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THE ATTITUDE-BEHAVIOR GAP ON THE PART OF GENERATION Z IN THE CONTEXT OF SUSTAINABLE TOURISM

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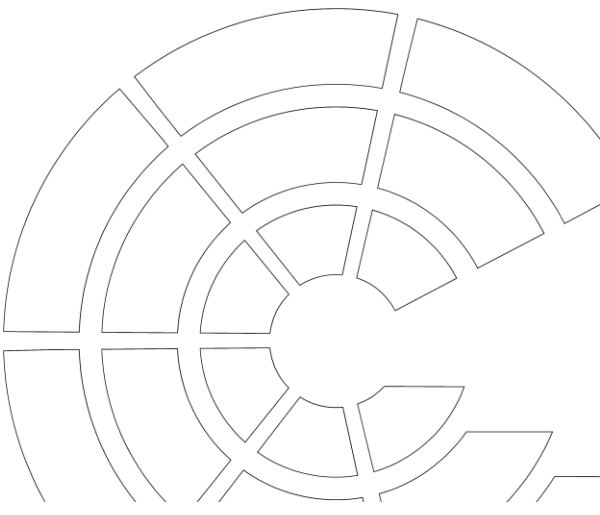

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List of Abbreviations

ABG	Attitude-Behavior Gap
AST	Attitude towards Sustainable Tourism
ASTG	General Attitude towards Sustainable Tourism
ASTS	Specific Attitude towards Sustainable Tourism
BI	Behavioral Intention
CA	Cronbach's Alpha
EFA	Exploratory Factor Analysis
ETC	European Travel Commission
GDPR	General Data Protection Regulation
Gen Z	Generation Z
Gen Zers	Members of Generation Z
KMO	Kaiser-Meyer-Olkin Measure
LRA	Simple Linear Regression Analysis
M	Mean
MCSN	Motivation to comply with Social Norms
Med	Median
MRA	Multiple Regression Analysis
NEP	New Environmental Paradigm
PBC	Perceived Behavioral Control
PRSN	Perceived Role of Social Norms
SBH	Sustainable Behavior at Home
SBT	Sustainable Travel Behavior
SBTG	General Sustainable Travel Behavior
SBTS	Specific Sustainable Travel Behavior
SD	Standard Deviation
SIT	Situational Factors

SM	Social Media
SN	Social Norms
TBL	Triple Bottom Line
TPB	Theory of Planned Behavior
TRA	Theory of Reasoned Action
UNWTO	United Nations World Tourism Organization
WCED	World Commission on Environment and Development

“The earth has its music for those who will listen.”

Reginald Vincent Holmes

1. Introduction

1.1 Problem Statement

With 1.46 billion international tourist arrivals and a contribution of 10.3% to global GDP in 2019, the tourism industry constitutes a major catalyst for global economic growth and sociocultural developments (United Nations Environment Programme [UNEP] & World Tourism Organization [WTO], 2005; United Nations World Tourism Organization [UNWTO], 2021; World Travel and Tourism Council [WTTC], 2020). However, this portrays only one fragment of the overall picture. The consumption and usage of natural and cultural resources forms an integral fundament of the entire travel sector. As a consequence, tourism activity significantly impacts environmental ecosystems and socio-cultural and economic environments (Chirieleison & Rizzi, 2020; Juvan & Dolnicar, 2016; McKercher, 1993; Strasdas, 2015a). Especially the relationship between climate change and tourism appears to be reciprocal, as tourism is both a leading contributor and a principal sufferer (Strasdas, 2015b). In order to not evade the fundamentals of its own existence, the development of a sustainable tourism, that equally enhances environmental, socio-cultural, and economic conditions (UNWTO, 2013) is thus a vital ingredient for the future viability of tourism. Thereby, especially the Covid-19 pandemic provides the tourism sector with an unprecedented opportunity for change (European Travel Commission [ETC], 2021). A substantial alignment of tourism with sustainability principles will however hardly be feasible without actively involving travellers in this transformation process (Dębski & Borkowska-Niszczota, 2020), posing a tremendous challenge to the tourism industry.

Tourist behavior holds a critical role within sustainable tourism development and constitutes both a potential driver and inhibitor of change. With tourists being capable of causing multiple harming impacts along the travel itinerary, initiating behavioral change forms a crucial cornerstone for realizing a more sustainable way of travel (Budeanu, 2007; Carrington et al., 2010). Generation Z – with members being born between 1995 and 2010 – is considered a trailblazing target market for sustainable tourism. The generational cohort is notorious for having a strongly pronounced awareness for sustainability issues and a fundamental interest in sustainable travel options (ETC, 2020). However, a general awareness for sustainability is not always a guarantor for sustainable behavior (Antimova et al., 2012). Research broadly suggests, that the relationship between tourists and sustainability is particularly ambivalent. Although travellers appear to have a general positive attitude towards

sustainable tourism and do not intend to cause any harmful effects, this attitude is not always replicated in their actual travel behavior (Anable et al., 2006; Barr et al., 2010; Dillimono & Dickinson, 2015; Hares et al., 2010; Holmes et al., 2021; Juvan & Dolnicar, 2014; Reis & Higham, 2017; Schrems & Upham, 2020). The same applies to the allegedly sustainable Generation Z, showing a divergence between expressed sustainable attitudes and respective travel behaviors (Sharpley, 2021). This attitude-behavior discrepancy is known as the *attitude-behavior gap* – a phenomenon broadly evidenced in the field of sustainable tourism research (Barr et al., 2011; Cohen et al., 2013; Hares et al., 2010; Holmes et al., 2021; Juvan & Dolnicar, 2014, 2021; G. Miller et al., 2010; Prillwitz & Barr, 2011).

Possible causes for the existence of an attitude-behavior-gap come along with individual and social barriers for behavioral change (Antimova et al., 2012). Although extensively researched, to date there is still no common consensus on the exact reasons that induce the phenomenon in sustainable tourism, yet (Anable et al., 2006; Juvan & Dolnicar, 2014). Further, Generation Z is expected to radically change future tourism demand due to having unprecedented characteristics compared to former generations (ETC, 2020; Monaco, 2018). With this comes uncertainty about how exactly the attitudes and behaviors of this young generation are formed, calling into question the viability of traditional tourism products that may not be aligned with the specific needs of this generation (ETC, 2020; Haddouche & Salomone, 2018).

Research on the backgrounds of the attitude-behavior discrepancy among Generation Z can hence provide valuable insights into how sustainable tourism may, or rather should, evolve in the years to come, which is exactly where this study aims to contribute.

1.2 Research Background and Need

While being considerably complex in nature and clearly distinguishable from behavior in other consumption settings, the topic of sustainable tourist behavior forms one of the most extensively studied areas in tourism academia (Cohen et al., 2014; Swarbrooke & Horner, 2007).

With an array of studies dedicated to the investigation of travel behavior-formation (e.g. Barr et al., 2011; Dolnicar et al., 2019; Juvan & Dolnicar, 2014; MacInnes et al., 2022), the inconsistency of attitudes and behaviors seems to be eminently observable within sustainable tourism. Several scholars outline, that attitude-behavior

discrepancies are generally wider in a tourism setting than with other consumption practices (Anable et al., 2006; Barr et al., 2010; Juvan & Dolnicar, 2014). A considerable body of behavioral research has attempted to logically explain the reasons for the general divergence between attitude and behavior. While some researchers suggest, that pro-environmental attitudes can directly translate into pro-environmental behaviors (Burgess et al., 1998), an array of studies refutes this assumption. Barr et al. (2010) for example argue, that although tourists acknowledge the adverse impacts of tourism, they do not aim to adapt their travel behaviors accordingly. Travellers' general knowledge of the detrimental consequences individual behavior can cause and their reluctance to change are replicated in the findings of several studies (Cohen et al., 2013; Dillimono & Dickinson, 2015; Hares et al., 2010; Juvan & Dolnicar, 2014). Multiple scholars further provide evidence, that the sustainability of behavior varies in intensity depending on the respective setting, with a significant drop from the domestic to the travel context (Barr et al., 2010; Barr et al., 2011; Cohen et al., 2013; Dolnicar & Grün, 2009; Holmes et al., 2021; Juvan & Dolnicar, 2014; D. Miller et al., 2014). This implies, that tourists tend to behave more sustainable at home than on vacation, which adds further complexity to the attitude-behavior gap in sustainable tourism (Cohen et al., 2013).

As Antimova et al. (2012) outline, the attitude-behavior gap is related to a multitude of hindrances that prevent from enacting sustainable behaviors. Further, behavioral theories disclose, that attitudes impact behavior indirectly via the intention to perform the behavior in question (Ajzen, 1991; Terlau & Hirsch, 2015). In this context, some researchers advocate the assumption, that attitudes alone serve as rather weak direct predictors of behavior (Ajzen, 1991; Anable et al., 2006), wherefore it is expected that besides the attitude, various other factors impact behavior-formation (Ajzen, 1991; Antimova et al., 2012; Carrington et al., 2010; Terlau & Hirsch, 2015). Nevertheless, no clear consensus on particular interfering variables has been established to date (Anable et al., 2006). Drawing on Ajzen (2020), a comprehensive understanding of the attitude-behavior relationship can most likely be achieved by relying *"on an established, empirical validated theoretical framework"* (Ajzen, 2020, pp. 9–10). However, no theoretical framework has been introduced yet, that does justice to the complex nature of travel behavior (Swarbrooke & Horner, 2007). Besides, existing research rather places focus on examining pro-environmental behaviors while neglecting social and economic aspects (Holmes et al., 2021; Juvan & Dolnicar, 2016), which form an integral part of the sustainability concept.

Although members of Generation Z are seen as drivers for future tourism development (Robinson & Schänzel, 2019), only a limited number of studies assess Generation Z with particular focus on sustainable tourism practices (e.g. Haddouche & Salomone, 2018; Robinson & Schänzel, 2019; Sharpley, 2021). In fact, current knowledge on Generation Z is mainly covered by market research studies, while academic literature remains scarce (Robinson & Schänzel, 2019). Moreover, there is lack of research on the attitude-behavior gap of Generation Z in sustainable tourism in general, and the impacting factors on the phenomenon in particular.

Given the critical necessity for sustainable tourism development, this underscores the need for an academic study dedicated to examining the attitude-behavior discrepancy among Generation Z in sustainable tourism, by taking into account the three-dimensional nature of sustainability.

1.3 Purpose of the Study

The purpose of the present study lies in gaining a deeper understanding of the attitude-behavior gap phenomenon on the part of Generation Z in the tourism context. Based on an extensive review of relevant literature and the adoption of a quantitative research design, this master's thesis intends to identify which exact factors determine behavior-formation and the resulting attitude-behavior discrepancy among Generation Z travellers. The findings of this study shall further expand the knowledge of existing behavioral research by providing an insight into how the attitude-behavior gap of Generation Z can be empirically investigated, which may pave avenues for future research. In addition, it is aimed at providing tourism practitioners with advice on how the attitude-behavior gap under study might be successfully bridged to foster sustainable tourism development.

1.4 Research Question

As it was emphasized, attitudes alone are probably not sufficient to thoroughly explain the implementation of a certain behavior. Instead, the attitude-behavior relationship is expected to be influenced by an array of additional factors. Against the background of the observed attitude-behavior gap among Generation Z travellers, this master's thesis intends to provide an answer to the following research question:

Which factors have an influence on the attitude-behavior-gap of Generation Z in the travel context?

1.5 Research Outline

After introducing the central cornerstones of the study at hand, a literature review will first provide a basic understanding of the theoretical concepts most relevant to the underlying research context.

In this sense, **Chapter 2** first examines and defines the concept of sustainability to provide a solid theoretical foundation. Afterwards, the sustainability concept is linked to the tourism realm, whereby the role that tourist behavior holds within the context of sustainable tourism finds clarification. To establish a thorough understanding of the attitude-behavior gap, the phenomenon is elaborated from a tourism and a theoretical perspective. Afterwards, the main characteristics of Generation Z, their general travel behavior and relationship towards sustainability are outlined. Lastly, the hypotheses and the research model upon which the empirical study will be grounded are presented based on the literature reviewed.

Chapter 3 outlines the adopted empirical methodology. After first describing the research design, concrete insights are provided on the sampling procedure, the chosen research instrument and the specification and operationalization of the constructs of interest. Thereafter, the procedures of pretesting the research instrument and data collection are specified. Finally, certain limitations accompanying the chosen methodology find consideration.

Chapter 4 gives an overview on the data evaluation and key findings. After providing an explanation on the chosen analysis approach and the results of factor and reliability analyses, the findings are subsequently presented and analyzed by means of descriptive, bi- and multivariate statistical procedures in the course of which the proposed hypotheses are tested on veracity. As concluding summary, a table with the respective results from hypotheses testing is provided.

Chapter 5 is dedicated to the interpretation of the results obtained. Thereby, the empirical findings are critically discussed by establishing linkages to the literature reviewed. Both, theoretical and practical implications are subsequently drawn from the findings of the study.

Chapter 6 and **Chapter 7** close the study at hand. A conclusion first synthesizes the theoretical and empirical key findings and provides an answer to the research question. As a final remark, the limitations imposed by the present study are specified in more detail and supplemented by outlining emerging avenues for future research.

2. Literature Review

The subsequent chapter establishes the theoretical framework for the thesis at hand. After precisely clarifying the terminology of sustainability, the concept is subsequently set into context with tourism and the specifics of tourist behavior. Thereafter, the attitude-behavior gap phenomenon is elaborated from a tourist and a scientific perspective. Further, the main characteristics of Generation Z, their general travel behavior, and their relationship towards sustainability find consideration. The chapter concludes with a theory-guided hypotheses and research model development.

2.1 Sustainability and Tourism

Within the following section the theoretical backgrounds of the topics sustainability and tourism are outlined. First, a definition of sustainability is provided, derived from both previous and current academic discourses. Afterwards, the chapter sheds light on the controversial relationship between sustainability and tourism and the critical role that tourist behavior holds within this interplay. Throughout the chapter, particular emphasis is placed on the relevance of consumer behavior within the process of sustainable (tourism) development.

2.1.1 Definition of Sustainability

A review of the relevant literature reveals, that the use and interpretation of the concept *sustainability* is at the core of an array of academic discourses, claiming an incoherent use of the term (Alhaddi, 2015; Marshall & Toffel, 2005), the variety of application contexts preventing a uniform understanding (Adams, 2006; Bañon Gomis et al., 2011; Giovannoni & Fabietti, 2013; Pufé, 2017), or the general lack of a common definition (Giovannoni & Fabietti, 2013; Moore et al., 2017). This underlines the need to establish a clear consensus on the concept of sustainability in order to provide a solid theoretical foundation for the present study (Salas-Zapata et al., 2017).

The origins of academic research revolving around the concept of sustainability can be traced back to Von Carlowitz (1713) in the field of forestry, who adopted the approach that trees that are felled must be replanted in equivalent numbers to preserve the resource basis in the long term (Carlowitz, 1713; as cited in Pufé, 2017). In simplified terms, sustainability in this initial line of thought describes the use of a natural system in a way that preserves its core attributes and facilitates a natural regrowth of resources (Pufé, 2017). With an increasing presence of environmental

concerns mainly originating from human interference, this conception of sustainability has been challenged by several researchers, with the consumption of resources in particular being given a more central role. Wachter (2012), for example, deems the approach of Von Carlowitz (1713) as simplistic and rather static. Likewise, Meadows et al. (1972) resumed the matter in a broader scope by introducing the *theory of limits to growth*, holding that over-consumerism has brought humanity to a tipping point at which a decision had to be taken between either invoking a self-induced global catastrophe, or embracing a more sustainable trajectory (Meadows et al., 1972; as cited in Bañon Gomis et al., 2011). The quintessence of this theory and the contextualization of consumption limits and sustainability can still be found over 30 years later in a publication of Adams (2006), who notes that the failure to understand and live within boundaries jeopardizes sustainability, wherefore *"[c]onsumption has to be made a driver of positive change, not a driver of global degradation*" (Adams, 2006, p. 15), further emphasizing the relevance of consumption behavior in the context of achieving sustainability.

A wide range of publications define sustainable development by drawing on the *Brundtland Report*[1] introduced by the World Commission on Environment and Development (WCED) (e.g. Geissdoerfer et al., 2017; Giovannoni & Fabietti, 2013; Marshall & Toffel, 2005; Pope et al., 2004; Pufé, 2017; Sartori et al., 2014), which intended to provide an agenda for a global long-term sustainable development (Pufé, 2017; Schmidheiny, 1998; Wachter, 2012). According to the WCED (1987), sustainable development describes *"[m]eet[ing] the needs of the present without compromising the ability of future generations to meet their own needs."* (WCED, 1987, p. 43). Despite the decennial relevance of the definition, its validity and the interchangeable use of the terms *sustainable development* and *sustainability* are however broadly questioned (Adams, 2006; Salas-Zapata & Ortiz-Muñoz, 2019). Adams (2006) claims, that the definition is imprecise since *"[i]n implying everything sustainable development arguably ends up meaning nothing"* (Adams, 2006, p. 3). Without directly doubting the relevance of the definition, Robert et al. (2005) likewise refer to the *creative ambiguity* of its scope of meaning. According to Pufé (2017), sustainable development describes dynamics and process, while sustainability rather refers to statics and a state of being, suggesting that sustainability manifests the

[1] *Note.* The Brundtland Report is also commonly referred to as *"Our Common Future"* (WCED, 1987).

aspired state of sustainable development, and thus the inaccuracy of a synonymous use.

Prior to Pufé (2017) the processual nature of sustainable development was already emphasized by Elkington (1997), who made the concept more tangible by introducing the Triple Bottom Line (TBL) and defining sustainable development as *"the simultaneous pursuit of economic prosperity, environmental quality, and social equity"* (Elkington, 1997, p. 397). The TBL highlights the multidimensionality of the concept, encompassing the three pillars environment, society, and economy, to which Elkington (2004) later refers to as people, planet, and profit. Drawing on Pope et al. (2004), the TBL interprets sustainability as a balanced status between environmental, social and economic aspects. More recently, Sartori et al. (2014) further elaborated on the three-dimensional concept of sustainability by concluding that sustainability is characterized by an interdependency between dynamic everchanging industrial, social, and natural systems, which indicates a mutual influence and existing overlaps between the three areas. The approach of viewing sustainability as a multi-variate rather than a one-dimensional concept has been taken up by a multitude of researchers and forms the basis for several definitions and streams of thought (e.g. Bañon Gomis et al., 2011; Dyllick & Hockerts, 2002; McMichael et al., 2003), particularly highlighting the relevance of this conception for the present study. Meanwhile, a considerable amount of designations to name the three components of sustainability can be found within scientific literature, such as *pillars* (Elkington, 1997), *lines* (Alhaddi, 2015), *domains* (Bañon Gomis et al., 2011), *dimensions* (Pufé, 2017), or *systems* (Marshall & Toffel, 2005). Following Pufé (2017), the term *dimensions* refers to the vast interweaving of the three areas, thus reflecting the multi-layered nature of sustainability, which is why the notation *dimensions* will be applied in the further course of the study.

Nevertheless, several researchers remark that there prevails a fragmentary view on sustainability within academic literature. Nature is often deemed to be the basis of all life and economic activity, resulting in the environmental dimension taking an overriding role in sustainability discourses, while leaving social and economic aspects unattended (Alhaddi, 2015; Giovannoni & Fabietti, 2013; Lozano, 2008; Pufé, 2017). The literature reviewed however indicates, that an equal focus on all the three dimensions is an essential imperative, which can be underscored with a remark of Clune and Zehnder (2020), who describe the holistic consideration of all dimensions

as a *prerequisite* for achieving sustainability (Clune & Zehnder, 2020), accordingly being consistent with Elkington's (1997) core idea of the TBL.

Following Alhaddi (2015), the attempts to conceptualize sustainability, though numerous, have nevertheless maintained the basic idea of sustainability at their core, which is the pursuit of a balance between needs and limitations. A cross-section of the literature reviewed furthermore shows that sustainability can be understood as a three-dimensional construct that is mostly defined in relation to the aspects of preserving, consumerism, future-orientation, or capacity limits. Building on this approach, the present study defines sustainability as a state of being in which the consumption of resources equally ensures environmental quality, social equity, and economic prosperity without exceeding existing capacity limits so that the current quality of life can be maintained and still meet the needs of future generations.

2.1.2 Sustainable Tourism and the Role of Tourist Behavior

An amalgamation of sustainability and tourism can be interpreted as a complex endeavor as tourism is dependent on both the consumption and the conservation of resources (McKercher, 1993). While being among the major economic industries worldwide, tourism entails a range of adverse consequences for, inter alia, host communities, the wider economic environment, and climatic conditions due to the transport-related emissions significantly contributing to climate change (UNWTO, 2013). Given this background, a growing body of literature deals with the question if and how sustainable tourism can be accomplished (e.g. Butler, 1999; McKercher, 1993; Mihalic, 2016; G. Miller et al., 2010; Sharpley, 2000). The following chapter examines the contemporary state of sustainable tourism research to further narrow the concept of sustainable tourism and capture the role of tourist behavior in the interplay between sustainability and tourism.

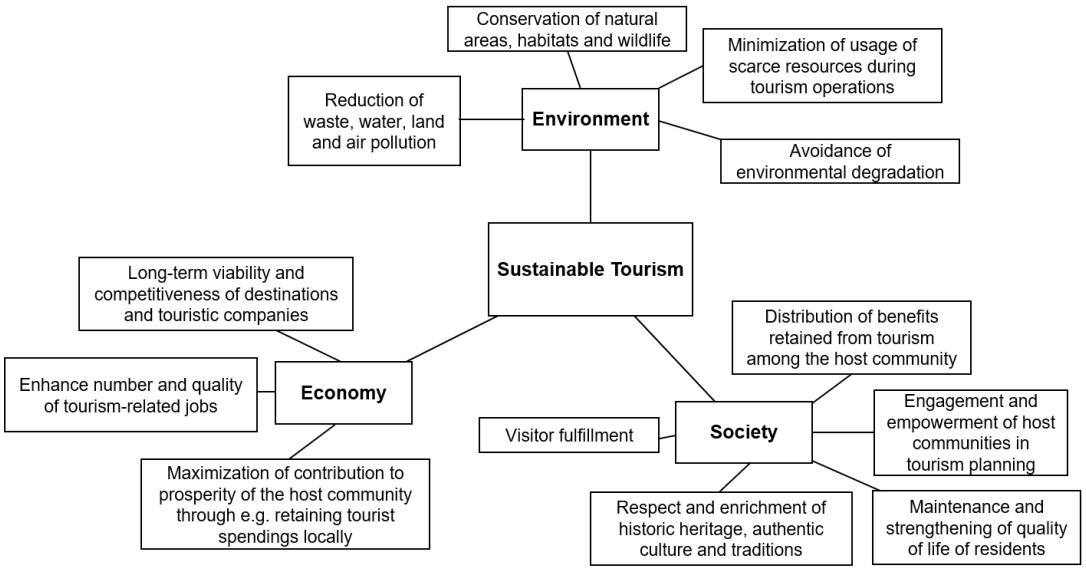
Within academic literature several alternative terminologies for *sustainable tourism* can be found, such as *responsustable tourism* (Mihalic, 2016), *ecotourism* (Powell & Ham, 2008) or *soft tourism* (Kirstges, 2003). Although having a substantive relationship to sustainable tourism, the terms have no conformity in meaning (Swarbrooke, 1999), wherefore sustainable tourism can be considered as a generic term under which the distinct forms of ecologically, socially or economically sustainable travel can be classified (Stoddard et al., 2012). Consequently, transferring the provided definition of sustainability to the context of tourism, the present study adopts the understanding that the fundamental principle of sustainable tourism lies in

pursuing a state in which all three dimensions are in balance. Complementing this, Smith et al. (2010) provide a definition that accentuates both the three-dimensionality and the processual nature of sustainable tourism, noting that *"[s]ustainable tourism applies the concept of sustainable development to the tourism industry and strives towards tourism that has the least possible impact on host communities and the environment, while maintaining economic viability"* (Smith et al., 2010, p. 169).

Over the past decades, a number of researchers have attempted to determine the compatibility of sustainability and tourism (e.g. Epler Wood, 2017; Sharpley, 2000; Scott et al., 2012). By referring to tourism as an industry that unavoidably makes use of resources, induced by both its own development and tourist activities (Sharpley, 2009; Smith et al., 2010), Smith et al. (2010) and Sharpley (2009) both indicate the controverse relationship between tourism and sustainability. According to McKercher (1993), tourism in its very nature inherently encourages the production of waste and is inevitably dependent on, and at the same time adversely affects, scarce resources, infrastructure, and host communities to which he refers to as *"the inherent and unavoidable consequences of embarking on the path of tourism development"* (McKercher, 1993, p. 7). Strasdas (2015b) further elaborates on the relationship between tourism and climate change as being particularly reciprocal, outlining that tourism is not only a major contributor – with transportation playing a significant role – but also a principal sufferer, with global warming inducing both direct and indirect impacts on the ecological and social fabric of the tourism system (Strasdas, 2015b). Sharpley (2000) and Butler (1999) share the view that an all-encompassing sustainability of the tourism sector is almost impossible to achieve (Butler, 1999; Sharpley, 2000). Thus, instead of understanding sustainability in the context of tourism as an aspired state that can be obtained in a certain timeframe, sustainable tourism must be regarded as an ongoing process or transformation (Kirstges, 2003; G. Miller & Twining-Ward, 2005). Subsequently, the fundamental aspiration of sustainable tourism lies in enhancing positive impacts while simultaneously reducing prevailing negative impacts on environment, society and economy in the best possible way (Strasdas, 2015a). Drawing on the United Nations World Tourism Organization (UNWTO, 2013), Figure 1 gives an overview on the core aims of sustainable tourism, fragmented into the three dimensions of sustainability.

Figure 1

The core aims of Sustainable Tourism



Note. Information from *"Sustainable Tourism for Development Guidebook - Enhancing capacities for Sustainable Tourism for development in developing countries",* by United Nations World Tourism Organization (UNWTO), 2013, p. 18. Copyright 2013 by Sustainable Tourism for Development. Own illustration.

Swarbrooke (1999) and Strasdas (2015a) further amplify the conception of sustainable tourism by emphasizing that sustainable tourism and mass tourism are not necessarily mutually exclusive realms, as unregulated individual tourism that is more geographically dispersed can likewise induce multiple negative effects. In this context, Lu and Nepal (2009) argue, that sustainable tourism does not define a particular form of tourism product but rather a status to which nearly any type of tourism can aspire, irrespective of scale. This suggests, that it may prove fruitful within the present study to elaborate on distinct travel components, rather than the type of vacation as such to obtain insights on sustainable travel patterns.

A review of the relevant literature further indicates that studies focused on tourist consumption behavior make up a vast proportion within sustainable tourism literature (Budeanu, 2007; Fermani et al., 2020; Hall, 2009; López-Sánchez & Pulido-Fernández, 2016; Passafaro et al., 2015). Several scholars point out, that while tourism brings about numerous negative impacts, tourist behavior plays a substantial role in it since it can exert significant impacts on the quality of life of host communities (Budeanu, 2007), and on global environmental developments (Dolnicar et al., 2019; Passafaro et al., 2015). The critical role that tourist behavior holds in the framework

of sustainable tourism is also accentuated by several empirical studies (e.g. Buffa, 2015; Fermani et al., 2020; MacInnes et al., 2022), that have sought to identify interventions for fostering sustainable tourism development by measuring individual attitudes, habits, or behaviors of tourists. As a result, one can deduce that sustainable tourist behavior can make a considerable contribution to reducing the negative impacts of tourism, and thus plays a decisive role in pursuing sustainable tourism (Budeanu, 2007; López-Sánchez & Pulido-Fernández, 2016).

Drawing on Budeanu (2007), the limited adaptation of tourists' behavior to sustainability principles forms a key obstacle to sustainable tourism development. As McKenzie-Mohr (2000) acknowledges, *"a cornerstone of sustainability is behavior change"* (McKenzie-Mohr, 2000, p. 536), being consistent with the general academic discourse on the sustainability concept, in which the consumption aspect is broadly assigned a critical role (Balderjahn et al., 2013). Accordingly, it can be inferred that tourist behavior can have a significant impact on both sustainable tourism progresses and setbacks, highlighting the need to examine consumption behavior in tourism in more detail.

2.1.3 Consumer Behavior in (Sustainable) Tourism

The evidence reviewed in the previous section shows, that tourists take a pivotal role in sustainable tourism development. The topic of consumer behavior represents one of the most extensively studied areas in tourism academia and is commonly termed as *travel behavior* or *tourist behavior* (Cohen et al., 2014). Drawing on Decrop (2014), *„[t]ourist behaviour focuses on the activities people undertake for obtaining, consuming, and evaluating tourism and travel services"* (Decrop, 2014, p. 252). However, as tourist behavior often takes place in a highly situational context it can be deemed as more complex than typical consumption behavior (Swarbrooke & Horner, 2007), which is why there must be made a distinction in this regard. The following chapter will first cast light on the peculiarities of the consumption of tourism products in general and subsequently link the specifics of tourist behavior to the concept of sustainability in particular.

Among the earlier publications in this area of research to be found is one by Moutinho (1987), who highlights the intangibility of the tourism product as a unique attribute, with travelling not following the purpose of obtaining a material resource in return, but rather an immaterial satisfaction, for which a tourist typically prepares with accumulated savings. Given this background, one can infer that travelling bears a

special meaning for the consumer, which is also emphasized by Decrop and Snelders (2004) who find *"that tourism is a hedonic experiential product consisting of fun, feelings and fantasies, nostalgia and daydreaming"* (Decrop & Snelders, 2004, p. 1027). As Pearce (2005) puts it, tourists make an intangible experience, while simultaneously being able to refine and transform their experience as they participate in it, which already indicates the unpredictability and spontaneity of tourist behavior. Vacation planning and tourist choices do not follow a predefined sequence and describe an ongoing process that continues beyond the actual booking-decision (Decrop & Snelders, 2004). Thus, after deciding on the type of vacation, a number of other decisions have to be made such as the selection of on-site activities (Swarbrooke & Horner, 2007). Cohen et al. (2014) challenge the widely held idea in consumer behavior research, that vacation decision-making is a planned-through process by drawing on Hyde and Lawson (2003), whose study of individual travellers finds, that the planning of travel elements captures all of the three: planned, unintentional and impulsive decisions. Swarbrooke and Horner (2007) further refer to *"[t]he myth of rational decision-making"* (Swarbrooke & Horner, 2007, p. 66) in a tourism context. This view is also held by G. Miller et al. (2010), who argue that vacation choice is not based on rational thinking as tourist behavior is influenced by a multitude of parameters.

Swarbrooke and Horner (2007) further elaborate, that the tourism product as such is highly complex in nature as it incorporates tangible and intangible components, can take on a variety of facets, characterizes an experience rather than a physical product, and is enormously influenced by external conditions, which gives an impression of the complex environment in which tourism consumption takes place. In fact, tourist behavior involves a myriad of isolated decisions (Hyde & Lawson, 2003; Swarbrooke & Horner, 2007) and is influenced by a multitude of internal and external factors (Decrop, 2014; Decrop & Snelders, 2004; Moutinho, 1987; Swarbrooke & Horner, 2007). Accordingly, tourist decision-making is *multifaceted* (Hyde & Lawson, 2003) and influenced by personal, social, cultural, and economic determinants (Anable et al., 2006; Decrop, 2014).

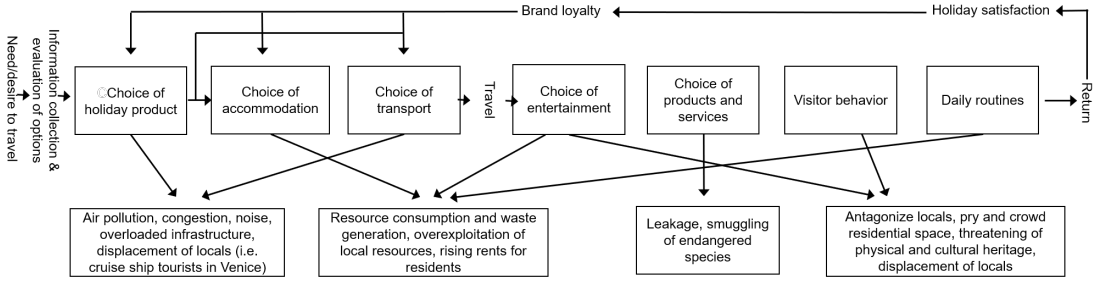
In addition, several researchers outline that travel behavior is highly context-sensitive (Cohen et al., 2014; Decrop, 1999b, 2014; Swarbrooke & Horner, 2007), which suggests that travel decisions tend to be adjusted to current situational conditions (Decrop & Snelders, 2004), underlining the relevance of viewing tourist behavior in light of the context in which it takes place. Moutinho (1987) particularly highlights the

strength of the influences emanating from other people which he groups into family influences, reference groups, social classes, and culture. This shows congruence with a number of studies, which underscore that holiday decisions are a matter of collective decisions, in which household members, friends, or other reference persons are involved (Decrop, 1999b, 2014; Dimanche & Havitz, 1995; Kozak, 2010; Moutinho, 1987; Swarbrooke & Horner, 2007).

Pearce (2005) further accentuates, that the actual tourist activity is prolonged by supplementary stages which forms a major distinction to other consumption behaviors. He builds his argument on an earlier contribution to this field of research made by Clawson and Knetsch (1966), who distinguish between five stages of the travel itinerary: the anticipation or pre-purchase stage, the travel to site stage, the on-site experience, the return travel component, and the recall and recollection phase (Clawson & Knetsch, 1966; as cited in Pearce, 2005). Figure 2 illustrates the potential impacts that may arise from tourist choices from an environmental (Budeanu, 2007) as well as a social and economic viewpoint (McKinsey & Company & World Travel & Tourism Council [WTTC], 2017), conveying a general sense of the complex environment in which tourist behavior is embedded.

Figure 2

Potential Impacts of Tourist choices



Note. Adapted from "Sustainable tourist behaviour? - A discussion of opportunities for change", by A. Budeanu, 2007, *International Journal of Consumer Studies, 31*(5), p. 501. Copyright 2007 by Blackwell Publishing Limited. Additional information from *"Coping with Success: Managing overcrowding in Tourism Destinations"*, by McKinsey & Company and WTTC, 2017, pp. 16-17. Copyright 2017 McKinsey & Company and World Travel & Tourism Council. Own illustration.

According to Budeanu (2007), tourist choices along the travel itinerary can induce multiple effects that are likely to appear over time and in varying settings, thus highlighting the complexity and challenge of actually adopting entirely sustainable behaviors in a tourism context.

Drawing on Manning (2009), sustainable behavior is more likely to be performed when *"people face few barriers to sustainable action"* (Manning, 2009, p. 4). Accordingly, it can be deemed relevant to investigate what might prevent tourists from enacting sustainable behaviors, which will be at the core of the subsequent chapter.

2.2 The Attitude-Behavior Gap in Sustainable Tourism

As previously examined, tourist behavior is characterized by a certain complexity and can be ascribed a special relevance in the context of obtaining, or not obtaining, sustainable progress within the tourism industry, highlighting the need to gain a deeper understanding of the backgrounds of tourist behavior. The following subchapters take a closer look on the attitude-behavior gap by framing the phenomenon from two different angles: the general complexity of the phenomenon in tourism by emphasizing the perceived behavioral barriers from a tourist perspective, as well as theoretical approaches that have sought to examine the backgrounds of behavior-formation in general.

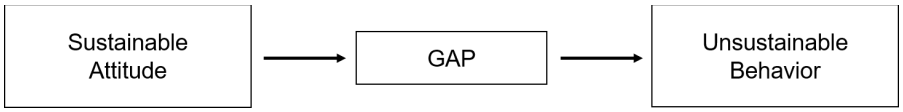
2.2.1 Definition and Complexity of the Phenomenon in Tourism

A central barrier for behaving in a more sustainable way constitutes the attitude-behavior gap (ABG), which is also often referred to as attitude-intention-behavior gap (ElHaffar et al., 2020), awareness/attitude-behavior gap (Antimova et al., 2012) or value-action gap (Klein, 2015). In the following, it will be provided an overview on the peculiarities of the ABG in general and in a tourism context, as well as perceived behavioral barriers and rationales for unsustainable behaviors from a tourist perspective.

The phenomenon of the ABG describes the discrepancy – namely the gap – between the attitude one has towards a particular topic and the respectively realized behavior, which is visualized in Figure 3. In other words, and set in context with sustainability, a positive attitude that one has towards sustainability does not always result in sustainable behavior (Antimova et al., 2012; Juvan & Dolnicar, 2014).

Figure 3

The Attitude-Behavior Gap



Note. Own illustration.

A review of literature indicates, that the majority of studies examining attitude-behavior discrepancies in sustainable tourism limit their focus on investigating pro-environmental behaviors, and are found particularly in the field of air travel and climate change (e.g. Cohen et al., 2013; Dillimono & Dickinson, 2015; Hares et al., 2010). Against the background of the given research objective, these studies are deemed to provide the most meaningful explanation of the ABG in tourism and will therefore be at the core of the subsequent discussion.

A wide array of studies have investigated and validated the existence of an ABG in a tourism context (Anable et al., 2006; Barr et al., 2010; Dillimono & Dickinson, 2015; Hares et al., 2010; Hibbert et al., 2013; Higham et al., 2016; Holmes et al., 2021; Juvan & Dolnicar, 2014, 2021; Kollmuss & Agyeman, 2002; Prillwitz & Barr, 2011; Reis & Higham, 2017; Schrems & Upham, 2020). While some research suggests that tourists rarely make a link between sustainability issues and travel activities (Dillimono & Dickinson, 2015), Hares et al. (2010) hypothesize, that such findings may be due to tourists suppressing the interrelationship between tourism and negative environmental impacts. However, the vast majority of research finds, that the adverse impacts of tourism are broadly recognized and that tourists nevertheless show a reluctance to behavioral change (Barr et al., 2010; Barr et al., 2011; Higham et al., 2016).

In fact, the ABG is considered to be wider in a tourism context than with consumption practices in other areas of life (Anable et al., 2006; Barr et al., 2010; Juvan & Dolnicar, 2014). The results of several studies further emphasize, that tourists tend to act more sustainably at home than while being on vacation, indicating an additional gap between both behavioral contexts. Researchers commonly explain this divergence by tourists showing a reluctance to voluntarily constrain their behavior to sustainability concerns while travelling (Barr et al., 2010; Barr et al., 2011; Cohen et al., 2013; Dillimono & Dickinson, 2015; Hares et al., 2010; Juvan & Dolnicar, 2014, 2021; G. Miller et al., 2010).

Cohen et al. (2013) describe the additional gap between *home* and *away* as a further complication of the initial ABG. In the framework of a study focused on discretionary air travel, Cohen et al. (2013) identified several behavioral barriers perceived by air travellers, who either repressed, lowered, or dropped their sustainability concerns on vacation. Travelling appeared to be perceived as a special time in life in which one is detached from daily behavioral expectations, lowering the will to devote one's time to climatic concerns. Further, the results indicate that aspects like convenience, time, and costs outweigh climate-related considerations, thus playing a key role in the decision to choose air travel over more sustainable modes of transport (Cohen et al., 2013). As a consequence, Cohen et al. (2013) reinterpret the term *attitude-behavior-gap* in the framework of tourism and refer to it as *home-away-gap*.

In accordance with Cohen et al. (2013), several researchers argue that it is especially the hedonistic context in which tourism is embedded that prevents tourists from behaving sustainable on holiday. Vacations are associated with pleasure and relaxation wherefore tourists do not want to spend this time with sustainability-related concerns (Cohen et al., 2013; Dolnicar et al., 2019; Dolnicar & Grün, 2009; Hares et al., 2010), which aligns with the aspects discussed in the previous chapter, again indicating that tourism takes on a distinctive relevance for the consumer. Within their study on pro-environmental tourist behavior, Dolnicar and Grün (2009) for example outline, that tourists feel more obliged to take responsibility for maintaining their immediate living environment while not sensing this kind of obligation when travelling, since *"vacation time is supposed to be worry-free, selfish time which should be free of responsibilities"* (Dolnicar & Grün, 2009, p. 710). It further becomes apparent, that a limited availability of sustainable infrastructure in the tourism realm is perceived as a fundamental hurdle to transfer daily pro-ecological behaviors to the context of tourism (Dolnicar & Grün, 2009). This shows consistence with comparable studies (Dillimono & Dickinson, 2015; Hares et al., 2010; Juvan & Dolnicar, 2014; Lorenzoni et al., 2007), such as that conducted by Hares et al. (2010), who found that air travellers mostly neglect their climate concerns in holiday planning and perceive the lack of alternative means of transport as a major barrier for behavioral change. In general, air travel is considered as the only possibility to reach far off destinations in a short period of time, while alternative modes of transport are perceived as time-consuming and expensive (Hares et al., 2010). This echoes the aforementioned findings of Cohen et al. (2013), in which time, convenience and costs also found mention. As Hares et al. (2010) further emphasize, tourists consider the effects of

adapting individual behaviors to sustainability aspects to be ineffective in light of the global nature of climate change and rather assign the responsibility for the adverse impacts of tourism to governmental bodies, or companies.

A further impression on the backgrounds of the ABG was lately conveyed by Juvan and Dolnicar (2014), who assessed the beliefs of environmentalists concerning the reasons of their less sustainable behavior on holidays. Several findings, such as the shifting of responsibility, the special value attributed to travel as well as limited time and money available show parallels to the findings of Cohen et al. (2013), Hares et al. (2010) and Dolnicar and Grün (2009). Additionally obtained results however provide further insights. As emphasized by Juvan and Dolnicar (2014), the surveyed environmentalists appeared to perceive their own travel behavior as rather benign compared to that of other tourists and held the view, that positive outcomes from tourism offset the negative impacts caused. Within a more recent, larger-scaled study, Juvan and Dolnicar (2021), verified their previous research results and summarize the rationales of tourists for enacting unsustainable travel behaviors as *denial of consequences*, *denial of responsibility*, *denial of control*, *compensation through benefits*, and *exception handling*.

In conclusion, the evidence gathered from the studies reviewed is largely congruent, and can hence be considered as providing a valuable contribution to the understanding of the complexity and backgrounds of the ABG from a tourism perspective. To also shed light on the ABG from the viewpoint of behavioral research, the subsequent chapter focuses on theoretical approaches that have sought to explain attitude-behavior discrepancies and behavior-formation in general.

2.2.2 Behavioral Theories on the Backgrounds of Behavior-Formation

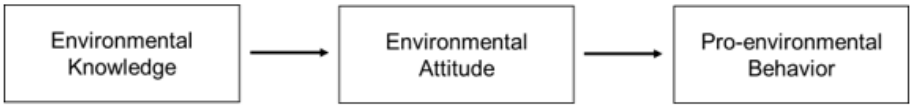
A multitude of studies have attempted to identify the causalities between attitude and behavior as well as factors that exert an influence on the frequent contradictory relationship between the two variables (Ajzen, 1991; Sheeran, 2002). Although the phenomenon of the ABG has been widely documented within scientific literature, there is no common consensus on specific influencing variables, yet (Anable et al., 2006). Drawing Antimova et al. (2012), the ABG *“is associated with a range of personal and psychological barriers that restrain pro-environmental behavior”* (Antimova et al., 2012, p. 8). A comprehensive understanding of the ABG phenomenon can thus not be accomplished by means of only one theoretical framework (Antimova et al., 2012; Kollmuss & Agyeman, 2002).

As examined by Anable et al. (2006), and more recently Antimova et al. (2012), theoretical models of behavior can be subdivided into individual-level, interpersonal-level, and community-level theories. Antimova et al. (2012) however emphasize, that although individual-level theories can explain the attitude-behavior discrepancy in the most accurate way, to date no theory is capable of providing a thorough justification of the ABG. According to Anable et al. (2006), individual-level theories appear to be the ones most frequently applied within behavioral research in the field of tourism, suggesting that these theories hold particular relevance for the present study. Individual-level theories follow the intent of examining behavior-formation by identifying aspects that exert an influence on the individual's decision-making process (Anable et al., 2006). Respective theories basically differ in their intensity with which internal and external influencing factors are considered and involve determinants such as *"values, beliefs, attitudes, social norms, and intentions"* (Anable et al., 2006, p. 64). As Swarbrooke and Horner (2007) further outline, existing behavioral models in the field of tourism research are too linear to do justice to the complexity of tourist behavior, wherefore the subsequent contemplation of relevant literature will limit the focus to individual-level theories from general consumer behavior research.

According to Kollmuss and Agyeman (2002), the pioneering models that attempted to explain sustainable behaviors adopted a more rational logic, which implied that environmental knowledge transforms into pro-environmental attitudes which subsequently result in pro-environmental behaviors (Kollmuss & Agyeman, 2002). Accordingly, sustainable behavior is expected to be realized when the individuum knows about the impact his or her behavior may cause on the environment, implying that education on environmental impacts alone may promote sustainable behavior (Anable et al., 2006; Kollmuss & Agyeman, 2002). The linear deficit model of pro-environmental behavior established by Burgess et al. (1998, p. 1447) incorporates this rationale and is illustrated in Figure 4.

Figure 4

The Linear Deficit Model of Pro-environmental Behavior



Note. Adapted from "Mind the Gap: Why do people act environmentally and what are the barriers to pro-environmental behavior?", by A. Kollmuss and J. Agyeman, 2002, *Environmental Education Research, 8*(3), p. 241. (http://dx.doi.org/10.1080/13504620220145401). Copyright 2002 by Taylor & Francis Limited. Own illustration.

Although several studies conclude, that a lack of knowledge about the negative consequences of individual behavior can encourage unsustainable behavior (Dillimono & Dickinson, 2015; Juvan & Dolnicar, 2014; G. Miller et al., 2010; Reis & Higham, 2017; Tölkes, 2020), the deficit model has been widely criticized, claiming that the model in its linear nature is too simplistic to capture the complexity of the ABG (Anable et al., 2006; Kollmuss & Agyeman, 2002; G. Miller et al., 2010). Given the multidimensionality of the sustainability concept, the inclusion of only one fragment of sustainability (i.e., the environmental dimension) can be deemed as another shortcoming of the model, not allowing for a holistic analysis of the ABG in the sustainability context.

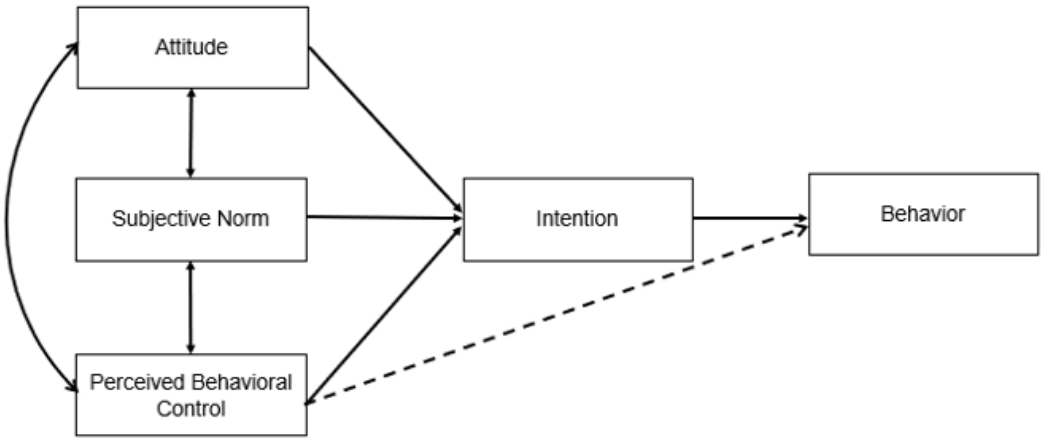
A contrary line of thought, that challenges the assumption that attitudes lead directly to behavior, adopts the conception that the determinant of intention acts as a mediating variable between attitude and behavior. Several empirical studies confirm, that intentions have a direct effect on behavior (Armitage & Conner, 1999; Bamberg et al., 2003; Sheeran, 2002; Wang et al., 2018), and that attitudes alone serve as rather weak predictors of behavior (Anable et al., 2006). Carrington et al. (2010) further add, that an *"[i]ntention is a singular notion that incorporates multiple influences"* (Carrington et al., 2010, p. 149), hence indicating that beyond the attitude various other factors may shape attitude-behavior discrepancies.

As arguably one of the most influential behavioral theories within academic literature (Dolnicar et al., 2019), the *Theory of Planned Behavior* (TPB) postulated by Ajzen (1991), is deemed to offer a notable contribution to the understanding of *"drivers of human behaviour"* (Juvan & Dolnicar, 2014, p. 78). A review of the relevant literature underscores the substantial relevance of the TPB in behavioral research, as the theory can be found in a large number of citations (Anable et al., 2006; Antimova et al., 2012; Budeanu, 2007; Carrington et al., 2010; Guagnano et al., 1995; Kollmuss & Agyeman, 2002; Sheeran, 2002; Sheoran & Kumar, 2022) and partially (Juvan & Dolnicar, 2014) or in its entirety (Armitage & Conner, 1999; Bamberg et al., 2003; Wang et al., 2018) serves as a basis for multiple data collections aimed at explaining attitude-behavior discrepancies. With the TPB and the inclusion of the component *perceived behavioral control*, Ajzen (1991) remedied the shortcomings of his formerly established Theory of Reasoned Action (TRA). As Armitage and Conner (1999) outline, the TRA was designed to measure behaviors that occurred to be voluntarily controllable, and thus only capable of predicting a narrow spectrum of behaviors due to the rarity of this condition.

As illustrated in Figure 5, the TPB follows the logic that attitudes, subjective norms, and perceived behavioral control act as influencing factors on the intention to realize a behavior. The intention plays a central role within the attitude-behavior-relationship and constitutes an indicator of how much effort a person is willing to invest in taking a specific action (Ajzen, 1991). In essence, the TPB implicates, that the greater the intensity of attitudes, social norms, and perceived behavioral control, the higher the intention and the more likely the person is to realize the behavior and vice versa (Ajzen, 1991; Armitage & Conner, 1999).

Figure 5

The Theory of Planned Behavior



Note. Adapted from "The Theory of Planned Behavior" by I. Ajzen, 1991, *Organizational Behavior and Human Decision Processes, 50*(2), p. 182. (https://doi.org/10.1016/0749-5978(91)90020-T). Copyright 1991 by Elsevier Incorporated. Own illustration.

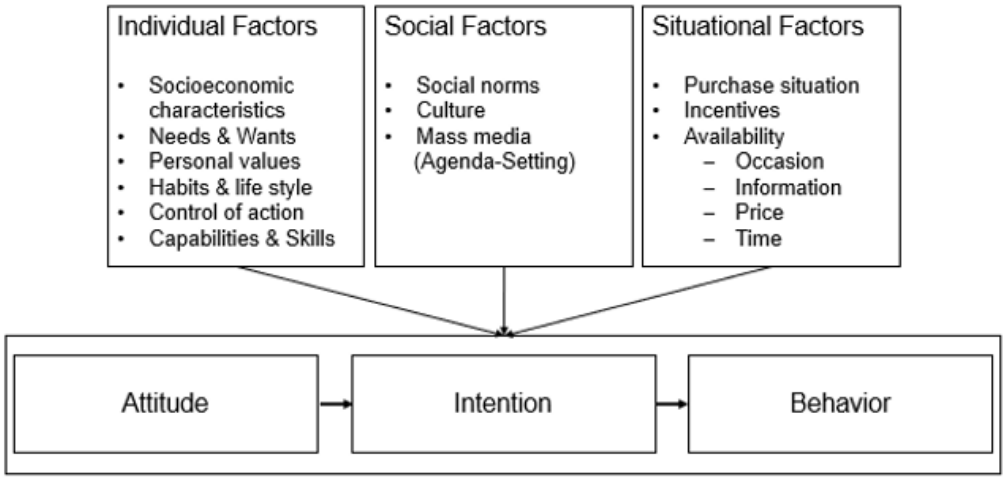
Examining the determinants of the model both independently and in more detail, the *attitude* as such evolves from behavioral beliefs, formed by the probable outcome that a person expects from carrying out a specific behavior. In brief, a person advocates behaviors that he or she believes will lead to desirable outcomes, while behaviors that are associated with undesirable outcomes are encountered with a rejective attitude (Ajzen, 1991). The second determinant of *subjective norms* refers to social influences that are perceived to result from performing the behavior, which in fact emerges from the normative belief of how significant reference persons favor or reject the behavior (Ajzen, 1991; Armitage & Conner, 1999). As the third determinant, *perceived behavioral control* is formed by control beliefs which are a compilation of the perceived existence or absence of mandatory resources and capabilities to perform the behavior, such as available money, time, or skills. Thus, perceived behavioral control

equals the estimated simplicity or difficulty to realize the behavior and can indirectly, in conjunction with behavioral intention, or directly influence behavior (Ajzen, 1991).

The principle logic established by the TPB is also taken up by the *Decision-Making model of Sustainable Consumption* (Terlau & Hirsch, 2015), which is illustrated in Figure 6. The model additionally incorporates multiple variables that are expected to exert an influence on behavior-formation, grouped into individual, social, and situational determinants (Terlau & Hirsch, 2015).

Figure 6

Decision-Making Model of Sustainable Consumption



Note. Adapted from "Sustainable Consumption and the Attitude-Behaviour-Gap Phenomenon - Causes and Measurements towards a Sustainable Development", by W. Terlau and D. Hirsch, 2015, *International Journal on Food System Dynamics, 6*(3), p. 161. (https://doi.org/10.18461/ijfsd.v6i3.634). Copyright 2015 by Creative Commons License. Own illustration.

According to Terlau and Hirsch (2015), individual factors entail socioeconomic attributes, the specific needs, values, and habits of the individual, and the ability to control and perform the behavior in question, which shows overlaps with the TPB. Secondly, social factors are composed of the prevailing norms in society, the embeddedness into cultural settings, and medial influences. Thirdly, situation-related determinants such as the actual situation of purchase, provided incentives and the opportunity to consume are expected to influence behavior-formation (Terlau & Hirsch, 2015).

Although the model has not yet been adopted for behavioral measures in a tourism context, it may still be considered applicable to the study of tourist behavior, due to incorporating multiple determinants. As it was emphasized, tourist behavior is

particularly context sensitive and influenced by an abundance of factors (G. Miller et al., 2010) – a complexity that no behavioral model is capable to cover, yet (Swarbrooke & Horner, 2007). Research reveals, that the same applies to the TPB logic. Albeit numerous studies have verified the applicability of the TPB in an empirical context (e.g. Armitage & Conner, 1999; Bamberg et al., 2003), many researchers raise criticism towards the theory. Especially in a tourism setting, the TPB is perceived to be too simplistic to capture tourist behaviors due to the complex surroundings in which travel choices are taken (Anable et al., 2006; G. Miller et al., 2010). As Armitage and Conner (1999) put it, the TPB *"is principally a predictive, rather than a causal model"* (Armitage & Conner, 1999, p. 49) which prompts the assumption, that the TPB in its initial form does not endow the ideal basis to investigate the backgrounds of the ABG in tourism. Other studies suggest, that there is no identifiable causal relationship between intention and behavior (Davies et al., 2002) and that the role of intentions within the attitude-behavior-framework remains vague (Antimova et al., 2012; Carrington et al., 2010). Support for this is provided by Carrington et al. (2010), who dedicate their study to examine an identified gap amidst intention and behavior. Manning (2009) further argues, that after a behavioral intention is formed, prevailing situational conditions can still cause a different behavioral outcome. The critical role of situational factors within the attitude-behavior-framework is similarly highlighted by several studies within tourism research (e.g. Barr et al., 2010; Cohen et al., 2013; Wang et al., 2018) and might offer an explanation for the additional gap between *home* and *away* (Cohen et al., 2013).

Nevertheless, the TPB can serve as a valuable basic framework for researchers assessing misalignments between attitudes and behavior as it is feasible to incorporate determinants derived from other models, which can consequently increase its precision (Anable et al., 2006). Accordingly, it can be argued, that adding variables from the Decision-Making model of Sustainable Consumption to the TPB may allow for a thorough examination of the backgrounds of the ABG under study.

To further obtain an impression on what aspects may intervene in shaping the behaviors of Generation Z, chapter 2.3 casts light on the main characteristics and peculiarities of the generational cohort in relation to sustainability and tourism.

2.3 Generation Z

Generational shifts can have a non-negligible impact on the future of tourism and act as a driver of change (Corbisiero & Ruspini, 2018; Robinson & Schänzel, 2019). Generation Z (Gen Z), also known as post-millennial or i-Generation (Corbisiero & Ruspini, 2018; Monaco, 2018) is gradually outshining the preceding Generation Y and is expected to profoundly shape the future tourism demand, challenging the viability of classical tourism products due to having unprecedented characteristics (ETC, 2020; Haddouche & Salomone, 2018; Seemiller & Grace, 2017). The following chapter provides an insight on the main characteristics of Generation Z, the specifics of their travel behavior and their relationship towards sustainability.

2.3.1 Main Characteristics

Examining the characteristics of a generational cohort helps to identify common attributes among its members, such as values, beliefs, or consumption behaviors (Pendergast, 2009). Drawing on Twenge et al. (2010), generational cohorts can be defined as a group of *"individuals born around the same time who share distinctive social or historical life events during critical developmental periods"* (Twenge et al., 2010, p. 1120). However, a generation is not equivalent to a consumer group (Haddouche & Salomone, 2018) and generalizations about generational cohorts are commonly criticized within academic literature (Corbisiero & Ruspini, 2018), suggesting that Generation Z is not homogenous in nature. Building on a similar argumentation, Seemiller and Grace (2017) add, that generational cohorts nevertheless have similar ideologies which emerged from the shared context in which they grew up, thus aligning with ETC (2020) and Francis and Hoefel (2018). It is commonly stated, that members of Generation Z (Gen Zers) grew up in an unstable environment, characterized by globalization, terrorist attacks, financial crises, climate change, Covid-19, social equity movements, and technological advances (ETC, 2020; Pendergast & Wilks, 2021; Seemiller & Grace, 2017; Sparks & Honey, 2015; Turner, 2015), altogether coining their attitudes and beliefs (ETC, 2020). In a global scope, Gen Zers resemble to each other in their attitudes and behaviors like no generation before (OC&C, 2019; Styvén & Foster, 2018) and now embody *"the zeitgeist of the contemporary world"* (ETC, 2020, p. 13).

The literature reviewed indicates, that there is no clear consensus on the exact birth period in which Generation Z may be classified, resulting in a lack of a definite

demarcation between preceding and subsequent generations (Corbisiero & Ruspini, 2018). While some researchers refer to Gen Zers being born from 1998 onwards (Pendergast, 2009; Sparks & Honey, 2015), others cite a birth range from 1993 to 2005 (Turner, 2015). The majority of research adopts the view that Generation Z incorporates all people born in 1995 or later (Bassiouni & Hackley, 2014; Francis & Hoefel, 2018; Gabrielova & Buchko, 2021; Robinson & Schänzel, 2019; Seemiller & Grace, 2017) with some scholars suggesting that Gen Zers were born no later than 2010 (Francis & Hoefel, 2018; Monaco, 2018; Seemiller & Grace, 2017). Accordingly, the present study adopts the definition that Generation Z comprises of all people born between 1995 and 2010.

Drawing on the logic of the life-cycle theory as proposed by Howe and Strauss (2000), each generation follows a distinct cycle, comprising of the stages childhood, young adulthood, mid-adulthood, and elderhood (Howe & Strauss, 2000; as cited in Pendergast, 2010). The values and beliefs of a generation are mainly formed during the *"formative years"* (Pendergast, 2010, p. 4) of child- and young adulthood in which Gen Zers can be classified. Hence, Gen Zers are to be found in different stages of their life with some still in their early teenage years and going to school, others attending university, or those who have already entered the workforce (ETC, 2020).

While the vast majority of current knowledge on Generation Z originates from market research studies, yet academic literature is scarce (Robinson & Schänzel, 2019). Several researchers however broadly agree, that members of Generation Z differ fundamentally in their mindsets, aspirations, and needs from those of previous generations (Corbisiero & Ruspini, 2018; Ozkan & Solmaz, 2015; Pendergast & Wilks, 2021; Seemiller & Grace, 2017). Gen Zers are mainly defined as being *digital natives* as they form the first generation with technology and internet being an essential element of their lives from the very beginning (Corbisiero & Ruspini, 2018; Francis & Hoefel, 2018; Haddouche & Salomone, 2018; Pendergast & Wilks, 2021). They are *"hyper-connected"* (ETC, 2020, p. 14), and hence used to have access to a large amount of information, to be able to communicate at any time (Seemiller & Grace, 2017; Turner, 2015) and to experience the world in both an online and offline setting (Francis & Hoefel, 2018). As Pendergast and Wilks (2021) frame it, *"the ubiquitous impact of digital technology on this generation is an effect like no other"* (Pendergast & Wilks, 2021, p. 320). In contrast, Seemiller and Grace (2017) emphasize that Generation Z's digital savviness represents only one facet of their characteristics.

Generation Z is self-confident, appreciates happiness over a well-paid job, places greater value on independence than authority (Ozkan & Solmaz, 2015) and has a we-centered rather than a me-centered mindset (Seemiller & Grace, 2017; Sparks & Honey, 2015). Although online-information forms an important resource for Gen Zers, family and friends in particular are highly trusted and thus have a major influence on decision-making (Goh & Lee, 2018; Sparks & Honey, 2015). A quantitative survey conducted by the institute Sparks & Honey (2015) for example shows, that the parental attachment of the generational cohort is very strong, and that parents take on the role of allies or even *"best friends"* (Sparks & Honey, 2015, p. 49).

Drawing on the findings of Sparks & Honey (2015) and Wunderman Thompson Intelligence (2021), inclusion is deeply embedded in the generational mindset, along with the general understanding and recognition that people follow different gender-norms and have different ethnic and socioeconomic backgrounds. Sparks & Honey (2015) outline, that *"they embrace the world with blind inclusivity instead of simply tolerance, which implies that there is the "other" to tolerate"* (Sparks & Honey, 2015, p. 59). Hence, Gen Zers are strongly committed to ethics, diversity and equality and seek to make a change in the world by *"challenging the status quo"* (Wunderman Thompson Intelligence, 2021, p. 41), which already foreshadows the relationship between Gen Zers and sustainability. The ETC (2020) summarizes specific aspects and values that are of major concern to Generation Z as climate change, gender and ethnical equality, personal wellbeing, sharing over ownership and the personal importance of belonging. While some research ascribes the generation's pronounced awareness for all kinds of injustice to the fact of being permanently exposed to global incidents via the internet (Robinson & Schänzel, 2019; Turner, 2015), others attribute it to the generation's diversity as such, including many members living in nontraditional or multigenerational family constellations and sharing a variety of ethnic backgrounds (Sparks & Honey, 2015; Wunderman Thompson Intelligence, 2021). A more recent publication of Pendergast and Wilks (2021) further outlines, that the Covid-19 pandemic, which occurred in the formative years of Gen Zers, will also fundamentally shape their future values, beliefs and behaviors, hence adding further complexity to the understanding of the generational cohort and their travel behavior.

2.3.2 Travel Behavior of Generation Z

In the framework of generational research it becomes apparent, that travel behavior does not describe a static attribute but is characterized by change over time (Gardiner

et al., 2014). Within a cross-generational study, Gardiner et al. (2014) found, that different factors influence the travel decision-making process and travel behavior across generations. It is further outlined, that a generational cohort's travel behavior is constantly altered while passing through the various stages of the life-cycle (Gardiner et al., 2014), which suggests that travel behavior changes with age. This is substantiated by the findings of Cavagnaro and Staffieri (2015), revealing that younger people place more value on the hedonistic attributes of tourism than older people. In general, Gen Zers *"have the potential to be the most travel-active segment ever"* (ETC, 2020, p. 67) and mass tourism models as well as typical sun-sand-and-sea packages are expected to be incompatible with their unique characteristics and needs (Monaco, 2018; Organization for Economic Co-operation and Development [OECD], 2018). Hence, Gen Zers act as a driving force shaping the tourism of the future (Cavagnaro & Staffieri, 2015; Robinson & Schänzel, 2019), which explains the enormous importance that lies within understanding the travel behavior of Gen Z in all its facets.

An array of academic literature and market research studies deal with Gen Zers in the context of tourism (Haddouche & Salomone, 2018; Robinson & Schänzel, 2019). Previous research suggests, that travel is of utmost importance for Gen Zers (ETC, 2020; Expedia & Center for Generational Kinetics [CGK], 2018), with *travelling the world* forming their most prioritized aspiration in a quantitative market study conducted by Deloitte (2019). The special meaning that Gen Zers attach to travel also becomes apparent in the research of ETC (2020), outlining that travel is rated as the third important leisure activity of the generational cohort and generally considered *"a necessity and a right"* (ETC, 2020, p. 76). The findings of Monaco (2018) further indicate, that Gen Z value travel as both, a period of time detached from daily routine, and a realm which is related to *"culture, discovery, and the construction of identity"* (Monaco, 2018, p. 12). This coincides with several comparable studies (Cavagnaro et al., 2018; ETC, 2020; Haddouche & Salomone, 2018; Pendergast & Wilks, 2021; Robinson & Schänzel, 2019). The ETC (2020) for example finds, that Gen Zers view travel as a driver for self-development. Furthermore, Robinson and Schänzel (2019) identify *escaping from reality* as one of Gen Zers main motivating factors to engage in travel. The hedonistic value given to travel is also emphasized by Haddouche and Salomone (2018), whose findings point out, that Gen Zers relate travel to an extraordinary moment that breaks with daily routine and is characterized by aspects like recreation, relaxation, and fun. The literature reviewed further reveals, that the

ubiquity of digital connectivity is also reflected in the generational cohort's travel behavior and decision-making. Besides considerations such as price, and convenience (Robinson & Schänzel, 2019), research uniformly suggests, that social media in particular exerts a considerable influence on Gen Zers travel-decision and behavior (ETC, 2020; Expedia & CGK, 2018; Monaco, 2018; OECD, 2018; Robinson & Schänzel, 2019; Setiawan et al., 2018). Expedia and CGK (2018) for example found, that 36%[2] of Gen Zers based their destination-decision on postings on social media.

In general, young people set high expectations for their travels (Haddouche & Salomone, 2018), have a low disposable income (Olsson et al., 2020; OECD, 2018), and have a desire for unique, individual, and sustainable experiences (OECD, 2018). The travel behavior of young tourists is significantly determined by their family affiliations and living conditions (Jamal & Newbold, 2020). Several market research studies provide the impression that the majority of Gen Zers tend to travel with their parents (Expedia & CGK, 2018) or family members (ETC, 2020). In their study on travel experiences of Gen Zers, Haddouche and Salomone (2018) further distinguish between two emerging travel patterns: solo/with friends or with parents. In fact, the findings suggest that Gen Zers are only actively involved in travel planning when the vacation is taken alone or with friends (Haddouche & Salomone, 2018). Hence, travel decisions appear to be significantly influenced by the choices of the accompanying family members (Haddouche & Salomone, 2018), which gives an idea of the influence parents may have on the travel behavior of the generational cohort.

Expedia (2017) describe Gen Zers as travellers that are open-minded, bucket-list oriented, and looking for off-the beaten track destinations. They favor authentic experiences, and are interested in sociocultural encounters with local residents in the destination (ETC, 2020; Haddouche & Salomone, 2018; Monaco, 2018). Gen Zers mainly travel by plane, use public transportation in the destination in a more frequent manner than elder generations, book via online travel agencies and tend to stay in hotels rather than youth hostels (ETC, 2020; Olsson et al., 2020; Setiawan et al., 2018). In particular, findings retrieved from the ETC (2020) reveal, that while the generational cohort mainly prefers to stay in upscale-hotels, 45%[3] of Gen Zers would

[2] *Note.* The study sample was composed of N=250 Gen Zers aged between 18-21 years and located in the U.S. region (Expedia & CGK, 2018).
[3] *Note.* The study sample was composed of N=2800 Gen Zers aged between 18-24 years, located to equal parts (N=700) in China, Germany, UK, and the U.S. respectively (ETC, 2020).

prefer to choose a destination based on cheap flight connections, which stands in contrast with the sustainable awareness of Gen Z, as it is widely evidenced in several studies (Cavagnaro et al., 2018; Cavagnaro & Staffieri, 2015). This gives reason to the assumption, that the relationship between Generation Z and sustainability is particularly ambiguous in the context of tourism, which highlights the need to further elaborate on this field of research.

2.3.3 Generation Z and Sustainability

Among the earlier publications in which Gen Z finds mention, Pendergast (2008) already forecasted sustainability playing a major role within the generational cohort. The current state of research meanwhile indicates the accuracy of this prediction, with empirical evidence suggesting that Generation Z is generally more sustainably conscious than previous generations (ETC, 2020; OC&C, 2019; Ozkan & Solmaz, 2015). Drawing on the logic of the *theory of socioemotional selectivity*, younger people tend to show a greater awareness for future-oriented goals as they may adversely affect their future needs. In its quintessence, the theory posits that as people move along the stages of their life-cycle, the perception of time changes. While people who are more advanced in their life-cycle perceive a narrower time-horizon and thus place greater value on presence- rather than future-related concerns, younger people think long-term oriented, which entails a shift in the prioritization of social goals between generations (Carstensen et al., 1999). Building on the theory in the context of the environmental dimension of sustainability, Wiernik et al. (2013) argue that these differences result in younger people being more environmentally aware than their older counterparts, which may serve as an explanation for the comparably pronounced awareness for sustainability issues among Gen Z.

A growing body of both academic and market research states, that Gen Zers generally embrace a positive attitude towards sustainability (Dabija et al., 2020; Djafarova & Foots, 2022; Nikolić et al., 2022; Porter Novelli, 2019; Stylos et al., 2021; Wunderman Thompson Intelligence, 2021). The generational cohort displays a pronounced awareness for environmental issues (Haddouche & Salomone, 2018; Sharpley, 2021; Stylos et al., 2021) – with climate change being their main concern – and a moral attitude towards social matters (Djafarova & Foots, 2022; ETC, 2020), from which they *“understand not only the scope, but also the impact […] on their future”* (Dabija et al.,

2020, p. 3). According to a market research study by Porter Novelli (2019), 88%[4] of Gen Zers state to generally care about social and environmental issues and feel capable of making a contribution to positively change the future of the planet, which is also reflected in their eagerness to address ethical or environmental issues (Tyson et al., 2021; Wunderman Thompson Intelligence, 2021).

Several studies confirm that the positive attitude towards sustainability is also reflected in the consumption behavior of the generational cohort (Dabija et al., 2020; Djafarova & Foots, 2022; Francis & Hoefel, 2018; Kleinjohann & Reinecke, 2020; OC&C, 2019). Francis and Hoefel (2018) for example outline, that the majority of Gen Zers considers a company's alignment with ethical principles when making a purchase decision. The findings of OC&C (2019) and ETC (2020) further emphasize the generation's willingness to reduce their environmental footprint by making pro-environmental purchase decisions.

However, as it was emphasized, Generation Z is not a homogenous cohort, with which comes along a hindrance to a generation-encompassing generalization. This also shows evidence within research on Generation Z in the context of sustainability (Cavagnaro & Staffieri, 2015; ETC, 2020; Haddouche & Salomone, 2018; Nikolić et al., 2022). By examining sustainable tourism practices of students, Cavagnaro and Staffieri (2015) for example found, that women placed greater value on sustainability within their travel experience than the male participants. Thereby it must however be considered, that the sample partly covered members of the preceding Generation Y, thus limiting the explanatory power for the present study. Additional evidence on the other hand suggests, that it is particularly the variable *age* that causes intra-generational differences (ETC, 2020; Haddouche & Salomone, 2018). Findings of Haddouche and Salomone (2018) show a considerable divergence between the oldest and the youngest members of the generational cohort. Similar results are obtained by ETC (2020), coming to the conclusion that *"young people in different age groups exhibit quite different consumer preferences at different stages of their development"* (ETC, 2020, p. 88), which shows congruence to the life-cycle theory.

While some research highlights, that Gen Zers *"stick to the principles of sustainability in everything they do"* (Dabija et al., 2020, p. 3) a multitude of studies display contrasting findings in the context of economics (Parzonko et al., 2021), young

[4] *Note.* The study sample was composed of N=1026 Gen Zers aged between 14-22 years and located in the U.S. region (Porter Novelli, 2019).

consumer research (Adnan et al., 2017), and sustainable tourism in particular (Bosio & Fecker, 2021; ETC, 2020; Haddouche & Salomone, 2018; Sharpley, 2021). Parzonko et al. (2021) for example found, that Gen Zers behave less environmentally sustainable than older generational cohorts with financial savings acting as motivating factors to display pro-environmental behaviors. In the field of tourism research, Gen Zers positive attitude towards sustainability is often not, or only partially, reflected in a respective tourist behavior (Sharpley, 2021), which provides evidence for an ABG among Gen Z in sustainable tourism. Drawing on the findings of ETC (2020), perceived benefits resulting from tourism seem to outweigh Gen Zers personal concern for the welfare of locals. Moreover, performed behaviors to reduce negative environmental impacts appear to be limited to those behaviors that are quite simple and inexpensive to implement (ETC, 2020). Haddouche and Salomone (2018) further observed, that sustainability plays a significant minor role within the tourist experience of Gen Zers and is subordinate to aspects such as pleasure, having fun, or the desire to discover. In the framework of the study, sustainability-related issues only found mention when resulting in a degradation of the individual tourist experience (Haddouche & Salomone, 2018).

To conclude, Generation Z appears to be a generational cohort with strong values, and a generally keen interest and awareness for sustainability issues. Though the generation appears to transform these sustainable attitudes into daily consumption practices, several evidence suggests, that particularly in the tourism context the relationship between Generation Z and sustainability is ambivalent. The generational cohort places great relevance to travel and perceive this time as apart from daily obligations with aspects of pleasure taking precedence. Based on the literature reviewed, Generation Z however only partially adopts sustainable travel behaviors, which stands in contrast to their positive attitude held towards sustainability. Accordingly, it can be assumed an ABG on the part of Gen Zers in sustainable tourism, which underlines the need to gain a deeper understanding of the backgrounds of this seemingly existing attitude-behavior discrepancy.

2.4 Development of Hypotheses and Research Model

Based on the literature reviewed, the following chapter is devoted to the formulation of the supporting hypotheses and the development of a conceptual research model. For the purpose of providing a holistic explanation, both the counterhypothesis and the null-hypothesis are presented. Thereby, it is followed the procedure of refining the

examined behavioral theories based on additional findings from academic literature, to build a basis to further investigate and explain the backgrounds of the ABG under study (Leedy & Ormrod, 2010). The study at hand follows the intent to examine the factors that impact the ABG of Gen Z travellers. As Ajzen (2020) points out, within endeavors to understand the backgrounds of a certain behavior it is advisable *"to rely on an established, empirical validated theoretical framework"* (Ajzen, 2020, pp. 9–10). As multiple researchers state, the TPB serves as a good starting point to investigate the attitude-behavior relationship and is empirically capable of being extended with additional variables (Ajzen, 2020; Anable et al., 2006; Bamberg et al., 2003; Conner & Armitage, 1998). The TPB thus serves as the base frame for the construction of the research model on which the empirical data collection will be grounded. As it was emphasized, a profound comprehension of the ABG phenomenon is elusive to obtain by means of one single theoretical framework (Antimova et al., 2012; Kollmuss & Agyeman, 2002). Consequently, the research model extends the TPB variable set by incorporating selected components from the Decision-Making Model of Sustainable Consumption by Terlau and Hirsch (2015) and additional variables that other studies have evidenced to be relevant to explain the attitude-behavior discrepancy in sustainable tourism. Support for the adoption of this approach can be provided by the fact, that many researchers in the field of behavioral science adhere to a similar methodology when attempting to obtain a deeper understanding of behavior (e.g. Armitage & Conner, 1999; Bamberg et al., 2003; Davies et al., 2002; Klöckner & Blöbaum, 2010; Wang et al., 2018) and the widely held proposition that the TPB in its original sense is too simplistic to adequately assess the complex nature of tourist behavior (Anable et al., 2006; G. Miller et al., 2010).

As it has been elaborated, the intention to perform a certain behavior plays a key role within the attitude-behavior relationship. A series of studies have attempted to empirically assess whether and to what extent intention plays a mediating role between influential variables and the behavior that is ultimately implemented (e.g. Bagozzi, 1981; Bagozzi et al.; Davies et al., 2002; Kim & Hunter, 1993). Thus, the intention to engage in a particular behavior can be understood as a strong determinant of behavior, wherefore the research model incorporates behavioral intention as direct antecedent of behavior.

While some research finds that attitudes can also directly influence behavior, the majority suggests that this correlation is rather moderate, and that attitudes influence behavior indirectly via the intention to enact the particular behavior (Bagozzi, 1981;

Bagozzi et al., 1989; Kim & Hunter, 1993), which aligns with the central idea of the TPB. Moreover, as it is evidenced in literature, even though travellers seem to have a positive attitude towards sustainability it is not displayed in their actual travel behavior, which is deemed to be rather unsustainable (Anable et al., 2006; Barr et al., 2010; Dillimono & Dickinson, 2015; Hares et al., 2010; Hibbert et al., 2013; Higham et al., 2016; Holmes et al., 2021; Juvan & Dolnicar, 2014, 2021; Kollmuss & Agyeman, 2002; Prillwitz & Barr, 2011; Reis & Higham, 2017; Schrems & Upham, 2020). This further accentuates the relevance of gaining a deeper understanding of the role of the intentional variable within the attitude-behavior relationship. To examine this rationale more closely, the following assumptions will be made:

($H1_1$) Gen Zers intention to perform a sustainable travel behavior is mediating the impact of their attitude towards sustainable tourism on their sustainable travel behavior.

> *($H1_0$) Gen Zers intention to perform a sustainable travel behavior is not mediating the impact of their attitude towards sustainable tourism on their sustainable travel behavior.*

($H2_1$) Gen Zers attitude towards sustainable tourism has a positive impact on their sustainable travel behavior.

> *($H2_0$) Gen Zers attitude towards sustainable tourism has no impact on their sustainable travel behavior.*

While there seems to be a general consensus that intentions are the immediate antecedent of behavior, a considerable body of literature argues that the emergence of an ABG is closely related to a discrepancy between intention and behavior (Carrington et al., 2010; Davies et al., 2002; Manning, 2009; Sheeran, 2002; Wang et al., 2018). Several researchers explain this divergence by the influence of situational factors on the process of developing an intention into a behavior, which is particularly evident in a tourism context (Carrington et al., 2010; Manning, 2009; Wang et al., 2018) and suggests that intentions do not directly influence behavior. Drawing upon the relevant literature reviewed, scholars commonly elaborate that tourist behavior is particularly context sensitive (Cohen et al., 2014; Decrop, 1999b, 2014; Swarbrooke & Horner, 2007). Derived from the aspects mentioned, it can thus be assumed that situational factors interfere in the process in which an intention develops into actual travel behavior (Carrington et al., 2010; Manning, 2009; Wang et al., 2020). To examine this assumption in more detail, the following hypothesis is proposed:

($H3_1$) Situational Factors moderate the impact of Gen Zers intention to perform a sustainable travel behavior on their sustainable travel behavior.

($H3_0$) Situational Factors do not moderate the impact of Gen Zers intention to perform a sustainable travel behavior on their sustainable travel behavior.

As it was elaborated, collective decisions take on a central role in travel decision-making (Decrop, 1999b; Dimanche & Havitz, 1995; Kozak, 2010; Moutinho, 1987; Swarbrooke & Horner, 2007). Moreover, it was found that Gen Zers mostly travel accompanied with their family members and generally attach great value to the opinions of their family and peers (Goh & Lee, 2018; Haddouche & Salomone, 2018; Sparks & Honey, 2015). Both, the TPB, with the notion *subjective norms* as well as the Decision-Making Model of Sustainable Consumption, with the notion *social norms*, suggest, that reference persons play a central role within the attitude-behavior-framework. As the terms *social norms* and *subjective norms* are used interchangeably within academic literature (e.g. Bamberg et al., 2007; ElHaffar et al., 2020), the research model incorporates the designation of *social norms* for reasons of consistency, as this terminology is expected to encompass the conceptions of both theoretical frameworks. Although a multitude of scholars include social norms as antecedents of intention within their conceptual research framework (Bagozzi et al., 1989; Bamberg et al., 2003; Klöckner & Blöbaum, 2010; Vermeir & Verbeke, 2008; Wang et al., 2018), there are still empirical inconsistencies regarding the role of social norms related to (un)sustainable behaviors (Davies et al., 2002). While some scholars find a positive correlation between social norms and intention (Klöckner & Blöbaum, 2010; Wang et al., 2018), other evidence suggests the relationship to be rather moderate (Bagozzi et al., 1989; Davies et al., 2002; Leone et al., 1999) or varying in intensity depending on the participant (Vermeir & Verbeke, 2008). Sheoran and Kumar (2022) particularly outline social norms as being a barrier for sustainable behavior. To empirically test this relationship, the respective hypothesis can be formulated as follows:

($H4_1$) Social Norms have a positive impact on Gen Zers intention to perform a sustainable travel behavior.

($H4_0$) Social Norms have no impact on Gen Zers intention to perform a sustainable travel behavior.

The impact of perceived behavioral control on the discrepancy between attitude and behavior has been widely discussed in academic literature. According to the logic of

the TPB, perceived behavioral control can indirectly – via intention – as well as directly influence behavior, meaning that if the intention to perform a particular behavior is strongly pronounced, the person may still be unable to carry out the behavior in question when it is not within his or her discretion (Vermeir & Verbeke, 2008). A range of studies confirm, that tourists perceive a multitude of barriers that discourage them from performing a sustainable travel behavior (Cohen et al., 2013; Dillimono & Dickinson, 2015; Dolnicar et al., 2019; Dolnicar & Grün, 2009; Hares et al., 2010; Juvan & Dolnicar, 2014, 2021; Lorenzoni et al., 2007), which intuitively suggests an absence of behavioral control. Juvan and Dolnicar (2014) furthermore find, that the construct of perceived behavioral control may contribute to sustainable attitudes not translating into sustainable travel behaviors. Accordingly, it can be assumed that the variable perceived behavioral control plays a relevant role in the attitude-behavior relationship within the underlying research context. To investigate respective correlations, the following hypotheses are proposed:

($H5_1$) Gen Zers perceived behavioral control on performing a sustainable travel behavior has a positive impact on the intention to perform a sustainable travel behavior.

> *($H5_0$) Gen Zers perceived behavioral control on performing a sustainable travel behavior has no impact on the intention to perform a sustainable travel behavior.*

($H6_1$) Gen Zers perceived behavioral control on performing a sustainable travel behavior has a positive impact on their sustainable travel behavior.

> *($H6_0$) Gen Zers perceived behavioral control on performing a sustainable travel behavior has no impact on their sustainable travel behavior.*

The fact, that Gen Zers are also referred to as digital natives intuitively suggests the assumption of social media being a central determinant in their decision-making process. As it has been acknowledged by the literature reviewed, social media exerts a considerable influence on Gen Zers travel behavior (ETC, 2020; Expedia & CGK, 2018; Monaco, 2018; OECD, 2018; Robinson & Schänzel, 2019; Setiawan et al., 2018), wherefore the social media determinant will be added to the research model. As the Decision-Making model of Sustainable Consumption posits, media forms a variable that indirectly influences behavior via the intentional component. Specific research on social media impacts on the ABG phenomenon however remains scarce. While some studies reveal a correlation between social media and the intention to

perform a certain tourist behavior, and hence an indirect impact on actual behavior (Javed et al., 2020), others suggest a rather insignificant relationship (Joo et al., 2020). To test the role social media may play in the framework of the ABG phenomenon under study, the following hypothesis is formulated:

($H7_1$) Social Media has a negative impact on Gen Zers intention to perform a sustainable travel behavior.

($H7_0$) Social Media has no impact on Gen Zers intention to perform a sustainable travel behavior.

As the literature review revealed, the complexity of the ABG phenomenon is further increased within the tourism context, as behaviors practiced in the home context tend to be more sustainable than in the travel context (Barr et al., 2010; Barr et al., 2011; Cohen et al., 2013; Dillimono & Dickinson, 2015; Hares et al., 2010; Juvan & Dolnicar, 2014, 2021; G. Miller et al., 2010). Scholars mainly attribute this further home-away gap to the hedonistic context in which tourism is embedded and associated with (Cohen et al., 2013; Dolnicar et al., 2019; Dolnicar & Grün, 2009; Hares et al., 2010). Conversely, some studies find a significant correlation between sustainable behaviors at home and sustainable behaviors on holiday, claiming that a more pronounced sustainable behavior at home results in a more pronounced sustainable behavior on vacation (Holmes et al., 2019). To investigate a correlation in this regard the following hypothesis is proposed:

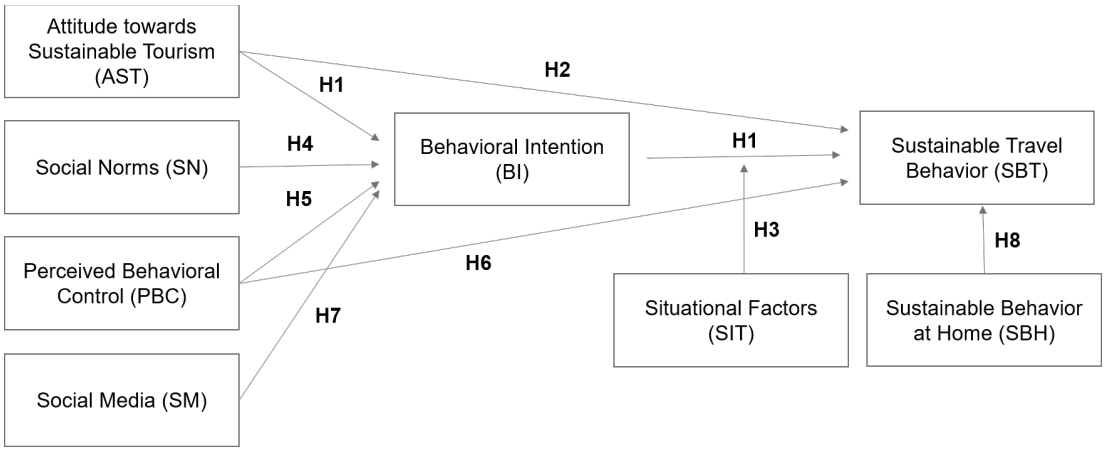
($H8_1$) Gen Zers sustainable behavior at home has a positive impact on their sustainable travel behavior.

($H8_0$) Gen Zers sustainable behavior at home has no impact on their sustainable travel behavior.

Finally, Figure 7 illustrates the proposed research model on which the data collection will build upon. A summary of the formulated hypotheses and variables of interest is provided in Table 1.

Figure 7

Proposed Research Model



Note. Own illustration.

Table 1

Summary of Research Hypotheses and Variables of interest

Hypothesis (H_1)	Independent Variable	Dependent Variable	Mediating Variable	Moderating Variable
H1 Gen Zers intention to perform a sustainable travel behavior is mediating the impact of their attitude towards sustainable tourism on their sustainable travel behavior.	AST	SBT	BI	
H2 Gen Zers attitude towards sustainable tourism has a positive impact on their sustainable travel behavior.	AST	SBT		
H3 Situational Factors moderate the impact of Gen Zers intention to perform a sustainable travel behavior on their sustainable travel behavior.	BI	SBT		SIT
H4 Social Norms have a positive impact on Gen Zers intention to perform a sustainable travel behavior.	SN	BI		

Table 1

Table continued

Hypothesis (H_1)	Independent Variable	Dependent Variable	Mediating Variable	Moderating Variable
H5 Gen Zers perceived behavioral control on performing a sustainable travel behavior has a positive impact on the intention to perform a sustainable travel behavior.	PBC	BI		
H6 Gen Zers perceived behavioral control on performing a sustainable travel behavior has a positive impact on their sustainable travel behavior.	PBC	SBT		
H7 Social Media has a negative impact on Gen Zers intention to perform a sustainable travel behavior.	SM	BI		
H8 Gen Zers sustainable behavior at home has a positive impact on their sustainable travel behavior.	SBH	SBT		

Note. Own illustration.

3. Empirical Methodology

The previous chapter has shown, that the ABG can be considered a common phenomenon in sustainable tourism, which further gains complexity due to an additional inconsistency between sustainable behaviors in domestic and tourism contexts. A review of literature further provided an indication for an ABG in tourism among the allegedly sustainable Generation Z. As evidence suggests, attitudes alone do not entirely determine behavior, wherefore it can be expected that the attitude-behavior relationship is influenced by several additional factors. With the aim to gain an in-depth understanding of the backgrounds of the ABG of Generation Z travellers, the empirical study attempts to precisely answer the underlying research question, which is recapitulated in the following:

Which factors have an influence on the Attitude-Behavior Gap of Generation Z in the travel context?

To properly address the research problem, several methodological considerations are required prior to conducting the empirical study. The subsequent chapter provides a detailed description of the chosen quantitative research methodology and the respective implementation process.

3.1 Research Design

Choosing a sound research design is a crucial consideration within the research process, as this decision is critical to the fruitfulness of the data gathered to adequately tackle the research problem (Döring et al., 2016; Leedy & Ormrod, 2010). Hence, it is imperative, that the choice of methodology builds upon the envisaged research objective. Drawing on the classification criteria of research designs established by Montero and León (2007), the adopted research design is specified in the following. Thereby, rationales for corresponding decisions are made transparent in the sense of intersubjective comprehensibility, in order to comply with the fundamental principles of science (Döring et al., 2016).

The research objective of the present study lies in the identification of variables that exert an influence on the ABG of Generation Z in sustainable tourism. Thereby, the study aims at testing established behavioral theories on the example of Generation Z on validity to draw conclusions about the target population (Creswell, 2014; Döring et al., 2016). Hence, instead of inductively developing theories based on a small sample

size, which is a common procedure within the qualitative research paradigm, it is followed a deductive approach, building on the assessment of pre-formulated premises (Leedy & Ormrod, 2010). A quantitative methodology is generally characterized by testing hypotheses with a standardized research instrument in order to refine or (un)confirm existing theories (Döring et al., 2016), reasoning the adoption of a quantitative research design. Against this background, the study aims to identify cause-and-effect relationships between specific variables, which in simplified terms refers to the investigation of whether any factor X exerts an influence on the ABG under study, and can hence be classified as being explanatory in nature (De Vaus, 2001; Döring et al., 2016).

Since no comparisons are required to be made within the sample, the data collection does neither involve a randomization of subjects nor divide the sample into control and experimental groups (Döring et al., 2016; Kromrey, 2009). Accordingly, the study is in fact a non-experimental study, which is also referred to as an *ex-post facto study* (Döring et al., 2016). In doing so, a random sample is drawn from the population of interest, whereby data is gathered at one temporal point of measurement, which further lends the study to be cross-sectional (Döring et al., 2016; Montero & León, 2007).

Several scholars suggest, that tourist behavior research is dominated by studies adopting a quantitative methodology (Cohen et al., 2014; ElHaffar et al., 2020), which provides support for the chosen research design. This stands however in contrast to the fact, that academic research is considerably at odds over which form of data collection is appropriate to gain a deeper understanding of the ABG. While some researchers stress mixed-methods methodologies as being particularly fruitful (Belk et al., 2005; Carrington et al., 2010), others advocate qualitative methods for the investigation of tourist behavior (Decrop, 1999a). In the framework of this academic discourse, Anable et al. (2006) consider the focus of research on standardized methods as a *weakness* that prevents from a thorough understanding of *"psychological processes"* (Anable et al., 2006, p. 165) with regard to tourist decision-making. Against this potential criticism of the chosen research design it can however be argued, that the present study aims at examining the ABG based on established behavioral theories which mismatches with the inductive nature that a qualitative methodology would bring about (Montero & León, 2007). Moreover, the study does not follow the objective of understanding the ABG from an individual viewpoint (Decrop, 1999a), but seeks to investigate the phenomenon in a broader setting to be

able to draw conclusions about the population of Gen Zers (Döring et al., 2016), which renders a quantitative research design to be the most appropriate.

To summarize, the master's thesis at hand employs a quantitative research methodology in the course of which an explanatory, non-experimental cross-sectional study is carried out that gathers data from a sample representing the population of interest in order to test theory-based hypotheses and provide an adequate answer to the research question.

3.2 Sampling

The data collection targets the German-speaking residential population of Gen Zers within the DACH-region (Germany, Austria, Suisse). As it was emphasized based on reviewing the literature of most relevance, the study adopts the definition of Gen Zers being born between 1995 and 2010 (Bassiouni & Hackley, 2014; Francis & Hoefel, 2018; Gabrielova & Buchko, 2021; Monaco, 2018; Robinson & Schänzel, 2019; Seemiller & Grace, 2017). For ethical reasons and the protection of minors, Gen Zers under the age of 16 have been excluded from the questionnaire by means of inserting a filter question. Drawing on art. 8 of the European General Data Protection Regulation (GDPR), an inclusion of minors below the age of 16 would require parental consent (Wiebe & Helmschrot, 2019), which would have entailed impeding controllability, as the online survey was spread on social media platforms, which are also accessible to minors of age below 16. Accordingly, the participating Gen Zers were born between 1995 and 2006 and hence aged between 16 and 27 years at the time of data collection. As a further condition for participation, respondents had to be able to recall their last vacation prior to the outbreak of Covid-19, as travel restrictions during the pandemic were thought to have caused behavioral change and consequently affected the sustainability of travel behavior, carrying the risk of data bias.

The study employed a snowball-sampling technique, wherefore the data collection was based on an arbitrary non-probabilistic sample (Bryman, 2016; Döring et al., 2016). Bryman (2016) refers to snowball-sampling as being a sort of convenience sampling, which should nevertheless be considered a separate method. In fact, snowball-sampling describes a procedure that draws not only on the personal social network of the researcher, but also on the social networks of individual population members, which likewise contribute to recruiting study participants (Döring et al.,

2016). The technique thus entails the benefit of generating a relatively large sample in a short period of time and can be implemented in a convenient and cost-effective manner (Bartlett, 2005), which proves advantageous given the limited time and financial capacity of the present study. As further suggested by Döring et al. (2016), snowball-sampling proves to be especially useful when the members of the population are characterized by high levels of interconnectedness among each other (Döring et al., 2016), which highlights the chosen approach as being particularly suitable for adequately addressing the digitally-interconnected Generation Z.

Finally, it was targeted a sample size of 385 at a confidence level of 95% and a margin of error of 5% based on internal calculations.

3.3 Research Instrument

The study employed a standardized self-administered questionnaire, which is also referred to as a survey method (Bartlett, 2005; Döring et al., 2016). A quantitative questionnaire allows to numerically capture unobservable matters, such as subjective opinions or cognitions, of the sample under study from which it can be drawn generalizations on the target population (Creswell, 2014; Döring et al., 2016; Leedy & Ormrod, 2010). In view of the explanatory research design and the proposed research model, the adoption of a survey instrument appears particularly suitable, as the standardized data allows for a proper testing of one or several theories and an exploration of relationships between different variables (Saunders et al., 2007). In this context, Dillman (2007) makes a distinction between four data variables that can be assessed with a survey, namely attitudes, beliefs, behaviors, and attributes. Commonly, these variables are measured by means of closed-response questions, whereby study participants can select the most applicable answer (Döring et al., 2016; Kromrey, 2009). Although several researchers point out the method's shortcoming of the researcher not being able to supervise the survey setting (De Leeuw & Hox, 2008; Döring et al., 2016; Saunders et al., 2007) and knowledge gained about the respondent's opinions being limited to the pre-structured question catalogue (Döring et al., 2016), yet the efficiency of the research instrument is generally acknowledged. Drawing on Döring et al. (2016), a self-administered questionnaire allows a large amount of data to be collected in a short period of time from a vast sample size, which was deemed particularly promising for obtaining the largest possible sample and thus the most meaningful insights into the ABG of Generation Z. Given the digital interconnectedness of Gen Zers, an anonymous online-questionnaire was chosen as

survey administration mode (Döring et al., 2016), which eliminates the risk of data distortion due to the occurrence of interviewer effects, and allows more sensitive issues to be addressed (De Leeuw & Hox, 2008). The choice of a questionnaire method can be further corroborated by the fact, that most studies attempting to fathom the ABG employ quantitative surveys (ElHaffar et al., 2020). In addition, it is widely advocated to study the TPB using a quantitative questionnaire (Ajzen, 1991, 2020; Fishbein & Ajzen, 2010).

With the proposed hypotheses and conceptual model forming the base frame for questionnaire development, the survey questions have been precisely formulated based on existing literature within the research area of interest, taking into account the criteria of comprehensibility, unambiguity, and non-suggestiveness (Kromrey, 2009). As suggested by Bourque and Clark (1992), a survey instrument can be developed by either adopting or adapting established items, or by creating new items. The present study followed the approach of adopting items that have already been employed to measure the constructs of interest within relevant studies and by adapting items to the given research context. Both, single items and psychometric scales were included (Döring et al., 2016). Furthermore, the questionnaire incorporated positive and negative items[5] with the aim to avoid response tendencies (Döring et al., 2016) and to ensure that the study participants read and respond to the questionnaire in a careful and sincere manner (Saunders et al., 2007).

Given the fact, that most research dealing with the ABG or applying the TPB has been carried out in English (e.g. Barr et al., 2010; Buffa, 2015; Gardiner et al., 2014; Holmes et al., 2021; Juvan & Dolnicar, 2014; MacInnes et al., 2022; Passafaro et al., 2015; Prillwitz & Barr, 2011), the questionnaire was initially conceptualized in English language. Against the background of the intended German-speaking target population, the questionnaire was subsequently translated, and available in German language only. For time and budgetary reasons, the questionnaire was directly translated by the researcher, taking into account the experiential, idiomatic, grammatical, and lexical equivalence of the questions (Usunier, 2011).

Table 2 finally provides an overview on the distinct thematic question blocks and the rough conception of the questionnaire, partially adapted to the structural survey elements as proposed by Döring et al. (2016).

[5] *Note.* Negative items have been later reverse coded and are marked with the notion *(R)*.

Table 2

Rough conception of the quantitative Questionnaire

Questionnaire element	Description
Title of questionnaire	*The relevance of sustainability within travel behavior*
Questionnaire instruction	Explanation of questionnaire objective and procedure. Provision of contact details of the researcher. Reference to research ethics and Data Protection Regulation.
Statistical data	Sociodemographic data Subject-specific background information on last travel before Covid-19
Question blocks	**A.** Sustainable Behavior at Home (SBH) **B.** Sustainable Behavior on Vacation (SBT) **C.** Attitude towards Sustainable Tourism (AST) **D.** Social influences on Sustainable Travel Behavior (SN, SM) **E.** Perceived Barriers for Sustainable Travel Behavior (PBC, SIT) **F.** Intention for future Sustainable Travel Behavior (BI)
Final page of the questionnaire	Acknowledgement of participation

Note. Information from *Forschungsmethoden und Evaluation in den Sozial- und Humanwissenschaften* (5th ed., p. 406), by N. Döring and J. Bortz, 2016, Springer. Copyright 2016 by Springer-Verlag. Own illustration.

A final version of the questionnaire in German language is provided in Appendix A1.

3.4 Concept Specification and Operationalization

Drawing on Kromrey (2009), the process of concept specification and operationalization can be understood as the *empirical translation* of the research problem. The following chapter first outlines the adopted approach to measure sociodemographic and background variables. Afterwards, the meaning and dimensionality of each theoretical construct captured in the research model are specified for the scope of the present study (Kromrey, 2009). In addition, the adopted

and adapted items as well as the scales used to adequately measure each construct are introduced (Döring et al., 2016).

3.4.1 Sociodemographic and Background Variables

The first part of the questionnaire was composed of items assessing the sociodemographic background of the participants. Although academic literature commonly proposes to position items with relation to sociodemographic characteristics at the end of the questionnaire (Döring et al., 2016), the present study adopted a different approach, as the age of the participants formed the main criterion for being an eligible proband. In this way, the age variable was included as a filter question, with participants outside the age range of 16 to 27 years being withdrawn from the questionnaire. Further sociodemographic variables, namely gender, country of origin, profession, and educational status were measured by adopting and partly adapting items from Cavagnaro and Staffieri (2015), Holmes et al. (2021), Buffa (2015), and Barr et al. (2011).

In addition, several background variables relevant to the subject under study have been assessed separately to the question blocks. These initial simple questions were further intended to familiarize the respondents with the subject matter of the questionnaire (Döring et al., 2016). Since being able to recall the last vacation taken before the outbreak of the pandemic formed a precondition for participation, probands were queried about their respective memory by means of a dichotomous filter question, leading the participant out of the questionnaire in case of negation. As it was emphasized, sustainable tourism does not describe a particular type of tourism product (see Lu & Nepal, 2009), from which it was concluded that it may prove more feasible to elaborate on the composition of the vacation rather than the type of vacation as such. Consequently, subject-related aspects regarding the chosen transport and accommodation components, the travel group constellation, and the accountability for travel expenses were queried by adapting items from Holmes et al. (2021), Prillwitz and Barr (2011), and López-Sánchez and Pulido-Fernández (2016).

3.4.2 Sustainable (Travel) Behavior

As behaviors are observable in nature, they differ from other variables to be measured such as intentions, or attitudes. However, due to the timely effort that a study method of behavioral observation entails, scholars mainly assess behaviors based on self-reports (Fishbein & Ajzen, 2010). The study at hand measured the participants self-

reported behavior across two contextual settings, namely sustainable behavior at home (SBH) and sustainable behavior on vacation (SBT), subdivided into the dimensions of general (SBTG) and specific (SBTS) sustainable travel behavior.

With the aim to also investigate the *home-away-gap* and draw direct comparisons between sustainable behaviors in the home and the travel context, general sustainable behavior at home and general sustainable behavior on vacation have first been assessed by including statements on identical environmental practices, as implemented within several quantitative studies such as the ones conducted by MacInnes et al. (2022), Dolnicar and Leisch (2008) and D. Miller et al. (2014). Due to a lack of studies that measure sustainable tourist behavior holistically, i.e., considering environmental, economic and social aspects, there were only included items with statements focusing on general pro-environmental practices in the domestic and the tourism context. Consequently, for both behavioral contexts there have been respectively adopted a compilation of seven items from MacInnes et al. (2022), Dolnicar and Leisch (2008) and D. Miller et al. (2014). The pro-environmental practices in the home context have been measured by asking the respondents to rate the frequency of engagement on a five-point Likert-scale ranging from 1=Never to 5=Always.

To measure the general (environmentally) sustainable behavior on vacation and the specific sustainable travel behavior, which referred to specific travel components, the participants were asked to relate the item statements to their last travel carried out before the pandemic. As it was emphasized, this retrospective measure of behavior (Fishbein & Ajzen, 2010) was intended to avoid data bias. In order to measure specific sustainable travel behavior, a set of eleven items consisting of statements that depict sustainable travel practices was used. The items were partly adopted and adapted from literature, namely Holmes et al. (2021), Juvan and Dolnicar (2016), and Buffa (2015). All items related to SBT were measured on a five-point Likert-scale ranging from 1=Never to 5=Always. Table 3 synthesizes the operationalization of sustainable behavior at home and sustainable travel behavior.

Table 3

Operationalization of Sustainable Behavior at Home and Sustainable Travel Behavior

Construct	Dimension	Item
Sustainable Behavior at Home (SBH)	General (environmentally) sustainable practices at home	I separate waste.
		I avoid heating/cooling.
		I save water.
		I pick up litter, that does not belong to me.
		I switch lights off when not in use.
		I encourage (or support) others to be environmentally friendly.
		I buy organic food products.
Sustainable Travel Behavior (SBT)	General (environmentally) Sustainable Travel Behavior (SBTG)	I separated waste.
		I avoided heating/cooling.
		I saved water.
		I picked up litter, that did not belong to me.
		I switched lights off when not in use.
		I encouraged (or supported) others to be environmentally friendly.
		I bought organic food products.
	Specific Sustainable Travel Behavior (SBTS) related to travel components	I chose tourism companies which proactively protect the environment and local culture.
		I stayed at locally owned accommodations.
		I have decided not to stay at accommodations that were not certified to be sustainable or eco or green-labeled.
		I walked or cycled instead of taking motorized transportation at the destination (taxi or renting a car).
		I purchased carbon offsets to mitigate my carbon footprint.
		I ate local foods and specialties in locally owned restaurant (instead of international food in known branded places such as McDonalds).
		I dismissed a particular mode of transport to a destination to avoid air pollution (e.g. flight).
		I intentionally interacted with locals.
		I adapted myself to local habits to meet the expectation of local people at the destination (e.g. dress style).
		I was committed to learn about the local environment, culture and history.

Note. Own illustration.

3.4.3 Attitude towards Sustainable Tourism

The concept of attitudes corresponds to the subjective evaluation of the behavior under study in terms of its desirability or undesirability (Ajzen, 1991; Conner & Armitage, 1998). Some researchers measure the attitude construct particularly related to the perceived outcome that the individual relates to the behavior such as Walsh and Dodds (2022), who distinguish between general attitude, perceived costs attitude, and perceived benefits attitude. However, Ajzen (1991) highlights, that general attitudes tend to be poor indicators of specific behaviors as they lack the reference to the behavior in question, which can be further substantiated by the TPB specifically incorporating the determinant *attitude toward the behavior*. Similarly to Walsh and Dodds (2022), Armitage and Conner (1999) measured the attitude construct both directly and indirectly, by asking respondents to rate several attitudinal statements and to elaborate on certain outcomes related to the behavior of interest. Following this approach, the attitudinal variable was operationalized by including items on the specific attitude, sustainability cost attitude and sustainability benefit attitude towards aspects related to sustainable tourism and sustainable travel behaviors. Consequently, the specific attitude has been measured by adopting items from relevant studies in the field of behavioral research in tourism, namely Passafaro et al. (2015), Barr et al. (2011), and Perkins and Brown (2012). This compilation of seven items has been further added with three items retrieved from Juvan and Dolnicar (2021) to also incorporate the most common justifications that tourists state as a rationale for not engaging in sustainable travel behaviors. Both the sustainability costs attitude and sustainability benefits attitude have been measured by adopting two items from Walsh and Dodds (2022). Several reverse coded items (R) have been incorporated with the aim to avoid response bias (Döring et al., 2016). The compilation of all attitudinal statements has been oriented on the three-dimensional logic of the TBL and measured on a five-point Likert-scale ranging from 1=strongly disagree to 5=strongly agree. Table 4 summarizes the operationalization of the Attitude towards Sustainable Tourism (AST) variables.

Table 4

Operationalization of Attitude towards Sustainable Tourism

Construct	Dimension	Item
Attitude towards Sustainable Tourism (AST)	Specific attitude towards the behavior	Reducing air travel is vital to tackling global warming and emissions.
		Rather than visit a place where tourism damages the environment, I prefer not to go on holiday.
		During the holiday, it is important to dedicate time to the understanding of the present and past history, culture and traditions of the place visited.
		Vacationers pay to get leisure and amusement and should not be involved in the social and environmental problems of the place visited. (R)
		Vacations are a special time for me. I do not want to be burdened by worrying about sustainability issues. (R)
		I prefer leisure activities and tourism experiences where I can just have fun, relax, and spend money on doing what I like how I like. (R)
		I do a lot for the environment when I am at home, so I can relax a bit when I am on vacation. (R)
		As a tourist I believe that I am entitled to travel anywhere and anyhow I choose as I have paid for the personal experience. (R)
		Other tourists harm the environment much more than I do. (R)
		I believe I should definitely consider my impact on earth and other cultures when I make my travel choices.
	Sustainability Costs Attitude	Spending money on sustainable tourism is giving up something of my needs and wants. (R)
	Sustainability Benefits Attitude	Spending money on sustainable tourism is buying services consciously that have a better impact on destinations.

Note. (R) = Reverse coded items. Own illustration.

3.4.4 Social Norms

In accordance with the TPB, social norms describe the perceived social pressure on enacting or not enacting a particular behavior (Ajzen, 1991; Brown, 1999; Klöckner & Blöbaum, 2010; Leone et al., 1999; Vermeir & Verbeke, 2008). Cialdini et al. (1991) further refine the term of norms by stating that the notion encompasses two distinct dimensions, namely which behaviors are perceived to be commonly carried out (descriptive norms), and what is considered to be commonly advocated by the society (injunctive norms) – a conceptualization that has been taken up by a multitude of researchers within empirical behavioral research (Ajzen, 2020; Doran & Larsen, 2016; Fishbein & Ajzen, 2010). As Ajzen and Madden (1986) propose, social norms can be quantified by measuring the normative beliefs of how important reference persons expect the individual to engage or not engage in the specific behavior and the individual's motivation to comply with these expectations – a measurement approach also implemented by Davies et al. (2002) and Bagozzi (1981). Fishbein and Ajzen (2010) however challenge this approach, as it purely covers the dimension of injunctive norms. Academic literature suggests to measure descriptive norms by assessing perceptions of whether or not important reference persons engage in the behavior in question (Doran & Larsen, 2016; Fishbein & Ajzen, 2010; Nolan et al., 2008). On this basis, the concept of social norms has been assessed by including items focused on the sub-dimensions of injunctive norms, namely normative beliefs and the motivation to comply, and the dimension of descriptive norms. Normative beliefs have been assessed by means of adopting and partly adapting four items from Doran and Larsen (2016) and Juvan and Dolnicar (2017). Furthermore, three items retrieved from Gardiner et al. (2014) have been included to measure the motivation to comply. Descriptive norms have been assessed by adopting three items from Doran and Larsen (2016). The items were measured with a five-point Likert-scale ranging from 1=strongly disagree to 5=strongly agree. Table 5 visualizes the operationalization of social norms (SN).

Table 5

Operationalization of Social Norms

Construct	Dimension	Item
Social Norms (SN)	Injunctive Norms *Normative Beliefs*	Being a sustainable tourist is something my friends and family value.
		Most people who are important to me think that one ought to make an effort to stay at a sustainable accommodation when travelling.
		Most people who are important to me think that one ought to purchase sustainable tourism products although this might be more expensive.
		Most people who are important to me think that one ought to use environmentally means of transportation although this might take more time.
	Motivation to comply	I generally choose a holiday that I think others will approve of.
		I like to go on holidays that make a good impression on others.
		I achieve a sense of belonging by purchasing the same holidays that others purchase.
	Descriptive Norms	People who are important to me make an effort to stay at a sustainable accommodation when travelling.
		People who are important to me purchase sustainable tourism products although this might be more expensive.
		People who are important to me use environmentally friendly means of transportation although this might take more time.

Note. Own illustration.

3.4.5 Social Media

Only a limited amount of academic literature explicitly addresses the role of social media in sustainable tourism, wherefore it was also drawn on general tourism literature to operationalize the construct. Drawing on Kaplan and Haenlein (2010) social media describes *"a group of Internet-based applications […] that allow the creation and exchange of User Generated Content"* (Kaplan & Haenlein, 2010, p. 61). Although the term *social media* encompasses multiple platforms, the study at hand confines the use of the terminology to social networking sites that allow users to

consume and create visual content and provide a space for virtual social communication and interaction (Zeng & Gerritsen, 2014).

Following Hysa et al. (2021) and Ana and Istudor (2013), the social media construct was mainly measured by including items focusing on the general social media usage in relation to travel. Therefore, the study adopted and adapted four items from Hysa et al. (2021) and Ana and Istudor (2013). By assessing the relationship between social media and behavioral intention in general (Latif et al., 2020) and in the framework of the TPB in particular (Asdecker, 2022; De Lenne & Vandenbosch, 2017) Latif et al. (2020), Asdecker (2022) and De Lenne and Vandenbosch (2017) operationalized the social media construct by measuring the perceived exposure to social media content with regard to the behavior of interest. Hence, the dimension *exposure to travel related content on social media* was included in the questionnaire by adapting an item from Latif et al. (2020). Within the research field of sustainable consumption behavior, Johnstone and Lindh (2018) assessed social media as part of the TPB from a different angle, by measuring the role played by social media influencers within travel decision-making. Accordingly, one item from Johnstone and Lindh (2018) was added and adapted to the research context. The item on *exposure to travel related content on social media* was measured by means of a five-point Likert-scale from 1=never to 5=very often[6]. The remaining dimensions were assessed with the aid of a five-point Likert-scale ranging from 1=strongly disagree to 5=strongly agree. Table 6 summarizes the operationalization of the construct social media (SM).

Table 6

Operationalization of Social Media

Construct	Dimension	Item
Social Media (SM)	General Social Media Usage in relation to travel	Positive opinions and comments in social media encourage me to go on holiday.
		I check opinions/stories on places I want to visit on social media.
		I use social media sites (e.g. Instagram) during the trip, when I try to find out information about specific attractions/activities.
		I use social media sites (e.g. Instagram) during the trip to share my experience with other travellers/friends.

[6] *Note.* The initial scale for measurement was 1=never to 5=30 or more times and converted to a 5-point Likert-scale based on the pretest results.

Table 6

Table continued

Construct	Dimension	Item
	Role of social media influencers	I often base travel decisions on the statements of influencers that I trust regardless of their sustainability awareness.
	Exposure to travel related content on Social Media	How often in the previous 6 months did people you are connected with on social media post pictures, updates, or posts on social media that showed or talked about them traveling?

Note. Own illustration.

3.4.6 Perceived Behavioral Control

As it was emphasized, perceived behavioral control describes the estimated simplicity or difficulty to realize a certain behavior (Ajzen, 1991). According to Davies et al. (2002), measures of perceived behavioral control can be accomplished in two different ways, either by asking how much control the respondents believe to hold over performing the behavior (*self-efficacy*), or by assessing the extent to which the respondents believe they can perform the behavior, which pertains to perceived barriers such as (un)available resources or opportunities (*perceived ease or difficulty*). This conception can be strengthened by drawing on Fishbein and Ajzen (2010), who refer to self-efficacy and perceived ease or difficulty as being the determinants of perceived behavioral control. An array of quantitative studies has adopted this measurement approach (e.g. Han et al., 2010; Juvan & Dolnicar, 2017; Vermeir & Verbeke, 2008), wherefore the present study likewise operationalized the construct by including both items on self-efficacy and items on the perceived ease or difficulty to enact the behavior. The dimension perceived ease or difficulty has been measured by adapting a compiled set of five reverse-coded items from Klöckner and Blöbaum (2010), Ajzen and Madden (1986), and Juvan and Dolnicar (2021), whereby the statements referred to potential barriers that may prevent from behaving sustainable on vacation. For the measurement of perceived self-efficacy, three items have been adapted from Han et al. (2010). Due to a lack of literature employing the TPB in the context of Gen Zers travel behavior, one additional item has been constructed on the basis of several items from Ajzen and Madden (1986), Han et al. (2010), and Juvan and Dolnicar (2017) with the aim to also investigate the influence that parents may

exert on Gen Zers (un)sustainable travel behavior. All items have been measured by employing a five-point Likert-scale ranging from 1=strongly disagree to 5=strongly agree. Table 7 illustrates the operationalization of perceived behavioral control (PBC).

Table 7

Operationalization of Perceived Behavioral Control

Construct	Dimension	Item
Perceived Behavioral Control (PBC)	Perceived ease or difficulty	Making sustainable vacation choices is too expensive for me. (R)
		There is a lack of infrastructure required to keep my vacations environmental impact low. (R)
		Planning sustainable vacations takes too much time. (R).
		It would be difficult to manage my holidays with environmentally friendly means of transportation. (R)
	Self-Efficacy	Whether or not I behave sustainable when traveling is completely up to me.
		I am confident that if I want, I can behave sustainable when traveling.
		I have resources, time, and opportunities to behave sustainable when traveling.
		I feel that my [travel companions] (e.g. parents) that pay for travel expenses have more control over the sustainable impact of my vacation than me. (R)

Note. (R) = Reverse coded items. Own illustration.

3.4.7 Situational Factors

According to Belk (1975), situational factors *"represent momentary encounters with those elements of the total environment which are available to the individual at a particular time"* (Belk, 1975, p. 157). Similarly, Wang et al. (2020) argue, that pro-environmental tourist behavior arises from an interplay between human beings and the environment. However, the measurement approaches focusing on such environmental factors remains scarce, especially in the field of sustainable tourism research (Wang et al., 2019a; Wang et al., 2019b; Wang et al., 2020). Several studies with a focus on pro-environmental tourist behavior find three distinct situational dimensions that moderate the relationship between the behavioral intention and behavior within the framework of the TPB and were hence deemed particularly relevant for adequately testing the formulated hypothesis (see Wang et al., 2019a;

Wang et al., 2019b; Wang et al., 2020). The studies outline, that *public environmental facilities*, which encompass the (un)availability of environmental-protective infrastructure, *environmental background*, namely the perceived environmental status of the touristic area such as clean public spaces, and *behavioral reference* to other tourist's behavior, form key situational factors (Wang et al., 2019a; Wang et al., 2019b; Wang et al., 2020). Situational factors were therefore operationalized by including items on public environmental facilities, environmental background, and behavioral reference. To assess the role played by the dimension of environmental background, respectively one item has been adapted from Wang et al. (2019b) and Wang et al. (2018). The influence of public environmental facilities has been measured by adapting three items from Wang et al. (2020) and So and Lehto (2007). Finally, two items adapted from Wang et al. (2019a) and So and Lehto (2007) served to measure the dimension of behavioral reference. All items have been assessed with a five-point Likert-scale ranging from 1=strongly disagree to 5=strongly agree. Table 8 provides an overview on the operationalization of situational factors (SIT).

Table 8

Operationalization of Situational Factors

Construct	Dimension	Item
Situational Factors (SIT)	Environmental Background	A clean public space of the tourist site makes me consciously regulate my environmentally friendly travel behavior.
		Rewards and punitive measures for the environmental protection of the destination/scenic spot make me regulate my environmentally friendly travel behavior consciously.
	Public environmental facilities	If the facilities at the destination (e.g. garbage cans) are set up properly, I will not behave unsustainable (e.g. littering).
		If I'm engaged in unsustainable travel behaviors, it's probably because the destination is not doing well enough.
	Behavioral reference	The environmentally protective behavior of other tourists makes me consciously regulate my own environmentally friendly travel behavior.
		In contexts where everyone is engaged in unsustainable behaviors such as littering, me as a tourist can't be blamed for doing it too.

Note. Own illustration.

3.4.8 Behavioral Intention

Behavioral intentions form the subjective motivation of making an effort to exhibit a certain behavior, which in the present context indicates the likelihood and individual willingness of performing a sustainable travel behavior (Conner & Armitage, 1998; Moutinho, 1987; Paul et al., 2016). Within quantitative studies, behavioral intention is commonly measured in a similar manner by directly asking participants about their willingness and perceived probability of participating in a certain behavior (Ajzen & Madden, 1986; Armitage & Conner, 1999; Davies et al., 2002; Doran & Larsen, 2016; Mehmetoglu, 2010). However, quantitative measurement approaches on the construct of intention in the research field of pro-environmental (Mehmetoglu, 2010) and sustainable tourist behavior remain scarce. Hence, the intention to participate in sustainable travel behaviors was operationalized by partly adopting and adapting five items from literature to the given research context, compiled from studies conducted by Doran and Larsen (2016), Mehmetoglu (2010), Ajzen and Madden (1986), and Maichum et al. (2017). The intentional items have been measured with a five-point Likert-scale ranging from 1=strongly disagree to 5=strongly agree. Finally, Table 9 illustrates the operationalization of behavioral intention (BI).

Table 9

Operationalization of Behavioral Intention

Construct	Description	Item
Behavioral Intention (BI)	Individual motivation to exert an effort to behave sustainable on vacation	It is likely that I would pay more for a trip if this helps to protect the environment, local culture and economy.
		It is likely that I would use environmentally friendly means of transportation although this might take more time.
		It is likely that I would make an effort to stay at environmentally friendly accommodations when travelling.
		I would be willing to behave as sustainable as at home on holiday.
		I choose to prefer tourism activities that are sustainable over other more unsustainable travel options.

Note. Own illustration.

A detailed operationalization table can be consulted in Appendix A2.

3.5 Pretest

Prior to the data collection, a pretest was conducted with the objective of identifying possible response difficulties and adjusting the questionnaire accordingly, thus increasing the reliability and validity of the research instrument (Bartlett, 2005; Döring et al., 2016). The pretest was carried out with nine members of Generation Z. The participants were briefed to pay particular attention to the comprehensibility of the instructions and questions, the question order, the meaningfulness of response formats, the usability, and the length of the questionnaire (Döring et al., 2016; Saunders et al., 2007). The questionnaire instructions, the wording of the questions, online usability and the arrangement of items were considered comprehensible and logically structured by all participants. Certain items were deemed more understandable if they would relate to tangible examples, wherefore some items have been accordingly modified. In addition, one scale employed ranging from 1=never to 5=30 or more times was perceived as being difficult to adequately respond to due to the numerical designations. Consequently, the scale was changed to a five-point Likert-scale of frequency ranging from 1=never to 5=very often. This was simultaneously thought to increase consistency (Döring et al., 2016), as a five-point Likert-scale represented the principal scale applied to measure the questionnaire variables. Furthermore, in some cases none of the provided response options for measuring the background variables have been applicable to the respondents, for which reason the answer options were extended by the missing components mentioned. Finally, all respondents criticized the length of the questionnaire. Since excessively long questionnaires have a strong link to drop-out rates (Döring et al., 2016; Singer, 2008), the questionnaire was shortened by eliminating items that showed overlaps or were determined to be of least relevance for adequately testing the hypotheses.

3.6 Procedure of Data Collection

The questionnaire was distributed on social media platforms and made accessible via a hyperlink, whereby participation was possible by means of both mobile and stationary devices (Döring et al., 2016). The social media platforms that were chosen to be the most appropriate for obtaining a large sample were Instagram, Facebook, LinkedIn, and Xing. By distributing the questionnaire across multiple social media channels, it was intended to obtain a high response rate and a sample structure as heterogeneous as possible. The hyperlink was uploaded in conjunction with subject-

specific background information, and the pre-conditions for participation, namely being aged between 16 and 27 years and the ability of recalling the last vacation taken before the outbreak of the pandemic. Against the background of the adopted snowball-sampling technique, the potential respondents were furthermore encouraged to forward the questionnaire. Some researchers point out, that online surveys carry the risk of a *coverage error* since there is no warranty as to whether all members of the target population have access to the internet (Lozar Manfreda & Vehovar, 2008). However, as the target population is composed of Gen Zers, who are particularly known for being extensively connected on online platforms, it can be argued that this data collection bias could be reduced to a minimum within the present study. The questionnaire was available on the aforementioned social media platforms for a period of 17 days.

3.7 Limitations of the chosen Methodology

Several limitations need to be acknowledged regarding the chosen methodology. First of all, several researchers argue, that the adoption of a snowball-sampling technique involves risks concerning the generalizability of data (Döring et al., 2016; Lozar Manfreda & Vehovar, 2008; Saunders et al., 2007). As Döring et al. (2016) outline, snowball-sampling constitutes an arbitrary and non-probabilistic method, which is why the researcher has no control over the representativeness of the results. Moreover, snowball-sampling bears the risk of yielding a rather homogenous sample, as the questionnaire is scattered exclusively in the social environment of the researcher and the individual population members (Lee, 1993; Neuman & Neuman, 2014). Hence, a generalizability of the obtained results to the pre-defined target population may not be possible.

As there are no validated scales to date that adequately measure the constructs of interest in the underlying research context, it was relied on a compilation of items retrieved from different studies. This entails the risk of jeopardizing the instruments internal validity and reliability, meaning that the employed items may not holistically measure the constructs under study (Döring et al., 2016; Kromrey, 2009). However, established scales, such as the New Environmental Paradigm (NEP) proposed by Dunlap and van Lière (1978), which forms the most widely employed measure to assess pro-environmental attitudes (Dunlap, 2008), limit their scope to the environmental dimension of sustainability. As the present study aims at assessing attitudes towards sustainable tourism in a three-dimensional manner, the NEP-scale

was deemed insufficient for the purpose of the study. Nevertheless, with the intention of minimizing the risks involved, it was followed the approach of measuring the theoretical constructs using multiple indicators, which has the potential to reduce measurement errors and to increase questionnaire reliability (Döring et al., 2016). Besides, scholars are at odds on to whether Likert-scales should incorporate a middle category, as the opinion the respondent desires to express by choosing the middle response option is open to multiple interpretations (Dubois & Burns, 1975). However, due to the complex and considerable breadth of the sustainability issue, employing a five-point Likert-scale was intended to avoid data bias, in case if respondents lacked the knowledge or opinion to provide an accurate answer to the question (Willits et al., 2016). In addition, five-point Likert scales are the most widely adopted scales to measure attitudes within behavioral research (Bryman, 2016), which enhances the comparability to other studies (Willits et al., 2016).

Further, empirical studies in the field of tourism research are predominantly located in the thematic area of environmental sustainability (e.g. Doran & Larsen, 2016; Juvan & Dolnicar, 2017; Perkins & Brown, 2012; Wang et al., 2020), which is why the environmental dimension is unintentionally covered more extensively within the questionnaire than the social and economic dimension of sustainability. Lastly, a social desirability bias, meaning that participants respond in a way that is perceived as socially accepted rather than reflecting the factual reality (Carrington et al., 2010), may occur due to the chosen survey mode (Moutinho, 1987) and the sustainability topic studied (Davies et al., 2002), which must be further considered within data evaluation and presentation.

4. Data Evaluation and Findings

The following section sheds light on the procedure of data analysis and the main findings obtained. After outlining the approach that was adopted to analyze the data, the results of factor and reliability analyses are presented. Descriptive statistics subsequently elaborate on the sample characteristics and the major theoretical findings of the study. Thereafter, both the results of simple and multiple regression analyses, which have been employed to test the research model and related hypotheses, are documented. Lastly, the tested hypotheses are tabulated to provide a holistic overview on the empirical results.

4.1 Procedure of Data Analysis

The data analysis was performed with the tool IBM SPSS Statistics, using descriptive, bivariate, and multivariate statistical procedures. For multivariate analyses, the widely applied regression analysis modeling tool *PROCESS macro* by Andrew Hayes (see Hayes, 2018), which operates with SPSS, was used. After the completion of data collection, the raw data set was first refined and accordingly reduced, whereby the criteria of completeness, missing values, and response tendencies such as errors of central tendency were considered (Döring et al., 2016; Saunders et al., 2007). As part of this process, reverse coded items have been recoded. Since the study operationalized the constructs of interest on the basis of compiled sets of items from literature, exploratory factor analyses (EFA) and reliability analyses had to be applied to ensure construct validity, reliability and internal consistency of the measures (Döring et al., 2016; Watkins, 2018). The EFA constitutes a method capable of discovering structures within the data and combining variables into new superordinate variables, known as factors (Döring et al., 2016). According to Yong and Pearce (2013), an EFA intends to reduce data in such a way that relationships between variables can be more accurately grasped and explained on the basis of common variance. Thus, to ensure that the items employed adequately assess the constructs of interest (Bryman, 2016; Henson & Roberts, 2006), an EFA with a principal component extraction method and varimax rotation has been performed, whereby 11 factors have been extracted. To further increase internal consistency and reliability, all extracted factors have been validated by calculating the Cronbach's Alpha (CA) coefficient (Döring et al., 2016). As a consequence of EFA and CA analyses, some items have been eliminated in favor of scale reliability. The retained items were finally

combined to the extracted factors by calculating the respective mean values. A table summarizing the final constructs and respective items used for further analyses can be consulted in Appendix A3.

After running descriptive statistics to obtain insights into sample composition and theoretical key findings, single and multiple regression analyses have been applied for testing the proposed research model and hypotheses. Albeit this approach might be doubted, as there is debate whether Likert-scales can be defined as interval-scaled and thus suitable for parametric statistical testing, the present study draws on the argumentation of Döring et al. (2016), who state that rating scales with equal-spaced labeling and at least five levels are commonly regarded interval-scaled in empirical research practice. Moreover, Joshi et al. (2015) point out, that composite scores of Likert-type items basically convert into interval-scaled variables, emphasizing the chosen analytical approach. Further, the present study aims at assessing cause-and-effect relationships between independent and dependent variables, wherefore performing regression analyses is most appropriate since the method does not only allow for an assessment of relationship strength, but also of direction (Saunders et al., 2007). Before running the analyses, all required assumptions regarding linearity, homoscedasticity, multi-collinearity, and approximate normal distribution have first been tested for compliance (Saunders et al., 2007). For SBH a normal distribution could not be determined unambiguously due to a kurtosis value of 1.564. As Lumley et al. (2002) and Schmidt and Finan (2018) demonstrate, linear regression analyses (LRA) in larger-scaled studies (N>100) are robust and remain valid to non-normally distributed variables, wherefore a normal distribution was assumed for SBH.

For two multivariate correlation hypotheses ($H1_1$ and $H3_1$), multiple regression analyses (MRA) were carried out, whereby both mediator analyses to test the mediating effect of BI on the relationship between AST and SBT, and moderator analyses, to assess the moderating effect of SIT on the relationship between BI and SBT, have been performed.

A detailed documentation of the performed analyses can be consulted in the electronic Appendix.

4.2 Factor and Reliability Analyses

Factor and reliability analyses have been applied on the data set of 70 items measuring the key constructs. Given the large number of items, an EFA was

conducted for each major construct, namely BI, SIT, SN, SM, SBTG, SBTS, AST, SBH, and PBC. The Bartlett's Test of Sphericity showed statistical significance across all variables as measures were consistently $p<.05$, indicating the factorability and sufficiency of correlations among the variables. The Kaiser-Meyer-Olkin Measure (KMO) of sampling adequacy further proved to be above the minimum threshold of .05 for all constructs (Yong & Pearce, 2013), rendering all variables suitable for conducting an EFA and showing capability of producing reliable results (Yong & Pearce, 2013).

The exclusion of items was based on several considerations. All items showing an anti-image correlation <.5 have been excluded from further analyses as they were expected to demonstrate a low sampling adequacy (Child, 2006). Further, items with communalities <.2 have been eliminated due to the low explanatory power of the extracted factor for the respective item (Child, 2006; Yong & Pearce, 2013). To adequately determine the number of factors to extract, both the explained total variance and the scree-plot criterion have been taken into account, whereby no factors with eigenvalues less than 1 have been extracted (Ford et al., 1986; Yong & Pearce, 2013). By applying the Varimax rotation method with Kaiser Normalization, respective factor loadings have been assessed based on intensity, whereby it was strived for excluding items with factor loadings <.4, as these items were expected to insufficiently define the extracted factor (Ford et al., 1986). However, based on pragmatic and theoretical considerations, the stringency of item exclusion varied as tradeoffs had to be made between different aspects, such as a high Cronbach's alpha (α), versus low factor loadings or communalities. In general, it was strived for a CA value between .6 and .9 as an excessive value can also indicate redundancy of items (Kline, 2000; Tavakol & Dennick, 2011). This precondition is met by all constructs except from SBH showing a slightly lower value (α=.572).

After eliminating several items according to the aforementioned considerations, all remaining items related to BI (KMO=.789; α=.740), SIT (KMO=.646; α=.701), SM (KMO=.732; α=.780), and SBTG (KMO=.753; α=.716), displayed clear loadings on one factor and where hence capable of being summarized under the respective construct. In contrast, the items related to SN were clearly loading on two distinct factors with no loadings ≤.748. This shows congruence with the literature-based operationalization of the construct, distinguishing between the (sub)dimensions *normative beliefs*, *motivation to comply*, and *descriptive norms*. The EFA revealed, that the items related to the *motivation to comply* demonstrated high loadings on the

second factor, wherefore two further EFA's have been performed respectively. The items related to normative beliefs and descriptive norms showed high values in all measures considered but however displayed a CA of α=.908 which suggests a redundancy of items (Tavakol & Dennick, 2011). Accordingly, one item has been excluded to increase internal consistency. With a total variance explained of 64.946%, remaining items have been summarized under the factor *perceived role of social norms* (PRSN) with KMO= .849 and α=.890. The remaining items showed satisfactory numbers and consequently form the factor *motivation to comply with social norms* (MCSN) (KMO=.637; α=.760) with a total variance explained of 67.904%. The EFA further highlighted the need for distinguishing between two distinct attitude types. After excluding four items due to low anti-image correlations and communalities, the analysis has shown that items referring to specific beliefs related to sustainable tourism loaded on a different factor than the statements formulated in a more general sense. After performing two distinct EFAs with no salient deficiencies found in the data, the items were summarized under the factors *specific attitude towards sustainable tourism* (ASTS) (KMO=.789; α=.744) and *general attitude towards sustainable tourism* (ASTG) (KMO=.605; α=.638).

Even though the total variance explained matrix proposed a multi-factor extraction for three variable sets, it was chosen to adopt a single-factor solution based on theoretical considerations and the scree-plot criterion for SBH, SBTS, and PBC – an approach also supported by scientific literature (e.g. Ford et al., 1986; Wolff & Bacher, 2010). After excluding several items due to low factor loadings or communalities (PBC6, SBTS3, SBTS6, SBTS1, SBTS, SBH7) and an elimination-related increase in internal consistency (=α) (PBC8, SBH5), the remaining items were merged to the constructs SBTS (KMO=.731; α=.702), SBH (KMO=.684; α=.572), and PBC (KMO=.710; α=.666).

Table 10 finally provides an overview on the results of factor and reliability analyses and respective values of KMO, Bartlett's Test, and CA.

Table 10

Results of Factor and Reliability Analyses

Factor	Items	Description	KMO	Bartlett's Test	CA
BI	5	Behavioral Intention	.789	<.001	.740
SIT	3	Situational Factors[1]	.646	<.001	.701
PRSN	6	Perceived Role of Social Norms[2]	.849	<.001	.890
MCSN	3	Motivation to comply to Social Norms	.637	<.001	.760
SM	4	Social Media[3]	.732	<.001	.780
SBTG	6	General Sustainable Travel Behavior[4]	.753	<.001	.716
SBTS	5	Specific Sustainable Travel Behavior[5]	.731	<.001	.702
ASTS	5	Specific Attitude towards Sustainable Tourism[6]	.789	<.001	.744
ASTG	3	General Attitude towards Sustainable Tourism	.605	<.001	.638
SBH	5	Sustainable Behavior at Home[7]	.684	<.001	.572
PBC	6	Perceived Behavioral Control[8]	.710	<.001	.666

Note. Excluded items: [1]SIT4, SIT5, SIT6; [2]SN3, SN7; [3]SM4, SM6; [4]SBTG5; [5]SBTS1, SBTS3, SBTS4, SBTS6; [6]AST2, AST3, AST9, AST11; [7]SBH5; [8]PBC6, PBC8. Own illustration.

4.3 Presentation of Findings

The following chapter presents the empirical findings gathered. First, the acquired sample is described in more detail, followed by general theoretical findings from the descriptive statistics applied. Further, the results from simple and multiple regression analyses are outlined and respective hypotheses are tested on veracity. Finally, the tested hypotheses are assembled in tabular form to provide a concluding overview.

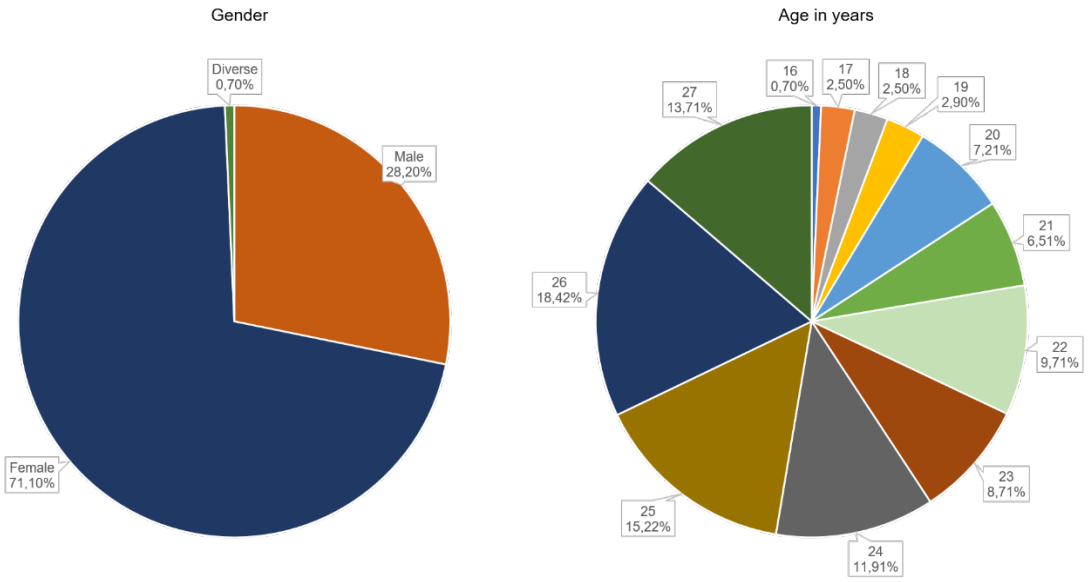
4.3.1 Description of Sample

A total of 385 people participated in the quantitative survey, of which 257 participants reached the last survey page (termination ratio: 69.35%). Besides the outliers identified within the EFA, additional cases were excluded from further analyses because they either were not eligible for the sample, clicked through the questionnaire, or left too many missing values. Thereby, a completion of at least 50% of the main question blocks was set as a benchmark to be included in the sample. The final sample was composed of 277 respondents of which 197 participants (71.1%)

identified as female, 78 (28.2%) as male and two (0.7%) respondents as diverse. The sample covered all age groups of Gen Zers ranging from 16 to 27 years, with an average age of 23.64 years (SD=2.953). The gender and age distribution of the sample is summarized in Figure 8.

Figure 8

Gender and Age Distribution of the Sample



Note. N=277. Own illustration.

The majority of respondents (66.4%) indicated their main residence in Germany, followed by 30 participants (10.8%) in Austria and 3 (1.1%) in Switzerland, with two respondents not wishing to indicate their place of main residence. It must be acknowledged, that 58 people did not provide an answer to this question. Based on internal considerations encompassing the social environment of the researcher in which the questionnaire was scattered in German language only, these respondents where nevertheless included in further analyses, as it was deemed reasonable to expect their main place of residence in the DACH-region, thus being capable of making a valuable contribution to the understanding of the TPB.

The data gathered reveals, that at the time of data collection the vast majority of the surveyed Gen Zers were either studying (47.3%) or already in the workforce (37.5%) including 4 participants being self-employed (1.4%). Moreover, the educational level of the sample can be considered fairly high, with a significant majority already holding a bachelor's degree (36.8%) or a high school diploma (36.1%). None of the respondents reported a lower secondary school diploma as the highest educational

level achieved. Table 11 provides an overview on the demographic characteristics of the sample.

Table 11

Sociodemographic Characteristics of the Sample

Demographic variables	Sample characteristics	N	%	Total N	
				Valid	*Missing*
Age	16-27 years			**277**	**0**
	M=23.64 years				
Gender	Male	78	28.2%		
	Female	197	71.1%		
	Diverse	2	0.7%		
				277	**0**
Country of Residence	Germany	184	66.4%		
	Austria	30	10.8%		
	Switzerland	3	1.1%		
	Prefer not to say	2	0.7%		
				219	**58**
Occupation	Pupil	14	5.1%		
	Student	131	47.3%		
	Apprentice	11	4.0%		
	Employee	100	36.1%		
	Self-employed	4	1.4%		
	Other	14	5.1%		
	Prefer not to say	3	1.1%	**277**	**0**
Highest level of Education	Secondary school diploma	18	6.5%		
	High school diploma	100	36.1%		
	Apprenticeship degree	27	9.7%		
	Bachelor's degree	102	36.8%		
	Master's degree	19	6.9%		
	Other	10	3.6%		
	Prefer not to say	1	0.4%		
				277	**0**

Note. N=277 except from *Country of Residence* (N=219) due to missing variables. Own illustration.

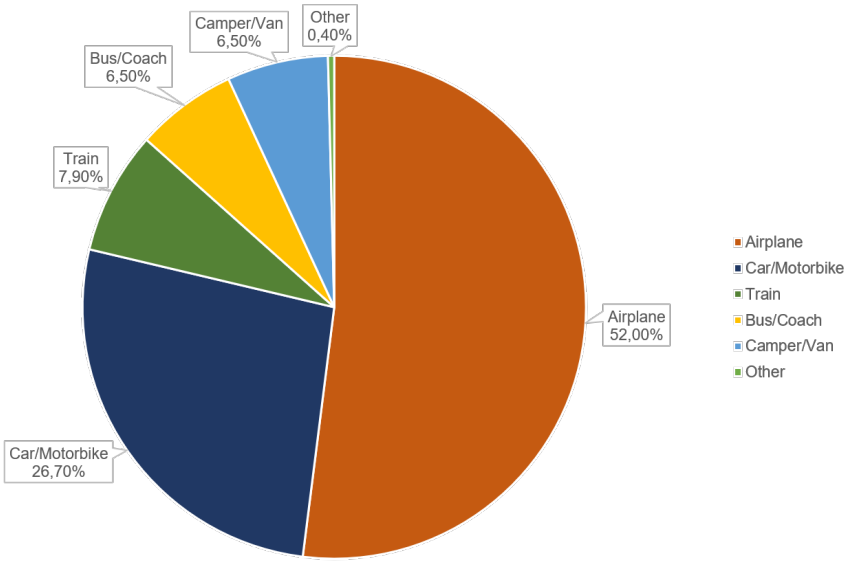
4.3.2 Descriptive Statistics and Pearson Product-Moment Correlation

The following chapter sheds light on the key findings of the study by means of descriptive statistics. First, the travel components of Gen Zers last vacation before the outbreak of the pandemic will be outlined, followed by a presentation of the findings gathered by measuring the constructs of interest.

As Figure 9 visualizes, the main mode of transportation used to reach the destination was the airplane with 52.0%, followed by car/motorbike (26.7%), the train (7.9%), bus/coach (6.5%), and camper/van (6.5%). Hence, 14.4% of the participants made use of public transportation.

Figure 9

Main mode of Transportation used to reach the Destination



Note. N=277. Own illustration.

In terms of the arrangement of travel components, the results reveal that most respondents stayed in a self-catering or half board hotel or resort (22.7%), in a holiday home or appartement (22.7%), or in a hostel (16.6%). To almost equal parts, several respondents also stayed in all-inclusive hotels or resorts (10.8%) or rented home-sharing premises such as Airbnb (11.2%). As shown in Table 12, the trip was mainly taken with friends (40.1%), partner/spouse (28.5%) or parents (19.1%). Although 200 participants financed their trip by themselves (72.2%), still one quarter (25.3%) indicated that their parents paid for the travel expenses. At this point, it is noteworthy

that 70 participants stated that their parents paid for the vacation (25.3%) even though only 53 (19.1%) travelled with their parents.

Table 12

Arrangement of Travel Components

Variable	Dimension	N	%	Total N
Accommodation	Hotel/resort (Self-catering/Half board)	63	22.7%	
	Hotel/resort (All inclusive)	30	10.8%	
	Holiday home/appartement	63	22.7%	
	Home-sharing (e.g., Airbnb)	31	11.2%	
	Hostel	46	16.6%	
	Camper/Van	18	6.5%	
	Family and friends	16	5.8%	
	Other	10	3.6%	
				277
Travel group constellation	Partner/Spouse	79	28.5%	
	Parents/Parent	53	19.1%	
	Friends	111	40.1%	
	Colleagues	5	1.8%	
	Alone	17	6.1%	
	Other	11	4.0%	
				276
Financier of trip	Myself	200	72.2%	
	My parents/one parent	70	25.3%	
	Other family members	3	1.1%	
	Other	4	1.4%	
				277

Note. Own illustration.

The key findings of the study reveal, that the participants showed both a positive specific (M=3.44; SD=0.72) and general (M=4.02; SD=0.59) attitude towards sustainable tourism. While 232 respondents (83.8%) (strongly) agreed that they should consider their impact on earth and other cultures while making travel choices, 220 (79.4%) also held the view, that the reduction of air travel is critical to combating global warming and emissions. Further, 122 (44%) of the respondents (strongly) agreed to prefer tourism practices that just enable them to have fun, relax and spend money on doing the things they like. Moreover, 26% of the respondents indicated to

(strongly) agree with the statement, that vacations are a special time in which one does not want to be burdened by worrying about sustainability issues.

When taking into account the adopted travel practices during the last vacation before the pandemic, the specific sustainable travel behavior (M=3.56; SD=0.75) appeared to be slightly more pronounced than the general sustainable travel behavior (M=3.03; SD=0.74). With a majority of 87.4%, the respondents often or always consumed food in locally owned restaurants rather than internationally branded chains. The participants further demonstrated strong socially sustainable travel behaviors, with 137 (49.5%) reporting that they often or always adapted themselves to local customs to meet the expectations of the local population. In contrast, 66 (23.8%) participants also indicated to have seldom or never actively interacted with the host population and 14.4% (40 participants) to have seldom or never been committed to learn about the local environment, culture, and history. Thus, ambiguity can be observed in this regard, which is why the findings provide no evidence on behavioral tendencies of Gen Zers towards one specific sustainability dimension.

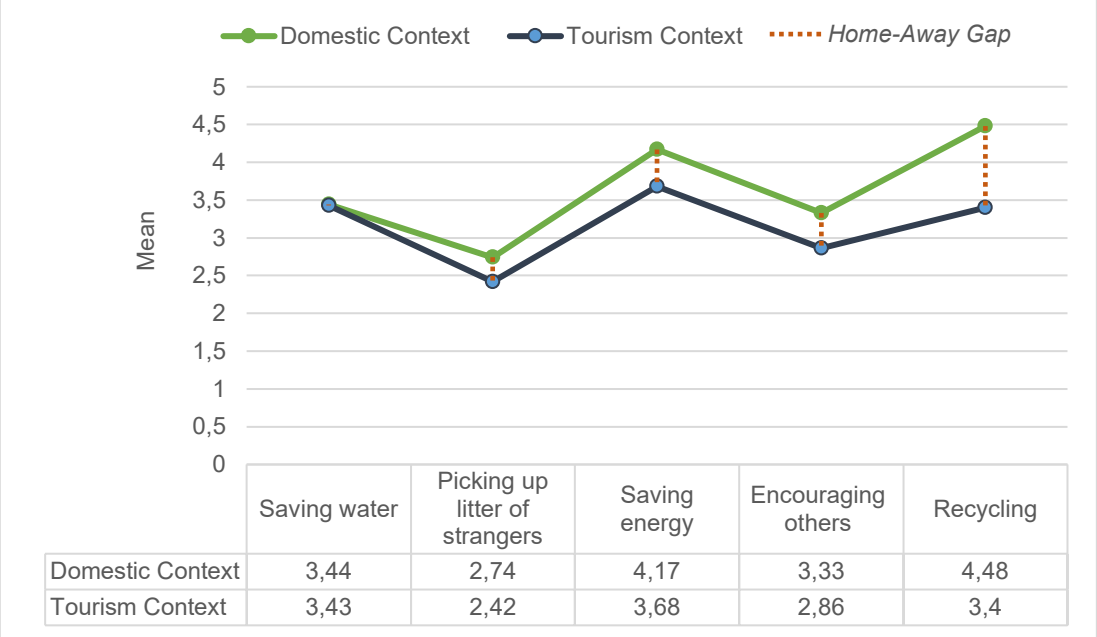
Although SBTS shows a higher mean value than the ASTS, there can still be observed a distinct attitude-behavior gap among the surveyed Gen Zers. With a mean value of 4.02, the general attitude towards sustainable tourism was significantly more pronounced than the general (M=3.03) and specific (M=3.56) sustainable travel behavior. In addition, the specific attitude towards sustainable tourism (M=3.44) showed more salience than the general sustainable travel behavior.

When comparing the (environmentally) sustainable behavior displayed at home (M=3.63; SD=0.52) with general sustainable behavior performed on vacation (M=3.03.; SD=0.74) it becomes apparent, that all sustainable practices found more adoption within the domestic context. While recycling seemed to constitute a common practice of the respondents in day-to-day life (M=4.48), it found notably fewer adoption while being on vacation (M=3.4). The same applies to supporting or encouraging others to behave environmentally friendly with a mean value of 3.33 in the domestic and 2.86 in the tourism context.

Figure 10 illustrates the contextual discrepancies in item responses and accentuates the observed home-away gap among Gen Zers.

Figure 10

The Home-Away Gap of Generation Z



	Saving water	Picking up litter of strangers	Saving energy	Encouraging others	Recycling
Domestic Context	3,44	2,74	4,17	3,33	4,48
Tourism Context	3,43	2,42	3,68	2,86	3,4

Note. N=277. Own illustration.

With all items showing a mean value of at least 3.39, the construct of behavioral intention (M=3.69; SD=0.62) appears to be particularly pronounced among the sample under study. 79.8% (N=221) indicated a general willingness to behave as sustainably on vacation as at home, which constitutes a contrasting finding to the observed gap between domestic and tourism contexts. The findings further provide evidence for a discrepancy between the behavioral intention and the displayed general (M=3.03) and specific (M=3.56) sustainable travel behavior. In addition, the construct of situational factors shows a considerably high mean value (M=3.67; SD=0.8). Thereby a total of 167 respondents (60.3%) for example (strongly) agreed, that environmentally protective behaviors of other tourists lead them to consciously adjust their own travel behavior accordingly.

The respondents reported several barriers to implementing sustainable travel behaviors. Specifically, infrastructure was seen as a hurdle to behave sustainable, with 56.3% (fully) agreeing on a lack of infrastructure that prevents from keeping the individual vacations environmental impact low and 151 (54.6%) respondents further approving that managing the own holidays with environmentally friendly means of transportation is rather difficult. In addition, 30.4% perceived sustainable vacation choices as too expensive and 35.3% (completely) disagreed on having enough

resources, time, and opportunities to behave sustainable while travelling. Considering the overall mean value, the construct of perceived behavioral control (M=2.89; SD= 0.61) appears to be marginally pronounced among the sample compared to the other constructs measured.

Descriptive statistics on the perceived role of social norms reveal, that a number of respondents (strongly) agreed that their close reference persons consider being a sustainable tourist important (32.1%), whereby the peers appear to not depict this opinion in their own behavior to the same extent. While 98 respondents (35.4%) (fully) agreed that most people who are important to them take the view that one ought to use environmentally means of transportation although this might take more time, only 29.2% (fully) agreed on their peers implementing respective travel behaviors. Nevertheless, PRSN (M=2.82; SD=0.79) appears to be more pronounced than MCSN (M=2.49; SD=0.95). Still, 78 respondents (28.2%) (fully) agreed to generally chose a holiday of which they think important others will approve of. Contrasting the subconstructs of SN with the role played by SM, it becomes apparent that SM was assigned a slightly stronger role with a mean value of 2.97 (SD=0.89). Respective findings show, that social media is generally attached a rather informational role and used to check postings on places aimed to visit (M=3.6) and to gain information about certain activities and sights during the trip (M=3.63). Less pronounced emerges the role that statements from social media influencers play within travel decision-making (M=1.85).

Finally, Table 13 provides an overview on the mean, median, and standard deviation of the key constructs. Table 14 further gives an insight on the correlations between the constructs by means of Pearson's product-moment correlation.

Table 13

Mean, Median and Standard Deviation of key Constructs

Construct	Mean (M)	Median (Med)	Standard Deviation (SD)	Valid N	Missing Values
Behavioral Intention	3.69	3.80	0.62	241	36
Specific Attitude towards Sustainable Tourism	3.44	3.40	0.72	277	0
General Attitude towards Sustainable Tourism	4.02	4.00	0.59	277	0
Specific Sustainable Travel Behavior	3.56	3.60	0.75	277	0

Table 13

Table continued

Construct	Mean (M)	Median (Med)	Standard Deviation (SD)	Valid N	Missing Values
General Sustainable Travel Behavior	3.03	3.17	0.74	277	0
Sustainable Behavior at Home	3.63	3.60	0.52	277	0
Perceived Role of Social Norms	2.82	2.83	0.79	249	28
Motivation to comply with Social Norms	2.49	2.33	0.95	249	28
Perceived Behavioral Control	2.89	2.83	0.61	241	36
Social Media	2.97	3.00	0.89	249	28
Situational Factors	3.67	3.67	0.80	241	36

Note. Own illustration.

Table 14

Pearson's Product-Moment Correlation of key Constructs

		BI	SIT	PRSN	MCSN	SM	SBTG	ASTS	ASTG	PBC	SBH	SBTS
BI	r	1										
	N	241										
SIT	r	,052	1									
	N	241	241									
PRSN	r	,547**	,072	1								
	N	241	241	249								
MCSN	r	,034	,232**	,307**	1							
	N	241	241	249	249							
SM	r	-,036	,181**	,004	,148*	1						
	N	241	241	249	249	249						
SBTG	r	,492**	-,110	,348**	,007	-,055	1					
	N	241	241	249	249	249	277					
ASTS	r	,498**	-,037	,296**	-,065	-,185**	,309**	1				
	N	241	241	249	249	249	277	277				
ASTG	r	,436**	,132*	,269**	,094	,038	,223**	,356**	1			
	N	241	241	249	249	249	277	277	277			
PBC	r	,341**	-,059	,296**	,007	-,266**	,246**	,230**	,035	1		
	N	241	241	241	241	241	241	241	241	241		
SBH	r	,521**	,037	,321**	-,091	-,051	,606**	,373**	,335**	,129*	1	
	N	241	241	249	249	249	277	277	277	241	277	
SBTS	r	,397**	,012	,180**	,069	-,024	,388**	,342**	,222**	,208**	,309**	1
	N	241	241	249	249	249	277	277	277	241	277	277

Note. **Correlation is significant at the 0.01 level (2-tailed). *Correlation is significant at the 0.05 level (2-tailed). Own illustration.

4.3.3 Simple Linear Regression Analyses

Since all hypotheses capture not only the relationships between variables, but also their magnitude, several LRAs have been carried out. This method is capable of determining both the strength and direction of correlations between a dependent and

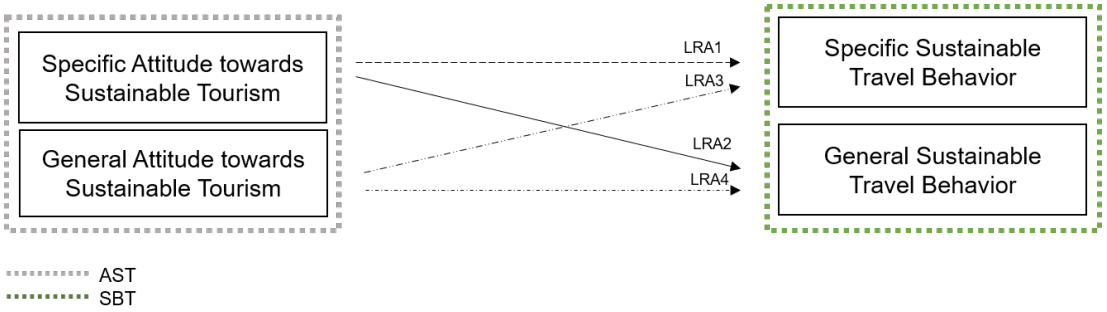
an independent variable (Saunders et al., 2007). Given the fact, that several key constructs incorporate subdimensions, in some cases multiple LRAs had to be performed to test one hypothesis.

Prior to the analysis, it was necessary to assess if the data gathered meets imperative pre-conditions (Poole & O'Farrell, 1971) whereby all relationships of interest were examined separately. By visual inspection of a scatter-plot both linearity and homoscedasticity have been evidenced. Moreover, Durbin-Watson statistics ≥1.482 and ≤1.874 proved an independence of residuals, hence indicating a reliability of the analyzed output (Saunders et al., 2007). Further, significant outliers have been identified by means of *casewise diagnostics* and accordingly excluded from regression analysis (cases 46, 119, 153, 186) to avoid any distortion of data. A visual assessment of a normal probability plot moreover proved approximate normal distribution between dependent and independent variables (Saunders et al., 2007).

For investigating the relationship between the attitude towards sustainable tourism and sustainable travel behavior, four LRAs were carried out as the factor analyses revealed two distinct dimensions of AST. The LRAs performed focused on SBTG and SBTS as dependent variables and ASTG and ASTS as independent variables. Figure 11 visualizes the relationships that have been analyzed.

Figure 11

Conceptual Model of tested Relationships between AST and SBT



Note. Own illustration.

$H2_1$: Gen Zers attitude towards sustainable tourism has a positive impact on their sustainable travel behavior.

The ANOVA analysis indicates, that the regression model can be interpreted as statistically significant with $F(1, 275) = 36.461$, $p<.001$. As R^2 (=.117) suggests, ASTS can explain 11,4% of the variability of the dependent variable SBTS. As Table 15

shows, the LRA further revealed that ASTS exerts a positive influence on SBTS with B=0.359 (p<.001), which provides evidence for supporting $H2_1$.

Table 15

LRA Summary: Impact of the Specific Attitude towards Sustainable Tourism on the Specific Sustainable Travel Behavior

Variable	Unstandardized B	Standardized	Standard Error
Constant	2.328***		0.209
Specific Attitude towards Sustainable Tourism	0.359***	0.342***	0.059
R	0.342		0.71052
R^2	0.117		0.71052
F (df=1; 275)	36,461***		

Note. *p<.05, **p<.01, ***p<.001. N=277. Dependent Variable: Specific Sustainable Travel Behavior (SBTS). Own illustration.

An examination of the relationship between the specific attitude towards sustainable tourism and general sustainable travel behavior also showed statistical significance with F (1, 275) = 29.082 at p<.001 whereby ASTS is expected to explain 9.6% of variance of SBTG. Table 16 further reveals that ASTS can be expected to positively influence SBTG (B=0.318 at p<.001) which again favors an acknowledgement of $H2_1$.

Table 16

LRA Summary: Impact of the Specific Attitude towards Sustainable Tourism on the General Sustainable Travel Behavior

Variable	Unstandardized B	Standardized	Standard Error
Constant	1.942***		0.207
Specific Attitude towards Sustainable Tourism	0.318***	0.309***	0.059
R	0,309		0.70506
R^2	0.096		0.70506
F (df=1; 275)	29,082***		

Note. *p<.05, **p<.01, ***p<.001. N=277. Dependent Variable: General Sustainable Travel Behavior (SBTG). Own illustration.

Although the correlation between ASTG and SBTS is rather moderate (r=0.222), ASTG is however capable of explaining 4.9% of variance of SBTS. The ANOVA

analysis confirms a statistically significant relationship with F (1, 275) = 14.258 at p<.001. As it can be concluded from Table 17, ASTG positively influences SBTS (B=0.282 at p<.001).

Table 17

LRA Summary: Impact of the General Attitude towards Sustainable Tourism on Specific Sustainable Travel Behavior

Variable	Unstandardized B	Standardized	Standard Error
Constant	2.429***		0.303
General Attitude towards Sustainable Tourism	0.282***	0.222***	0.075
R	0.222		0.73729
R^2	0.049		0.73729
F (df=1; 275)	14,258***		

Note. *p<.05, **p<.01, ***p<.001. N=277. Dependent Variable: Specific Sustainable Travel Behavior (SBTS). Own illustration.

Finally, an LRA focusing on the relationship between ASTG and the dependent variable SBTG has also elicited statistical significance with F (1, 275) = 14.328 at a significance level of p<.001, as depicted in Table 18. Further, ASTG can be expected to explain 5% of variability of SBTG and positively impacts SBTG (B=0.277 at p<.001). Accordingly, all four LRAs carried out provide evidence that hypothesis 2_1 can be supported.

Table 18

LRA Summary: Impact of the General Attitude towards Sustainable Tourism on General Sustainable Travel Behavior

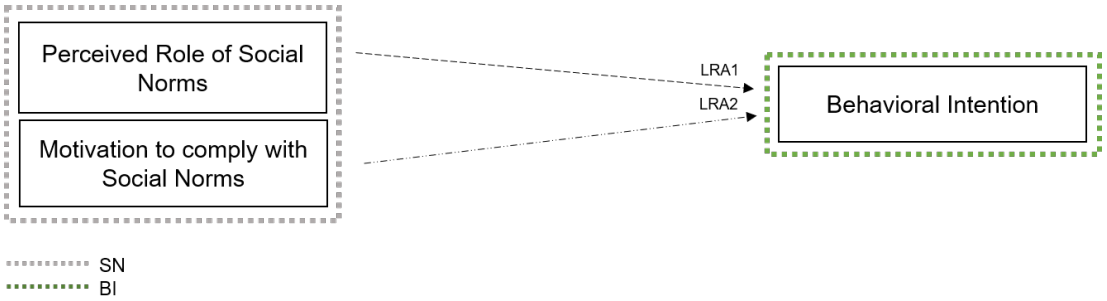
Variable	Unstandardized B	Standardized	Standard Error
Constant	1,922***		0.297
General Attitude towards Sustainable Tourism	0.277***	0.223***	0.073
R	0,223		0,72281
R^2	0.050		0,72281
F (df=1; 275)	14,328***		

Note. *p<.05, **p<.01, ***p<.001. N=277. Dependent Variable: General Sustainable Travel Behavior (SBTG). Own illustration.

To determine the validity of hypothesis 4_1, the relationship between the variables SN and BI have been analyzed. The factor analysis suggested to further differentiate between PRSN and MCSN, wherefore two LRAs have been carried out which respectively measured the relationship between the independent variables PRSN and MCSN towards the dependent variable BI. The analyzed relationships are visualized in Figure 12.

Figure 12

Conceptual Model of tested Relationships between SN and BI



Note. Own illustration.

$H4_1$: Social Norms have a positive impact on Gen Zers intention to perform a sustainable travel behavior.

By first assessing the correlation between PRSN and BI, the ANOVA analysis, with F (1, 239) = 101.927 at p<.001 reveals a statistical significance of the regression model. As Table 19 illustrates, PRSN is expected to explain 29.9% (=R^2) of variance of BI. Moreover, it is shown that PRSN positively impacts BI with B=0.424 at p<.001, which provides support for $H4_1$.

Table 19

LRA Summary: Impact of the Perceived Role of Social Norms on Behavioral Intention

Variable	Unstandardized B	Standardized	Standard Error
Constant	2.499***		0.123
Perceived Role of Social Norms	0.424***	0.547***	0.042
R	0,547		0,51677
R^2	0.299		0,51677
F (df=1; 239)	101,927***		

Note. *p<.05, **p<.01, ***p<.001. N=241. Dependent Variable: Behavioral Intention (BI). Own illustration.

In contrast, the LRA focusing on the relationship between MCSN and BI reveals an insignificance of the regression model due to F (1, 239) = 0.272 at p>.05, as shown in Table 20. Hence, MCSN cannot support the hypothesis. Accordingly, $H4_1$ can only be partly supported.

Table 20

LRA Summary: Impact of the Motivation to Comply with Social Norms on Behavioral Intention

Variable	Unstandardized B	Standardized	Standard Error
Constant	3.641***		0.112
Motivation to comply with Social Norms	0.022	0.034	0.042
R	0,034		0,61685
R^2	0.001		0,61685
F (df=1; 239)	0.272		

Note. *p<.05, **p<.01, ***p<.001. N=241. Dependent Variable: Behavioral Intention (BI). Own illustration.

For testing hypothesis $H5_1$, the impact of PBC on the dependent variable BI has been measured by carrying out one LRA, as illustrated in Figure 13.

Figure 13

Conceptual Model of tested Relationships between PBC and BI

Note. Own illustration.

$H5_1$: Gen Zers perceived behavioral control on performing a sustainable travel behavior has a positive impact on the intention to perform a sustainable travel behavior.

As Table 21 indicates, PBC is expected to be capable of explaining the dependent variable by 11.6% (=R^2). The regression model of PBC and BI proves to be statistically significant with F (1, 239) = 31.488 at p<.001. Besides, PBC can be regarded as a positive influential variable on BI, because B=0.344 at p<.001. Accordingly, $H5_1$ can be supported.

Table 21

LRA Summary: Impact of Perceived Behavioral Control on Behavioral Intention

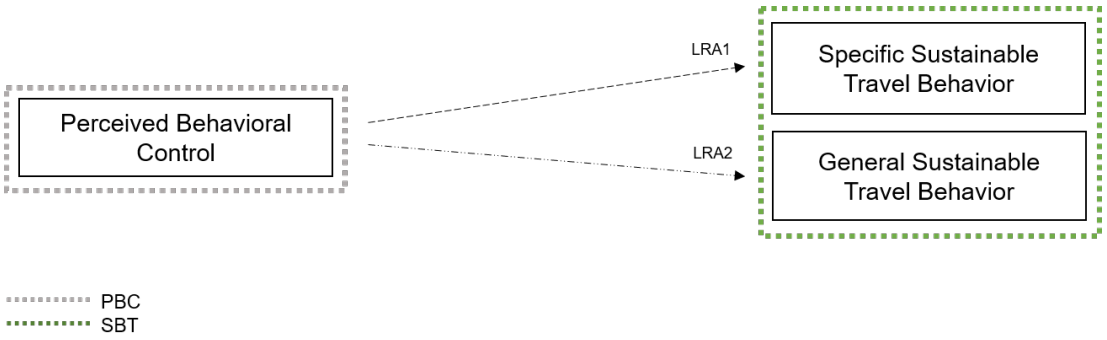
Variable	Unstandardized B	Standardized	Standard Error
Constant	2.703***		0.181
Perceived Behavioral Control	0.344***	0.341***	0.061
R	0,341		0,58017
R^2	0.116		0,58017
F (df=1; 239)	31.488***		

Note. *p<.05, **p<.01, ***p<.001. N=241. Dependent Variable: Behavioral Intention (BI). Own illustration.

As the construct SBT is composed of the dimensions SBTS and SBTG, two distinct LRAs have been conducted to investigate the relationships between the independent variable PBC and the dependent variables SBTS and SBTG respectively, as visualized in Figure 14.

Figure 14

Conceptual Model of tested Relationships between PBC and SBT



Note. Own illustration.

$H6_1$: Gen Zers perceived behavioral control on performing a sustainable travel behavior has a positive impact on their sustainable travel behavior.

As summarized in Table 22, the LRA accounting for the relationship between the constructs PBC and SBTS indicates, that the independent variable carries an explanatory power of 4.3% for SBTS (R^2=.043). Given the statistical significance with F (1, 239) = 10.812, p=.001, PBC positively impacts SBTS (B=0.254, p=.001) and thus acts supportively for $H6_1$.

Table 22

LRA Summary: Impact of Perceived Behavioral Control on Specific Sustainable Travel Behavior

Variable	Unstandardized B	Standardized	Standard Error
Constant	2.853***		0.227
Perceived Behavioral Control	0.254**	0.208**	0.077
R	0,208		0.73001
R^2	0.043		0.73001
F (df=1; 239)	10.812**		

Note. *p<.05, **p=.001, ***p<.001. N=241. Dependent Variable: Specific Sustainable Travel Behavior (SBTS). Own illustration.

The linear regression of the independent variable PBC and the dependent variable SBTG also proves to be statistically significant with F (1, 239) = 15.430, p<.001. As Table 23 demonstrates, PBC provides an explanation of the variance of SBTG by 6.1% (=R^2) and appears to positively influence SBTG (B=0.298, p<.001). Consequently, both LRAs undertaken support $H6_1$.

Table 23

LRA Summary: Impact of Perceived Behavioral Control on General Sustainable Travel Behavior

Variable	Unstandardized B	Standardized	Standard Error
Constant	2.186***		0.223
Perceived Behavioral Control	0.298***	0.246***	0.076
R	0,246		0.71675
R^2	0.061		0.71675
F (df=1; 239)	15.430***		

Note. *p<.05, **p<.01, ***p<.001. N=241. Dependent Variable: General Sustainable Travel Behavior (SBTG). Own illustration.

To examine the interrelation between SM and BI, one LRA has been carried out, as visualized in Figure 15.

Figure 15

Conceptual Model of tested relationships between SM and BI

Note. Own illustration.

$H7_1$: Social Media has a negative impact on Gen Zers intention to perform a sustainable travel behavior.

As the Pearson product-moment correlation (see Table *14*) has shown, there is a negative correlation between SM and BI with r=-0.036. The LRA however reveals an insignificance of the regression model since F (1, 239) = 0.311, p=.578 as can be inferred from Table 24. Consequently, $H7_1$ is not supported.

Table 24

LRA Summary: Impact of Social Media on Behavioral Intention

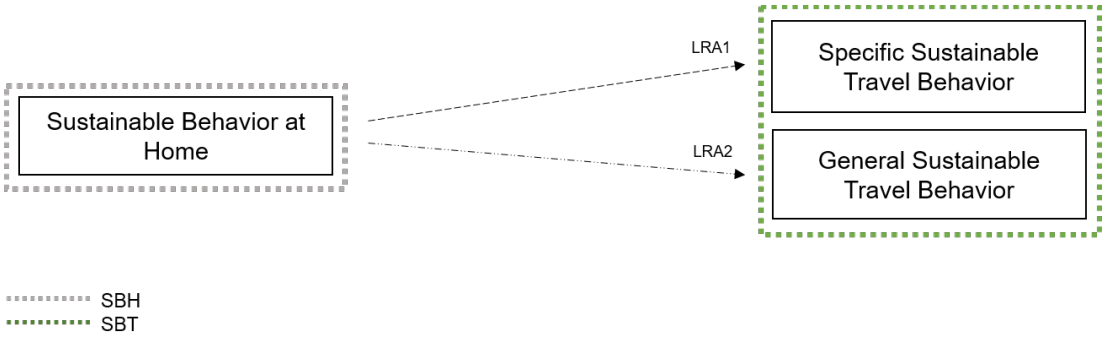
Variable	Unstandardized B	Standardized	Standard Error
Constant	3.770***		0.140
Social Media	-.025	-.036	0.045
R	0,036		0.61680
R^2	0.001		0.61680
F (df=1; 239)	0.311		

Note. *p<.05, **p<.01, ***p<.001. N=241. Dependent Variable: Behavioral Intention (BI). Own illustration.

To further assess the relation between SBH and SBT, two LRAs have performed, that respectively measured the relationship between the independent variable SBH and the two dimensions of SBT, as visualized in Figure 16.

Figure 16

Conceptual Model of tested Relationships between SBH and SBT



Note. Own illustration.

$H8_1$: Gen Zers sustainable behavior at home has a positive impact on their sustainable travel behavior.

As Table 25 shows, the regression model of SBH and SBTS can be interpreted as statistically significant with F (1, 275) = 29.079, p<.001. Besides, the LRA indicates that SBH has an explanative power of 9.6% (=R^2) for SBTS. In addition, SBH positively influences the dependent variable since B=0.452 at p<.001, hence providing support for $H8_1$.

Table 25

LRA Summary: Impact of Sustainable Behavior at Home on Specific Sustainable Travel Behavior

Variable	Unstandardized B	Standardized	Standard Error
Constant	1.918***		0.308
Sustainable Behavior at Home	0.452***	0.309***	0.084
R	0.309		0.71909
R^2	0.096		0.71909
F (df=1; 275)	29.079***		

Note. *p<.05, **p<.01, ***p<.001. N=277. Dependent Variable: Specific Sustainable Travel Behavior (SBTS). Own illustration.

Finally, the LRA on SBH and SBTG reveals a comparatively strong correlation (r=0.606) and statistical significance with F (1, 275) = 159.731 at p<.001. As it can be extracted from Table 26, SBH allows for an explanation of variance of 36.7% (=R^2) of SBTG and clearly exerts a positive influence on SBTG (B=0.869, p<.001). Consequently, $H8_1$ can be supported.

Table 26

LRA Summary: Impact of Sustainable Behavior at Home on General Sustainable Travel Behavior

Variable	Unstandardized B	Standardized	Standard Error
Constant	-.123		0.252
Sustainable Behavior at Home	0.869***	0.606***	0.069
R	0.606		0.58967
R^2	0.367		0.58967
F (df=1; 275)	159.731***		

Note. *p<.05, **p<.01, ***p<.001. N=277. Dependent Variable: General Sustainable Travel Behavior (SBTG). Own illustration.

4.3.4 Multiple Linear Regression Analyses

As the proposed hypotheses $H1_1$ and $H3_1$ aim to assess mediating and moderating effects within the attitude-intention-behavior relationship, several MRAs have been carried out as this method is capable of measuring relationships between two or more independent variables and one dependent variable (Saunders et al., 2007). To determine that all assumptions are fulfilled for running a MRA, linearity and approximate normal distribution were assessed by normal probability and scatter plots. Further, homoscedasticity has been determined by a visual inspection of partial regression plots and is given with all constructs. There has been an independence of residuals, as shown by Durbin-Watson statistics within the range from 1.588 to 1.907. The assumption of no multicollinearity was met and assessed by inspecting collinearity statistics. *Casewise diagnostics* further did not identify any additional outliers, wherefore only the cases identified within the LRA have been excluded from analysis.

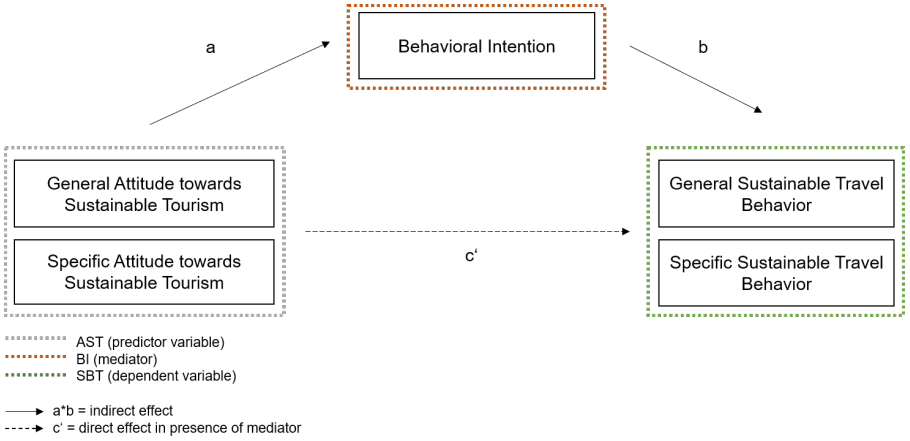
Mediation Analysis

Drawing on Baron and Kenny (1986), mediators are variables that are capable of providing an explanation of the relationship between an independent and a dependent variable. Full mediation is demonstrated, when the direct relation between the independent and the dependent variable is no longer statistically significant in the presence of the mediator (path c') while the product of the indirect effect shows significance (path a*b) (Baron & Kenny, 1986). Figure 17 illustrates the regression model that has been tested for assessing $H1_1$, drawing on the conceptual model of mediation according to Hayes (2018).

$H1_1$ Gen Zers intention to perform a sustainable travel behavior is mediating the impact of their attitude towards sustainable tourism on their sustainable travel behavior.

Figure 17

Conceptual Regression Model of Mediation Analysis

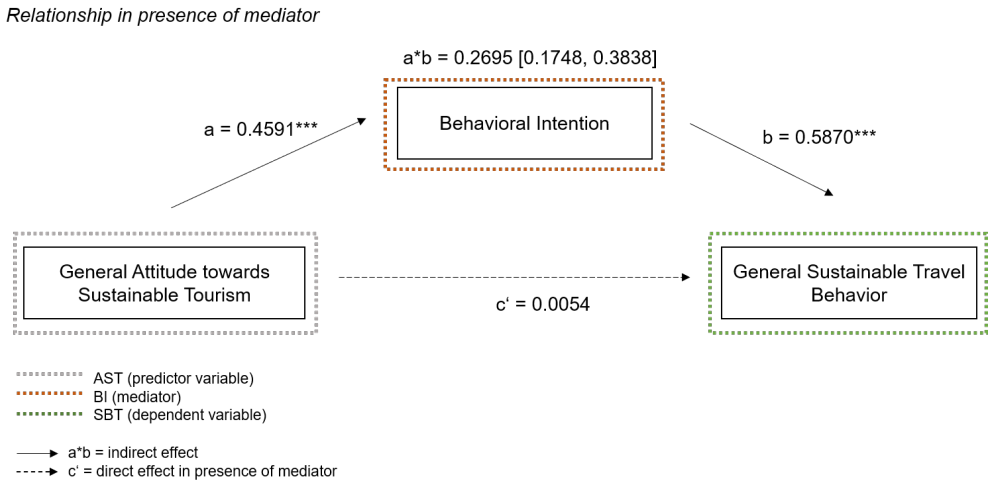


Note. Adapted from *"Introduction to mediation, moderation, and conditional process analysis: A regression-based approach"* (2nd ed., p. 585), by A. Hayes, 2018, The Guilford Press. Copyright 2018 by The Guilford Press. Own illustration.

As the regression model highlights, both AST and SBT are composed of two distinct dimensions, wherefore four MRAs have been performed. First, the mediating role of BI on the relationship between ASTG and SBTG has been analyzed, with the results being presented in Figure 18.

Figure 18

Statistical Model of the Relationship between ASTG and SBTG mediated through BI



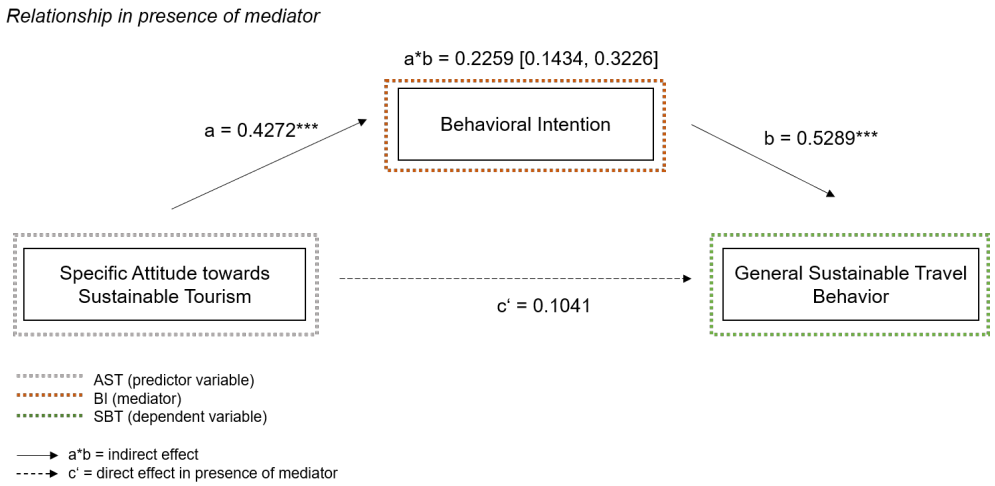
Note. *p<.05, **p<.01, ***p<.001. N=241. Own illustration.

The results indicate an insignificant direct effect of ASTG on SBTG in presence of the mediator BI with B=0.0054 at p=.9461. In contrast, the analysis reveals a significant indirect effect of ASTG on SBTG through the mediator BI (B=0.2695) with a bootstrap confidence interval above zero CI [0.1748, 0.3838]. Thus, it can be concluded that BI fully mediates the relationship between ASTG and SBTG.

The second analysis assessed the impact of ASTS on SBTG mediated by BI. Figure 19 provides an overview on the regression model under study and the statistical findings.

Figure 19

Statistical Model of the Relationship between ASTS and SBTG mediated through BI



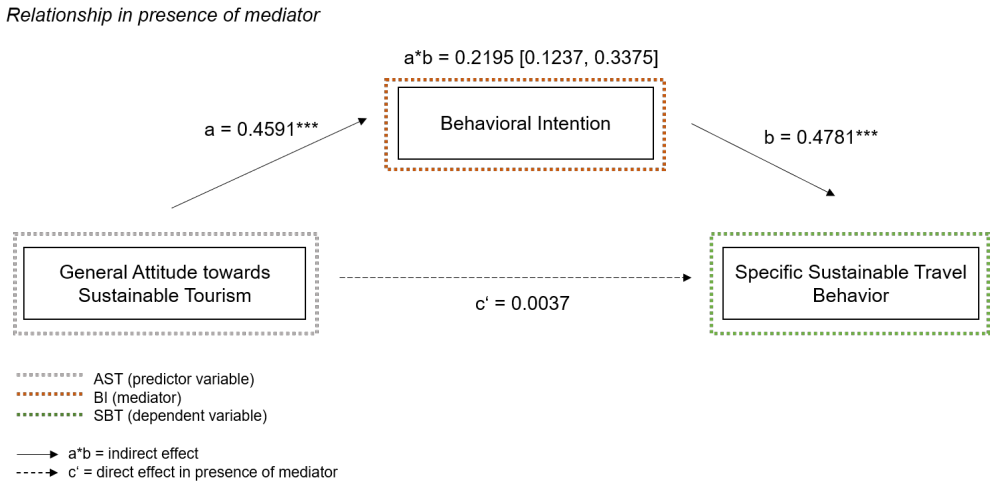
Note. *p<.05, **p<.01, ***p<.001. N=241. Own illustration.

The findings show a significant indirect effect of ASTS on SBTG through the mediating variable BI with a bootstrap confidence interval entirely higher than zero (B=0.2259; CI [0.1434, 0.3226]). The direct effect of ASTS on SBTG in presence of the mediator was however found insignificant (B=0.1041, p=.1193). Hence, BI appears to fully mediate the relationship between ASTS and SBTG which provides support for $H1_1$.

Thirdly, it was analyzed the mediating role of BI on the relationship between ASTG and SBTS as shown in Figure 20.

Figure 20

Statistical Model of the Relationship between ASTG and SBTS mediated through BI



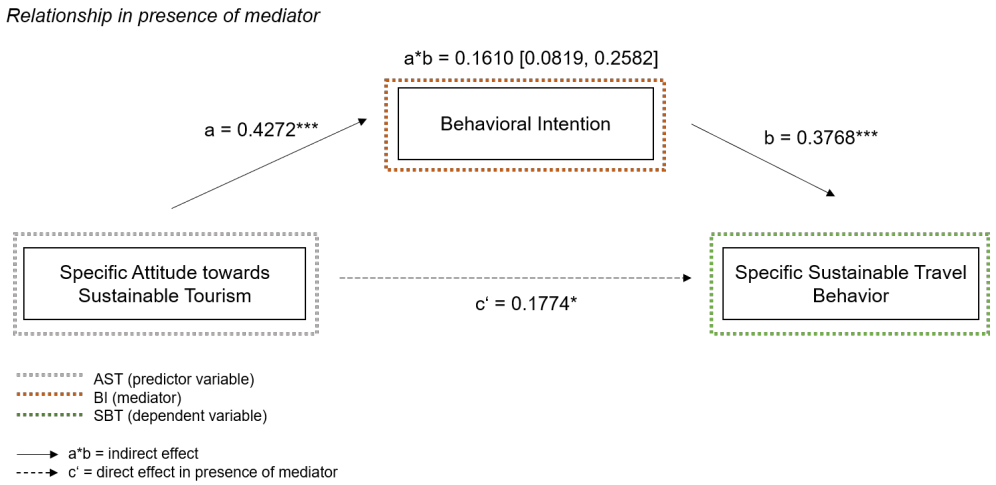
Note. *p<.05, **p<.01, ***p<.001. N=241. Own illustration.

The measures indicate a significant indirect effect of ASTG on SBTS through the mediator BI with a bootstrap interval in positive range (B=0.2195, CI [0.1237,0.3375]). The direct effect between ASTG and SBTG in presence of the mediating variable proves to be insignificant with B=0.0037 at p=.9650. Thus, it can be concluded, that BI fully mediates the relationship between ASTG and SBTS.

Finally, it was analyzed the mediating role of BI on the relationship between ASTS and SBTS with the respective statistical model being presented in Figure 21.

Figure 21

Statistical Model of the Relationship between ASTS and SBTS mediated through BI



Note. *p<.05, **p<.01, ***p<.001. N=241. Own illustration.

The results reveal both, a significant direct and indirect effect. With B=0.1774 at p<.05 ASTS exerts a significant direct impact on SBTS in presence of the mediator BI. Simultaneously, the indirect effect of ASTS on SBTS through BI (B=0.1610, CI [0.0819, 0.2582]) is found significant. Hence, BI partially mediates the relationship between ASTS and SBTS.

In conclusion, BI appears to mediate the relationship between AST and SBT. The analyses conducted provide evidence, that the strength of mediation can be interpreted as rather strong as three out of four analyses proved a full mediation of BI. Hence, $H1_1$ can be supported. A summary of mediation analyses is provided in Table 27.

Table 27

Summary of Mediation Analyses

Relationship	Total effect	Direct effect	Indirect effect	Confidence Interval (CI) 95%		Result
				Lower bound	Upper bound	
ASTG → BI → SBTG	0.0748***	0.0054	0.2695	0.1748	0.3838	Full Mediation
ASTS → BI → SBTG	0.330***	0.1041	0.2259	0.1434	0.3226	Full Mediation
ASTG → BI → SBTS	0.2232**	0.0037	0.2195	0.1237	0.3375	Full Mediation
ASTS → BI → SBTS	0.3384***	0.1774*	0.1610	0.0819	0.2582	Partial Mediation

Note. *p<.05, **p<.01, ***p<.001. N=241 due to missing values on the construct BI. Own illustration.

Moderation Analysis

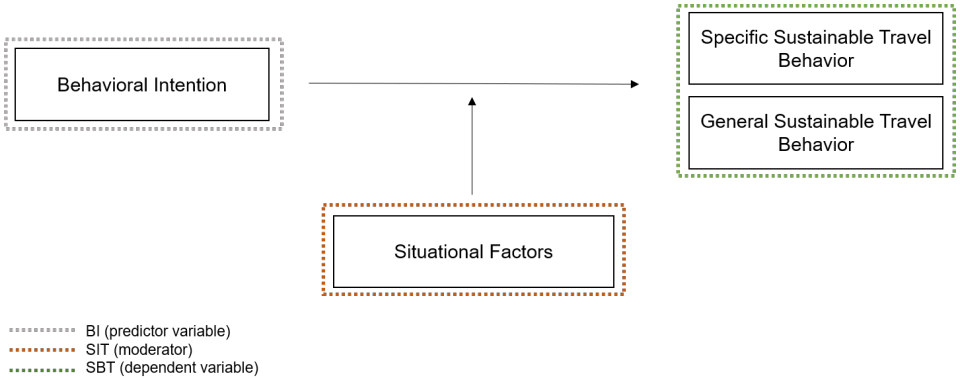
Further, moderation analyses have been performed. In essence, a moderator can be defined as a variable that exerts a strengthening or weakening influence on the relationship between an independent and a dependent variable. Moderation can be proved if the interaction effect – the product of the predictor and the moderator variable – has statistical significance (Baron & Kenny, 1986). The moderation analysis aimed at testing if SIT form a moderating variable within the intention-behavior relationship, to assess the veracity of $H3_1$.

$H3_1$ Situational Factors moderate the impact of Gen Zers intention to perform a sustainable travel behavior on their sustainable travel behavior.

In accordance with Hayes (2018), the conceptual model of moderation as shown in Figure 22 formed the basis of analysis. Due to the two-dimensional structure of SBT, two moderation analyses have been carried out.

Figure 22

Conceptual Regression Model of Moderation Analysis

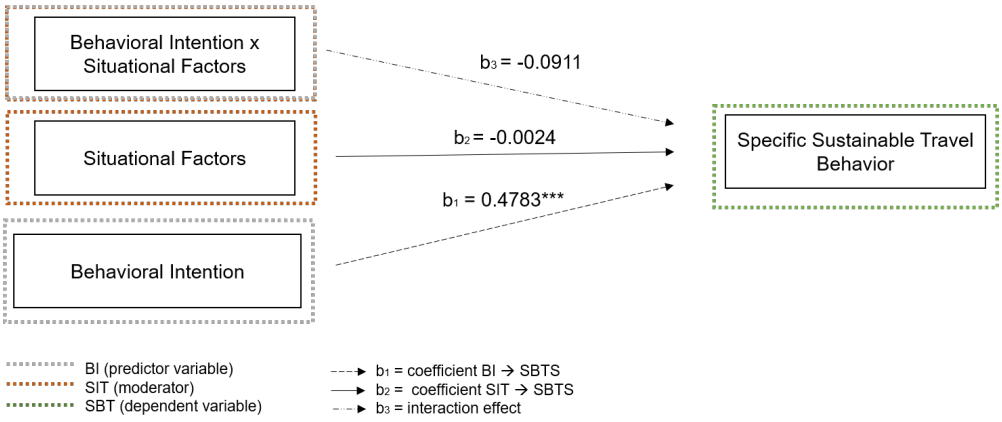


Note. Adapted from *"Introduction to mediation, moderation, and conditional process analysis: A regression-based approach"* (2nd ed., p. 584), by A. Hayes, 2018, The Guilford Press. Copyright 2018 by The Guilford Press. Own illustration.

First, it was analyzed if SIT moderate the relationship between BI and SBTS. The statistical diagram illustrated in Figure 23 provides a summary of the findings of analysis.

Figure 23

Statistical Model of the Relationship between BI and SBTS moderated through SIT



Note. *p<.05, **p<.01, ***p<.001. N=241 due to missing values on the construct BI. Own illustration.

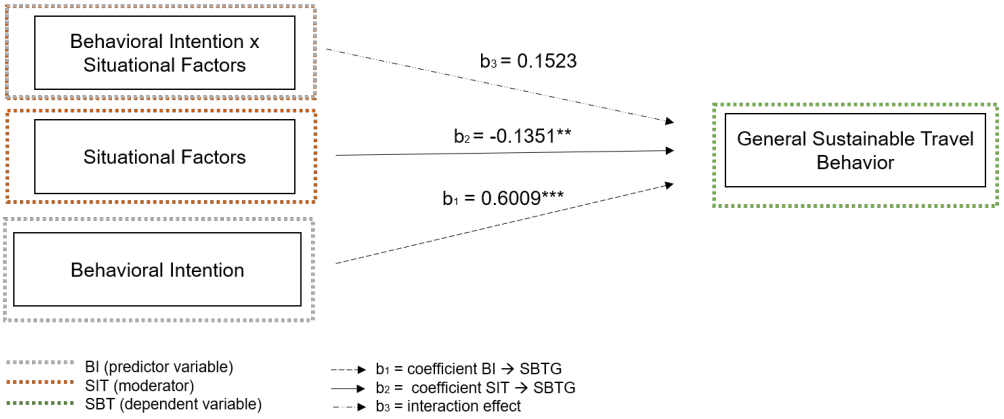
The findings reveal that BI significantly impacts SBTS with B=0.4783 at p<.001, while SIT does not show a significant effect on SBTS (B=-0.0024, p=.9656). The interaction term within the model further appears to be insignificant with B=-0.0911 at p=.2917.

Consequently, there cannot be proved a moderating effect of SIT on the relationship between BI and SBTS.

Secondly, it was assessed the moderating effect of SIT on the relationship between BI and SBTG. Figure 24 illustrates the results of the analysis performed.

Figure 24

Statistical Model of the Relationship between BI and SBTG moderated through SIT



Note. *p<.05, **p<.01, ***p<.001. N=241 due to missing values on the construct BI. Own illustration.

The analysis reveals that both BI (B=0.6009, p=.0000) and SIT (B=-0.1351, p=.0093) exert a significant effect on the dependent variable SBT whereby the effect of SIT on SBTG can be interpreted as negative. However, the interaction effect is insignificant (B=0.1523, p=.0569), which suggests that the relationship between BI and SBTG is not moderated through SIT. Hence, no support is provided for $H3_1$.

To conclude, it can be stated that SIT neither strengthens nor weakens the influence of BI on SBT and can hence not be understood as a moderating variable within the intention-behavior relationship. Accordingly, $H3_1$ is not supported. Table 28 summarizes the findings gathered from the moderation analyses.

Table 28

Summary of Moderation Analyses

Variable	Coefficient	R^2	R^2 change	LLCI	ULCI
Outcome Variable: SBTS		0.1614	0.0040		
BI	0.4783***			0.3364	0.6203
SIT	-0.0024			-0.1122	0.1074
Interaction effect (BI x SIT)	-0.0911			-0.2609	0.0787

Table 28

Table continued

Variable	Coefficient	R^2	R^2 change	LLCI	ULCI
Outcome Variable: SBTG		0.2715	0.0113		
BI	0.6009***			0.4698	0.7320
SIT	-0.1351**			-0.2365	-0.0336
Interaction effect (BI x SIT)	0.1523			-0.0045	0.3092

Note. *p<.05, **p<.01, ***p<.001. N=241 due to missing values on the construct BI. Own illustration.

4.3.5 Results of Hypothesis Testing

The performed analyses revealed, that the majority of hypotheses can be supported. With the aim to provide a holistic summary, Table 29 provides an overview on the tested hypotheses and analysis results.

Table 29

Summary of Hypotheses and Analysis Results

Hypothesis (H_1)	Result
H1 Gen Zers intention to perform a sustainable travel behavior is mediating the impact of their attitude towards sustainable tourism on their sustainable travel behavior.	Supported
H2 Gen Zers attitude towards sustainable tourism has a positive impact on their sustainable travel behavior.	Supported
H3 Situational Factors moderate the impact of Gen Zers intention to perform a sustainable travel behavior on their sustainable travel behavior.	Rejected
H4 Social Norms have a positive impact on Gen Zers intention to perform a sustainable travel behavior.	Partly Supported
H5 Gen Zers perceived behavioral control on performing a sustainable travel behavior has a positive impact on the intention to perform a sustainable travel behavior.	Supported
H6 Gen Zers perceived behavioral control on performing a sustainable travel behavior has a positive impact on their sustainable travel behavior.	Supported
H7 Social Media has a negative impact on Gen Zers intention to perform a sustainable travel behavior.	Rejected
H8 Gen Zers sustainable behavior at home has a positive impact on their sustainable travel behavior.	Supported

Note. Own illustration.

5. Discussion and Implications

The empirical study has sought to determine the factors that exert an influence on the ABG of Generation Z in sustainable tourism. The following chapter aims at framing this ABG of the surveyed Gen Z travellers by contrasting the empirical findings with the literature reviewed, paying particular emphasis on the influencing factors identified. Further, theoretical implications for behavioral research and practical implications for the tourism industry are given based on the findings acquired.

5.1 Framing the Attitude-Behavior Gap of Generation Z Travellers

The ABG phenomenon appears to be particularly evident in a tourism context, as multiple studies have empirically confirmed a discrepancy between a tourists' attitude towards sustainable tourism and the actually implemented travel behavior (Anable et al., 2006; Barr et al., 2010; Dillimono & Dickinson, 2015; Hares et al., 2010; Hibbert et al., 2013; Higham et al., 2016; Holmes et al., 2021; Juvan & Dolnicar, 2014, 2021; Kollmuss & Agyeman, 2002; Prillwitz & Barr, 2011; Reis & Higham, 2017; Schrems & Upham, 2020). Although the ABG terminology intuitively suggests an absence of correlation between attitude and behavior, the present study partially indicates otherwise among the studied sample of Gen Z travellers.

Empirical findings show that attitudes carry a certain level of explanatory power for behavior as there could be identified positive significant relationships between attitudinal and behavioral variables. However, the types of attitudes and behaviors appear to play a decisive role with regard to the strength of the predicting power identified. While ASTS can explain 11.7% of variance (R^2=.117) of SBTS, ASTS only accounts for 9.6% (R^2=.096) of SBTG followed by ASTG on SBTG (R^2=.05) and ASTG on SBTS (R^2=.049). This shows congruence with the argumentation of Ajzen (1991), who outlines that attitudes that lack the reference to the behavior in question tend to be poor indicators of specific behaviors. In addition, the fact that the attitude construct only accounts with a maximum of 11.7% for behavior corroborates the common belief, that besides the attitude, various other factors interfere in the process of behavior-formation (Ajzen, 1991; Carrington et al., 2010; Fishbein & Ajzen, 2010; Terlau & Hirsch, 2015) and thus also in the emergence of the ABG. From this it can be drawn, that Gen Zers positive attitude towards sustainable tourism is not sufficient to stimulate sustainable travel behaviors.

In general, the results indicate that the surveyed Gen Zers have both, a positive general and a positive specific attitude towards sustainable tourism, which aligns with several studies revealing that Gen Zers show a strongly positive attitude towards sustainability in general (Dabija et al., 2020; Djafarova & Foots, 2022; Nikolić et al., 2022; Porter Novelli, 2019; Stylos et al., 2021; Wunderman Thompson Intelligence, 2021) and sustainable tourism in particular (Haddouche & Salomone, 2018). The vast majority of Gen Zers feel they should consider their impact on earth and other cultures when making travel decisions and that reducing air traffic is crucial to combating global warming and emissions, which indicates that Generation Z is generally aware of the negative impacts arising from tourism and also of what their individual travel behavior may cause. This supports the general assumption, that the generational cohort has a particularly high awareness of sustainability issues (ETC, 2020; OC&C, 2019; Ozkan & Solmaz, 2015) and substantiates the *theory of socioemotional selectivity*, proposing that younger people are more aware of future-related concerns knowing that they will be directly affected by those issues in the long-term (Carstensen et al., 1999).

However, parallels emerge with other studies, suggesting that travellers are indeed aware of tourism-related impacts in relation to sustainability, but nevertheless do not succeed in reflecting this attitude in their travel behavior (Anable et al., 2006; Barr et al., 2010; Juvan & Dolnicar, 2014). When contrasting the mean values of attitudinal variables (ASTS: M=3.44; ASTG: M=4.02) with behavioral variables (SBTG: M=3.03; SBTS: M=3.56), a distinct ABG becomes apparent among the participating Gen Zers. It seems particularly paradoxical that while the vast majority of Gen Zers report concerns about emissions caused by air traffic, they particularly used airplanes to reach the destination during their last vacation before Covid-19. Further evidence for framing this ABG among Gen Z travellers is provided by the mediation analyses carried out to examine the role played by behavioral intention within the attitude-behavior relationship. While there seems to be a significant correlation between AST and SBT when viewed in isolation, the same effect was only partially found significant in presence of the mediator BI. Hence, it can be inferred that the positive attitude of Gen Z travellers towards sustainable tourism is more likely to indirectly influence sustainable travel behavior via the intentional component, which parallels with several studies in the domain of behavioral science (Ajzen, 1991; Bagozzi, 1981; Bamberg et al., 2003; Fishbein & Ajzen, 2010; Kim & Hunter, 1993; Terlau & Hirsch, 2015). This

observation again substantiates the notion that attitudes alone serve as rather weak predictors of behavior (Anable et al., 2006).

Albeit these findings demonstrate that the intention to realize a sustainable travel behavior mediates the attitude-behavior relationship, it remains questionable, whether BI is indeed the direct antecedent of Gen Zers travel behavior, as it is anticipated in an array of behavioral theories and studies (Ajzen, 1991; Armitage & Conner, 1999; Fishbein & Ajzen, 2010; Terlau & Hirsch, 2015). The findings reveal, that Gen Zers intention to perform a sustainable travel behavior (M=3.69) is slightly more pronounced than the sustainable travel behavior actually implemented (SBTS: M=3.56; SBTG: M=3.03). This can be interpreted as an indication, that although Gen Z travellers intend to behave sustainable on holiday, they are still not always able to put this intention into practice to the same extent. Given these results, it is reasonable to assume an additional gap between intention and behavior among the studied sample, which further adds complexity to the examined ABG and shows congruence with an array of research (Carrington et al., 2010; Conner & Armitage, 1998; Davies et al., 2002; Manning, 2009; Sheeran, 2002; Wang et al., 2018).

As Sheeran (2002) suggests, further studies should be dedicated to examine which moderators intervene in the intention-behavior relationship, considering that this additional intention-behavior-gap is not negligible. Several scholars share the consensus, that situational factors may interfere in intention-behavior formation (Carrington et al., 2010; Manning, 2009; Wang et al., 2018), which would serve as a valuable explanation for the ABG under study, given the context sensitivity of tourist behavior in particular (Cohen et al., 2014; Decrop, 1999b; Swarbrooke & Horner, 2007). However, the findings obtained indicate otherwise. Situational factors appear to neither strengthen nor weaken the intention-behavior relationship and can consequently be understood as playing no decisive role within the ABG in the underlying research context, challenging several studies in the field of tourism research (Carrington et al., 2010; Manning, 2009; Wang et al., 2019a; Wang et al., 2019b; Wang et al., 2018; Wang et al., 2020).

The backgrounds of the observed intention-behavior gap thus remain unclear in the framework of the present study. Within this discourse, several researchers (e.g. Conner & Armitage, 1998; Sheeran, 2002) draw upon a line of reasoning established by Gollwitzer (1993), who argues that intentions should be regarded as a two- rather than a one-dimensional construct. According to this logic, *implementation intentions*,

which involve the individual relating the initial intention to the situational circumstances deemed necessary for enacting the behavior, are expected to complement the construct (Gollwitzer, 1993). Applying this theory to the present study, a low level of implementation intentions among the respondents may be considered as a reason for the observed intention-behavior gap, though this argumentation can solely be treated as hypothetical.

Several studies emphasize the importance family and friends hold within the decision-making process of Generation Z (Goh & Lee, 2018; Sparks & Honey, 2015), which can further be supported by the findings acquired. The perceived role of social norms appears to significantly impact Gen Zers intention to perform sustainable travel behaviors, which aligns with empirical findings from previous literature (Klöckner & Blöbaum, 2010; Wang et al., 2018). Interestingly, while peers of Gen Zers consider sustainable travel behavior important, they seem to not translate this attitude into behavior to the same extent, allowing for the assumption that an ABG also exists amongst the reference persons of the generational cohort. Nonetheless, social norms appear to be less pronounced than the other variables examined. Further, no significant relationship could be identified between MCSN and BI, which mitigates the impact of SN on the ABG of Gen Z travellers. This leaves the role played by social norms indefinite (Davies et al., 2002), and calls into question the current operationalization approach to the SN construct. Besides, additional unexpected results were obtained when considering further social influences on the ABG under study. Both academic and market research assign a key role to social media in young travellers' decision-making and behavior (ETC, 2020; Expedia & CGK, 2018; Monaco, 2018; OECD, 2018; Robinson & Schänzel, 2019; Setiawan et al., 2018). However, the results of the present study challenge this reasoning, as there are no demonstrable significant correlations between SM and BI, contradicting the findings of Hysa et al. (2021) and Javed et al. (2020).

A widely discussed topic in behavioral research is the impact of PBC on the discrepancy between attitude and behavior, which is expected to influence behavior both, indirectly via the intentional component and directly (Ajzen, 1991; Fishbein & Ajzen, 2010; Vermeir & Verbeke, 2008). As Vermeir and Verbeke (2008) posit, a strongly pronounced intention is still no guarantor for sustainable behavior, as an absence of control may render the engagement in sustainable behaviors impossible. The empirical findings reveal, that Gen Zers PBC is moderately pronounced (M=2.82), which indicates that the control that Gen Zers expect to have over performing a

sustainable travel behavior is rather limited. As tourism researchers suggest, tourists perceive an array of barriers that prevent them from behaving sustainable on holiday (Cohen et al., 2013; Dillimono & Dickinson, 2015; Dolnicar et al., 2019; Dolnicar & Grün, 2009; Hares et al., 2010; Juvan & Dolnicar, 2014, 2021; Lorenzoni et al., 2007). The findings obtained reveal, that Gen Zers mainly ascribe the lack of infrastructure a crucial role in discouraging them to perform sustainable travel behaviors. This shows congruence with a large body of research, which establishes that a limited availability of sustainable infrastructure forms an inherent obstacle to sustainable travel behavior (Dillimono & Dickinson, 2015; Dolnicar & Grün, 2009; Hares et al., 2010; Juvan & Dolnicar, 2014; Lorenzoni et al., 2007). Further, the impossibility of managing the own holidays with environmentally friendly means of transportation, the absence of enough resources, time and opportunities to perform a sustainable travel behavior, and over-pricing related to making sustainable vacation choices are perceived as main hurdles to sustainable travel behaviors among Gen Zers. This aligns with the findings from Cohen et al. (2013) and Hares et al. (2010), which imply that factors such as convenience, time, and costs play a dominant role in the contemplation of sustainable travel options, thus acting as a barrier to behavioral change. However, significant relationships between PBC and BI (B=0.344; p<.001) as well as PBC and SBT (SBTS: B=0.254, p=.001; SBTG: B=0.298, p<.001) could be observed, which highlights that PBC can be interpreted as a relevant factor impacting the ABG of Gen Zers. Interestingly, with PBC being capable of explaining 11.6% of variance of BI, PBC accounts for a comparatively small proportion of variance in SBT (SBTG: R^2=.061; SBTS: R^2=.043), suggesting that also an absence of control is more likely to indirectly result in unsustainable travel behaviors via the behavioral intention. However, despite the PBC-SBT relationship being less salient, the findings allow the suggestion that even if Gen Zers intend to behave sustainable on holiday, a lack of control such as the unavailability of sustainable infrastructure may still prevent this behavioral intention from being translated into a respective sustainable travel behavior (Vermeir & Verbeke, 2008), which may serve as a possible explanation for the observed intention-behavior discrepancy.

Although tourism researchers broadly observed a distinct inconsistency between sustainable behaviors at home and on vacation, with the sustainability degree of behavior notably dropping from the domestic to the vacation context (Barr et al., 2010; Cohen et al., 2013; Dillimono & Dickinson, 2015; Hares et al., 2010; Juvan & Dolnicar, 2014; G. Miller et al., 2010), other scholars still discovered spill-over effects between

both behavioral contexts (Holmes et al., 2021). In order to gain insights into this phenomenon, the present study has been guided by previous studies conducted by MacInnes et al. (2022), Dolnicar and Leisch (2008), and D. Miller et al. (2014), which contemplated environmentally sustainable behaviors that were possible to be performed in both contexts. The empirical findings are well aligned with previous studies, as the results obtained indicate both, a clear *home-away-gap* (Cohen et al., 2013) of Gen Zers and spill-over effects between the behaviors practiced at home and on vacation. SBH was found to significantly positively correlate with SBTG (r=0.606). Hence, it can be concluded, that the more Gen Zers take part in sustainable behaviors at home, the more likely they are to engage in similar behaviors on vacation (Holmes et al., 2021), although in a more infrequent manner. While obtaining analogical findings, MacInnes et al. (2022) attribute these contextual spill-over effects to individual habits, which they define as key drivers for sustainable travel behavior, as habitual sustainable practices are more likely to be performed in other, more unfamiliar behavioral contexts.

Further, the observed *home-away gap* may most likely be attributed to the hedonistic context tourism is associated with, which is also widely suggested by a multitude of scholars (Cohen et al., 2013; Dolnicar et al., 2019; Dolnicar & Grün, 2009; Hares et al., 2010). As it was emphasized, travel behavior constantly alters as generations pass through the stages of their life-cycle (Gardiner et al., 2014), whereby younger people attach more value to the hedonistic attributes of tourism than older people (Cavagnaro & Staffieri, 2015). This is also echoed in the findings of the present study, which reveal that almost half of the Gen Zers surveyed advocate the opinion to prefer tourism practices that just enable them to have fun, relax and spend money on doing the things they like. Further, nearly one third of the respondents take the view that vacations are a special time in which one does not want to be burdened by worrying about sustainability issues. Accordingly it can be assumed, that vacations take on a special time in Gen Zers lives and are mainly associated with hedonistic aspects that dominate over sustainability considerations, which is consistent with a large body of the literature reviewed (Cohen et al., 2013; Decrop & Snelders, 2004; Deloitte, 2019; Dolnicar et al., 2019; Dolnicar & Grün, 2009; Haddouche & Salomone, 2018; Hares et al., 2010).

When contemplating the findings with the observed positive attitude towards sustainable tourism and the fact that the vast majority of Gen Z travellers indicated to intend to behave as sustainable on vacation as at home, the relationship between

Gen Z and sustainable tourism appears to be particularly ambivalent. Although Gen Zers clearly take sustainability aspects into account in daily behaviors, a different pattern emerges in the tourism context. Generally speaking, the widely emphasized sustainability consciousness of Gen Z, with climate change and equality as their main concerns (Djafarova & Foots, 2022; Porter Novelli, 2019), as well as their eagerness to drive global change (ETC, 2020; Tyson et al., 2021; Wunderman Thompson Intelligence, 2021), is not holistically reflected in their travel behavior. The findings presented provide evidence, that besides the attitude, multiple additional factors exert an impact on this attitude-behavior discrepancy.

5.2 Theoretical Implications for Behavioral Research

A number of theoretical implications for behavioral research arise from the present study. A distinct ABG could be empirically evidenced among Gen Zers in the field of sustainable tourism. As postulated by Ajzen (1991), the intention to perform a certain behavior mediates the attitude-behavior relationship, which also proved evident in the framework of this study. Although attitudes appear to play a role in behavior-formation, this magnitude has shown to be rather moderate, which is why researchers are advised to refrain from considering attitudes as the primary predictor of behavior. Instead, additional components ought to be taken into account to accurately uncover the backgrounds of attitude-behavior discrepancies.

For a profound investigation of the ABG it may however prove fruitful to measure attitudes directly related to the behavior in question. Further, it is evidenced that a lack of behavioral control can lead both directly and indirectly to unsustainable travel behaviors. This provides support for the composition of the TPB as well as evidence to researchers, that perceived behavioral barriers can significantly induce inconsistencies between attitudes and behaviors. In addition, SN appeared to influence BI, although it must be considered that the motivation to comply with social norms does not significantly account for BI. Hence, the dimensional perspective and operationalization of the construct SN should be revised in further studies, which may facilitate drawing definite conclusions on the role played by SN in the framework of the ABG. As some scholars agree on, the ABG phenomenon cannot be comprehensively understood by means of one single theoretical framework (Antimova et al., 2012; Kollmuss & Agyeman, 2002), which can be substantiated by the study at hand. The empirical findings reveal that the TPB model postulated by Ajzen (1991) is practicable to be extended with additional variables, as it has been emphasized by

several studies (Anable et al., 2006; Bamberg et al., 2003; Conner & Armitage, 1998). The present study highlights, that employing the TPB as a basic framework along with variables derived from the Decision-Making Model of Sustainable Consumption (Terlau & Hirsch, 2015) and findings from empirical behavioral research in general can be viewed as an approach that is empirically capable of framing the ABG of Gen Z travellers.

However, future studies dealing with the investigation of tourist behavior and a corresponding ABG using the TPB as conceptual model are advised to consider certain limitations of the model. The findings revealed an additional gap between intention and behavior. This empirical disconnect may be solved by treating BI as a two-dimensional construct by adding the sub-dimension of *implementation intentions* (Gollwitzer, 1993). In addition, particular complexity is added to the ABG phenomenon in the context of sustainable tourism, as a distinct *home-away-gap* is apparent. SBH was found to play a non-negligible role in behavior-formation among Gen Z, wherefore this construct is recommended to be taken into account by scholars assessing the ABG in sustainable tourism. As recent research suggests, in this context the construct of habits might bring about additional explanatory power (MacInnes et al., 2022).

Lastly, while travel behavior is characterized by a distinct complexity, Generation Z in particular is confronted with a multitude of external influences, mainly due to the omnipresence of digital technologies (see Francis & Hoefel, 2018). This may add additional complexity to the ABG under study, and must hence be taken into account within further research.

5.3 Practical Implications for Tourism

Several recommendations for action can be derived from the present study and taken up by practitioners to stimulate sustainable travel behaviors. Due to the symbiotic relationship between sustainability and tourism, an entirely sustainable tourism industry will eventually never be feasible. Yet, there is scope to drive the development of a more sustainable form of travel, whereby sustainable tourism not be considered as an aspired state of being but rather as an ongoing process (see G. Miller & Twining-Ward, 2005). The results demonstrate, that Gen Zers represent a valuable target group for sustainable travel, as they hold positive attitudes towards sustainable tourism and a strongly pronounced intention to travel sustainably in the future. Considering that individual attitudes can also influence travel behaviors to a certain

extent, it can be assumed that raising a general awareness of the adverse impacts individual travel behavior can cause may narrow the ABG. Such interventions can however be deemed as not sufficient to induce behavioral change, since attitudes alone are not decisive for performing sustainable travel behaviors. The present study shows that Gen Z travellers perceive various barriers to enacting a sustainable travel behavior, mainly related to a lack of accessible sustainable infrastructure, and the perceived financial and timely effort required to travel sustainably. This is precisely where the tourism industry ought to tackle, as those barriers can still discourage sustainable travel behaviors despite the prevalence of positive attitudes and intentions towards sustainable tourism. An approach should be developed in collaboration with all stakeholders that involves enabling travels with more sustainable alternative transportation options in an affordable and comfortable way.

Further, it is evidenced that Gen Zers associate travel with pleasure and fun, which relegates sustainability considerations to the background. It is therefore crucial to convey, that sustainability and the hedonistic nature of travel are not mutually exclusive, but rather can be merged to create both a more pleasurable experience that simultaneously preserves environment, society, and economy.

Despite the existence of a distinct home-away-gap, spill-over effects still occur between both behavioral contexts. Consequently, marketing measures should assist in transferring daily sustainable behaviors to the travel context. As the findings reveal, the majority of respondents intend to behave as sustainably on vacation as at home. At this point, tourism providers can build upon by establishing a link to the domestic context through encouraging travellers at different stages of the customer journey to behave as sustainably at the destination as they would at home.

Furthermore, it can be deduced, that a social environment committed to sustainability can minimize the ABG of Gen Zers. An ABG however appears to be also apparent among the peers of Gen Z. Hence, exchanges should be encouraged that effect both Gen Zers and their social environment by means of marketing measures on social media platforms highlighting the positive impacts and appeal of travelling sustainably.

As mentioned preliminarily, Gen Zers unprecedented characteristics have the potential to evoke a rethinking of classical tourism products. Likewise, the generational cohort can be expected to fundamentally shape and drive future tourism demand. Tourism practitioners should take this as an opportunity for sustainable

transformation, where out-of-the-box-thinking and an openness to adopting new approaches are critical to bring about a change in the industry and, in turn, in behavior.

6. Conclusion

Sustainable tourism development is a crucial imperative to prevent the tourism industry from eroding its own fundament. Within this process, tourist behavior holds an essential role and cannot be solely considered a driver but also an obstacle to change. The emerging Generation Z is expected to considerably shape future tourism demand, with their unprecedented characteristics and needs calling into question the viability of classical tourism products. At the same time, the generational cohort appears to show strong concern for sustainability issues, accompanied with a fundamental interest in sustainable travel options, which at first glance seems promising in light of the need for a more sustainable form of travel. Sustainable attitudes are however not always reflected in sustainable behaviors. In fact, this attitude-behavior gap phenomenon is particularly observable in the realm of sustainable tourism and also evidenced among the allegedly sustainable generational cohort (e.g. Sharpley, 2021).

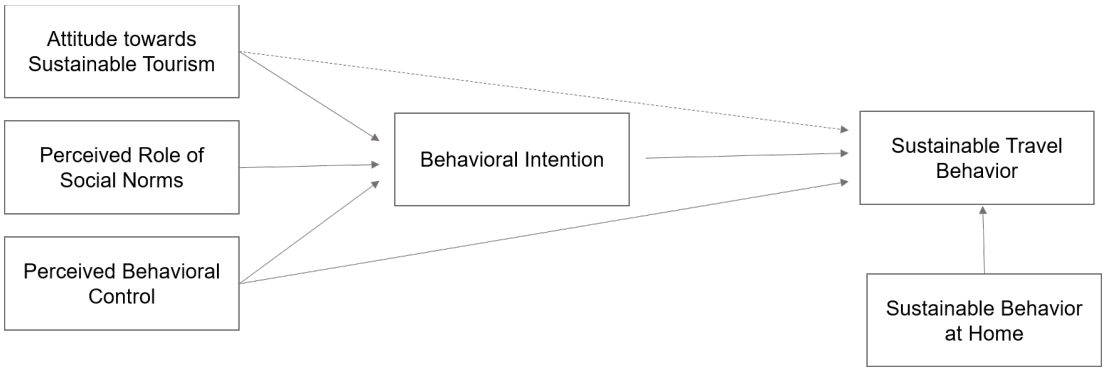
The backgrounds of this attitude-behavior discrepancy have not yet been uncovered within behavioral research, wherefore this master's thesis aimed at providing an answer to the following research question: *Which factors have an influence on the Attitude-Behavior Gap of Generation Z in the travel context?*

As the findings of the quantitative study indicate, the research question is not briefly answerable, wherefore further elaboration is needed to establish a thorough understanding of the complexities involved in the topic under study.

Reviewing relevant literature revealed, that to date no behavioral theory exists which is capable to precisely explain tourist-behavior-formation. An examination of behavior is further not feasible with one finite theoretical framework. By developing a conceptual model grounded on the Theory of Planned Behavior (Ajzen, 1991) extended with variables derived from literature, it was gained a deeper understanding of the backgrounds of the attitude-behavior gap of Generation Z in sustainable tourism. Figure 25 illustrates the revised conceptual model adjusted to the findings of the present study.

Figure 25

Revised Research Model



Note. Own illustration.

The findings demonstrate, that the relationship between Generation Z and sustainable tourism is particularly ambivalent. Although the generational cohort shows a strongly positive attitude towards sustainable tourism, this attitude is not to the same extent reflected in their actual travel behavior. Attitudes were found to be rather weak indicators of the travel behavior of Generation Z, whereby the impact appears to be higher the more specifically the attitude relates to the behavior in question. In compliance with prior research (e.g. Ajzen, 1991; Terlau & Hirsch, 2015), the results suggest, that the generations' attitudes rather impact behavior indirectly via the intentional component. In fact, besides the attitude several other factors were found to influence the attitude-behavior discrepancy, echoing the findings from several scholars (e.g. Bamberg et al., 2003; Conner & Armitage, 1998).

Considering social influences, the perceived role of social norms is not negligible in impacting the attitude-behavior gap of Generation Z, which is indicative for the strong position that important others hold in the generations' decision to perform (un)sustainable travel behaviors. The findings further emphasize, that although the generation of *digital natives* is expected to be strongly influenced by social media within decision-making and behavior, social media influences appear to make no contribution to the emergence of the attitude-behavior gap under study.

Particularly noticeable is the fact, that though Generation Z travellers clearly adopt sustainable behaviors at home, the same behaviors are less likely to be performed in a tourism realm. In contrast, spill-over effects were found to exist between both behavioral contexts, indicating that members of Generation Z who behave sustainable at home are more likely to behave sustainable on vacation – an observation that

reflects an integral part of behavioral research in tourism (e.g. Barr et al., 2010; Cohen et al., 2013; Juvan & Dolnicar, 2014; MacInnes et al., 2022). This home-away gap may be attributed to the observation, that travel appears to take on a special role in the lives of the generational cohort and is mainly associated with hedonistic aspects, further showing close alignment with a large body of tourism academia (e.g. Dolnicar et al., 2019; Hares et al., 2010). In general, Generation Z appears to perceive a rather limited control over performing sustainable travel behaviors, seeing themselves confronted with several behavioral barriers, such as a lack of sustainable infrastructure and timely or financial resources. Further complexity is revealed through the observation, that although when Generation Z travellers intend to behave sustainable on holiday, this intention is not replicated in their behavior to equal parts, challenging the common belief of intentions being the direct antecedent of behavior. Since perceived behavioral control appeared to also directly impact behavior, the findings provide an indication, that although if Generation Z strongly intends to behave sustainable on holiday, the generational cohort may still be unable to carry out sustainable travel behaviors due to a prevalence of perceived barriers to behavioral change.

Albeit this additional intention-behavior gap is generally acknowledged within behavioral research (e.g. Davies et al., 2002; Sheeran, 2002), there is still no common consensus on the backgrounds of the phenomenon, yet. Even though scholars attempt to explain this divergence with situational factors interfering in the process in which an intention develops into behavior, the present study indicates otherwise, and accordingly refutes a common line of argumentation in behavioral research (e.g. Carrington et al., 2010; Manning, 2009; Wang et al., 2020).

In essence, the present study found, that besides the attitude, several additional factors exert an influence on the examined attitude-behavior discrepancy. The intention to behave sustainable on holiday, social norms, the perceived behavioral control over sustainable travel behaviors and sustainable behaviors at home can be seen as considerable impacting factors on the attitude-behavior gap of Generation Z in sustainable tourism. Further, the relevance Generation Z attributes to travel along with the hedonistic aspects associated with vacations may further contribute to widening the gap between attitude and behavior.

The challenge now lies with behavioral research and tourism practitioners to bridge this gap. This thesis puts forward behavioral research by framing the attitude-behavior

gap of Generation Z, which to date has been a scarcely researched topic in tourism academia. However, research is needed to draw definite conclusions on what leads Generation Z travellers' sustainable attitudes being inconsistent with respective travel behaviors. Although the present study has demonstrated that merging existing behavioral theories can empirically capture the ABG of Generation Z, there is still need for a unified model that is capable of holistically accounting for the complexity of travel behavior. Moreover, it remains questionable what determines the additional intention-behavior gap among Generation Z, opening up further avenues for investigation. At the same time, the tourism industry is encouraged to take action. Interventions to enhance general awareness of the potential impacts individual travel behaviors can cause may narrow the studied attitude-behavior gap, but not be sufficient to induce behavioral change. Close collaboration among all stakeholders is necessary to provide affordable, comfortable and appealing alternative means of transportation and to encourage travellers to transfer daily sustainable behaviors to the tourism context. Tourism is and always will be symbolic for pleasure and a detachment from daily obligations. Nevertheless, it forms a crucial imperative to convey, that sustainability and the hedonistic nature of tourism are not mutually exclusive realms, but rather can be merged to create both a more pleasurable experience that simultaneously preserves environment, society and economy. Taking all things together, an even commitment from both industry and tourists is essential to accelerating sustainable change in a joint effort, and hence to safeguard the foundation of tourism.

7. Limitations and Avenues for Future Research

The results of the study must be viewed in light of several limitations. Firstly, the findings should be interpreted with caution by taking into account the heterogenous nature of Generation Z. As it was emphasized, travel behavior changes with age, which can induce intra-behavioral differences. As the findings have shown, the sample under study was composed of members of Generation Z being in different stages of their life-cycle, with some already being employed or studying while others were still attending school. Consequently, a cross-generational generalization of findings needs to be treated with some criticism.

Academic literature suggests, that Generation Z travellers are not actively involved in travel planning when the vacation is taken with their family (e.g. Haddouche & Salomone, 2018). As the findings revealed, several participants either travelled with their parents or their parents paid for their travel expenses, wherefore it can be assumed that the reported behaviors have been considerably impacted by their parent's decisions. Although it remains questionable to which extent this circumstance had an impact on the findings of the present study, it must be considered that a comparison of travel behaviors without taking into account travel constellations could bring about certain biases. Moreover, the fact that women appear to be generally more sustainably conscious than men (e.g. Cavagnaro & Staffieri, 2015), may compromise the viability of the results since the majority of the sample identified as female. In general, a generalization of the empirical results on the members of Generation Z residing in the DACH-region is not possible, since the targeted sample size was not achieved.

Further it must be noted, that the present study assessed self-reports on behaviors during the last vacation before the outbreak of the Covid-19 pandemic. In this manner, it was attempted to minimize data distortion, as it was expected that travel behavior performed during pandemic times was heavily influenced by travel restrictions and would not have reflected reality. However, it can be argued that comparing actual attitudes with past behaviors may not accurately reflect reality, since the attitude at the time of performing the behavior may have changed over the years of pandemic. Further, although the examination of self-reported behavior forms common practice in behavioral research methods (e.g. Juvan & Dolnicar, 2017), it still receives criticism as the method is expected to limit the validity of results due to carrying the risk of socially desirable responses (MacInnes et al., 2022). The occurrence of a social

desirability bias is especially prone to survey modes assessing sustainability topics (Davies et al., 2002), wherefore the travel behavior reported may eventually not be congruent with the travel behavior actually performed.

It must further be critically noted, that due to an absence of validated scales measuring the constructs of interest in the field of sustainable tourism, the constructs have been operationalized by means of a compiled set of items retrieved from different studies. Therefore, it remains elusive, if the constructs have been measured properly. The reliability concerns inherent to this procedure have however been minimized where possible through performing reliability and factor analyses. In addition, a lack of studies assessing tourist behavior in light of the three-dimensional nature of sustainability has implicated an unintentional overemphasis of environmental aspects within questionnaire development, thereby limiting a holistic examination of sustainable travel behavior-formation. Further, some researchers extend the dimensional composition of sustainability with an additional *institutional dimension* (e.g. Pfahl, 2005). Due to the limited scope of the present study, this extended conception of sustainability was not taken into account, which may have provided further insights on the topic under study.

Another limitation is imposed by the regression analyses performed. Since the sample also involved participants who did not complete the questionnaire entirely, several variables had missing values and consequently different sample sizes. Thus, comparing the extracted factors despite the uneven sample sizes could have impeded the reliability of the results, which should therefore be interpreted carefully.

Lastly, it must be acknowledged, that to date no theoretical model exists that accurately captures the complexity of tourist behavior. Thus, the present study relied on a conceptual model developed from existing behavioral theories available in general consumer behavior research. Hence, it remains unclear if the developed model holistically captured the tourist behavior of Generation Z or if additional variables, which did not find consideration in the present study, interfere in behavior-formation. Given the additionally observed intention-behavior gap, this aspect remains questionable, and gives rise to the assumption, that the addition of further variables would have drawn a different picture of the ABG among Generation Z travellers from that obtained in the present study.

Future research is therefore well advised to develop a theoretical model that is uniformly capable of capturing the complex nature of tourist behavior, with precise

suggestions being provided in Chapter 5.2. Further, researchers should consider relying on observation methods instead of self-reports for assessing behaviors in order to minimize the occurrence of socially desirable responses. Additional research is needed that holistically assesses the sustainable travel behavior of Generation Z, whereby sustainability may be approached as a four-dimensional construct, which could provide further valuable insights on the ABG in question. Most importantly, future studies should focus on examining intra-generational differences among Generation Z. Thereby, quantitative large-scale studies may divide the sample into distinct clusters, to assess age- or gender-related discrepancies. As a concluding remark, the present study provides valuable insights on the backgrounds of the attitude-behavior gap among Generation Z travellers, but simultaneously remains with open questions, thus creating an ideal basis for future research approaches.

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Appendix

A1 Final Questionnaire in German Language

Mit welchem Geschlecht identifizieren Sie sich am meisten?

- ○ Männlich
- ○ Weiblich
- ○ Divers
- ○ Möchte ich nicht sagen

Wie alt sind Sie?

Bitte wählen Sie aus dem Drop-Down Menü das auf Sie zutreffende Alter, indem Sie auf den Pfeil klicken. Wenn Sie jünger als 16 Jahre sind, wählen Sie bitte die Option <16. Wenn Sie älter als 27 Jahre sind, wählen Sie bitte die Option >27.

< 16
16
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> 27

Filter: Last page when answer was „< 16“ or „> 27“

Da sich meine Masterarbeit auf das nachhaltige Reiseverhalten der Mitglieder der Generation Z, welche im Jahr 1995 oder später geboren und für vorliegende Umfrage mindestens 16 Jahre alt sein müssen, fokussiert, zählen Sie leider nicht zu der untersuchten Population.

Ich danke Ihnen dennoch für Ihre tatkräftige Unterstützung und die Bereitschaft, einen Teil zu meiner Masterarbeit beizutragen.

Was ist Ihr Beruf?

Bitte wählen Sie eine der vorgegebenen Antwortmöglichkeiten.

- ○ Schüler:in
- ○ Auszubildende:r
- ○ Student:in
- ○ Angestellte:r
- ○ Sonstiges:
- ○ Möchte ich nicht sagen

Was ist Ihr aktuell höchster Bildungsabschluss?

- ○ Berufsreife (Hauptschulabschluss)
- ○ Mittlere Reife (Realschulabschluss)
- ○ Allgemeine Hochschulreife (Abitur/Matura)
- ○ Bachelorabschluss
- ○ Masterabschluss
- ○ Ausbildung/Lehrabschluss
- ○ Sonstiges:
- ○ Möchte ich nicht sagen

Können Sie sich an Ihre letzte Reise vor Ausbruch der Corona-Pandemie erinnern?

- ○ Ja
- ○ Nein

Filter: Endseite bei Antwort „Nein“

Da die Thematik meiner Masterarbeit im Tourismusbereich angesiedelt ist, und auf die Untersuchung des tatsächlich realisierten nachhaltigen Reiseverhaltens seitens der Generation Z abzielt ist es vonnöten sich bei der Teilnahme an eine explizite Reise zurück erinnern zu können, um diesbezügliche Verhaltensweisen wiedergeben zu können.

Ich danke Ihnen dennoch für Ihre tatkräftige Unterstützung und die Bereitschaft, einen Teil zu meiner Masterarbeit beizutragen.

In welchen Unterkünften haben Sie auf dieser Reise hauptsächlich übernachtet?

- ○ Hotel/Resort (Selbstverpflegung/Halbpension)
- ○ Hotel/Resort (All Inclusive)
- ○ Ferienwohnung/Appartement
- ○ Home-Sharing (z. B. Airbnb)
- ○ Hostel
- ○ Camper/Van
- ○ Bei Freunden/Verwandten
- ○ Sonstiges:

Welches Transportmittel haben Sie hauptsächlich genutzt, um die Destination zu erreichen?

- ○ Flugzeug
- ○ Auto/Motorrad
- ○ Bus
- ○ Zug
- ○ Camper/Van
- ○ Sonstiges:

Mit wem haben Sie diese Reise hauptsächlich unternommen?

- ○ Partner:in/Ehepartner:in
- ○ Eltern/Elternteil
- ○ Eigene Kinder
- Freund:innen
- ○ Kolleg:innen
- ○ Alleine
- ○ Andere:

Wer ist hauptsächlich für die Reisekosten dieser Reise aufgekommen?

- ○ Ich selbst
- ○ Meine Eltern/Elternteil
- ○ Mein Arbeitgeber
- ○ Andere Familienmitglieder
- ○ Andere:

Wenn Sie an Ihr alltägliches Leben denken, wie häufig üben Sie die folgenden Tätigkeiten aus?

Bitte geben Sie auf einer Skala von 1 (=Nie) bis 5 (=Immer) an, wie häufig Sie die folgenden Tätigkeiten **Zuhause** ausüben.

	Nie	Selten	Manchmal	Oft	Immer
Ich trenne Müll (z. B. in Plastik, Bio-Müll, Restmüll).	○	○	○	○	○
Wenn nicht zwingend notwendig, vermeide ich es zu Heizen/die Klimaanlage zu benutzen.	○	○	○	○	○
Ich gehe sparsam mit dem Verbrauch von Wasser um.	○	○	○	○	○
Ich hebe Müll auf, der mir nicht gehört.	○	○	○	○	○
Ich schalte das Licht aus, wenn ich es nicht brauche.	○	○	○	○	○
Ich ermutige (oder unterstütze) andere dabei, umweltfreundlich zu sein.	○	○	○	○	○
Ich kaufe Bio-Lebensmittel.	○	○	○	○	○

Wenn Sie an Ihr Reiseverhalten während der letzten Reise vor dem Ausbruch der Corona-Pandemie denken, wie häufig haben Sie folgende Tätigkeiten ausgeübt?

Bitte geben Sie auf einer Skala von 1 (=Nie) bis 5 (=Immer) an, wie häufig Sie die folgenden Tätigkeiten **im Urlaub** ausgeübt haben.

	Nie	Selten	Manchmal	Oft	Immer
Ich habe Müll getrennt (z. B. in Plastik, Bio-Müll, Restmüll).	○	○	○	○	○
Wenn nicht zwingend notwendig, habe ich es vermieden die Heizung/Klimaanlage zu benutzen.	○	○	○	○	○
Ich bin sparsam mit dem Verbrauch von Wasser umgegangen.	○	○	○	○	○
Ich habe Müll aufgehoben, der nicht mir gehört hat.	○	○	○	○	○
Ich habe das Licht ausgeschaltet, wenn ich es nicht gebraucht habe.	○	○	○	○	○
Ich habe andere dazu ermutigt (oder dabei unterstützt), umweltfreundlich zu sein (z. B. Mitreisende).	○	○	○	○	○
Ich habe Bio-Lebensmittel eingekauft.	○	○	○	○	○

Wie häufig haben Sie <u>während Ihrer letzten Reise vor dem Ausbruch der Corona-Pandemie</u> die folgenden tourismusspezifischen Verhaltensweisen praktiziert?

Bitte geben Sie auf einer Skala von 1 (=Nie) bis 5 (= Immer) an, wie häufig Sie die folgenden Verhaltensweisen **<u>im Urlaub</u>** ausgeübt haben.

	Nie	Selten	Manchmal	Oft	Immer
Ich habe mich bewusst für Tourismusunternehmen/-betriebe (z. B. Hotel, Reiseveranstalter) entschieden, die sich aktiv für den Schutz der Umwelt und der lokalen Kultur einsetzen.	○	○	○	○	○
Ich habe in Unterkünften übernachtet, die Einheimischen gehören (anstatt in internationalen Hotelketten).	○	○	○	○	○

Ich bin zu Fuß gegangen oder geradelt, anstatt am Zielort motorisierte Verkehrsmittel (z. B. Taxi oder Mietwagen) zu benutzen.					
Ich habe Emissionsausgleiche bezahlt (z. B. CO2 Ausgleich), um meinen ökologischen Fußabdruck zu verringern.	○	○	○	○	○
Ich habe einheimische Gerichte und Spezialitäten in Restaurants gegessen, die Einheimischen gehören (anstelle von internationalen Gerichten in bekannten Restaurantketten wie McDonalds).	○	○	○	○	○
Ich habe bewusst auf die Nutzung bestimmter Verkehrsmittel verzichtet, um Luftverschmutzung zu vermeiden (z. B. Flug).	○	○	○	○	○
Ich habe ganz bewusst/gezielt mit der einheimischen Bevölkerung interagiert.	○	○	○	○	○
Ich habe mich den örtlichen Gewohnheiten angepasst, um die Erwartungen der einheimischen Bevölkerung am Zielort zu erfüllen (z. B. Kleidungsstil).	○	○	○	○	○
Ich habe mich sehr darum bemüht, etwas über die örtliche Lebensumgebung, Kultur und Geschichte zu lernen.	○	○	○	○	○

Nun geht es nicht mehr um Ihre letzte Reise vor der Corona-Pandemie, sondern um Ihre generelle Meinung zu verschiedenen Aspekten in Bezug auf das Reisen. Inwieweit stimmen Sie den folgenden Aussagen zu?

Bitte geben Sie den Grad Ihrer Zustimmung auf einer Skala von 1 (=stimme überhaupt nicht zu) bis 5 (=stimme voll und ganz zu) an.

	Stimme überhaupt nicht zu	Stimme nicht zu	Neutral	Stimme zu	Stimme voll und ganz zu
Die Reduzierung des Flugverkehrs ist für die Bekämpfung der globalen Erwärmung und der Emissionen von entscheidender Bedeutung.	○	○	○	○	○
Bevor ich einen Ort besuche, an dem der Tourismus die Umwelt schädigt, verzichte ich lieber auf meinen Urlaub.	○	○	○	○	○
Während des Urlaubs ist es wichtig, sich Zeit zu nehmen, um die gegenwärtige und vergangene Geschichte, Kultur und Traditionen des besuchten Ortes zu verstehen.	○	○	○	○	○
Urlauber zahlen für Freizeit und Vergnügen und sollten sich nicht mit den sozialen und ökologischen Problemen des besuchten Ortes auseinandersetzen müssen.	○	○	○	○	○
Der Urlaub ist für mich eine besondere Zeit, in welcher ich nicht von Sorgen über Nachhaltigkeitsprobleme belastet werden möchte.	○	○	○	○	○
Ich bevorzuge Freizeitaktivitäten und touristische Erlebnisse, bei denen ich einfach nur Spaß haben, mich entspannen und Geld ausgeben kann, um das zu tun, was ich mag und wie ich es mag.	○	○	○	○	○
Ich leiste zu Hause bereits viel für die Umwelt, weshalb ich mich im Urlaub diesbezüglich ein wenig entspannen kann.	○	○	○	○	○

Als Tourist bin ich der Meinung, dass ich das Recht habe, zu reisen, wohin und wie ich will, da ich für die persönliche Erfahrung bezahlt habe.	○	○	○	○	○
Andere Touristen schaden der Umwelt viel mehr als ich.	○	○	○	○	○
Ich glaube, dass ich bei meinen Reiseentscheidungen auf jeden Fall meinen Einfluss auf die Erde und andere Kulturen berücksichtigen sollte.	○	○	○	○	○
Geld für nachhaltigen Tourismus auszugeben, bedeutet für mich, auf einige meiner Bedürfnisse und Wünsche verzichten zu müssen.	○	○	○	○	○
Geld für nachhaltigen Tourismus auszugeben bedeutet, bewusst Leistungen zu kaufen, die eine bessere Wirkung auf die Reiseziele haben.	○	○	○	○	○

Inwieweit stimmen Sie den folgenden Aussagen zu?

Bitte geben Sie den Grad Ihrer Zustimmung auf einer Skala von 1 (=stimme überhaupt nicht zu) bis 5 (=stimme voll und ganz zu) an.

	Stimme überhaupt nicht zu	Stimme nicht zu	Neutral	Stimme zu	Stimme voll und ganz zu
Ein nachhaltiger Tourist zu sein, ist etwas, das meinen Freunden und meiner Familie wichtig ist.	○	○	○	○	○
Die meisten Menschen, die mir wichtig sind, sind der Meinung, dass man sich auf Reisen darum bemühen sollte, in einer nachhaltigen Unterkunft zu übernachten.	○	○	○	○	○

Die meisten Menschen, die mir wichtig sind, sind der Meinung, dass man sich für nachhaltige Tourismusprodukte entscheiden sollte, auch wenn diese vielleicht teurer sind.	○	○	○	○	○
Die meisten Menschen, die mir wichtig sind, sind der Meinung, dass man auf Reisen umweltfreundliche Verkehrsmittel nutzen sollte, obwohl das unter Umständen mehr Zeit in Anspruch nimmt.	○	○	○	○	○
Menschen, die mir wichtig sind, achten darauf, auf Reisen in nachhaltigen Unterkünften zu übernachten.	○	○	○	○	○
Menschen, die mir wichtig sind, entscheiden sich für nachhaltige Tourismusprodukte, auch wenn diese teurer sind.	○	○	○	○	○
Menschen, die mir wichtig sind, nutzen auf Reisen umweltfreundliche Verkehrsmittel, obwohl das unter Umständen mehr Zeit in Anspruch nimmt.	○	○	○	○	○
Ich wähle in der Regel einen Urlaub, von dem ich glaube, dass ihn Menschen, die mir wichtig sind, befürworten.	○	○	○	○	○
Ich mache gerne Reisen, welche auf Menschen, die mir nahestehen, einen guten Eindruck machen.	○	○	○	○	○
Ich empfinde ein Gefühl der Zugehörigkeit, wenn ich die gleichen Reisen mache, wie die Menschen, die mir wichtig sind.	○	○	○	○	○

Inwieweit stimmen Sie den folgenden Aussagen in Bezug auf Ihre Social Media Nutzung (z. B. Instagram) zu?

Bitte geben Sie den Grad Ihrer Zustimmung auf einer Skala von 1 (=stimme überhaupt nicht zu) bis 5 (=stimme voll und ganz zu) an.

	Stimme überhaupt nicht zu	Stimme nicht zu	Neutral	Stimme zu	Stimme voll und ganz zu
Positive Meinungsäußerungen und Kommentare unter Urlaubsbeiträgen in den sozialen Medien bestärken mich darin zu verreisen.	○	○	○	○	○
Ich schaue mir in den sozialen Medien Beiträge/Stories zu den Orten an, die ich gerne bereisen möchte.	○	○	○	○	○
Ich nutze soziale Medien während einer Reise, um Informationen über bestimmte Sehenswürdigkeiten/Aktivitäten zu erhalten.	○	○	○	○	○
Ich nutze soziale Medien während einer Reise, um meine Erfahrungen mit anderen Reisenden/Freunden zu teilen.	○	○	○	○	○
Ich nutze soziale Medien während einer Reise, um meine Erfahrungen mit anderen Reisenden/Freunden zu teilen.	○	○	○	○	○
Ich orientiere mich bei meinen Reiseentscheidungen oft an den Aussagen von Influencern, denen ich vertraue, unabhängig davon, ob diese über ein nachhaltiges Bewusstsein verfügen oder nicht.	○	○	○	○	○

In welcher Intensität haben Personen, mit denen Sie in den sozialen Medien vernetzt sind in den letzten 6 Monaten Bilder, Updates oder Posts veröffentlicht, die sie beim Reisen zeigten oder vom Reisen berichteten?

- ○ Nie
- ○ Selten
- ○ Manchmal
- ○ Oft
- ○ Sehr oft

Sie haben bereits 2/3 der Umfrage beantwortet. Viele Reisende empfinden verschiedene Barrieren für das Praktizieren eines nachhaltigen Reiseverhaltens. Inwieweit stimmen Sie den folgenden Aussagen zu?

Bitte geben Sie den Grad Ihrer Zustimmung auf einer Skala von 1(=stimme überhaupt nicht zu) bis 5 (=stimme voll und ganz zu) an.

	Stimme überhaupt nicht zu	Stimme nicht zu	Neutral	Stimme zu	Stimme voll und ganz zu
Eine nachhaltige Reise zu buchen ist für mich zu teuer.	○	○	○	○	○
Es mangelt an der notwendigen Infrastruktur (z. B. Transportmittel), um die Umweltbelastung meines Urlaubs gering zu halten.	○	○	○	○	○
Die Planung nachhaltiger Urlaube nimmt zu viel Zeit in Anspruch.	○	○	○	○	○
Es wäre schwierig, meine Reisen mit umweltfreundlichen Verkehrsmitteln zu realisieren.	○	○	○	○	○
Ob ich mich auf Reisen nachhaltig verhalte oder nicht, liegt ganz allein bei mir.	○	○	○	○	○
Ich bin überzeugt, dass ich mich auf Reisen nachhaltig verhalten kann, wenn ich es möchte.	○	○	○	○	○
Ich verfüge über die notwendigen Mittel (z. B. Geld), Zeit und Möglichkeiten, um mich auf meinen Reisen nachhaltig zu verhalten.	○	○	○	○	○

Ich habe das Gefühl, dass meine Reisebegleiter (z. B. Eltern), die für die Reisekosten aufkommen, mehr Kontrolle über die nachhaltigen Auswirkungen meines Urlaubs haben als ich.	○	○	○	○	○

Das Verhalten auf Reisen ist oftmals auch von verschiedenen situativen Aspekten abhängig. Inwieweit stimmen Sie den folgenden Aussagen zu?

Bitte geben Sie den Grad Ihrer Zustimmung auf einer Skala von 1 (=stimme überhaupt nicht zu) bis 5 (=stimme voll und ganz zu) an.

	Stimme überhaupt nicht zu	Stimme nicht zu	Neutral	Stimme zu	Stimme voll und ganz zu
Eine saubere öffentliche Umgebung des Reiseziels bewirkt, dass ich mich bewusst umweltfreundlicher verhalte.	○	○	○	○	○
Am Reiseziel verhängte Belohnungen und Sanktionen (z. B. Geldstrafe) zum Schutz der Umwelt bewirken, dass ich mich bewusst umweltfreundlicher verhalte.	○	○	○	○	○
Das umweltschonende Verhalten anderer Touristen bewirkt, dass ich mein eigenes Reiseverhalten bewusst daran anpasse.	○	○	○	○	○
In Situationen, in denen alle anderen ein unnnachhaltiges Verhalten an den Tag legen, wie z. B. das Liegenlassen von Müll, kann mir als Tourist nicht vorgeworfen werden, dass ich mich dann genauso verhalte.	○	○	○	○	○

Wenn die Einrichtungen am Zielort (z. B. Mülleimer) entsprechend vorhanden sind, werde ich mich NICHT unnachhaltig (z. B. Müll in der Natur entsorgen) verhalten.	○	○	○	○	○
Wenn ich ein unnachhaltiges Reiseverhalten ausübe, liegt das wahrscheinlich daran, dass sich das Reiseziel nicht gut genug dafür einsetzt.	○	○	○	○	○

Sie sind nun bei der letzten Frage des Fragebogens angelangt. Bitte denken Sie schließlich an Ihre nächste Urlaubsreise. Inwieweit stimmen Sie den folgenden Aussagen zu?

Bitte geben Sie den Grad Ihrer Zustimmung auf einer Skala von 1 (=stimme überhaupt nicht zu) bis 5 (=stimme voll und ganz zu) an.

	Stimme überhaupt nicht zu	Stimme nicht zu	Neutral	Stimme zu	Stimme voll und ganz zu
Es ist wahrscheinlich, dass ich mehr für die Reise bezahlen werde, wenn dies zum Schutz der Umwelt, der lokalen Kultur und der Wirtschaft beiträgt.	○	○	○	○	○
Es ist wahrscheinlich, dass ich umweltfreundliche Verkehrsmittel nutzen werde, auch wenn dies mehr Zeit in Anspruch nehmen könnte.	○	○	○	○	○
Es ist wahrscheinlich, dass ich mich darum bemühen werde, auf der Reise in umweltfreundlichen Unterkünften zu übernachten.	○	○	○	○	○
Ich bin gewillt, mich im Urlaub genauso nachhaltig zu verhalten wie zu Hause.	○	○	○	○	○
Ich beabsichtige, nachhaltige touristische Aktivitäten, gegenüber anderen, nicht nachhaltigen Reiseoptionen zu bevorzugen.	○	○	○	○	○

Last page:

Vielen Dank für Ihre Teilnahme an meiner Umfrage und den damit verbundenen wichtigen Beitrag, den Sie zu meiner Masterarbeit geleistet haben!

A2 Operationalization Table

Construct related items

H1	Construct	Dimension	Description	Items incl. Code	Sources
H8	Sustainable Behavior at Home (SBH)	General (environmentally) Sustainable Behavior at Home	Frequency of displayed general (environmentally) sustainable practices in the home context.	SBH1 I separate waste. SBH2 I avoid heating/cooling. SBH3 I save water. SBH4 I pick up litter, that does not belong to me. SBH5 I switch lights off when not in use. (E) SBH6 I encourage (or support) others to be environmentally friendly. SBH7 I buy organic food products. (E)	MacInnes et al., 2022; Dolnicar & Leisch, 2007; Miller et al., 2014
H1, H2, H3, H6, H8	Sustainable Travel Behavior (SBT)	General (environmentally) Sustainable Travel Behavior (SBTG)	Frequency of displayed general (environmentally) sustainable practices in the travel context.	SBTG1 I separated waste. SBTG2 I avoided heating/cooling. SBTG3 I saved water. SBTG4 I picked up litter, that did not belong to me. SBTG5 I switched lights off when not in use. (E) SBTG6 I encouraged (or supported) others to be environmentally friendly. SBTG7 I bought organic food products.	MacInnes et al., 2022; Dolnicar & Leisch, 2007; Miller et al., 2014
		Specific Sustainable Travel Behavior related to travel components (SBTS)	Actually displayed environmentally, socially, and economically sustainable travel behavior with reference to travel components.	SBTS1 I chose tourism companies which proactively protect the environment and local culture. (E) SBTS2 I stayed at locally owned accommodations. SBTS3 I walked or cycled instead of taking motorized transportation at the destination (taxi or renting a car). (E) SBTS4 I purchased carbon offsets to mitigate my carbon footprint. (E) SBTS5 I ate local foods and specialties in locally owned restaurant (instead of international food in known branded places such as McDonalds).	Holmes et al., 2021; Juvan & Dolnicar, 2016; Buffa, 2015;

H1	Construct	Dimension	Description	Items incl. Code	Sources
				SBTS6 I dismissed a particular mode of transport to a destination to avoid air pollution (e.g. flight). (E) SBTS7 I intentionally interacted with locals. SBTS8 I adapted myself to local habits to meet the expectation of local people at the destination (e.g. dress style). SBTS9 I was committed to learn about the local environment, culture and history.	
H1, H2	Attitude towards Sustainable Tourism (AST)	Specific attitude towards the behavior	Beliefs that the individual holds about environmentally, socially, and economically sustainable or unsustainable travel (practices).	AST1 Reducing air travel is vital to tackling global warming and emissions. AST2 Rather than visit a place where tourism damages the environment, I prefer not to go on holiday. (E) AST3 During the holiday, it is important to dedicate time to the understanding of the present and past history, culture and traditions of the place visited. (E) AST4 Vacationers pay to get leisure and amusement and should not be involved in the social and environmental problems of the place visited. (R) AST5 Vacations are a special time for me. I do not want to be burdened by worrying about sustainability issues. (R) AST6 I prefer leisure activities and tourism experiences where I can just have fun, relax, and spend money on doing what I like how I like. (R) AST7 I do a lot for the environment when I am at home, so I can relax a bit when I am on vacation. (R) AST8 As a tourist I believe that I am entitled to travel anywhere and anyhow I choose as I have paid for the personal experience. (R) AST9 Other tourists harm the environment much more than I do. (R) (E)	Passaforo et al., 2015; Juvan & Dolnicar, 2021; Barr et al., 2011; Perkins & Brown, 2012;

H1	Construct	Dimension	Description	Items incl. Code	Sources
				AST10 I believe I should definitely consider my impact on earth and other cultures when I make my travel choices. (Perkins & Brown, 2012)	
		Sustainability Costs Attitude	Perception on the unfavorable outcome that might occur in relation to sustainable tourist behavior.	AST11 Spending money on sustainable tourism is giving up something of my needs and wants. (R) (E)	Walsh & Dodds, 2022
		Sustainability Benefits Attitude	Perception on the favorable outcome that might occur in relation to sustainable tourist behavior.	AST12 Spending money on sustainable tourism is buying services consciously that have a better impact on destinations.	Walsh & Dodds, 2022
H1, H4, H5, H7, H3	Behavioral Intention (BI)	Intention to perform a sustainable travel behavior	Individual motivation to exert effort to behave sustainable on vacation.	BI1 It is likely that I would pay more for a trip if this helps to protect the environment, local culture and economy. BI2 It is likely that I would use environmentally friendly means of transportation although this might take more time. BI3 It is likely that I would make an effort to stay at environmentally friendly accommodation when travelling. BI4 I would be willing to behave as sustainable as at home on holiday. BI5 I choose to prefer tourism activities that are sustainable over other more unsustainable travel options.	Doran & Larsen, 2016; Mehmetoglu, 2010; Maichum, 2017; Ajzen & Madden, 1987
H4	Social Norms (SN)	Injunctive Norms	Normative beliefs of the importance that important others (friends, family) attach to performing	SN1 Being a sustainable tourist is something my friends and family value. SN2 Most people who are important to me think that one ought to make an effort to stay at a sustainable accommodation when travelling.	Juvan & Dolnicar, 2017; Doran & Larsen, 2016

H1	Construct	Dimension	Description	Items incl. Code	Sources
			a sustainable behavior on vacation	SN3 Most people who are important to me think that one ought to purchase sustainable tourism products although this might be more expensive. (E) SN4 Most people who are important to me think that one ought to use environmentally means of transportation although this might take more time.	
			Motivation to comply with (sustainable behaviors) that important others (friends, family) consider important	SN5 I generally choose a holiday that I think others will approve of. SN6 I like to go on holidays that make a good impression on others. SN7 I achieve a sense of belonging by purchasing the same holidays that others purchase.	Gardiner et al., 2014
		Descriptive Norms	Individual perception if or how important others enact sustainable travel behaviors.	SN8 People who are important to me make an effort to stay at a sustainable accommodation when travelling. SN9 People who are important to me purchase sustainable tourism products although this might be more expensive. SN10 People who are important to me use environmentally friendly means of transportation although this might take more time.	Doran & Larsen, 2016;
H5, H6	Perceived Behavioral Control (PBC)	Perceived ease or difficulty	Perceived ease or difficulty to engage in sustainable travel behaviors	PBC1 Making sustainable vacation choices is too expensive for me. (R) PBC2 There is a lack of infrastructure required to keep my vacations environmental impact low. (R) PBC3 Planning sustainable vacations takes too much time. (R) PBC4 It would be difficult to manage my holidays with environmentally friendly means of transportation (R).	Juvan & Dolnicar, 2021; Ajzen & Madden, 1986; Klöckner & Blöbaum, 2010
		Self-efficacy	Perceived control over performing a	PBC5 Whether or not I behave sustainable when traveling is completely up to me.	Han et al., 2010; Juvan & Dolnicar,

H1	Construct	Dimension	Description	Items incl. Code	Sources
			sustainable travel behavior	PBC6 I am confident that if I want, I can behave sustainable when traveling. (E) PBC7 I have resources, time, and opportunities to behave sustainable when traveling. PBC8 I feel that my travel companions (e.g. parents) that pay for travel expenses have more control over the sustainable impact of my vacation than me. (R) (E)	2017; Ajzen & Madden, 1986
H7	Social Media (SM)	Social Media Usage	General social media usage in relation to travel	SM1 Positive opinions and comments in social media encourage me to go on holiday. SM2 I check opinions/stories on places I want to visit on social media. SM3 I use social media sites (e.g. Instagram) during the trip, when I try to find out information about specific attractions/activities. SM4 I use social media sites (e.g. Instagram) during the trip to share my experience with other travelers/friends. (E)	Hysa et al., 2021; Ana & Istudor, 2013
		Role of social media influencers	Perceived role of social media influencers in relation to travel-decisions.	SM5 I often base travel decisions on the statements of influencers that I trust, regardless of their sustainability awareness.	Johnstone & Lindh, 2018
		Exposure to travel related content on Social Media	Perceived exposure to travel related content on social media	SM6 How often in the previous 6 months did people you are connected with on social media post pictures, updates, or posts on social media that showed or talked about them traveling? (E)	Latif et al. 2020
H3	Situational Factors (SIT)	Environmental Background	Perceived role of the existing environmentally friendly conditions prevalent at the destination	SIT1 A clean public space of the tourist site makes me consciously regulate my environmentally friendly travel behavior. SIT2 Rewards and punitive measures for the environmental protection of the destination/scenic spot make me regulate my environmentally friendly travel behavior consciously.	Wang et al., 2019b; Wang et al., 2018

H1	Construct	Dimension	Description	Items incl. Code	Sources
		Public Environmental Facilities	Perceived role of (un)availability of environmental-protective infrastructure at the destination	SIT5 If the facilities at the destination (e.g. garbage cans) are set up properly, I will not behave unsustainable (e.g. littering). (E) SIT6 If I'm engaged in unsustainable travel behaviors, it's probably because the destination is not doing well enough. (E)	Wang et al., 2020; So & Lehto, 2007
		Behavioral Reference	Perceived influence of other tourist's behavior on own environmental behaviors	SIT3 The environmentally protective behavior of other tourists makes me consciously regulate my own environmentally friendly travel behavior. SIT4 In contexts where everyone is engaged in unsustainable behaviors such as littering, me as a tourist can't be blamed for doing it too. (E)	Wang et al., 2019a; So & Lehto, 2007

Note. Items marked with (R) have been reverse coded during data preparation. Items marked with (E) have been excluded from analyses due to the results from the EFA.

All items have been measured by means of a five-point Likert-scale.

Sociodemographic and background variables

Type of Variable	Dimension	Item	Sources	Scale
Sociodemographics	Age	How old are you?	Cavagnaro & Staffieri, 2015; Nikolić et al., 2022; Holmes et a., 2021	<16 [filter question] Answer options ranging from 16 to 27 >27 [filter question]
	Gender	With which gender do you identify yourself?	Holmes et al., 2021	Male Female Diverse
	Place of residence	What is your main place of residence?	(-) Study specific question	Germany Austria Switzerland Other: Prefer not to say
	Profession	What is your profession?	Buffa, 2015	Pupil Apprentice Student Employee Self-employed Other: Prefer not to say
	Educational Status	What is your level of education?	Holmes et al., 2021; Barr et al., 2011; Holmes et al., 2019	Lower secondary school diploma Secondary school diploma High school diploma Apprenticeship degree Bachelor’s degree Master’s degree Other:

Type of Variable	Dimension	Item	Sources	Scale
				Prefer not to say
Background variables	Memory on last travel before the outbreak of Covid-19	Do you remember your last travel before the outbreak of Covid-19?	(-) Study specific question	Yes No [filter question]
	Characteristics of chosen travel components	In which type of accommodation did you most commonly stay?	Holmes et al., 2021	Hotel/resort (self-catering/half board) Hotel/resort (all inclusive) Holiday home/appartement Home-sharing (e.g., Airbnb) Hostel Camper/Van Family and Friends Other:
		Which mode of transport did you most commonly use?	Prillwitz & Barr, 2011	Airplane Car/motorbike Bus/coach Train Other
	Travel Group Constellation	In which constellation did you most commonly travel?	López-Sánchez & Pulido-Fernández, 2016; Holmes et al., 2019	Alone Partner/Spouse Family Friends Colleagues Other
	Financier of trip	Who mainly paid for the travel expenses?	(-) Study specific question	Myself My parents/one parent Other family members Other:

A3 Constructs and Items after Factor and Reliability Analyses

Construct/Factor	Code	Item	KMO	Cronbachs Alpha
Behavioral Intention	BI	5 Items	.789	.740
	BI1	It is likely that I would pay more for a trip if this helps to protect the environment, local culture and economy.		
	BI2	It is likely that I would use environmentally friendly means of transportation although this might take more time.		
	BI3	It is likely that I would make an effort to stay at environmentally friendly accommodation when travelling.		
	BI4	I would be willing to behave as sustainable as at home on holiday.		
	BI5	I choose to prefer tourism activities that are sustainable over other more unsustainable travel options.		
Situational Factors	SIT	3 Items	.646	.701
	SIT1	A clean public space of the tourist site makes me consciously regulate my environmentally friendly travel behaviour.		
	SIT2	Rewards and punitive measures for the environmental protection of the destination/scenic spot make me regulate my environmentally friendly travel behavior consciously.		
	SIT3	The environmentally protective behavior of other tourists makes me consciously regulate my own environmentally friendly travel behavior.		
Social Norms	SN			
Perceived Role of Social Norms	PRSN	6 Items	.849	.890
	SN1	Being a sustainable tourist is something my friends and family value.		
	SN2	Most people who are important to me think that one ought to make an effort to stay at a sustainable accommodation when travelling.		

Construct/Factor	Code	Item	KMO	Cronbachs Alpha
	SN4	Most people who are important to me think that one ought to use environmentally means of transportation although this might take more time.		
	SN8	People who are important to me make an effort to stay at a sustainable accommodation when travelling.		
	SN9	People who are important to me purchase sustainable tourism products although this might be more expensive.		
	SN10	People who are important to me use environmentally friendly means of transportation although this might take more time.		
Motivation to Comply with Social Norms	MCSN	3 Items	.637	.760
	SN5	I generally choose a holiday that I think others will approve of.		
	SN6	I like to go on holidays that make a good impression on others.		
	SN7	I achieve a sense of belonging by purchasing the same holidays that others purchase.		
Social Media	SM	4 Items	.732	.780
	SM1	Positive opinions and comments in social media encourage me to go on holiday.		
	SM2	I check opinions/stories on places I want to visit on social media.		
	SM3	I use social media sites (e.g. Instagram) during the trip, when I try to find out information about specific attractions/activities.		
	SM5	I often base travel decisions on the statements of influencers that I trust, regardless of their sustainability awareness.		
Sustainable Travel Behavior	SBT			
General Sustainable Travel Behavior	SBTG	6 Items	.753	.716
	SBTG1	I separated waste.		
	SBTG2	I avoided heating/cooling		

Construct/Factor	Code	Item	KMO	Cronbachs Alpha
	SBTG3	I saved water.		
	SBTG4	I picked up litter, that did not belong to me.		
	SBTG6	I encouraged (or supported) others to be environmentally friendly.		
	SBTG7	I bought organic food products.		
Specific Sustainable Travel Behavior	SBTS	5 Items	.731	.702
	SBTS2	I stayed at locally owned accommodations.		
	SBTS5	I ate local foods and specialties in locally owned restaurant (instead of international food in known branded places such as McDonalds).		
	SBTS7	I intentionally interacted with locals.		
	SBTS8	I adapted myself to local habits to meet the expectation of local people at the destination (e.g. dress style).		
	SBTS9	I was committed to learn about the local environment, culture and history.		
Attitude Towards Sustainable Tourism	AST			
Specific Attitude towards Sustainable Tourism	ASTS	5 Items	.789	.744
	AST4	Vacationers pay to get leisure and amusement and should not be involved in the social and environmental problems of the place visited.		
	AST5	Vacations are a special time for me. I do not want to be burdened by worrying about sustainability issues.		
	AST6	I prefer leisure activities and tourism experiences where I can just have fun, relax, and spend money on doing what I like how I like.		
	AST7	I do a lot for the environment when I am at home, so I can relax a bit when I am on vacation.		
	AST8	As a tourist I believe that I am entitled to travel anywhere and anyhow I choose as I have paid for the personal experience.		

Construct/Factor	Code	Item	KMO	Cronbachs Alpha
General Attitude towards Sustainable Tourism	ASTG	3 Items	.605	.638
	AST1	Reducing air travel is vital to tackling global warming and emissions.		
	AST10	I believe I should definitely consider my impact on earth and other cultures when I make my travel choices.		
	AST12	Spending money on sustainable tourism is buying services consciously that have a better impact on destinations.		
Sustainable Behavior at Home	SBH	5 Items	.684	.572
	SBH1	I separate waste.		
	SBH2	I avoid heating/cooling.		
	SBH3	I save water.		
	SBH4	I pick up litter, that does not belong to me.		
	SBH6	I encourage (or support) others to be environmentally friendly.		
Perceived Behavioral Control	PBC	6 Items	.710	.666
	PBC1	Making sustainable vacation choices is too expensive for me.		
	PBC2	There is a lack of infrastructure required to keep my vacations environmental impact low.		
	PBC3	Planning sustainable vacations takes too much time.		
	PBC4	It would be difficult to manage my holidays with environmentally friendly means of transportation.		
	PBC5	Whether or not I behave sustainable when traveling is completely up to me.		
	PBC7	I have resources, time, and opportunities to behave sustainable when traveling.		