lives in a city of more than 500,000 citizens than for those from cities of between 100,000-250,000 and 250,000-500,000. This again is in line with Nicolau's (2008) notion that the more urban the city of residence is, the higher the need for relaxation is. In addition, at the same level of travel costs, the odds of picking a destination are significantly higher for someone who earns more than €1,000 per month than for someone who earns less than €250 per month. This is also in line with Nicolau's (2008) notion that people with higher incomes perceive less disutility associated with higher travel costs.

5 Conclusion/Recommendations/Reflection

5.1 Conclusions to the Research Questions

This section answers the research questions which were described in Section 1.4. Before the main question is answered, the sub-questions are answered first, since they provide insights in parts of the main question.

5.1.1 Conclusion Sub-Question 1

The first sub-question of this thesis and its corresponding hypothesis are as follows:

What is the Value of Distance in tourism travel for Dutch students? (in other words, how do Dutch students trade off distance and travel costs?

- Hypothesis (h0): There is no Value of Distance (no significant relationship between absolute distance and travel costs)

Taking into account both models, no conclusion can be drawn with confidence. MNL parameters of the short-haul model are insignificant and show near-nihil results. Although the long-haul model yields significant results, the parameters are also somewhat small in absolute terms. However, the long-haul model *does* show that the disutility associated with increased travel costs is larger than the utility associated with an increase in absolute distance. The ratio between the coefficient of these attributes, the Value of Distance, amounts to a number that is similar to the airline industry's average price per kilometre. This indicates that the Stated Preference experimental design, which contains a relatively large amount of unobserved utility in this choice experiment (in this case respondents imagining destination attributes other than just absolute distance and travel costs) is capable of replicating Revealed Preference data from the formula which is used. The main conclusion of this sub-question is that the long-haul design which is used in this thesis, is adequate in replicating the Revealed Preference data, which found that travellers on average are willing to pay around €40 to travel 500km farther. The null-hypothesis with respect to the long-haul design can be rejected, since the design yields significant parameters. The Value of Distance of this design is €38,19 per 500km. Since the short-haul design yields insignificant and near-nihil coefficients, no conclusion about this model can be drawn with confidence. With respect to this design, the null-hypothesis is accepted.

5.1.2 Conclusion Sub-Question 2

The second sub-question of this thesis and its corresponding hypothesis are as follows:

What is the effect of the novelty construct on the Value of Distance?

- Hypothesis (h0): There is no significant effect of the novelty-instrument on the Value of Distance.

Novelty was assumed to increase the utility of distant destinations, and therefore an odds-ratio of above 1 was expected. However, its direct effects in the short-haul and long-haul are 0.878 and 0.909

respectively. The interaction effects between the novelty-instrument and the attributes of the discrete choice experiment are predominantly insignificant. The only significant interaction effect yields an odds-ratio of exactly 1 (in the short-haul model between novelty-seeking and travel costs), which indicates that at the same level of travel costs there is no difference in odds, caused by a change in novelty-seeking characteristics.

5.1.3 Conclusion Sub-Question 3

The final sub-question of this thesis, along with its hypothesis is described below:

What is the effect of demographic characteristics on the Value of Distance?

- Hypothesis (h0): There is no significant effect of personal characteristics on the Value of Distance.

From the results section it has become clear that there are a number of significant interaction effects between absolute distance and travel costs, and personal characteristics. In the short-haul model the interaction effects which include absolute distance are exclusively insignificant. This indicates that the effect of distance is not mediated by other explanatory variables. Oppositely, many interaction effects which include travel costs *are* significant. Furthermore, the odds associated with these interaction effects are in line with the expected sign, as conceptualised by Nicolau (2008). For instance, at the same level of travel costs, variety-seeking increases the odds of picking a destination, living in a larger city increases the odds of picking a destination, picking a slower mode of transport (bus or car) increases the odds of picking a destination (in the short-haul model), and a higher income (>€1,000/month) increases the odds of picking a destination, relative to lower incomes (<€250/month).

In the long-haul model, the interaction effects between absolute distance and personal characteristics are only significant between three categories of the surprise vacation. At the same level of absolute distance, the odds of picking a long-haul destination are slightly higher for respondents who picked the 10,000km option than for those who picked the 1,000km option. However, despite its significant effect, the interaction effects between absolute distance and the 5,000km option does not affect the odds of picking a destination. The interaction effects between travel costs and the surprise vacation question are similar to that of absolute distance and the surprise vacation. At the same level of travel costs, the odds of picking a destination are higher for respondents who picked the destination at 10,000km than for those who picked the 2,500km or 5,000km option. Odds are also higher for those who live in a large city (>500,000 citizens) than for respondents from smaller cities (100,000-250,000 and 250,000-500,000 citizens) and higher for respondents with higher incomes (>€1,000/month) than for those with lower incomes (<€250/month). The latter two interaction effects are in line with Nicolau's (2008) findings.

The null-hypothesis can be rejected with fair confidence. Although in both models interaction effects which include absolute distance are predominantly insignificant, interaction effects between travel costs and the surprise vacation are similar for the majority of dummy categories. In both models, the size of the city of residence and the level of income have significant interaction effects with travel costs, and the direction of the effects (increased or decreased odds) is similar to Nicolau's (2008) findings.

5.1.4 Conclusion Main Research Question

The main research question of this thesis is:

What is the Value of Distance in leisure tourism for Dutch students and what role does it play in choosing a destination?

Taking into account both models, no conclusion can be drawn with confidence, with regards to the main research question. MNL parameters of the short-haul model are insignificant and show near-nihil results. Although the long-haul model yields significant results, the parameters are also somewhat small. However, the Value of Distance derived from this model, is similar to the airline industry's average price per kilometre. This indicates that the long-haul model is adequate at replicating Revealed Preference data from the formula which is used to generate attribute levels. With respect to the long-haul design, the Value of Distance of distance is €38.19 per 500km. Since personal characteristics could not be included in the MNL analysis, the exact role of the Value of Distance in the choice of destination cannot be described. However, a BLR is executed to partly explain this role.

Direct effects of absolute distance and travel costs are insignificant in the short-haul model, but in the long-haul model they are significant. The odds-ratios of the attributes in the long-haul model also have the expected sign: a small increase in odds at an increase of absolute distance and a decrease in odds at an increase in travel costs. Interaction effects which include absolute distance, are only significant in two instances (across both models), which indicates that there is uncertainty about the effect of absolute distance in the choice of destination. Furthermore, at the same level of travel costs the choice of a more distant destination for a surprise vacation, living in a larger city, or having a higher income increases the odds of picking a destination in both models. This indicates that the effects of travel costs are mediated by other explanatory variables.

5.2 Recommendations

Since this thesis is exploratory in nature, recommendations in this section are mostly centred around future research on this topic, rather than recommendations for praxis. Recommendations are made about the methodology and the analysis.

For this type of analyses, additional statistical software is required and this software is often not part of Master students' software packages available at university workspaces. Additionally, since reality is often more unruly than theory assumes, it is difficult to anticipate every possible disrupting factor. Consulting an expert in the field in early stages of such research is of great importance. These types of fundamental research questions, and the specialistic methodologies associated with them, do not lend themselves for a standalone master research, but should be in conjunction with research tradition and built-up expertise.

5.2.1 Recommendations about the methodology

5.2.1.1 Data characteristics

The first recommendation about data characteristics is to widen the scope of the research, in terms of the sample. In this thesis a student sample is used, due to time and money constraints. As mentioned in Section 2.6, student samples often yield atypical results and in this thesis this rings true for the modes of transport, where the majority of respondents travel by airplane, instead of by car. Using a bigger sample, however, should only be done when the experimental design is revisited, as explained in Section 5.2.1.3.

5.2.1.2 Inclusion/Exclusion of variables

Another recommendation is to revisit the selection of personal characteristics. Ever since Nicolau published his work in 2008, a lot has changed in the travel industry, and variables that had an effect in his study, may very well be redundant in current times. Furthermore, in this thesis it is found that the use of intermediaries yields insignificant effects. The target group in this thesis is relatively affluent and internationally oriented, so the inclusion of this variable may have been superfluous.

5.2.1.3 Experimental design

The third recommendation about the methodology focusses on the experimental design. For future research it is recommended to use more than two attributes in the discrete choice experiment. For instance, travel time is an often used variable in transport sciences, especially in Value of Travel Time calculations. Since the coefficients from the MNL analysis are either/both insignificant or/and nihil, the experimental design leaves much to wish for.

The fourth recommendation relates to the previous recommendation. Hassan et al. (2006) and Cranenburgh and Collins (2019) stress the importance of conducting a pilot study before collecting a full set of data. Hassan et al. (2006) mainly focus on the importance of a pilot study on the planning of the research. The authors argue that it informs estimates about the duration of the whole study and it is a suitable way to test the measurement instrument (e.g. the questionnaire). In this thesis a few students were asked to check the questionnaire for spelling errors, ambiguous formulations, and other unclarities. However, Hassan et al. (2006) speak of another advantage of conducting a pilot study, besides correcting spelling errors, namely ‘data entry and analysis’. Since the format of the collected data is incompatible with Biogeme, a less thorough analysis could be performed. Furthermore Cranenburgh and Collins (2019) argue that the most common way to obtain prior parameters is by conducting a pilot study. These prior parameters inform the way in which the Robust Design Generator (section 3.5.4) matches attributes, which leads to statistically more efficient designs. Lastly, a pilot study can determine which attributes respondents deem as most important in their selection of travel destinations. The most important factors can then be included as attributes in the discrete choice experiment.

Moreover, for future research it is recommended to explore the possibility of including destination attributes. This somewhat relates to the last part of the previous recommendation, but requires further explanation. The attributes in the discrete choice experiment of this thesis are relatively abstract, since it is argued that adding names of destinations would lead to the implicit inclusion of a whole series of other variables. A respondent can have a preference for nature destinations, but at the same time have a special connection to a city like London, and therefore opt for this option in a choice experiment. However, since the experimental design of this thesis allows for a large amount of randomness, the inclusion of more concrete destination attributes should definitely be considered. If future research aims to explain the growing interest in distant destinations, investigating attributes which increase travellers’ Value of Distance, and possibly increase their average distance travelled, is of great importance.

Lastly, it is recommended to consider an experimental design which combines short-haul and long-haul destinations, since this can possibly better explain why more people are opting for more distant destinations. This cannot be explained by the designs in this thesis, since both designs are analysed separately.

5.2.2 Recommendations about the analysis

The first recommendation about the analysis is to include more advanced analyses in future studies. Analyses such as the Nested Logistic Regression and Mixed Logistic Regression are able to capture the effect of taste in the unobserved variance within a model. Since the eventual goal of this research is to explain why travellers opt for more distant destinations, results from these analyses are desired. However, since these analyses are quite advanced, the help of experts is definitely recommended.

The last recommendation of this section is about the Value of Distance calculation. In this thesis, a simple method of Value of Distance calculation is used. It is recommended to explore different methods, in order to be able to differentiate between groups of respondents. This also depends on the compatibility of the (format of the) data with software, such as Biogeme, as mentioned in the fourth recommendation of the previous section.

5.3 Limitations

Since this research is bounded by time and money constraints, as well as a difference in field of expertise, there are a number of limitations to this thesis. Since the recommendations in the previous section are mainly informed by the limitations of this research, this section has the same lay-out as the recommendations section.

5.3.1 Limitations of the methodology

5.3.1.1 Limitations of data characteristics

In this thesis, a student sample is used to collect data. As mentioned, this can lead to atypical results, which is also the case in this thesis. Besides that, non-probability sampling is used, which means that results from this sample cannot be generalised to the whole population. However, since the Value of Distance has not been researched quantitatively, the goal was not to find results which could directly be used in praxis, but to form a basis from which future research can depart.

Participation in the survey was incentivised, which means that there is a chance that respondents only participated to get the reward. The use of SurveySwap is similar to this. Respondents who use this website can only get respondents themselves, by filling out others' surveys. Therefore there is a chance that responses from these participants are less reliable. Despite this, SurveySwap is used in order to increase the number of respondents.

5.3.1.2 Limitations of the selection of variables

The explanatory variables predominantly originate from Nicolau's (2008) research. However, in the BLR analysis it is found that some of these variables have no significant effect on the accuracy of the model. Besides that, the study is published in 2008 and it is likely that some of the variables used in this thesis are redundant, or that other variables which are not included in this thesis, can improve the accuracy of the models.

5.3.1.3 Limitations of the experimental design

The first limitation of the experimental design is the use of a Stated Preference design. This type of research design is common in the context of a thesis project, but a Stated Preference of Revealed Preference design (SP-of-RP) can increase the amount of data of a study. Similar to the recommendation about conducting a pilot study, the Revealed Preference part of the study is used to provide context (e.g. which attributes are important in destination choice) and the Stated Preference part is used to collect data more quickly. The only 'RP-part' in this thesis is the formula of average airplane ticket prices. Stated Preference does not necessarily mean reality and therefore the link between the results from a SP experiment and policy measures, for instance, is less strong.

The second limitation of the experimental design is that the levels of travel costs are based on a formula of average airplane ticket prices. This can yield biased results, since people who regularly travel by airplane perceive travel costs and absolute distance differently than car users.

The third limitation is about the use of an efficient design. Efficient designs are not meant to generate realistic choice options, but to create an as big as possible variance in attribute levels. Since prior parameters are based on own estimations, researcher bias could have occurred. Consulting an expert in this field could have prevented this. However, getting in touch with experts from outside of the Radboud University has proven to be difficult. Therefore this option was not used. The Value of Distance from this type of design is to be used with some caution, since it does not necessarily reflect reality.

Another limitation of the experimental design is the absence of an opt-out option. Due to the simplicity of the choice tasks and the goal of the research, this option is excluded from the research. However, an opt-out option can increase realism, since travellers in real life are not forced to pick a destination and can choose from more than three options.

The level of abstraction of the used attributes is another limitation of this thesis. Respondents are asked to imagine destinations based on the provided attribute levels. Since perceptions on distance vary a lot, there is a high degree of randomness in the results. However, in the long-haul design, this randomness cancels itself out.

Lastly, the inclusion of only two attributes means that the relative importance of each attribute is high. Of course this is also the case in discrete choice experiments with more attributes, but since only two attributes are used in this discrete choice experiment, the effects are even bigger.

5.3.2 Limitations of data analysis

The first limitation of the analysis is that a MNL analysis is executed to derive a Value of Distance. More advanced analyses, such as the Nested Logistic Regression and Mixed Logistic Regression are able to capture taste effects, which is more compatible with the goal of Peeters to explain *why* travellers are opting for more distant destinations.

Another limitation of the data analysis is that the MNL analysis does not include other explanatory variables (e.g. personal characteristics and the novelty-instrument). A BLR analysis is conducted to explain differences in preference based on these explanatory variables. However, a BLR does not capture effects of changes in attribute levels and the dependent variable is different from the MNL. In the MNL the dependent variable is the choice of option 1, 2, or 3, whereas the dependent variable of the BLR is the choice of destination (1) or not (0). The interpretation is different and therefore conclusions can only be made with extreme caution. However, the Value of Distance which is derived from a relatively simple MNL analysis of the long-haul model with only two attributes, does show results similar to the air travel industry's average. Therefore it is likely that a more advanced analysis with additional attributes could predict or explain the ever-increasing desire for distance, which makes this thesis a very useful contribution to a better understanding of travellers' trade-offs.

Bibliography

Ahn, M. J., & McKercher, B. (2015). The effect of cultural distance on tourism: A study of international visitors to Hong Kong. *Asia Pacific Journal of Tourism Research, 20(1), 94-113.*

Ankomah, P. K., Crompton, J. L., & Baker, D. (1996) Influence of Cognitive Distance in Vacation Choice. *Annals of Tourism Research 23:138–150.*

Ben-Akiva, M., Lerman, S.R., 1985. Discrete Choice Analysis. MIT Press, Cambridge, MA.

Ben-Akiva, M., McFadden, D., Gärling, T., Gopinath, D., Bolduc, D., Borsch-Supan, D., Delquie, P., Larichev, O., Morikawa, T., Polydoropoulou, A., Rao, V., 1999. Extended framework for modeling choice behavior. *Marketing Letters 10, 187–203.*

Boorstin, D. J. (1961). The image: A Guide to Pseudo-Events in America, New York: Harper & Row.

Britton, S. (1991). Tourism, capital and place: Towards a critical geography of tourism. *Environment and Planning D: Society and Space, 9(4), 451–478.*

CBS (2014). Bevolkingskernen in Nederland, 2011 [Residential Areas in The Netherlands]. Retrieved from https://www.cbs.nl/nl-nl/achtergrond/2014/13/bevolkingskernen-in-nederland-2011

CBS (2018, October 5th). Statline. Retrieved from https://statline.cbs.nl/StatWeb/publication/?PA=71450ned

Chorus, C. (2012). Random regret minimization: an overview of model properties and empirical evidence. *Transport reviews, 32(1), 75-92.*

Chorus, C. G., Arentze, T. A., & Timmermans, H. J. (2008). A random regret-minimization model of travel choice. *Transportation Research Part B: Methodological, 42(1), 1-18.*

Corner, S. (2009). Choosing the right type of rotation in PCA and EFA. *JALT testing & evaluation SIG newsletter, 13(3), 20-25.*

Creswell, J. W. (2013). *Research design: qualitative, quantitative, and mixed methods approaches.*

Crompton, J. L., & Kim, S.-S. (2001). The influence of cognitive distance in vacation choice. *Annals of Tourism Research, 28(2), 512-515.*

Bibliography

Dann, G. (2018). Why, oh why, do people travel abroad? In Prebensen, N. Chen, J. and Uysal, M. eds. *Creating Experience Value in Tourism, chapter 5*

Den Boer, A. (2015). Menselijke keuzes begrijpen en beïnvloeden [Understanding and influencing human choices].

Emberger, G., Shepherd, S.P., May, A.D., 2008. The effects of appraisal methodology on the specification of optimal urban transport strategies. *International Journal of Sustainable Transportation 2, 58–75.*

Eymann, A., and G. Ronning (1992). "Discrete Choice Analysis of Foreign Travel Demand." In *European Integration in the World Economy. Studies in International Economics and Institutions*, edited by H. J. Vosgerau. Berlin: Springer.

Foster, J. J., Barkus, E., & Yavorsky, C. (2005). Understanding and using advanced statistics: A practical guide for students. Sage.

Fowler, F. J. (2009). Survey Research Methods (4th ed.). Thousand Oaks, CA: Sage.

Garland, R. (1991). The mid-point on a rating scale: Is it desirable. *Marketing bulletin, 2(1), 66-70.*

Gärling, T., (1998). Behavioral assumptions overlooked in travel-choice modeling. In: *Ortuzar, J., Jara-Diaz, S., Hensher, D. (Eds.), Transport Modeling, pp. 3–18.* Pergamon, Oxford.

Gärling, T., Gillholm, R., Gärling, A., 1998. Reintroducing attitude theory in travel behavior research: the validity of an interactive interview procedure to predict car use. *Transportation 25, 147–167.*

Giddens, A. (1984). The constitution of society: Outline of the theory of structuration. Cambridge, UK: Polity Press.

Gollwitzer, P. M. (1999). Implementation intentions: strong effects of simple plans. *American psychologist, 54(7), 493.*

Grote Bosatlas. (2016). 55e Editie. Wolters-Noordhoff.

Gunn, C. A. (1994). Tourism planning. London: Taylor and Francis.

Bibliography

Hanks, R.R. (2011). Encyclopedia of Geography, Terms, Themes, and Concepts. Santa Barbara, CA: ABC-CLIO.

Hassan, Z. A., Schattner, P., & Mazza, D. (2006). Doing A Pilot Study: Why Is It Essential?. *Malaysian family physician : the official journal of the Academy of Family Physicians of Malaysia, 1(2-3), 70–73.*

Hensher, D. A., Rose, J. M. & Greene, W. H., 2005. Applied Choice analysis: A Primer. Cambridge: Cambridge University Press.

Hill, A. B., and R. E. Perkins (1985). Towards a Model of Boredom. *British Journal of Psychology 76:235-240.*

Hirschman, E. C. (1984). Experience seeking: a subjectivist perspective of consumption. *Journal of Business research, 12(1), 115-136.*

Hornby, A. S., Cowie, A. P., Gimson, A. C., & Hornby, A. S. (1974). *Oxford advanced learner's dictionary of current English (Vol. 1428).* Oxford: Oxford university press.

Hosmer Jr, D. W., Lemeshow, S., & Sturdivant, R. X. (2013). Applied logistic regression (Vol. 398). John Wiley & Sons.

Hu, Y., & Ritchie, J. B. (1993). Measuring destination attractiveness: A contextual approach. *Journal of travel research*, *32*(2)*, 25-34.*

Huber, J. and K. Zwerina (1996) The Importance of Utility Balance in Efficient Choice Designs. *Journal of Marketing Research 33, 307-317.*

IBM (n.d.). KMO and Bartlett's test. Retrieved from https://www.ibm.com/support/knowledgecenter/SSLVMB_26.0.0/statistics_casestudies_project_ddita/spss/tutorials/fac_telco_kmo_01.html

Jamal, T., & Lee, J. H. (2003). Integrating micro and macro approaches to tourist motivations: Toward an interdisciplinary theory. *Tourism Analysis, 8(1), 47-59.*

Johnson, R., & Orme, B. (2003). Getting the most from CBC. *Sawtooth Software Research Paper Series.*

Kahneman, D. & Tversky, A. (1979). Prospect Theory: An Analysis of decision under risk. *Econometrica, 47, 263-291.*

Bibliography

Kemperman, A. D., Borgers, A. W., Oppewal, H., & Timmermans, H. J. (2000). Consumer choice of theme parks: A conjoint choice model of seasonality effects and variety seeking behavior. *Leisure Sciences, 22(1), 1-18.*

Kenton, W. (2018). Investopedia: discretionary income. Retrieved from https://www.investopedia.com/terms/d/disposableincome.asp

Kim, J. O., & Mueller, C. W. (1978). Introduction to factor analysis: What it is and how to do it. Beverly Hills, CA: Sage.

Larsen, G. R., & Guiver, J. W. (2013). Understanding tourists' perceptions of distance: a key to reducing the environmental impacts of tourism mobility. *Journal of Sustainable Tourism, 21(7), 968–981.*

Lee, H. A., Guillet, B. D., Law, R., & Leung, R. (2012). Robustness of distance decay for international pleasure travelers: A longitudinal approach. *International Journal of Tourism Research, 14(5), 409-420.*

Leedy, P. & Ormrod, J. (2001). Practical research: Planning and design (7th ed.). Upper Saddle River, NJ: Merrill Prentice Hall. Thousand Oaks: SAGE Publications.

Lepp, A., & Gibson, H. (2008). Sensation seeking and tourism: Tourist role, perception of risk and destination choice. *Tourism Management, 29(4), 740-750.*

Lindberg, F., Hansen, A.H. and Eide, D. (2014). A multirelational approach for understanding consumer experiences within tourism. *Journal of Hospitality Marketing & Management, 23:5, 487-512.*

Lumsdon, L. & Page, S. (2004). Progress in transport and tourism research: Reformulating the transport-tourism interface and future research agendas. In L. Lumsdon & S. Page (Eds.), *Tourism and transport: Issues and agenda for the new millennium.* London: Elsevier.

MacCannell, D. (1973) Staged authenticity: arrangements of social space in tourist settings. *American Journal of Sociology 79 (3), 589-603.*

Mansfeld, Y. (1992). From motivation to actual travel. *Annals of tourism research, 19(3), 399-419.*

Mayo, E. J., & Jarvis, L. P. (1981). The psychology of leisure travel. Effective marketing and selling of travel services. CBI Publishing Company, Inc.

McKercher, B., Chan, A., & Lam, C. (2008). The impact of distance on international tourist movements. *Journal of Travel Research, 47(2), 208-224.*

McKercher, B., & Lew, A. A. (2004). Tourist flows and the spatial distribution of tourists. *A companion to tourism, 36.*

Mehrabian, A., Russel, J. A. (1973). A Measure of Arousal Seeking Tendency. *Environment and Behavior 5:315-333.*

Mehrabian, A., Russel, J. A. (1974). An Approach to Environmental Psychology. Cambridge MA: Massachusetts Institute of Technology.

Mieczkowski, Z. (1990). "World Trends in Tourism and Recreation." In *American University Studies Series XXV Geography, vol. 3.* New York: Peter Lang.

Mokhtarian, P. L., and I. Salomon (2001). "How Derived Is the Demand for Travel? Some Conceptual and Measurement Considerations," *Working Papers Series.* Institute of Transportation Studies, University of California, Davis.

NBTC (2018). Gastvrijheidseconomie kerncijfers 2018 [Key Figures Leisure Economy]. Retrieved from https://kerncijfers.nbtc.nl/nl/magazine/12053/825055/reisproces_-_vervoer.html

NBTC-NIPO (2018). ContinuVakantieOnderzoek [Continuous Vacation Research]. Retrieved from https://kerncijfers.nbtc.nl/nl/magazine/12053/825063/reisproces_-_boeken.html

Nicolau, J. (2008). Characterising tourist sensitivity to distance. *Journal of Travel Research, 47, 43–52.*

NRIT, CBS, NBTC, CELTH (2017). Trendrapport toerisme, recreatie en vrije tijd 2017 [Trend Report Tourism, Recreation, and Leisure 2017]. Retrieved from https://www.cbs.nl/nl-nl/publicatie/2017/47/trendrapport-toerisme-recreatie-en-vrije-tijd-2017

Olivier J.G.J. et al. (2017), Trends in global CO2 and total greenhouse gas emissions: 2017 report. PBL Netherlands Environmental Assessment Agency, The Hague.

Peeters, P. (2007). Mitigating tourism's contribution to climate change – An introduction. In P. Peeters (Ed.), *Tourism and climate change mitigation – Methods, greenhouse gas reductions and policies*. Breda: NHTV Academic Studies No. 6.

Bibliography

Peeters, P. (2010). Gestion de l'énergie Transport aérien et tourisme en Méditerranée [Energy Management of Air Transport and Tourism in the Mediterranean]. *Modélisation: méthodologie et sources de données*. Marseille: TEC.

Peeters, P. M. (2017). Tourism's impact on climate change and its mitigation challenges. How can tourism become 'climatically sustainable'? (PhD), Delft University of Technology, Delft.

Peeters, P., Szimba, E., & Duijnisveld, M. (2007). Major environmental impacts of European tourist transport. *Journal of Transport Geography, 15, 83–93.*

Piedmont R.L. (2014) Inter-item Correlations. In: Michalos A.C. (eds) *Encyclopedia of Quality of Life and Well-Being Research. Springer*, Dordrecht

Pirie, G. (2009). Distance. In R. Kitchin & N. Thrift (Eds.), *International encyclopedia of human geography (Vol. 1).* Oxford: Elsevier.

Plecher, H. (2019, June 19). Urbanization in the Netherlands 2017. Retrieved from https://www.statista.com/statistics/276724/urbanization-in-the-netherlands/

Prideaux, B. (2000). The role of transport in destination development. *Tourism Management, 21, 53–63.*

Pun-Cheng, L. S. (2016). Distance Decay. *International Encyclopedia of Geography: People, the Earth, Environment and Technology: People, the Earth, Environment and Technology, 1-5.*

Random Regret Minimisation (RRM). (n.d.). In *TU Delft Research Projects*. Retrieved from https://www.tudelft.nl/tbm/onderzoek/projecten/random-regret-minimization-model/

Rose, J. M., Bliemer, M. C., Hensher, D. A., & Collins, A. T. (2008). Designing efficient stated choice experiments in the presence of reference alternatives. *Transportation Research Part B: Methodological, 42(4), 395-406.*

S.G.T. Informe de la Secretaría General de Turismo (1992). "Las Vacaciones de los Españoles en 1992 [Vacation of Spanish travellers in 1992]." *Estudios Turísticos, 116:87–112.*

Sheller, M., Urry, J. (Eds) (2004). Tourism Mobilities: Places to Play, Places in Play (Routledge, London)

Sheller, M., & Urry, J. (2006). The new mobilities paradigm. *Environment and planning A, 38(2), 207-226.*

Small, K. A. (2012). Valuation of travel time. *Economics of transportation, 1(1-2), 2-14.*

Smock, C., & Holt, B. G. (1962). Children's reactions to novelty: An experimental study of" curiosity motivation.". *Child Development*.

Svenson, O., 1998. The perspective from behavioural decision theory on modelling travel choice. In: Gärling, T., Laitila, T., Westin, K. (Eds.), *Theoretical Foundations of Travel Choice Modelling, pp. 141–172,* Pergamon, Oxford.

Tabachnick, B. G., & Fidell, L. S. (2007). Using multivariate statistics(5th ed.). Upper Saddle River, NJ: Pearson Allyn & Bacon.

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International journal of medical education, 2, 53.*

Taylor, Ch. E., and D. M. Knudson (1973). "Area Preferences of Midwestern Campers." *Journal of Leisure Research, 5 (Spring): 39–48.*'

Train, K. (2003) Discrete Choice Methods with Simulation. Cambridge University Press, UK.

Tversky, A. & Kahneman, D. (1992). Advances in Prospect Theory: Cumulative Representation of Uncertainty. *Journal of Risk and Uncertainty, vol. 5, pp. 297-323.*

UCLA Institute for Digital Research & Education (n.d.(a)). Principal Component Analysis: SPSS annotated output. Retrieved from https://stats.idre.ucla.edu/spss/output/principal_components/

UCLA Institute for Digital Research & Education (n.d.(b)). What does Cronbach's alpha mean? Retrieved from https://stats.idre.ucla.edu/spss/faq/what-does-cronbachs-alpha-mean/

UNWTO. (2014). Glossary of Tourism Terms. Retrieved March 27, 2019, from http://cf.cdn.unwto.org/sites/all/files/Glossary+of+terms.pd

UNTWO-UNEP-WMO (2008). Climate change and tourism: Responding to global challenges. Madrid.

Uriely, N. (1997). Theories of modern and postmodern tourism. *Annals of tourism research, 24(4), 982-985.*

Uysal, M., Li, X. and Sirakaya-Turk, E. (2008) Push–pull dynamics in travel decisions. In: *Haemoon, O. (ed.) Handbook of Hospitality Marketing Management.* Butterworth-Heinemann, Oxford, pp. 412–439.

Van Cranenburgh, S., Chorus, C. G., & Van Wee, B. (2014). Vacation behaviour under high travel cost conditions – a stated preference of revealed preference approach. *Tourism Management, 43, 105-118.*

Van Cranenburgh, S., & Collins, A. T. (2019). New software tools for creating stated choice experimental designs efficient for regret minimisation and utility maximisation decision rules. *Journal of Choice Modelling.*

Van de Kaa, E. J. (2004). Prospect Theory and the Understanding of Travellers' Choice Behaviour. *CD-ROM Proceedings of the 8th International TRAIL Congres*s, Rotterdam.

Van de Kaa, E. J. (2010). Prospect Theory and Choice Behaviour Strategies: Review and Synthesis of Concepts from Social and Transport sciences. EJTIR, 10, 4.

Van der Werf, M., Schonewille, G. & Stoof, R. (2017). Nibud Studentenonderzoek 2017 [Nibud Student Research 2017]. Retrieved from https://www.nibud.nl/beroepsmatig/nibud-studentenonderzoek-2017/

Van Vuuren, C., & Slabbert, E. (2012). Travel motivations and behaviour of tourists to a South African resort. *Tourism & Management Studies, 295-304.*

Van Wee, B., 2012. How suitable is CBA for the ex-ante evaluation of transport projects and policies? a discussion from the perspective of ethics. *Transport Policy 19, 1–7.*

Veldwijk, J., Lambooij, M. S., de Bekker-Grob, E. W., Smit, H. A., & de Wit, G. A. (2014). The effect of including an opt-out option in discrete choice experiments. *PloS one, 9(11),* e111805.

Verschuren, P. (1994) De probleemstelling voor een onderzoek [The problem formulation for research] (5e druk). Utrecht: Het Spectrum.

Welker, W. I. (1961) An Analysis of Exploratory and Play Behavior in Animals. In *Functions of Varied Experience, D. W. Fiske and S. R. Maddi, eds., pp. 43-69.* Homewood IL: Dorsey Press.

Bibliography

Williams, C. (2007). Research methods. *Journal of business & economic research*, *5*(3), 65-72.

Wood, R. E. (2007). Cruise ships: deterritorialized destinations. In *Tourism and Transport (pp. 148-161)*. Routledge.

Wrigley, N. (2002). Categorical data analysis for geographers and environmental sciences.

Appendices

Appendix A

A.1 Tourism transport Continuum

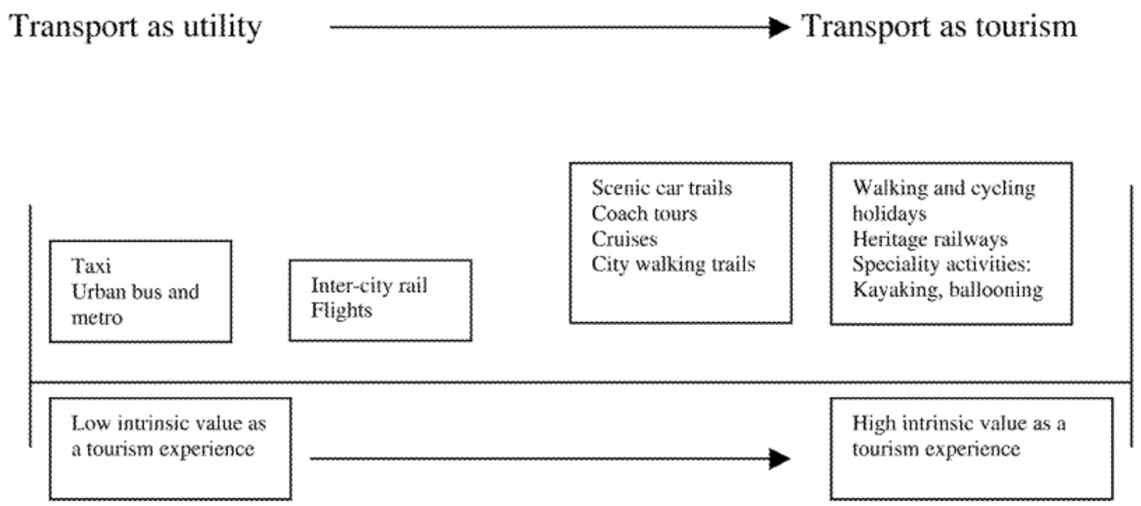

Figure 1.2: The tourism transport continuum.

Appendix B

B.1: Quantitative, Mixed, and Qualitative Research Methods

Table 1.3 Quantitative, Mixed, and Qualitative Methods

Quantitative Methods	Mixed Methods	Qualitative Methods
Pre-determined	Both predetermined and emerging methods	Emerging methods
Instrument based questions	Both open- and closed-ended questions	Open-ended questions
Performance data, attitude data, observational data, and census data	Multiple forms of data drawing on all possibilities	Interview data, observation data, document data, and audiovisual data
Statistical analysis	Statistical and text analysis	Text and image analysis
Statistical interpretation	Across databases interpretation	Themes, patterns interpretation

Figure 0.1

Appendix C

C.1: Reliability Analysis Routine Dimension

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,731	,762	7

Table 0.1: Cronbach's alpha 'Change from Routine'

Inter-Item Correlation Matrix							
	ROUTINE 1	ROUTINE 2	ROUTINE 3	ROUTINE 4	ROUTINE 5	ROUTINE 6	ROUTINE 7
ROUTINE1	1,000	,364	,324	,517	,312	,342	,200
ROUTINE2	**,364**	1,000	,254	,325	,352	,215	,277
ROUTINE3	**,324**	**,254**	1,000	,409	,297	,319	,285
ROUTINE4	**,517**	**,325**	**,409**	1,000	,374	,458	,254
ROUTINE5	**,312**	**,352**	**,297**	**,374**	1,000	,263	,221
ROUTINE6	**,342**	**,215**	**,319**	**,458**	**,263**	1,000	,240
ROUTINE7	**,200**	**,277**	**,285**	**,254**	**,221**	**,240**	1,000

Table 0.2: Correlation Matrix 'Change from Routine'

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	**Cronbach's Alpha if Item Deleted**
ROUTINE1	10,19	4,278	,507	,331	**,699**
ROUTINE2	10,35	3,957	,443	,231	**,700**
ROUTINE3	10,36	3,774	,477	,241	**,692**
ROUTINE4	10,23	3,942	,587	,418	**,676**
ROUTINE5	10,29	3,991	,449	,226	**,699**
ROUTINE6	10,34	3,838	,451	,253	**,698**
ROUTINE7	10,82	3,455	,373	,149	**,741**

Table 0.3: Cronbach's Alpha if item deleted 'Change from Routine'

C.2: Reliability Analysis Dimension Thrill

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,821	,828	7

Table 0.4: Cronbach's Alpha dimension 'Thrill'

Inter-Item Correlation Matrix							
	THRILL 1	THRILL 2	THRILL 3	THRILL 4	THRILL 5	THRILL 6	THRILL 7
THRILL1	1,000	,405	,562	,396	,382	,433	,398
THRILL2	,405	1,000	,286	,389	,445	,532	,487
THRILL3	,562	,286	1,000	,380	,264	,298	,317
THRILL4	,396	,389	,380	1,000	,359	,442	,457
THRILL5	,382	,445	,264	,359	1,000	,452	,350
THRILL6	,433	,532	,298	,442	,452	1,000	,537
THRILL7	,398	,487	,317	,457	,350	,537	1,000

Table 0.5: Correlation Matrix dimension 'Thrill'

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
THRILL1	8,26	8,973	,615	,432	,788
THRILL2	7,96	9,623	,591	,394	,794
THRILL3	8,60	9,268	,491	,348	,812
THRILL4	8,19	9,209	,564	,329	,797
THRILL5	8,15	9,077	,515	,297	,808
THRILL6	7,91	9,577	,631	,446	,789
THRILL7	8,00	9,601	,589	,395	,794

Table 0.6: Cronbach's Alpha if item deleted dimension 'Thrill'

C.3: Reliability Analysis Dimension Boredom Alleviation

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,688	,688	3

Table 0.7: Cronbach's Alpha dimension 'Boredom Alleviation'

Inter-Item Correlation Matrix			
	BOREDOM1	BOREDOM2	BOREDOM3
BOREDOM1	1,000	,358	,517
BOREDOM2	**,358**	1,000	,397
BOREDOM3	**,517**	**,397**	1,000

Table 0.8: Correlation Matrix dimension 'Boredom Alleviation'

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	**Cronbach's Alpha if Item Deleted**
BOREDOM1	2,19	2,031	,522	,295	**,568**
BOREDOM2	1,84	2,173	,433	,189	**,682**
BOREDOM3	2,05	2,000	,554	,319	**,527**

Table 0.9: Cronbach's Alpha if item deleted dimension 'Boredom Alleviation'

C.4: Reliability Analysis Dimension Surprise

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,708	,708	3

Table 0.10: Cronbach's Alpha dimension 'Surprise'

Inter-Item Correlation Matrix			
	SURPRISE1	SURPRISE2	SURPRISE3
SURPRISE1	1,000	,402	,444
SURPRISE2	**,402**	1,000	,496
SURPRISE3	**,444**	**,496**	1,000

Table 0.11: Correlation Matrix dimension 'Surprise'

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	**Cronbach's Alpha if Item Deleted**
SURPRISE1	2,11	1,865	,490	,241	**,662**
SURPRISE2	2,37	1,728	,531	,287	**,612**
SURPRISE3	2,57	1,547	,562	,317	**,573**

Table 0.12: Cronbach's Alpha if item deleted dimension 'Surprise'

C.5: Factor Analysis

Component Correlation Matrix					
Component	1	2	3	4	5
1	1,000	,254	,207	,280	-,201
2	,254	1,000	,252	,164	-,100
3	,207	,252	1,000	,133	-,133
4	,280	,164	,133	1,000	-,172
5	-,201	-,100	-,133	-,172	1,000
Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalization.					

Table 0.13: Correlation Matrix Oblimin Rotation

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**,839**
Bartlett's Test of Sphericity	Approx. Chi-Square	1959,169
	df	190
	Sig.	**,000**

Table 0.14: KMO and Bartlett's Test

Communalities		
	Initial	Extraction
ROUTINE1	1,000	,622
ROUTINE2	1,000	,459
ROUTINE3	1,000	,484
ROUTINE4	1,000	,660
ROUTINE5	1,000	,424
ROUTINE6	1,000	,485
ROUTINE7	1,000	,415
THRILL1	1,000	,621
THRILL2	1,000	,602
THRILL3	1,000	,703
THRILL4	1,000	,491
THRILL5	1,000	,498
THRILL6	1,000	,696
THRILL7	1,000	,549
BOREDOM1	1,000	,632
BOREDOM2	1,000	,519
BOREDOM3	1,000	,686
SURPRISE1	1,000	,621
SURPRISE2	1,000	,643
SURPRISE3	1,000	,761
Extraction Method: Principal Component Analysis.		

Table 0.15: Communalities

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5,309	26,545	26,545	5,309	26,545	26,545	3,187	15,934	15,934
2	2,101	10,507	37,051	2,101	10,507	37,051	2,759	13,794	29,728
3	1,586	7,930	44,981	1,586	7,930	44,981	1,964	9,821	39,549
4	1,538	7,690	52,672	1,538	7,690	52,672	1,932	9,662	49,210
5	1,037	5,187	57,858	1,037	5,187	57,858	1,730	8,648	57,858
6	,917	4,584	62,443						
7	,828	4,141	66,584						
8	,748	3,741	70,325						
9	,724	3,621	73,946						
10	,655	3,273	77,219						
11	,620	3,098	80,317						
12	,562	2,808	83,126						
13	,537	2,685	85,811						
14	,505	2,527	88,338						
15	,448	2,240	90,578						
16	,416	2,082	92,660						
17	,407	2,036	94,697						
18	,396	1,978	96,675						
19	,336	1,682	98,356						
20	,329	1,644	100,000						

Extraction Method: Principal Component Analysis.

Table 0.16: Percentage of Variance Explained

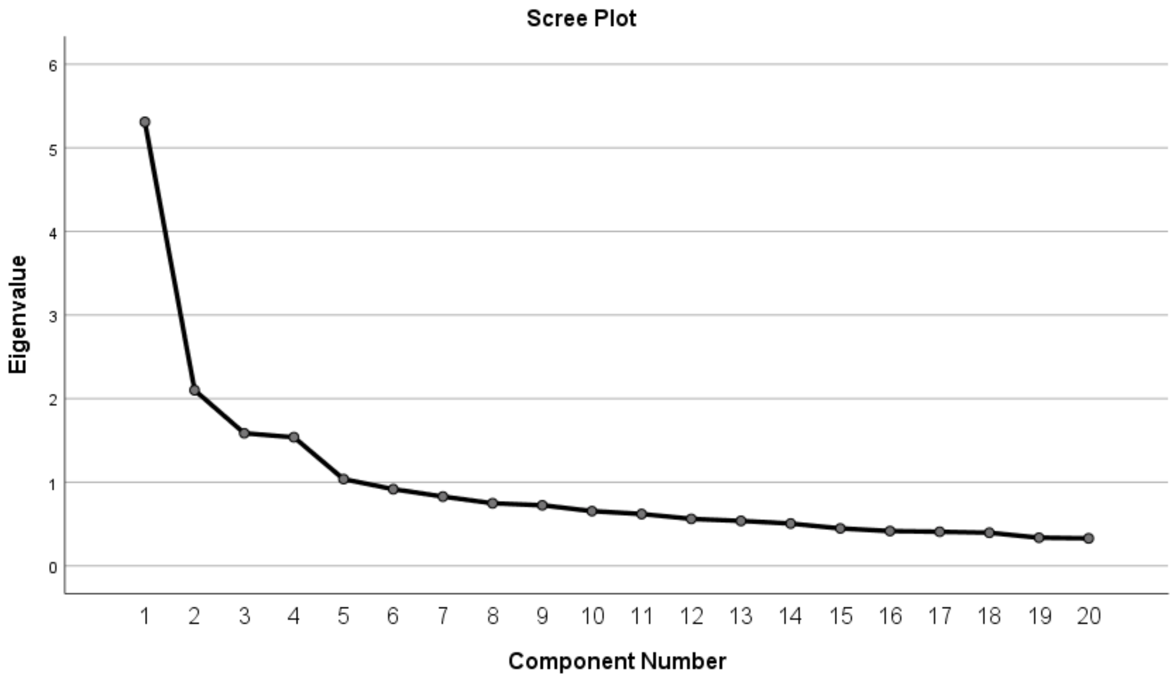

Figure 0.2: Scree Plot of Explained Variance

Rotated Component Matrix[a]					
	Component				
	1	2	3	4	5
ROUTINE1		,670			
ROUTINE2	,419	,457			
ROUTINE3		,640			
ROUTINE4		,772			
ROUTINE5		,629			
ROUTINE6		,653			
ROUTINE7		,330			,458
THRILL1	,481				,598
THRILL2	,760				
THRILL3					,775
THRILL4	,568				,353
THRILL5	,688				
THRILL6	,823				
THRILL7	,671				
BOREDOM1			,787		
BOREDOM2			,687		
BOREDOM3			,785		
SURPRISE1				,732	
SURPRISE2				,659	,389
SURPRISE3				,862	

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 6 iterations.

Table 0.17: Rotated Component Matrix

Appendix D

D.1: Final Version Survey

Since it is expected that both readers are able to read in Dutch, the survey is not translated back to English. The different coloured sentences below give more insight in the content of the survey.

In black: main content of the survey, as visible to the respondent

In blue: options used in Qualtrics to improve the quality of the survey.

In red: Coding for each answer.

Welkom bij de survey over reiskeuzes.

Bedankt dat u mee wilt doen aan dit onderzoek. Het onderzoek gaat over reiskeuzes en mogelijke verklaringen daarvoor. De vragenlijst zal zo'n 5 tot 10 minuten in beslag nemen. Ga bij alle antwoordmogelijkheden uit van een vakantie van minimaal anderhalve week. De antwoorden en gegevens worden vertrouwelijk behandeld.

Zijn verre bestemmingen een optie voor je lange vakantie? (qua interesse en/of middelen, zoals geld en beschikbare tijd)

Ja (1) / Nee (0)

De volgende reeks antwoordmogelijkheden bestaat uit combinaties van afstand en reiskosten. Probeer de antwoorden te baseren op uw eigen spontane idee van wat de afstanden betekenen.
Ga bij de reiskosten uit van de retourprijs in euro's van het vervoermiddel dat u normaal voor een lange vakantie gebruikt en reken de kosten tijdens de vakantie (eten, activiteiten etc.) niet mee. De afstand is voor een enkele reis in kilometers.

Antwoordmogelijkheden in willekeurige volgorde.

1. Welke bestemming zou u kiezen?

A)	750 km;	220 euro (1)
B)	1000 km;	300 euro (2)
C)	1250 km;	320 euro (3)

2.

A)	1250 km;	220 euro (1)
B)	1500 km;	300 euro (2)
C)	1750 km;	320 euro (3)

3.

A)	750 km;	220 euro (1)
B)	1000 km;	240 euro (2)
C)	1250 km;	320 euro (3)

4.

A)	750 km;	220 euro (1)
B)	1000 km;	240 euro (2)
C)	1500 km;	320 euro (3)

5.

A)	1250 km;	220 euro (1)
B)	1500 km;	240 euro (2)
C)	2000 km;	320 euro (3)

6.

A)	1500 km;	220 euro (1)
B)	1750 km;	300 euro (2)
C)	2000 km;	320 euro (3)

7.

A)	1000 km;	220 euro (1)
B)	1250 km;	260 euro (2)
C)	1750 km;	320 euro (3)

8.

A)	1250 km;	220 euro (1)
B)	1500 km;	240 euro (2)
C)	1750 km;	320 euro (3)

9.

A)	750 km;	220 euro (1)
B)	1000 km;	260 euro (2)
C)	1500 km;	320 euro (3)

10.

A) 1000 km; 220 euro (1)

B) 1250 km; 240 euro (2)

C) 1500 km; 320 euro (3)

De volgende reeks wordt alleen gestart wanneer de respondent interesse en/of middelen heeft voor een long-haul reis.

11.

A) 5500 km; 540 euro (1)

B) 6000 km; 700 euro (2)

C) 7500 km; 740 euro (3)

12.

A) 5000 km; 540 euro (1)

B) 5500 km; 660 euro (2)

C) 7500 km; 740 euro (3)

13.

A) 5000 km; 540 euro (1)

B) 5500 km; 580 euro (2)

C) 7500 km; 740 euro (3)

14.

A) 5000 km; 540 euro (1)

B) 5500 km; 660 euro (2)

C) 7000 km; 740 euro (3)

15.

A) 5000 km; 540 euro (1)

B) 6000 km; 700 euro (2)

C) 6500 km; 740 euro (3)

16.

A) 5500 km; 540 euro (1)

B) 6000 km; 660 euro (2)

C) 7500 km; 740 euro (3)

17.

A)	5000 km;	540 euro (1)
B)	6000 km;	620 euro (2)
C)	7500 km;	740 euro (3)

18.

A)	5500 km;	540 euro (1)
B)	6500 km;	700 euro (2)
C)	7000 km;	740 euro (3)

19.

A)	5000 km;	540 euro (1)
B)	5500 km;	700 euro (2)
C)	7000 km;	740 euro (3)

20.

A)	6000 km;	540 euro (1)
B)	7000 km;	700 euro (2)
C)	7500 km;	740 euro (3)

Geef aan in hoeverre je het eens bent met de volgende stellingen. Ga wederom bij iedere stelling uit van een lange vakantie.

Stellingen in willekeurige volgorde. Woorden in hoofdletters in blauw zijn categorieën van het novelty-instrument. Niet zichtbaar voor de respondent.

CHANGE FROM ROUTINE

Ik vind het leuk om naar bestemmingen te gaan waar ik nieuwe dingen kan ontdekken. Oneens (0)/ Neutraal (1)/ Eens (2)

Ik wil nieuwe en andere dingen doen op mijn vakantie .
Oneens (0)/ Neutraal (1)/ Eens (2)

Ik wil tijdens mijn vakantie gewoontes en culturen ervaren die anders zijn dan in mijn normale omgeving.
Oneens (0)/ Neutraal (1)/ Eens (2)

Ik geniet van de nieuwe omgeving die ervoor zorgt dat ik nieuwe dingen kan ontdekken tijdens mijn vakantie.
Oneens (0)/ Neutraal (1)/ Eens (2)

Op mijn ideale vakantie zie ik dingen die ik nog nooit heb gezien.

Oneens (0)/ Neutraal (1)/ Eens (2)

Tijdens mijn vakantie wil ik een gevoel van ontdekken ervaren.

Oneens (0)/ Neutraal (1)/ Eens (2)

Ik reis graag naar avontuurlijke plekken.

Oneens (0)/ Neutraal (1)/ Eens (2)

Ik heb een sterke drang om het onontdekte te ontdekken.

Oneens (0)/ Neutraal (1)/ Eens (2)

THRILL

Ik vind het soms leuk om dingen te doen die een beetje eng zijn.

Oneens (0)/ Neutraal (1)/ Eens (2)

Ik geniet van uitdagende dingen tijdens mijn vakantie.

Oneens (0)/ Neutraal (1)/ Eens (2)

Soms is het leuk om een beetje bang te zijn tijdens mijn vakantie.

Oneens (0)/ Neutraal (1)/ Eens (2)

Ik geniet van een gevoel van gevaar tijdens een vakantie.

Oneens (0)/ Neutraal (1)/ Eens (2)

Ik zou wel op een vlot in het midden van een wilde rivier willen zitten tijdens mijn vakantie.

Oneens (0)/ Neutraal (1)/ Eens (2)

Ik geniet van activiteiten die sensatie bieden.

Oneens (0)/ Neutraal (1)/ Eens (2)

Ik zoek avontuur op mijn vakantie.

Oneens (0)/ Neutraal (1)/ Eens (2)

BOREDOM ALLEVIATION

Ik wil reizen om mijn verveling te verlichten.

Oneens (0)/ Neutraal (1)/ Eens (2)

Ik heb het gevoel dat ik zo nu en dan op vakantie moet om te voorkomen dat ik in een sleur kom.

Oneens (0)/ Neutraal (1)/ Eens (2)

Ik wil reizen omdat ik verveeld raak door veel routinewerk.

Oneens (0)/ Neutraal (1)/ Eens (2)

SURPRISE

Ik plan mijn vakantie niet tot in detail, omdat dat het onverwachtse wegneemt.

Oneens (0)/ Neutraal (1)/ Eens (2)

Ik hou van vakanties die onvoorspelbaar zijn.

Oneens (0)/ Neutraal (1)/ Eens (2)

Ik ga graag op een trip zonder geplande routes in mijn hoofd.

Oneens (0)/ Neutraal (1)/ Eens (2)

Stel, bij een loterij hebt u een surprise-vakantie gewonnen voor een strandbestemming. Echter, u moet wel een keuze maken om de reis te krijgen. Welke van de onderstaande bestemmingen zou u dan kiezen?

a. Strandbestemming, 2 weken, appartement vlakbij het strand, 1000km van Nederland (1)
b. Strandbestemming, 2 weken, appartement vlakbij het strand, 2500km van Nederland (2)
c. Strandbestemming, 2 weken, appartement vlakbij het strand, 5000km van Nederland (3)
d. Strandbestemming, 2 weken, appartement vlakbij het strand, 10000km van Nederland (4)

Ik ga voor iedere trip bewust naar een bestemming waar ik nog niet eerder ben geweest.

Eens (1) / Oneens (0)

Hoeveel inwoners heeft de woonplaats waar u woonachtig bent?

Minder dan 50,000 (1)/ 50,000-100,000 (2)/ 100,000-250,000 (3)/ 250,000-500,000 (4)/ meer dan 500,000 (5)

Maakt u voor uw lange reis normalerwijs gebruik van een reisorganisatie die uw reis samenstelt?

Ja (1) / Nee (0)

Welke vervoerswijze heeft u voor uw laatste lange vakantie gebruikt?
Auto (eigen/geleend/huur) (1)/ Trein (2)/ Fiets (3)/ Boot (eigen/ferry/cruise) (4)/ Touringcar, pendelbus (5)/ Te voet (6)/ Vliegtuig (7)/ Overig (8)

Welk vervoermiddel gebruikt u normalerwijs voor een lange reis?
Indien de vervoerswijze van uw laatste lange reis dezelfde is als uw gewoonlijke, vul dan hetzelfde antwoord in.
Auto (eigen/geleend/huur) (1)/ Trein (2)/ Fiets (3)/ Boot (eigen/ferry/cruise) (4)/ Touringcar, pendelbus (5)/ Te voet (6)/ Vliegtuig (7)/ Overig (8)

Hoeveel heeft u maandelijks te besteden?
Reken uw totale inkomen uit werk inclusief bijdrage ouders, studiefinanciering en/of lening minus vaste uitgaven, zoals huur en zorgverzekering.
Minder dan €250 (1)/ €250-€500 (2)/ €500-€750 (3)/ €750-€1000 (4)/ meer dan €1000 (5)

Geef op deze pagina aan of u kans wilt maken op €25 en/of u de resultaten wilt ontvangen. Klik hierna door naar de volgende pagina om af te sluiten.
Dit is het einde van de vragenlijst. Nogmaals bedankt voor het invullen. Wilt u kansmaken op €25,-, vul dan hieronder uw e-mailadres in.

Het doel van dit onderzoek is om te achterhalen welke waarde mensen hechten aan afstand in hun lange vakantie en of er bepaalde factoren invloed op hebben. Wilt u de resultaten van dit onderzoek ontvangen, vul dan hieronder uw e-mailadres in.

Appendix E

E.1: Input Latent Gold

Dependent			**Dependent**			
selected	Nominal	3		**selected**	Nominal	3
1	1			**1**	1	
2	2			**2**	2	
3	3			**3**	3	
2 Attributes				**2 Attributes**		
afstandSH	Numeric	7		**afstandLH**	Numeric	6
750	1	750		**5000**	1	5000
1000	2	1000		**5500**	2	5500
1250	3	1250		**6000**	3	6000
1500	4	1500		**6500**	4	6500
1750	5	1750		**7000**	5	7000
2000	6	2000		**7500**	6	7500
prijsSH	Numeric	5		**prijsLH**	Numeric	6
220	1	220		**540**	1	540
240	2	240		**580**	2	580
260	3	260		**620**	3	620
280	4	280		**660**	4	660
300	5	300		**700**	5	700
320	6	320		**740**	6	740

Table 0.18: Input Latent Gold

Appendix F

F.1 Tables Short-Haul Model

Classification Table[a,b]					
	Observed		Predicted		
			selectedSH		Percentage Correct
			,00	1,00	
Step 0	selectedSH	,00	5140	0	100,0
		1,00	2570	0	,0
	Overall Percentage				**66,7**

a. Constant is included in the model.

b. The cut value is ,500

Table 0.19: Percentage of Predicted Choices Empty Short-Haul Model

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	620,531	74	,000
	Block	620,531	74	,000
	Model	**620,531**	**74**	**,000**

Table 0.20: Omnibus Tests Short-Haul

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	9194,517[a]	,077	,107

a. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found.

Table 0.21: Pseudo R² Measures Short-Haul

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	43,530	8	,000

Table 0.22: Hosmer and Lemeshow Test Short-Haul

Classification Table[a]

Observed			Predicted selectedSH ,00	Predicted selectedSH 1,00	Percentage Correct
Step 1	selectedSH	,00	4766	374	92,7
		1,00	2082	488	19,0
	Overall Percentage				68,1

a. The cut value is ,500

Table 0.23: Percentage of Predicted Choices full Short-Haul model

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B) Lower	Upper
Step 1[a]	afstandSH	,000	,001	,073	1	,787	1,000	,999	1,001
	prijsSH	,006	,006	1,148	1	,284	1,007	,995	1,019
	Q59			221,343	3	,000			
	Q59(1)	7,675	,603	162,224	1	,000	2154,006	661,177	7017,396
	Q59(2)	4,600	,576	63,883	1	,000	99,531	32,212	307,535
	Q59(3)	3,546	,406	76,325	1	,000	34,685	15,654	76,853
	Q45(1)	1,011	,346	8,545	1	,003	2,748	1,395	5,413
	Q46			69,854	4	,000			
	Q46(1)	,925	,682	1,841	1	,175	2,522	,663	9,595
	Q46(2)	4,268	,785	29,589	1	,000	71,355	15,332	332,076
	Q46(3)	3,323	,660	25,354	1	,000	27,750	7,612	101,166
	Q46(4)	1,003	,929	1,166	1	,280	2,728	,441	16,863
	Q47(1)	,272	,559	,238	1	,626	1,313	,439	3,925
	Q57			19,247	5	,002			
	Q57(1)	-1,267	,503	6,352	1	,012	,282	,105	,755
	Q57(2)	,645	,903	,510	1	,475	1,906	,325	11,179
	Q57(3)	415,939	50718,456	,000	1	,993	4,367E+180	,000	.
	Q57(4)	-3,960	1,255	9,957	1	,002	,019	,002	,223
	Q57(5)	2,566	1,971	1,695	1	,193	13,018	,273	620,392
	Q48			26,729	5	,000			
	Q48(1)	1,922	1,027	3,502	1	,061	6,836	,913	51,179
	Q48(3)	413,716	50718,456	,000	1	,993	4,728E+179	,000	.

	Q48(4)	,763	1,910	,160	1	,690	2,145	,051	90,521
	Q48(5)	-1,173	,489	5,748	1	,017	,309	,119	,807
	Q48(6)	8,446	2,607	10,496	1	,001	4655,062	28,114	770785,947
	Q49			36,857	4	,000			
	Q49(1)	-,217	,658	,108	1	,742	,805	,222	2,927
	Q49(2)	1,440	,526	7,498	1	,006	4,220	1,506	11,828
	Q49(3)	-1,135	,584	3,776	1	,052	,321	,102	1,010
	Q49(4)	-,350	,641	,298	1	,585	,705	,201	2,476
	NovTot	-,130	,030	19,163	1	,000	,878	,829	,931
	Q59 * afstandSH			,081	3	,994			
	Q59(1) by afstandSH	,000	,000	,004	1	,952	1,000	,999	1,001
	Q59(2) by afstandSH	,000	,000	,007	1	,933	1,000	,999	1,001
	Q59(3) by afstandSH	,000	,000	,064	1	,800	1,000	1,000	1,000
	Q59 * prijsSH			139,561	3	,000			
	Q59(1) by prijsSH	-,029	,003	103,525	1	,000	,972	,966	,977
	Q59(2) by prijsSH	-,017	,003	39,592	1	,000	,983	,978	,988
	Q59(3) by prijsSH	-,013	,002	45,452	1	,000	,987	,984	,991
	Q45(1) by afstandSH	,000	,000	,002	1	,962	1,000	1,000	1,000
	Q45(1) by prijsSH	-,004	,002	5,123	1	,024	,996	,993	1,000
	Q46 * afstandSH			1,382	4	,847			
	Q46(1) by afstandSH	,000	,000	,865	1	,352	1,000	1,000	1,001
	Q46(2) by afstandSH	,000	,000	,183	1	,669	1,000	,999	1,001
	Q46(3) by afstandSH	,000	,000	1,129	1	,288	1,000	1,000	1,001
	Q46(4) by afstandSH	,000	,000	,373	1	,541	1,000	,999	1,001
	Q46 * prijsSH			46,299	4	,000			
	Q46(1) by prijsSH	-,005	,003	2,375	1	,123	,995	,989	1,001

	Q46(2) by prijsSH	-,017	,004	20,525	1	,000	,984	,977	,991
	Q46(3) by prijsSH	-,014	,003	20,545	1	,000	,986	,980	,992
	Q46(4) by prijsSH	-,005	,004	1,355	1	,244	,995	,987	1,003
	Q47(1) by afstandSH	,000	,000	,003	1	,956	1,000	,999	1,001
	Q47(1) by prijsSH	-,001	,003	,146	1	,703	,999	,994	1,004
	Q57 * afstandSH			,426	5	,995			
	Q57(1) by afstandSH	,000	,000	,191	1	,662	1,000	,999	1,000
	Q57(2) by afstandSH	,000	,000	,000	1	,985	1,000	,999	1,001
	Q57(3) by afstandSH	,000	5,348	,000	1	1,000	1,000	,000	35643,841
	Q57(4) by afstandSH	,000	,001	,032	1	,859	1,000	,999	1,001
	Q57(5) by afstandSH	,000	,001	,268	1	,604	1,000	,998	1,001
	Q57 * prijsSH			12,789	5	,025			
	Q57(1) by prijsSH	,005	,002	4,865	1	,027	1,005	1,001	1,010
	Q57(2) by prijsSH	-,002	,004	,312	1	,576	,998	,989	1,006
	Q57(3) by prijsSH	-1,804	220,647	,000	1	,993	,165	,000	1,075E+187
	Q57(4) by prijsSH	,015	,006	6,684	1	,010	1,015	1,004	1,027
	Q57(5) by prijsSH	-,007	,009	,615	1	,433	,993	,975	1,011
	Q48 * afstandSH			,704	5	,983			
	Q48(1) by afstandSH	,000	,001	,105	1	,746	1,000	,999	1,001
	Q48(3) by afstandSH	,000	5,348	,000	1	1,000	1,000	,000	35646,203
	Q48(4) by afstandSH	-,001	,001	,352	1	,553	,999	,998	1,001
	Q48(5) by afstandSH	,000	,000	,005	1	,941	1,000	1,000	1,000
	Q48(6) by afstandSH	-,001	,001	,222	1	,638	,999	,997	1,002
	Q48 * prijsSH			16,012	5	,007			
	Q48(1) by prijsSH	-,008	,005	2,689	1	,101	,992	,983	1,002
	Q48(3) by prijsSH	-1,796	220,647	,000	1	,994	,166	,000	1,084E+187

Q48(4) by prijsSH	,000	,009	,000	1	,989	1,000	,983	1,017
Q48(5) by prijsSH	,004	,002	3,503	1	,061	1,004	1,000	1,009
Q48(6) by prijsSH	-,028	,012	5,420	1	,020	,972	,949	,996
Q49 * afstandSH			,366	4	,985			
Q49(1) by afstandSH	,000	,000	,331	1	,565	1,000	,999	1,000
Q49(2) by afstandSH	,000	,000	,196	1	,658	1,000	,999	1,000
Q49(3) by afstandSH	,000	,000	,195	1	,659	1,000	,999	1,000
Q49(4) by afstandSH	,000	,000	,166	1	,683	1,000	,999	1,000
Q49 * prijsSH			23,430	4	,000			
Q49(1) by prijsSH	,002	,003	,302	1	,583	1,002	,996	1,008
Q49(2) by prijsSH	-,005	,002	3,882	1	,049	,995	,990	1,000
Q49(3) by prijsSH	,005	,003	3,033	1	,082	1,005	,999	1,010
Q49(4) by prijsSH	,002	,003	,380	1	,538	1,002	,996	1,008
NovTot by afstandSH	,000	,000	,000	1	,982	1,000	1,000	1,000
NovTot by prijsSH	,000	,000	11,997	1	,001	1,000	1,000	1,001
Constant	-2,280	1,293	3,110	1	,078	,102		

a. Variable(s) entered on step 1: afstandSH, prijsSH, Q59, Q45, Q46, Q47, Q57, Q48, Q49, NovTot, Q59 * afstandSH , Q59 * prijsSH , Q45 * afstandSH , Q45 * prijsSH , Q46 * afstandSH , Q46 * prijsSH , Q47 * afstandSH , Q47 * prijsSH , Q57 * afstandSH , Q57 * prijsSH , Q48 * afstandSH , Q48 * prijsSH , Q49 * afstandSH , Q49 * prijsSH , NovTot * afstandSH , NovTot * prijsSH .

Table 0.24: Output Binary Logistic Regression Including Interaction Terms

F.2: Tables Long-Haul Model

Classification Table[a,b]					
			Predicted		
			selectedLH		Percentage
	Observed		,00	1,00	Correct
Step 0	selectedLH	,00	5140	0	100,0
		1,00	2570	0	,0
	Overall Percentage				**66,7**

a. Constant is included in the model.

b. The cut value is ,500

Table 0.25: Percentage of Predicted Choices Empty Long-Haul Model

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	1450,600	74	,000
	Block	1450,600	74	,000
	Model	1450,600	74	**,000**

Table 0.26: Omnibus Tests Long-Haul

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	8364,449[a]	**,172**	**,238**

a. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found.

Table 0.27: Pseudo R^2 Measures Long-Haul

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	14,020	8	**,081**

Table 0.28: Hosmer and Lemeshow Test Long-Haul

Classification Table[a]

Observed			Predicted: selectedLH ,00	Predicted: selectedLH 1,00	Predicted: Percentage Correct
Step 1	selectedLH	,00	4622	518	89,9
		1,00	1612	958	37,3
	Overall Percentage				72,4

a. The cut value is ,500

Table 0.29: Percentage of Predicted Choices Full Long-Haul Model

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B) Lower	Upper
Step 1[a]	afstandLH	,001	,001	6,039	1	,014	1,001	1,000	1,002
	prijsLH	-,018	,006	10,196	1	,001	,982	,971	,993
	Q59			164,284	3	,000			
	Q59(1)	7,016	,801	76,664	1	,000	1114,153	231,682	5357,944
	Q59(2)	6,749	,784	74,135	1	,000	853,469	183,634	3966,641
	Q59(3)	3,962	,502	62,395	1	,000	52,540	19,660	140,406
	Q45(1)	1,001	,422	5,611	1	,018	2,720	1,188	6,224
	Q46			36,837	4	,000			
	Q46(1)	1,307	,775	2,847	1	,092	3,695	,809	16,869
	Q46(2)	,203	,903	,051	1	,822	1,225	,209	7,186
	Q46(3)	3,197	,747	18,296	1	,000	24,465	5,653	105,878
	Q46(4)	2,585	1,084	5,687	1	,017	13,259	1,585	110,934
	Q47(1)	,056	,668	,007	1	,934	1,057	,285	3,918
	Q57			24,732	5	,000			
	Q57(1)	,766	,616	1,550	1	,213	2,152	,644	7,190
	Q57(2)	-2,341	1,122	4,349	1	,037	,096	,011	,869
	Q57(3)	472,504	56443,482	,000	1	,993	1,607E+205	,000	.
	Q57(4)	11,767	2,931	16,113	1	,000	128899,468	412,150	40313207,347
	Q57(5)	-2,708	2,365	1,312	1	,252	,067	,001	6,866
	Q48			8,489	5	,131			
	Q48(1)	,277	1,377	,040	1	,841	1,319	,089	19,618

	Q48(3)	455,191	56443,482	,000	1	,994	4,864E+197	,000	.
	Q48(4)	475,595	39652,440	,000	1	,990	3,535E+206	,000	.
	Q48(5)	-1,587	,603	6,934	1	,008	,205	,063	,667
	Q48(6)	-,568	3,211	,031	1	,860	,567	,001	306,401
	Q49			29,528	4	,000			
	Q49(1)	-2,491	,777	10,268	1	,001	,083	,018	,380
	Q49(2)	,914	,632	2,091	1	,148	2,495	,722	8,618
	Q49(3)	,860	,690	1,553	1	,213	2,363	,611	9,135
	Q49(4)	,398	,769	,268	1	,605	1,489	,330	6,718
	NovTot	-,095	,037	6,717	1	,010	,909	,846	,977
	Q59 * afstandLH			10,194	3	,017			
	Q59(1) by afstandLH	-,001	,000	6,028	1	,014	,999	,999	1,000
	Q59(2) by afstandLH	,000	,000	2,912	1	,088	1,000	,999	1,000
	Q59(3) by afstandLH	,000	,000	4,309	1	,038	1,000	,999	1,000
	Q59 * prijsLH			9,794	3	,020			
	Q59(1) by prijsLH	-,005	,003	4,057	1	,044	,995	,990	1,000
	Q59(2) by prijsLH	-,007	,003	5,826	1	,016	,993	,988	,999
	Q59(3) by prijsLH	-,003	,002	2,837	1	,092	,997	,994	1,000
	Q45(1) by afstandLH	,000	,000	,099	1	,753	1,000	1,000	1,000
	Q45(1) by prijsLH	-,002	,001	1,801	1	,180	,998	,995	1,001
	Q46 * afstandLH			5,543	4	,236			
	Q46(1) by afstandLH	,000	,000	,898	1	,343	1,000	1,000	1,001
	Q46(2) by afstandLH	,000	,000	,325	1	,568	1,000	1,000	1,001
	Q46(3) by afstandLH	,000	,000	2,922	1	,087	1,000	1,000	1,001
	Q46(4) by afstandLH	,001	,000	3,614	1	,057	1,001	1,000	1,001
	Q46 * prijsLH			22,035	4	,000			

	Q46(1) by prijsLH	-,004	,003	2,749	1	,097	,996	,991	1,001
	Q46(2) by prijsLH	-,002	,003	,384	1	,535	,998	,992	1,004
	Q46(3) by prijsLH	-,009	,002	12,800	1	,000	,991	,986	,996
	Q46(4) by prijsLH	-,011	,004	7,384	1	,007	,989	,982	,997
	Q47(1) by afstandLH	,000	,000	,327	1	,567	1,000	1,000	1,001
	Q47(1) by prijsLH	-,001	,002	,310	1	,577	,999	,994	1,003
	Q57 * afstandLH			8,308	5	,140			
	Q57(1) by afstandLH	,000	,000	3,332	1	,068	1,000	,999	1,000
	Q57(2) by afstandLH	,001	,000	2,652	1	,103	1,001	1,000	1,001
	Q57(3) by afstandLH	,000	10,920	,000	1	1,000	1,000	,000	1972486003,509
	Q57(4) by afstandLH	,000	,001	,087	1	,768	1,000	,998	1,002
	Q57(5) by afstandLH	-,001	,001	2,649	1	,104	,999	,998	1,000
	Q57 * prijsLH			9,518	5	,090			
	Q57(1) by prijsLH	,002	,002	1,150	1	,284	1,002	,998	1,006
	Q57(2) by prijsLH	-,002	,004	,328	1	,567	,998	,989	1,006
	Q57(3) by prijsLH	-,846	139,650	,000	1	,995	,429	,000	3,185E+118
	Q57(4) by prijsLH	-,022	,011	4,288	1	,038	,978	,957	,999
	Q57(5) by prijsLH	,015	,007	4,269	1	,039	1,015	1,001	1,029
	Q48 * afstandLH			4,656	5	,459			
	Q48(1) by afstandLH	,000	,000	,005	1	,942	1,000	,999	1,001
	Q48(3) by afstandLH	,000	10,920	,000	1	1,000	1,000	,000	1972067507,691
	Q48(4) by afstandLH	,000	7,687	,000	1	1,000	1,000	,000	3495900,416
	Q48(5) by afstandLH	,000	,000	,578	1	,447	1,000	,999	1,000
	Q48(6) by afstandLH	-,002	,001	4,278	1	,039	,998	,996	1,000

Q48 * prijsLH			7,520	5	,185			
Q48(1) by prijsLH	,000	,005	,001	1	,975	1,000	,990	1,010
Q48(3) by prijsLH	-,816	139,650	,000	1	,995	,442	,000	3,283E+118
Q48(4) by prijsLH	-,847	98,374	,000	1	,993	,429	,000	2,332E+83
Q48(5) by prijsLH	,004	,002	3,439	1	,064	1,004	1,000	1,008
Q48(6) by prijsLH	,019	,009	4,205	1	,040	1,019	1,001	1,038
Q49 * afstandLH			8,571	4	,073			
Q49(1) by afstandLH	-,001	,000	6,954	1	,008	,999	,999	1,000
Q49(2) by afstandLH	,000	,000	1,499	1	,221	1,000	,999	1,000
Q49(3) by afstandLH	,000	,000	,171	1	,679	1,000	,999	1,000
Q49(4) by afstandLH	,000	,000	1,251	1	,263	1,000	,999	1,000
Q49 * prijsLH			24,133	4	,000			
Q49(1) by prijsLH	,010	,003	14,741	1	,000	1,010	1,005	1,015
Q49(2) by prijsLH	,001	,002	,206	1	,650	1,001	,997	1,005
Q49(3) by prijsLH	,000	,002	,031	1	,859	1,000	,995	1,004
Q49(4) by prijsLH	,002	,003	,603	1	,438	1,002	,997	1,007
NovTot by afstandLH	,000	,000	,404	1	,525	1,000	1,000	1,000
NovTot by prijsLH	,000	,000	2,965	1	,085	1,000	1,000	1,000
Constant	2,845	1,610	3,125	1	,077	17,209		

a. Variable(s) entered on step 1: afstandLH, prijsLH, Q59, Q45, Q46, Q47, Q57, Q48, Q49, NovTot, Q59 * afstandLH , Q59 * prijsLH , Q45 * afstandLH , Q45 * prijsLH , Q46 * afstandLH , Q46 * prijsLH , Q47 * afstandLH , Q47 * prijsLH , Q57 * afstandLH , Q57 * prijsLH , Q48 * afstandLH , Q48 * prijsLH , Q49 * afstandLH , Q49 * prijsLH , NovTot * afstandLH , NovTot * prijsLH .

Table 0.30: Output Binary Logistic Regression Long-Haul

Appendix G

G.1 Descriptive Statistics Novelty-Instrument

The novelty-instrument is added to the survey to possibly account for the desire for distance. In the dataset, the 20 statements are added up and transformed into a new variable denoted as: 'Total'. This variable puts the level of novelty-seeking characteristics in a continuum, ranging from novelty-avoiding (relatively close to 0) and novelty-seeking (relatively close to 40). In Table 0.31 the main statistics of this variable are represented. The mean level of novelty-seeking characteristics is 28.24, which indicates that in general, respondents lean more towards novelty-seeking than to novelty-avoiding. Since there cannot be extreme values in this sample, the median is only slightly higher, at 29. The lowest score in this sample is 4, which belongs to only one respondent. Oppositely, the highest score is 40, the maximum score, and this score is achieved by 9 respondents.

Statistics

total

N	Valid	330
	Missing	0
Mean		**28,24**
Median		**29,00**
Std. Deviation		6,801
Minimum		4
Maximum		40

Table 0.31: Mean and Median Novelty-Instrument

G.2: Descriptive Statistics Personal Characteristics

The first question after the discrete choice experiment and novelty-instrument is the choice of surprise vacation. This question was added for 'safety', in case the Value of Distance analysis yielded no significant and/or notable results. In Table 0.32 an overview of the given answers is provided. More than half of the respondents (53.3%) opted for the farthest option (10,000km) and almost 75 per cent of respondents picked either one of the two farthest options. Although it was mandatory to answer this question and it does not vary in, or include any other preferential variables (such as travel time, type of vacation, level of luxury etc.), these results hint at the existence of a Value of Distance. A choice of free surprise trips will rarely happen, but holding all, but one, variable constant, it indicates that respondents do see additional utility in additional distance.

Choice of Surprise Vacation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1000km	42	12,7	12,7	12,7
	2500km	45	13,6	13,6	26,4
	5000km	67	20,3	20,3	46,7
	10000km	176	53,3	53,3	100,0
	Total	330	100,0	100,0	

Table 0.32: Frequency Table Choice of Surprise Vacation

Variety-seeking was added to the survey to possibly account for a desire for distance. According to the sample of this thesis, the number of variety-seekers (visiting a different destination every trip) is relatively similar to that of variety-avoiders. 178 out of the 330 respondents purposely visit a different destination, which is 53.9%. However, of this group, 146 respondents also consider long-haul destinations for a vacation, whereas only 32 respondents do not (Table 0.33). This could indicate that respondents who are willing and/or able to go on long-haul trips are more likely to visit a different destination each trip.

Variety-Seeking

Count

		Ik ga iedere trip bewust naar een bestemming waar ik nog niet eerder ben geweest.		
		Oneens	Eens	Total
Zijn verre bestemmingen (buiten Europa) voor u een optie voor een lange vakantie? (qua interesse en/of middelen, zoals geld en beschikbare tijd)	Nee	**41**	**32**	73
	Ja	**111**	**146**	257
Total		152	178	330

Table 0.33: Cross Table Variety-Seeking and Willingness/Ability of Long-Haul Travel

The size of the city of residence was added to the survey, since it is assumed that urbanites have a stronger need for relaxation (more on this in Section 3.5.5). The large majority of respondents lives in a medium to large sized city (more than 50,000 citizens, Table 0.34). This resonates with Plecher's (2019) findings that 91.08% of Dutch citizens live in cities. Since an urban area of more than 10,000 people is considered a city in the Netherlands, it is likely that the sample is a relatively good representation of the Dutch population.

Size of City

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Minder dan 50.000	100	30,3	30,3	30,3
	50.000 - 100.000	32	9,7	9,7	40,0
	100.000 - 250.000	159	48,2	48,2	88,2
	250.000 - 500.000	17	5,2	5,2	93,3
	Meer dan 500.000	22	6,7	6,7	100,0
	Total	330	100,0	100,0	

Table 0.34: Frequency Table Size of City

The use of intermediaries was added to the survey, since it was assumed that booking through an intermediary is mostly frequently done for complex trips, usually to distant destinations. However, only 10.3% does make use of intermediaries (Table 0.35). This is somewhat similar to NBTC-NIPO's (2018) findings. These findings indicate that 40% of trips by Dutch travellers is independently organised and another 57% of travellers independently book their accommodation. Less than 3 per cent of travellers book some form of package holidays. The majority of respondents who use intermediaries also considers long-haul destinations for a trip (Table 0.36). Oppositely, the group of respondents that does consider long-haul destinations and does not make use of intermediaries, is substantially larger than any other group, as can be seen in Table 0.36.

Use of Intermediaries

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Nee	296	89,7	89,7	89,7
	Ja	34	10,3	10,3	100,0
	Total	330	100,0	100,0	

Table 0.35: Frequency Table Use of Intermediaries

Zijn verre bestemmingen (buiten Europa) voor u een optie voor een lange vakantie? (qua interesse en/of middelen, zoals geld en beschikbare tijd) * Maakt u voor een lange reis normalerwijs gebruik van een reisorganisatie die uw reis samenstelt? (pakketreis) Crosstabulation

Count

		Maakt u voor een lange reis normalerwijs gebruik van een reisorganisatie die uw reis samenstelt? (pakketreis)		
		Nee	Ja	Total
Zijn verre bestemmingen (buiten Europa) voor u een optie voor een lange vakantie? (qua interesse en/of middelen, zoals geld en beschikbare tijd)	Nee	65	8	73
	Ja	231	26	257
Total		296	34	330

Table 0.36: Cross Table Use of Intermediaries and Willingness/Ability of Long-Haul Travel

The last used and usual mode of transport were added, since the physical and monetary effort associated with travelling, differs between different modes of transport. Frequency tables for both survey questions are merged for convenience. From Table 0.37 it is clear that the large majority of respondents travel by airplane, during their last trip (70.9%), as well as usually (69.4%). Across the two survey questions, approximately 20 per cent of respondents travel by car and the remaining 10 per cent is accounted for by the other modes of transport. These shares differ substantially from NRIT et al.'s (2017) figures. These figures indicate that cars are the most frequently used mode of transport among Dutch travellers. However, the sample in this thesis consists of students. Therefore this difference is unsurprising, since it can be assumed that the share of students that own a car is substantially lower than that of the non-student Dutch population.

Mode of transport Last Trip / Usual Trip

		Frequency Last Trip	Percent Last Trip	Frequency Usual Trip	Percent Usual Trip
Valid	Auto (eigen/geleend/gehuurd)	69	20,9	80	24,2
	Trein	14	4,2	13	3,9
	Fiets	1	,3	3	,9
	Boot (eigen/ferry/cruise)	2	,6	-	-
	Touringcar, pendelbus	8	2,4	2	,6
	Te voet	2	,6	2	,6
	Vliegtuig	234	70,9	229	69,4
	Overig	-	-	1	,3
	Total	330	100,0	330	100,0

Table 0.37: Frequency Table Last Used and Usual Mode of Transport

Lastly, monthly disposable income was added to the survey, since it is assumed that respondents with a relatively high income associate travel costs with relatively less disutility than respondents with a lower income. From Table 0.38 it becomes clear that most respondents have a disposable income of between €250-€500 per month. Van der Werf et al. (2017) estimated the average income of students at €919 per month. However, this is the spendable income. Therefore it is difficult to compare the results from the sample with the Dutch average.

Monthly Disposable income					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Minder dan €250	54	16,4	16,4	16,4
	€250 - €500	133	40,3	40,3	56,7
	€500 - €750	66	20,0	20,0	76,7
	€750 - €1000	39	11,8	11,8	88,5
	Meer dan €1000	38	11,5	11,5	100,0
	Total	330	100,0	100,0	

Table 0.38: Frequency Table Monthly Disposable Income

G.3: Scatterplots Descriptive Statistics Short-Haul Model

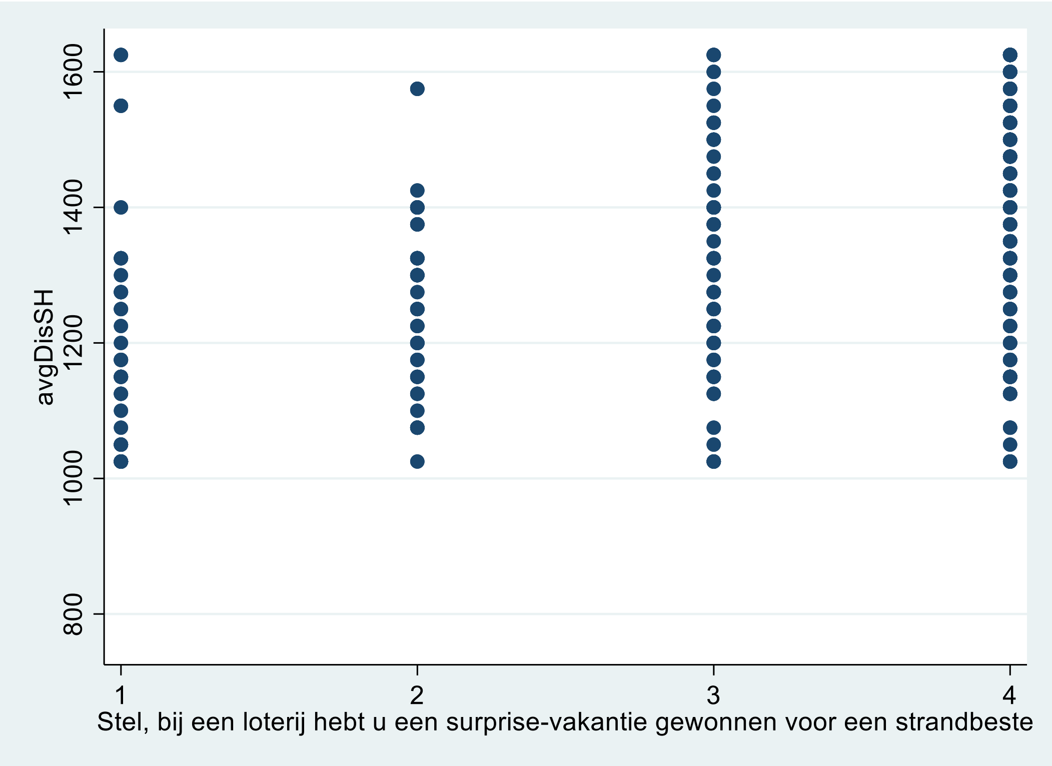

Figure 0.3: Scatterplot Surprise Vacation and Average Distance Short-Haul Model

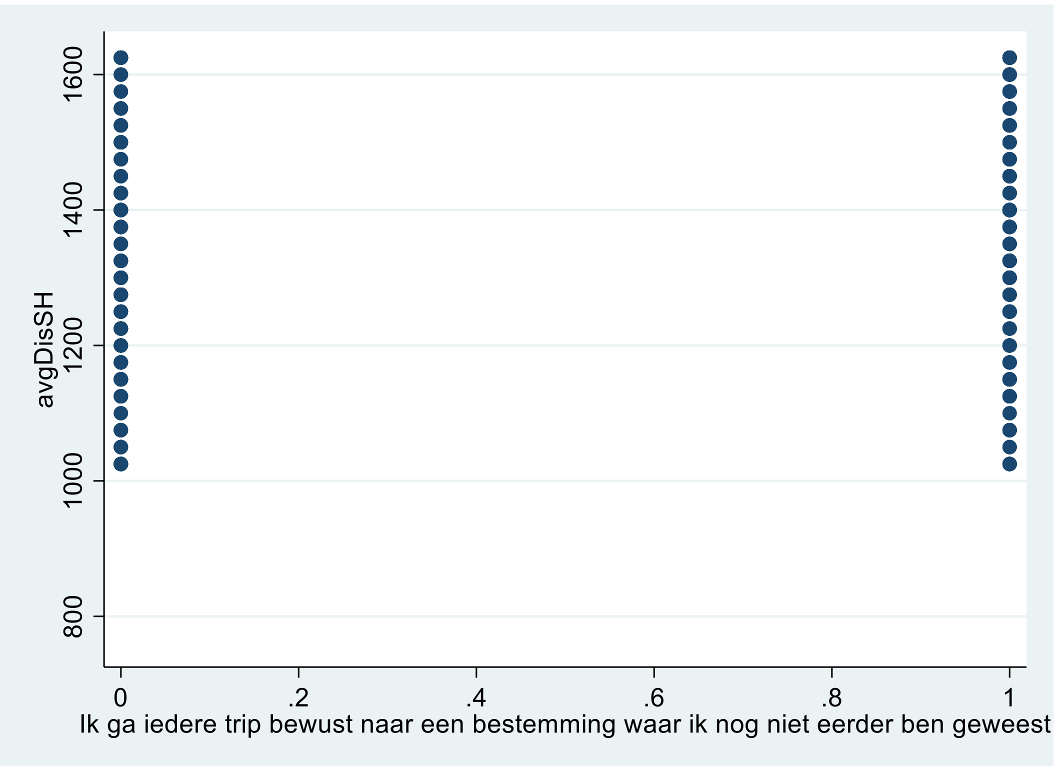

Figure 0.4: Scatterplot Variety-Seeking and Average Distance Short-Haul Model

Figure 0.5: Scatterplot Size of City and Average Distance Short-Haul Model

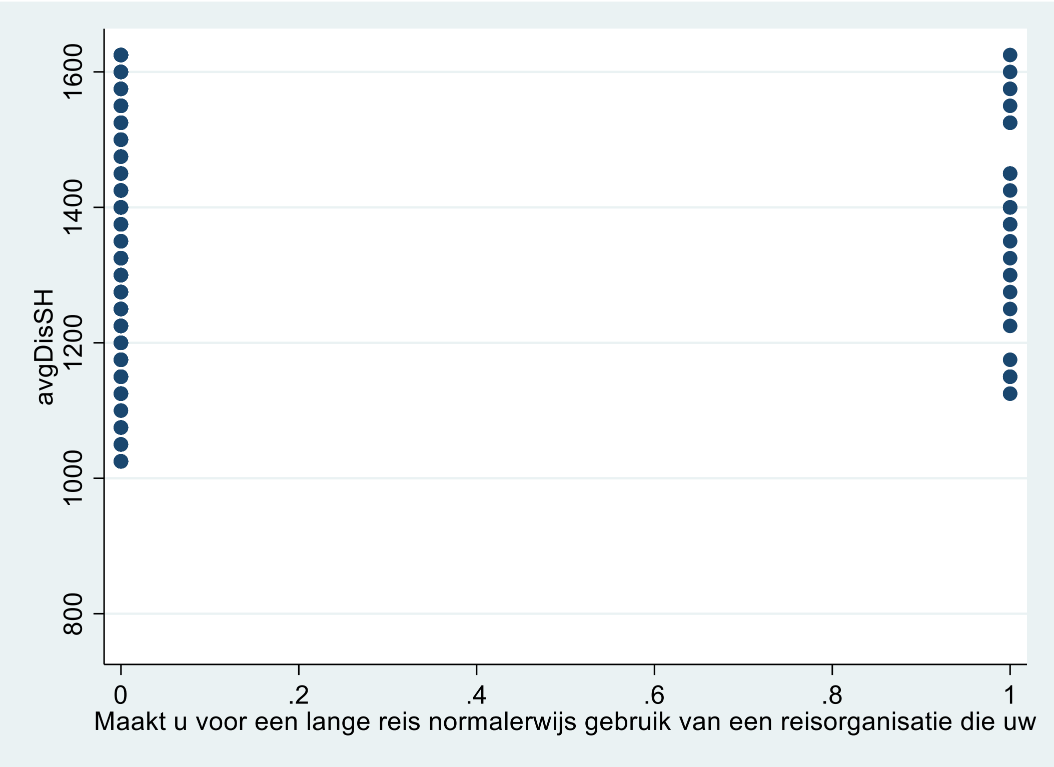

Figure 0.6: Use of Intermediaries and Average Distance Short-Haul Model

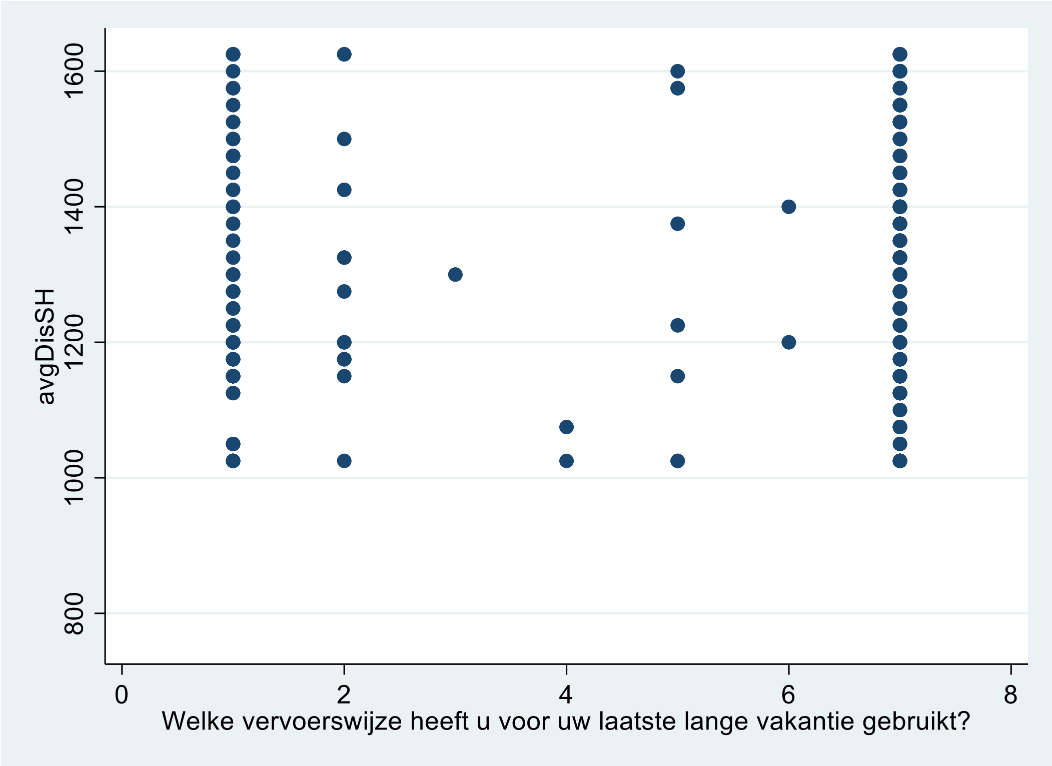

Figure 0.7: Scatterplot Last Used Mode of Transport and Average Distance Short-Haul Model

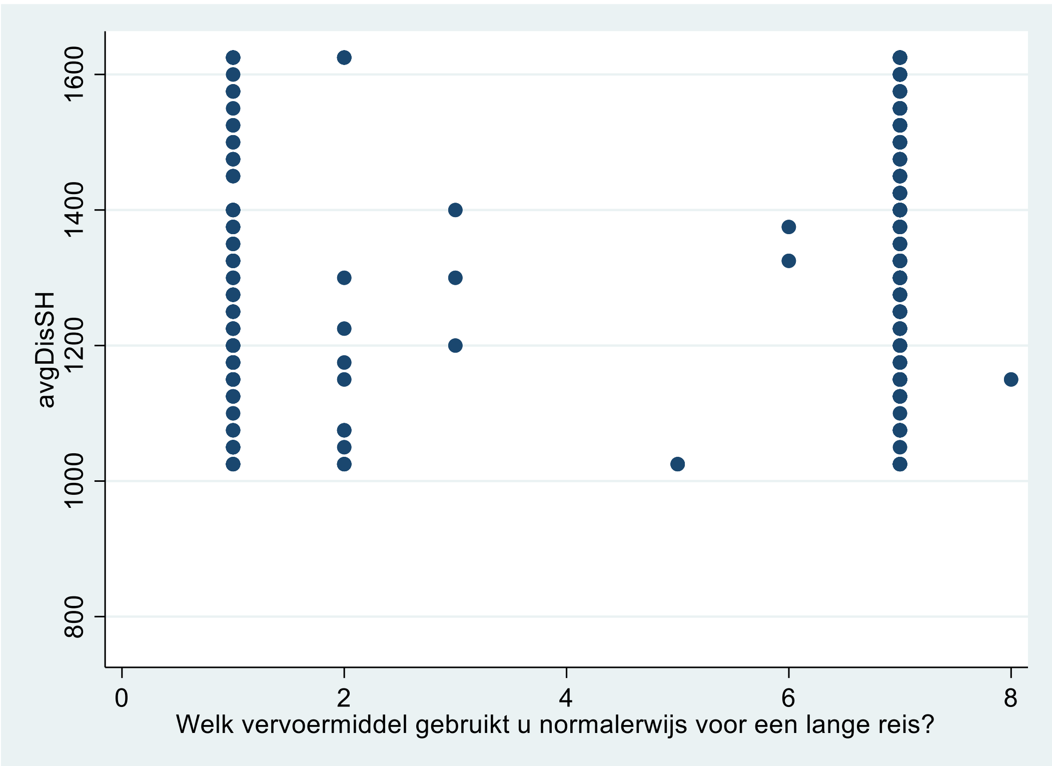

Figure 0.8: Scatterplot Usual Mode of Transport and Average Distance Short-Haul Model

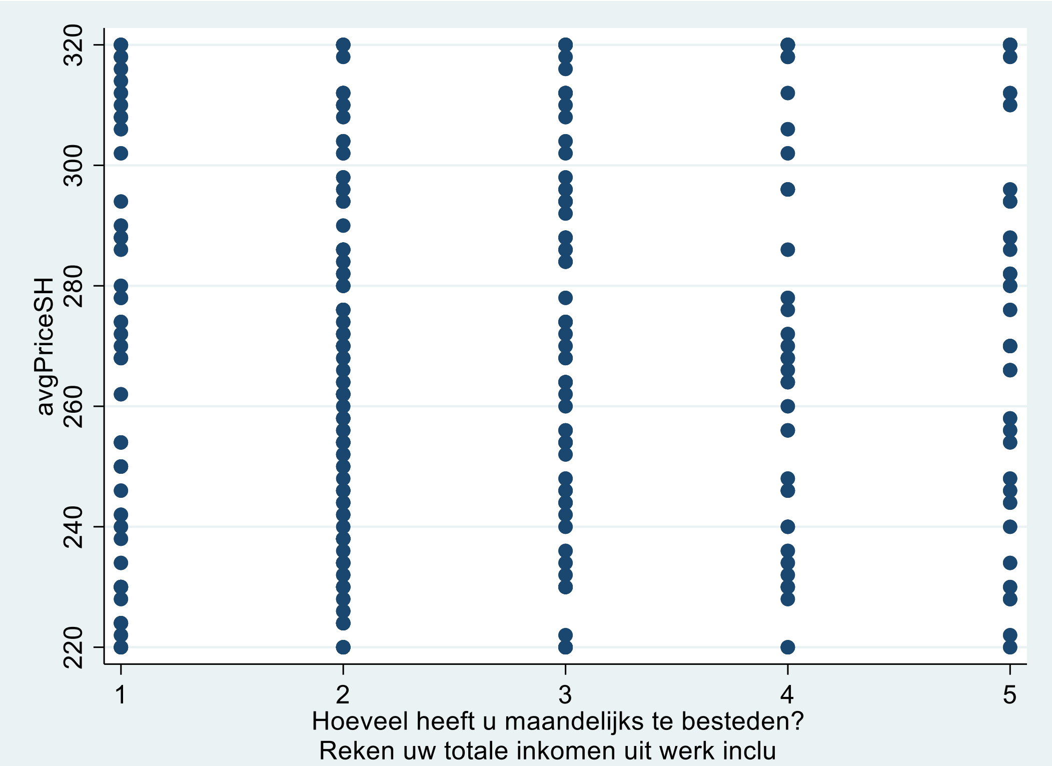

Figure 0.9: Scatterplot Monthly Income and Average Travel Costs Short-Haul Model

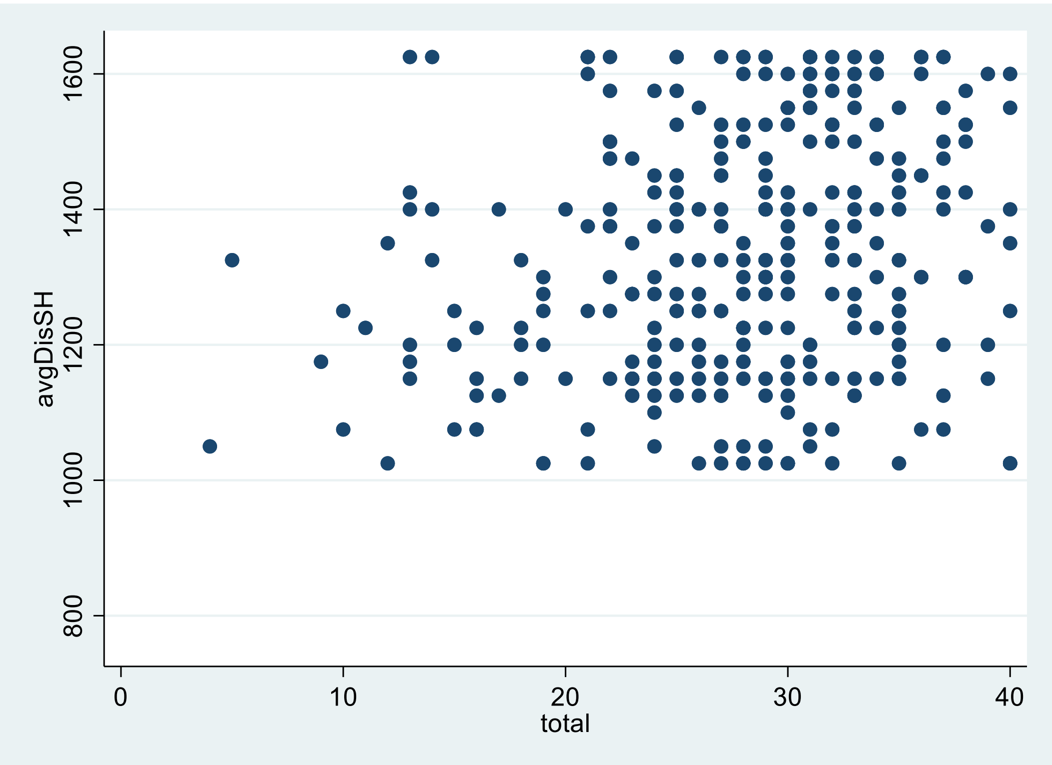

Figure 0.10: Scatterplot Novelty-Seeking and Average Distance Short-Haul Model

G.4: Scatterplots Descriptive Statistics Long-Haul Model

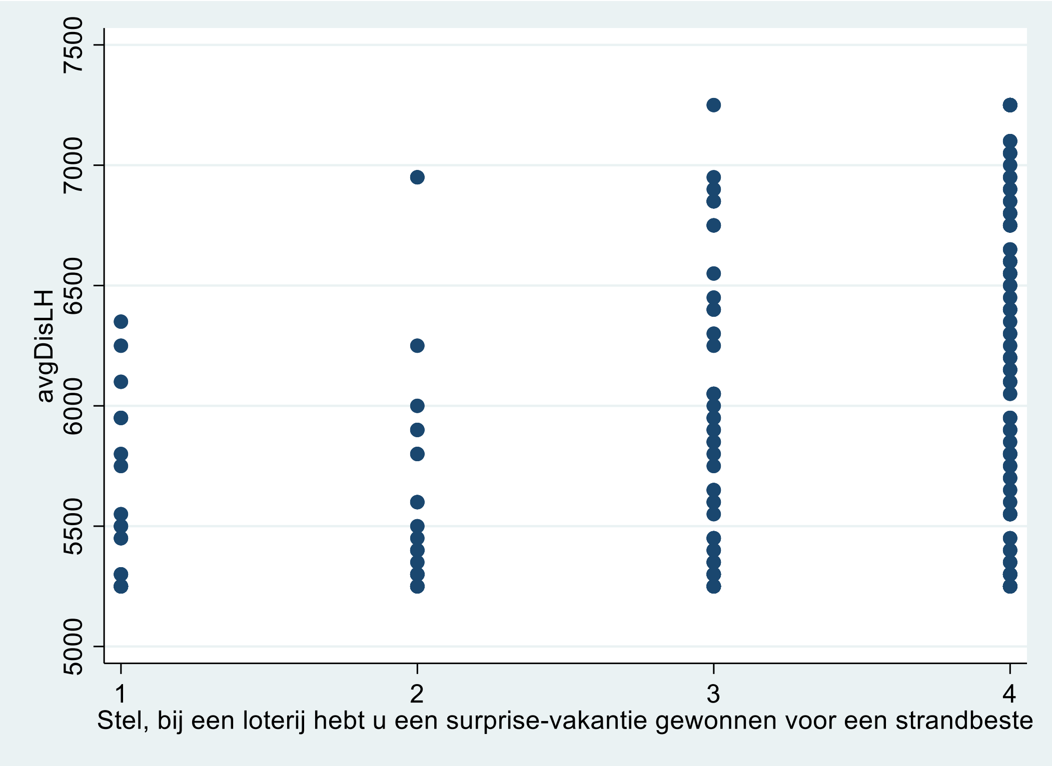

Figure 0.11: Scatterplot Surprise Vacation and Average Distance Long-Haul Model

Figure 0.12: Scatterplot Variety-Seeking and Average Distance Long-Haul Model

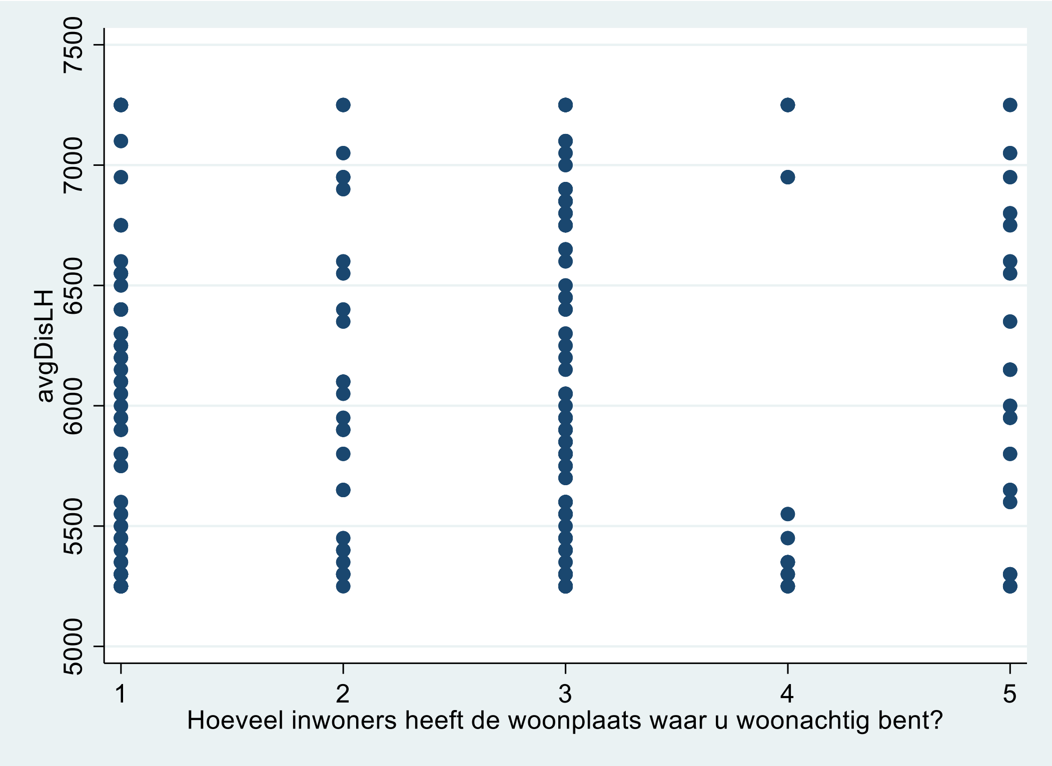

Figure 0.13: Scatterplot Size City of Residence and Average Distance Long-Haul Model

Figure 0.14: Scatterplot Use of Intermediaries and Average Distance Long-Haul Model

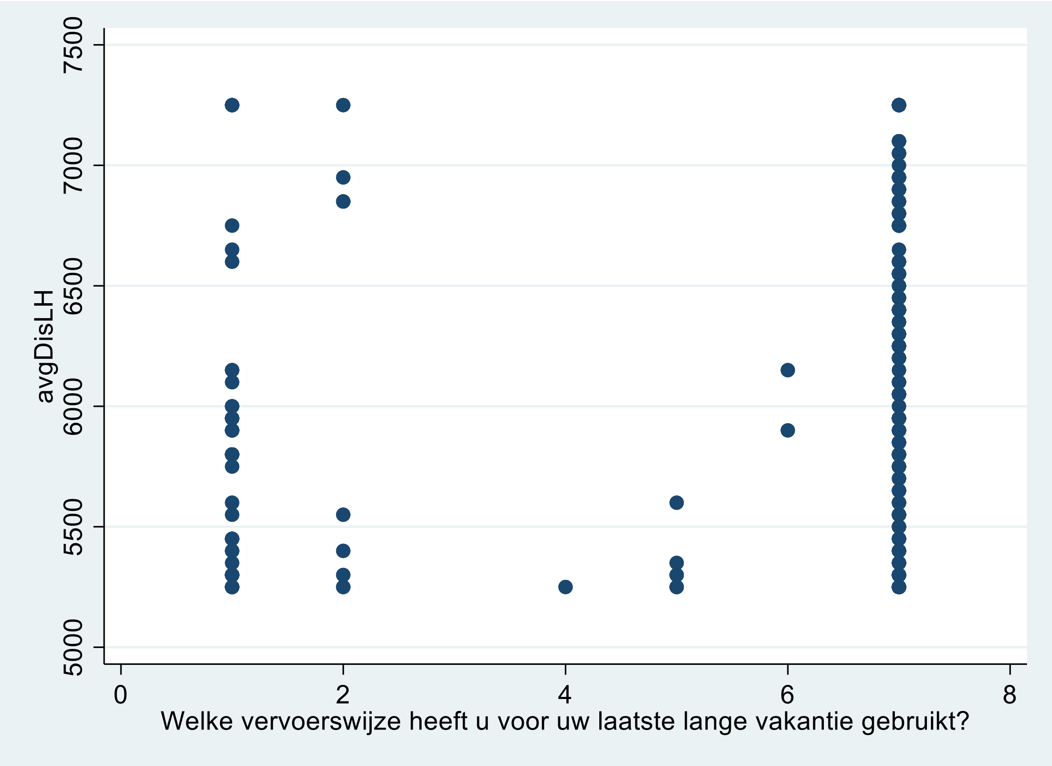

Figure 0.15: Scatterplot Last Used Mode of Transport and Average Distance Long-Haul Model

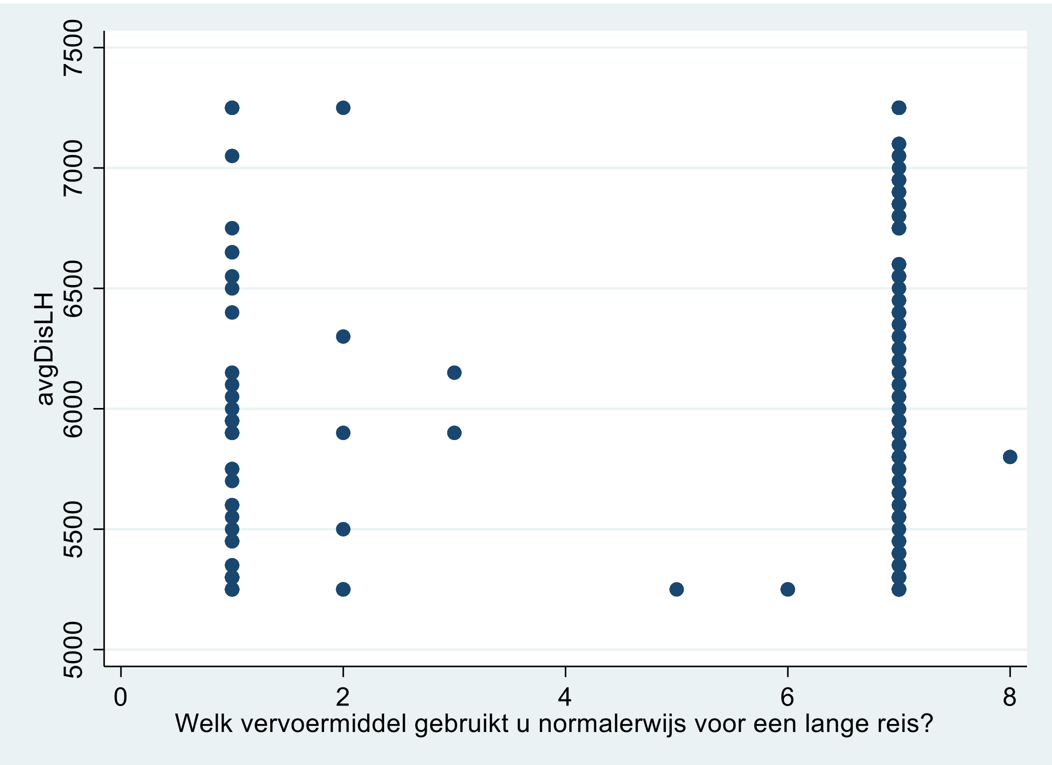

Figure 0.16: Scatterplot Usual Mode of Transport and Average Distance Long-Haul Model

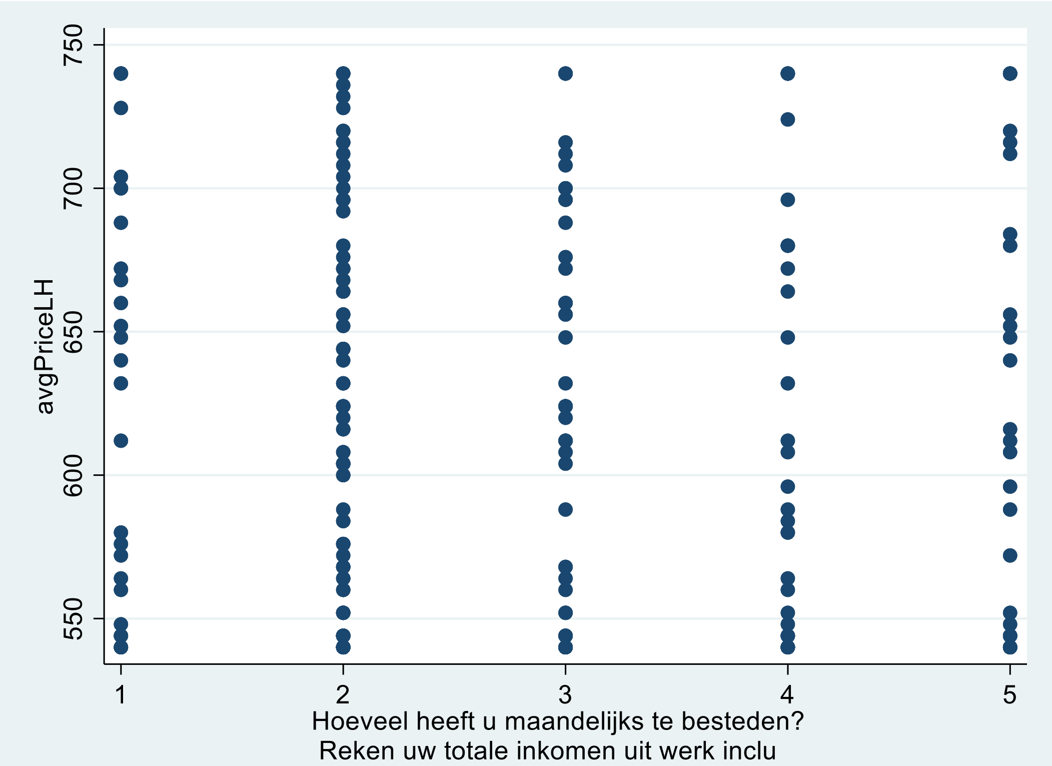

Figure 0.17: Scatterplot Monthly Income and Average Travel Costs Long-Haul Model

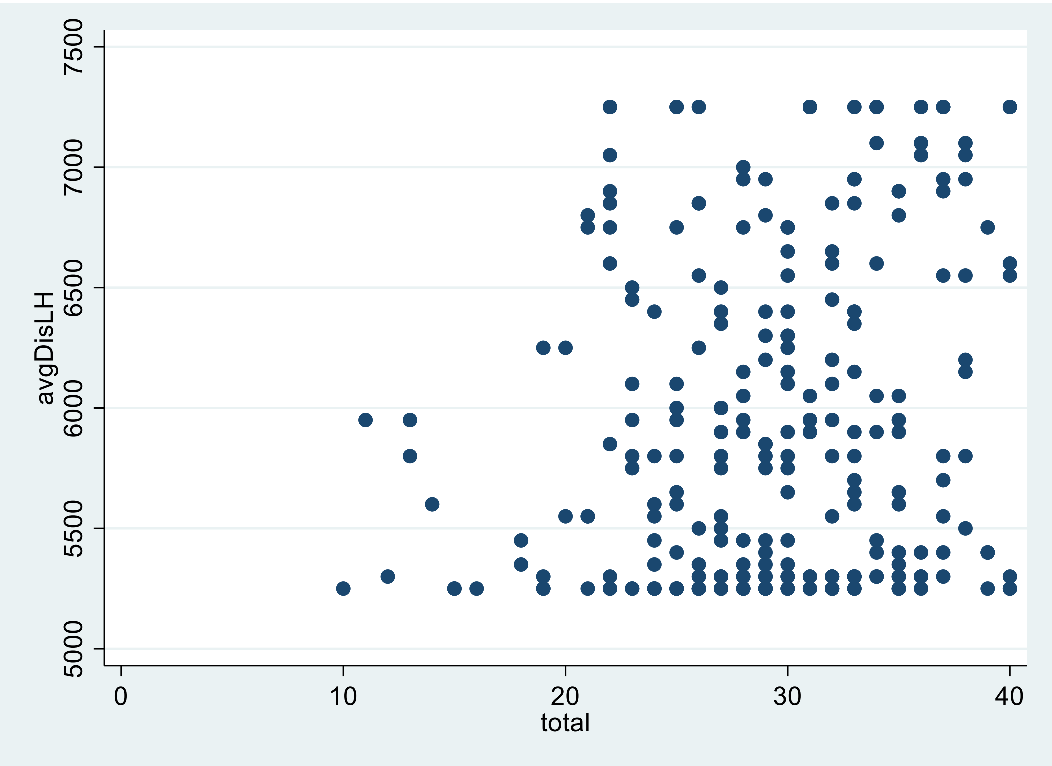

Figure 0.18: Scatterplot Novelty-Instrument and Average Distance Long-Haul Model

Appendix H

H.1 Cognitive Distance in Tourism

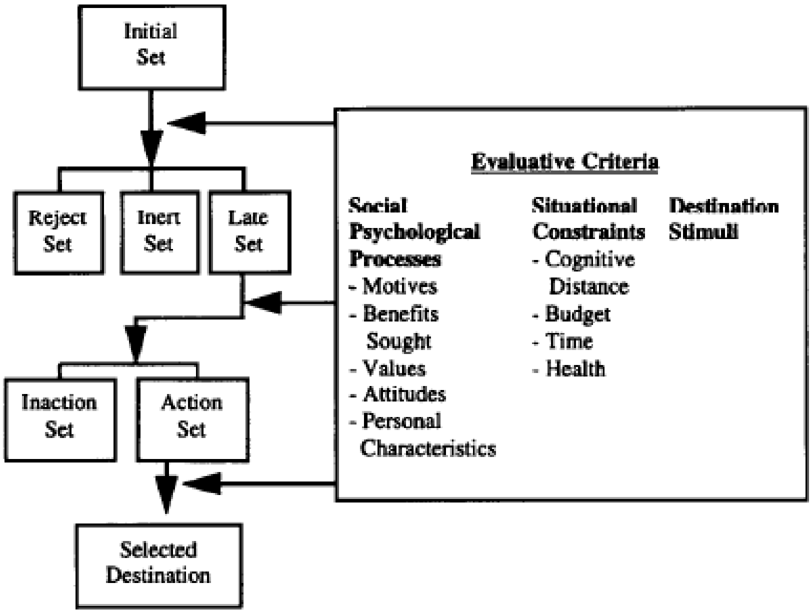

Figure 0.19: The Role of Cognitive Distance in Tourism

H.2: Novelty-seeking in Tourism

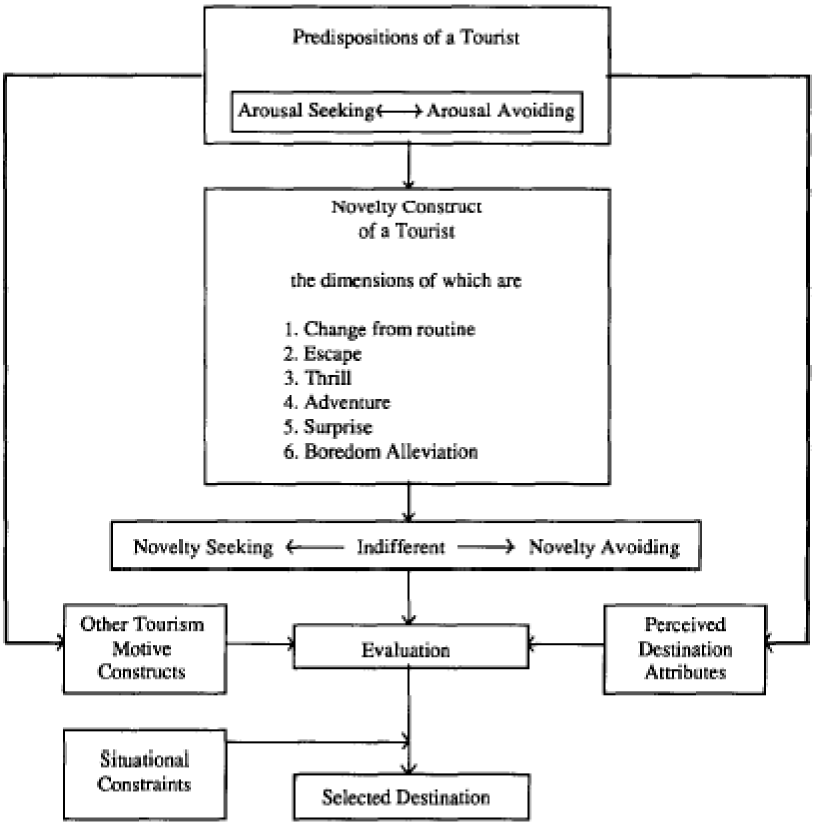

Figure 0.20: The Role of Novelty-Seeking in Tourism

H.3: Items of Novelty-Instrument

Dimension	Item
Thrill	-I sometimes like to do things on vacation that are a little frightening. -I enjoy 'daring' activities while on vacation. Sometimes it is fun to be a little scared on vacation. -I enjoy experiencing a sense of danger on a vacation trip. -I would like to be on a raft in the middle of a wild river at the time of spring flood waters. -I enjoy activities that offer thrills. -I seek adventure on my vacation.
Change from Routine	-I like to find myself at destinations where I can explore new things. -I want to experience new and different things on my vacation. -I want to experience customs, and cultures different from those in my own environment on my vacation. -I enjoy the change of environment which allows me to experience something new on vacation. -My ideal vacation involves looking at things I have not seen before. -I want there to be a sense of discovery involved as part of my vacation. -I like to travel to adventurous places. -I feel a powerful urge to explore the unknown -on vacation.
Boredom Alleviation	-I want to travel to relieve boredom. -I have to go on vacation from time to time to avoid getting into a rut. -I like to travel because the same routine work bores me.
Surprise	-I don't like to plan a vacation trip in detail because it takes away some of the unexpectedness. -I like vacations that are unpredictable. -I would like to take off on a trip with no pre-planned routes in my mind.

Table 0.39: Dimensions and Items Novelty-Instrument

Appendix I

Appendix I.1: Input Short-Haul Model Robust Design Generator

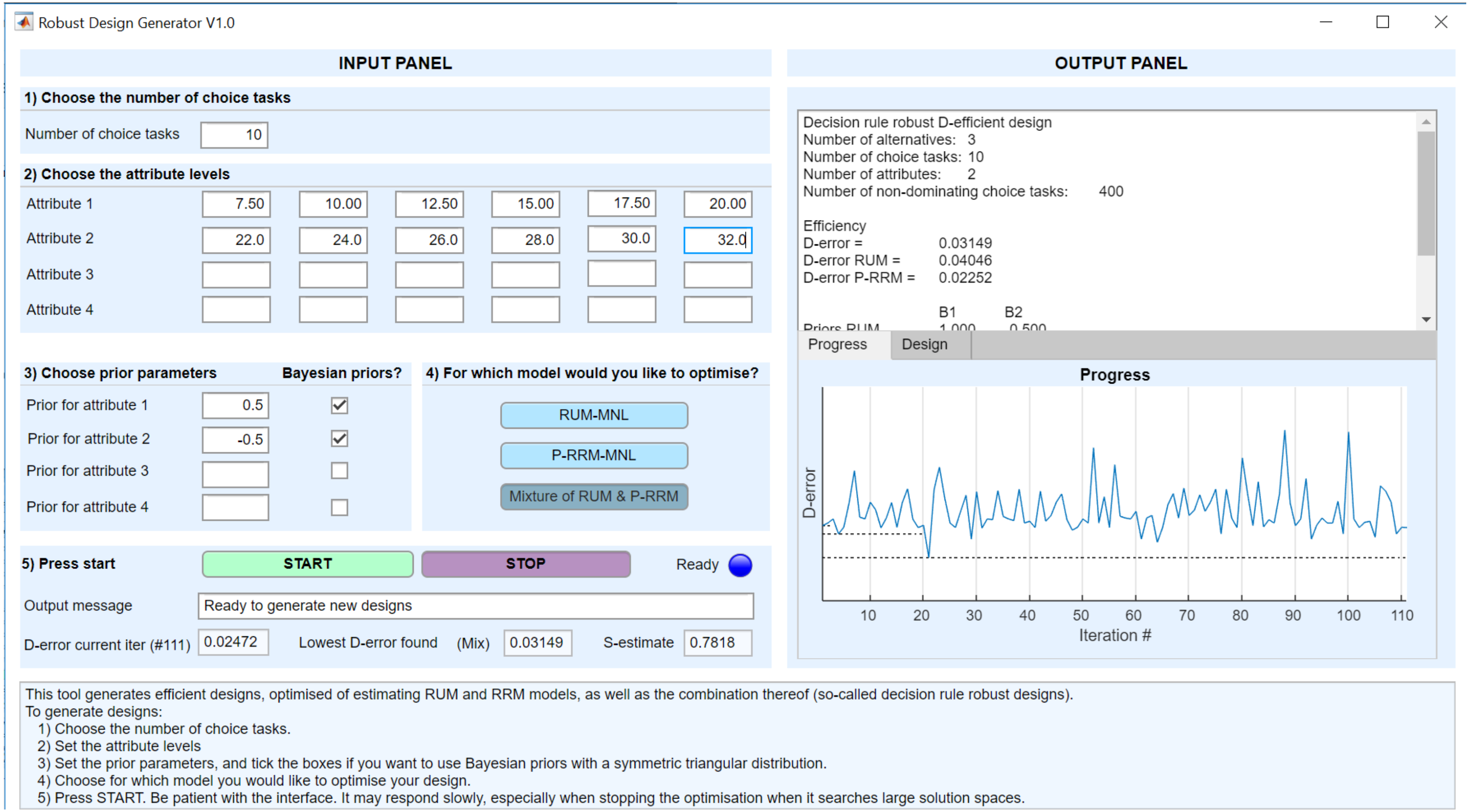

Figure 0.21: Input Short-Haul Model Robust Design Generator

Appendix I.2: Input Long-Haul Model Robust Design Generator

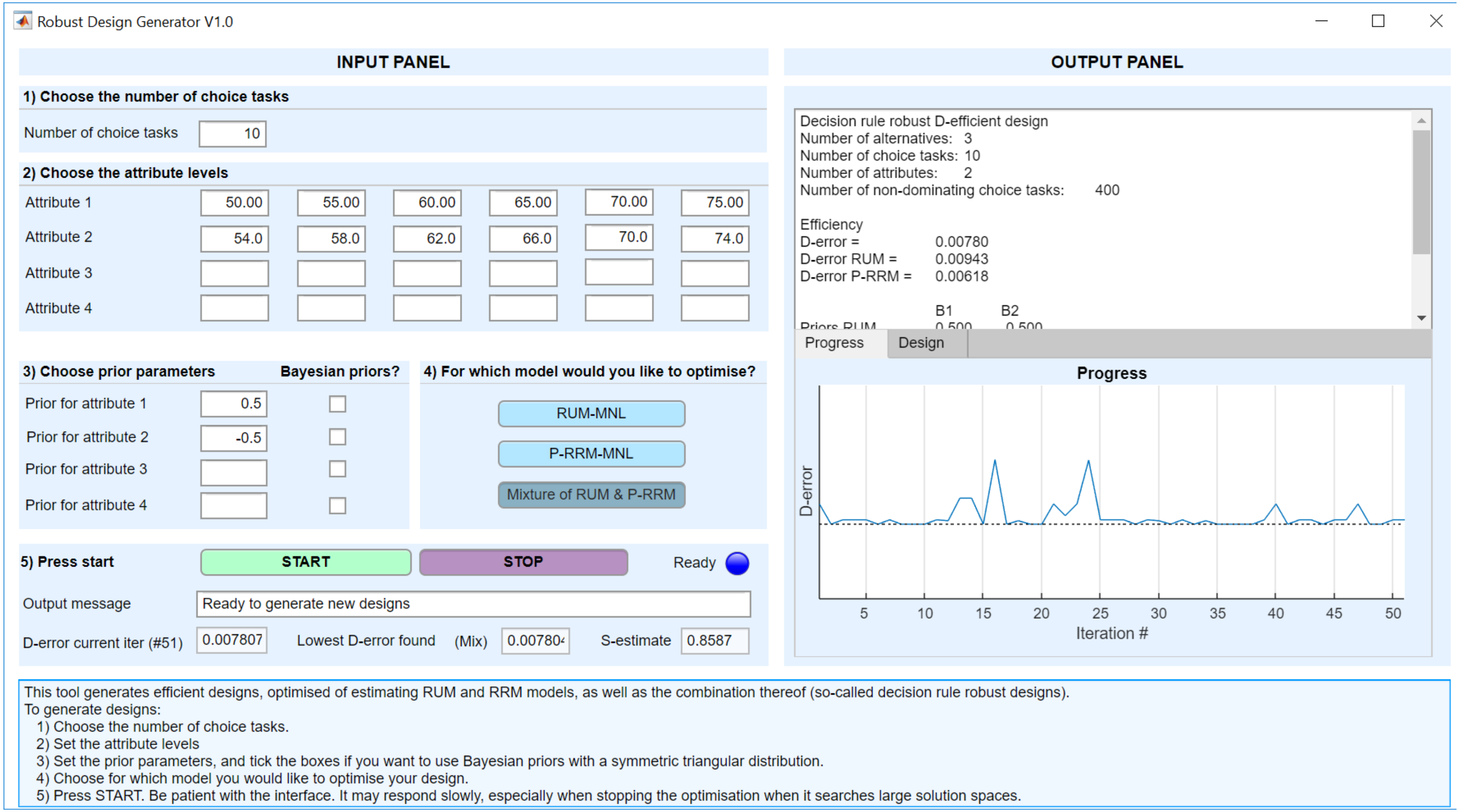

Figure 0.22: Input Long-Haul Model Robust Design Generator