

THE RELATIONSHIP BETWEEN SUSTAINABILITY-RELATED USER
GENERATED CONTENTS AND VANCOUVER ISLAND VISITORS'
INTENTION TO PURCHASE SUSTAINABLE PRODUCTS

by
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SUSTAINABLE PRODUCTS**

By

Sepideh Shahidi

Presented as part of the requirement for the degree of Master of Arts in
Sustainable Leisure Management within the Department of Recreation and Tourism
Management at Vancouver Island University

DECLARATION

This thesis is a product of my own work and is not the result of anything done in collaboration.

Sejideh Shahidi

I agree that this thesis may be available for reference and photocopying at the discretion of Vancouver Island University.

Sejideh Shahidi

THESIS EXAMINATION COMMITTEE SIGNATURE PAGE

The undersigned certify that they have read, and recommend to the Department of Recreation and Tourism Management for acceptance, the thesis title “The Relationship Between Sustainability-Related User Generated Contents and Vancouver Island Visitor's Intention to Purchase Sustainable Products”, submitted by Sepideh Shahidi in partial fulfillment of the requirements for the degree of Master of Arts in Sustainable Leisure Management.



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ABSTRACT

Thanks to the rapid growth of online resources, tourism consumers can share their online purchase experiences with other users on popular platforms such as Trip Advisor (Henning-Thurau, Gwinner, Walsh, & Gremler, 2004). It is also becoming increasingly important for people to learn from other customers' reviews prior to purchasing tourism products. In addition, there has been a paradigm shift towards purchasing sustainable tourism products; however, the relationship between sustainability-related user generated content (UGC) and consumers' purchase intention is yet to be investigated in greater detail. The present study investigates factors that influence visitors' intention to purchase sustainable tourism products through online platforms.

The theory of planned behaviour (TPB; Ajzen, 1991) guided the framework of this study. The TPB posits that attitude, subjective norms, and perceived behavioural control predict people's behavioural intentions. With a focus on online purchase behaviours, this research extended the TPB by adding ecological worldview (New Ecological Paradigm; NEP; Dunlap et al., 2000) values, beliefs, and personal norms (Value-Belief-Norm theory; VBN; Stern, 2000) in an attempt to improve the theory's predictive power. This research utilized an online questionnaire to obtain data. Social media platforms such as Facebook and Instagram as well as Vancouver Island's tourism and recreation organizations' (e.g., Tourism Nanaimo, Tourism Victoria, Tourism Vancouver Island, etc.) websites were used to recruit participants. The survey included 59 questions measuring online purchases. Data were collected from visitors of Vancouver Island who were over 19 years old. The partial least square structural equation modelling (PLS-SEM) approach was used to test the hypothesized relationships in the proposed model. The result of structural equation modelling showed that attitude towards purchasing environmentally sustainable products was the strongest predictor, and found to be positively and significantly related to the purchase intention. The impacts of the subjective norm, PBC, value, ecological worldview on sustainable purchase intention were all positive and significant. Based on the results, the influence of beliefs and personal norms on sustainable purchase intention was not statistically significant. This study discusses these associations and their practical and theoretical implications.

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Chapter 1

Introduction

Research Background

The quality of the environment, both natural and man-made, is essential to tourism. However, tourism's relationship with the environment is complex, as many tourism activities can have adverse environmental effects if careful tourism planning and management are not undertaken (Kaiser et al., 1999). Tourism stakeholders need to consider environmental concerns, as tourism growth relies significantly on the quality of environment, including natural, cultural, and built environments as tourism attractions (Hall et al., 2010). Maintaining a balance between economic development and environmental protection, however, is a major challenge for destinations (Kalafatis et al., 1999). This balance is often referred to as destination sustainability which is critical to maintaining tourism's long-term competitiveness (Steg & Vlek, 2009).

Hall et al., (2010) stated that tourism growth often determines economic growth at the expense of natural capital. Most environmental issues are caused by travelers' behavior (Yuzhanin, & Fisher, 2016). There is abundant research to show that all types of recreational activity can cause environmental degradation, even at low use levels (Skar et al., 2008), and that visitor behavior and visitor density levels can influence the quality of the visitor experience (Manning et al., 2011; McCool & Lime, 2001). Thus, changing visitors' adverse behaviors may help to reduce their environmental impacts (Scott et al., 2010). Many studies in the field of tourism have tried to understand how to promote change towards more sustainable behavior (Zhang et al., 2014). However, environmental issues are mainly in the public, rather than individual, domain (Anable et al., 2006). For instance, climate change as a global issue, identifies change as a matter for which everyone needs to take responsibility (Wang et al., 2014). Complex

concepts such as geographic isolation and intangibility of environmental issues, however, make it difficult to comprehend how the actions of individuals can make a difference (Buckley, 2012).

Literature in this area addresses three gaps in promoting pro-environmental behavior. First is the attitude-behavior gap, which means people who have a positive attitude towards the environment may not necessarily behave in an environmentally friendly manner (Miller et al., 2010). Second is the awareness-behavior gap. It is evident that holding environmental knowledge does not automatically result in pro-environmental behavior (Zhao et al., 2010). The third is the home vs. travel behavior gap, which means that people, who accept environmental actions in regular life, may not behave in an environmentally friendly way when traveling (Miller et al., 2010). Various information strategies are frequently used as interventions to motivate tourists to behave in a pro-environmental way from the perceptual, affective, and normative perspectives (Steg & Vlek, 2009).

Steg and Vlek (2009) stated that social support aims at informing the perceptions, efficacy, and behaviors of travelers. However, where the environment is altered, the existing social norms may not be so effective in shaping people's behavior. Therefore, other means of communication, such as the internet, may be needed and prove useful in influencing people's behavior in new environments (citation?). The increasing usage of Web 2.0 and social media has drawn increasing research attention (Kaplan & Haenlein, 2010). The term Web 2.0 refers to "the second generation of web-based services that have gained massive popularity by letting people collaborate and share information online in previously unavailable ways" (Reactive, 2007). Therefore, Web 2.0 enables any individual to post their own content such as videos, audio, imagery, and opinion to the web and share with other users (Cox et al., 2009). Moreover, the rapid emergence of social media allows people to share their purchasing experiences (Khan,

2017). Social media is defined as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0 and that allow the creation and exchange of User Generated Contents" (Kaplan & Haenlein, 2010). There are a variety of social media, such as Instagram, Twitter, and Facebook which are very consistent about the technological features, however, they work differently regarding the online cultures they impose (Kaplan & Haenlein, 2010). These online platforms cannot only maintain pre-existing social networks, but also connect strangers by shared interests. Social media platforms have attracted millions of users and been highly integrated into the daily life of people (Fuchs, 2017). Cinder (2020) explained that, Facebook had 1.73 billion daily active users, Twitter had 186 million, and Instagram had 500 million daily active users. The increasing prevalence of social media has transformed the traditional forms of information dissemination (Cox et al., 2009). The pivotal role that individual consumers have in submitting, reviewing, and responding to online content is reflected in terms such as user-generated content (UGC) or consumer-generated media (CGM) that are commonly used for Web 2.0 (Luo & Zhong, 2015). UGC, which refers to content written by website owners and other users on social media (Luo & Zhong, 2015; Kaplan & Haenlein, 2010), UGC has continuously improved in terms of content and the reliability of social media has been gradually enhanced (Yoo & Gretzel, 2011). The impacts of social media on tourist decision-making and travel behavior have been the subject of much research (Canovi & Pucciarelli, 2019; Luo & Zhong, 2015).

Social media is often viewed as a tourism reference because it is believed that it provides trustworthy and up-to-date information (Luo & Zhong, 2015; Cox et al., 2009). As a form of electronic word of mouth (e-WOM), shared travel experiences on social media shape tourists' awareness, expectations, perceptions, attitudes, and behaviors (Liu et al., 2019). Many tourists

frequently use UGC in their travel planning to minimize risks in their decision making, because UGC typically comes from trusted sources such as friends and family (Yoo & Gretzel, 2011). Travel-related UGC has significant impacts on tourists' cognition and behavior (Luo & Zhong, 2015). The interpersonal influence of travel-related UGC on tourists' purchase intention has received much research attention, but there has been insufficient attention to UGC's impact on promoting pro-environmental tourist behavior specifically (Park & Lee, 2009; Miller et al., 2010). Benckendorff et al., (2014) conclude that constant training, monitoring, and collaboration are significant for the sustainable development of tourism, which can be achieved by social media. For example, social media plays an important role in distributing and making accessible information, creating environmental and cultural awareness, monitoring environmental resources, and reducing energy consumption.

Although the literature supporting the significance of UGC has increased in the past decade, the analysis of the influence of sustainable UGC on the consumers' sustainable purchase intention has not been comprehensively studied.

Purpose of Research

The purpose of this quantitative study is to examine the influence of sustainability-related User Generated Contents (UGC) on Vancouver Island's visitors' sustainable purchase behavioral intentions. This study develops a combined theoretical framework to investigate the influence of the predictors of behavior on Vancouver Island's visitors' intention to purchase sustainable products and services. First, the theory of planned behavior (TPB; Ajzen, 1991) is used as the core framework of this study. Second, the new ecological paradigm (NEP; Dunlap et al., 2000), and Stern's (2000) value-belief-norm-theory (VBN) were added to the TPB to further investigate the online purchase behavioral intention of Vancouver Island's visitors.

Research Questions

The core question of this study is:

- To what extent does sustainability-focused online UGC impact consumers' online purchase behavior?

Detailed sub-questions are stated below:

- To what extent does the ecological worldview of tourists influence their intention to purchase sustainable online products and services?
- To what extent do the attitudes of tourists influence their intention to purchase sustainable online products and services?
- To what extent do the subjective norms of tourists influence their intention to purchase sustainable online products and services?
- To what extent does the perceived behavioral control of tourists influence their intention to purchase sustainable online products and services?
- To what extent do values of tourists influence their intention to purchase sustainable online products and services?
- To what extent do beliefs of tourists influence their intention to purchase sustainable online products and services?
- To what extent do personal norms of tourists influence their intention to purchase sustainable online products and services?

The theory of planned behavior (Ajzen, 1991) was extended by adding VBN and NEP to achieve the objectives of this research and answer the research questions. The proposed conceptualizing model draws the influence of people's attitude, subjective norms, perceived

behavioral control, values, beliefs, norms as well as ecological worldview on their online purchase intention.

Methodology

Based on the research objectives, this thesis research adopted a quantitative methodology. Specifically, the survey approach was adopted to provide a more comprehensive understanding of the research questions in this study. With a post-positivist approach, an online questionnaire was used to obtain data for this study. The research was advertised by displaying the research poster on the researcher's personal social media like Facebook and Instagram, and also on Vancouver Island's tourism and recreation organizations' (e.g., Tourism Nanaimo, Tourism Victoria, Tourism Vancouver Island, etc.) websites and social media. The participants used the survey link provided in the poster. Structural equation modelling (SEM) was used to test the hypothesized relationships in the proposed model. SPSS and SmartPLS 3.0 software were used to analyze the survey data.

Definitions and Key Concepts

User-Generated Content (UGC)

User-generated content refers to the generation, manipulation, and expression of ideas about the developers and sellers of a product or service generated by the users and consumers of those products, services, or market goods (Gretzel, 2006). UGC is mostly in the form of words or statements, but it also includes photos, videos, or audios posted with the same purpose (Krumm, et al., 2008). The three main characteristics of UGC are as follow:

- It is created by the user and consumers of the product or service rather than the developer and seller of the product or service.

- It is easily accessible, and everyone has the right to respond to it.
- It is posted online.
- It is critical in nature and is based on something new.

Fernando (2007) suggests that UGC contrasts with the traditional forms of media marketing since content is generated by the consumer rather than by the marketer. Tools such as blogs and social media websites/applications (e.g., Facebook) not only allow users to add their own comments, but also enable them to find others' comments and information using tools such as 'tagging' their own keywords for search purposes (Buhler, 2006). People share their experiences, attitudes, and ideas about the different products and services. Thus, UGC develops views of others about certain products or services (Daugherty et al., 2008). This is a two-way or a conversational style of communication with other users as well as the marketers of those services or products (Krumm et al., 2008).

The passive audiences' role has been shifted along with advancement in marketing and media. A vast majority of users are benefitting from the opportunity to create online content and share their reviews regarding the quality, efficiency, and productivity of their services or goods (Daugherty et al., 2008). This online content is reliable for other users as they receive peer-review about certain goods, and it becomes easy for others to distinguish between two similar products by reviewing comments and ratings of others (Girardin et al., 2008). There are a lot of online applications that allow people to create online contents; particularly all of the social media networks and influencers (Gretzel, 2006). The culture of published UGC has become a tool of advertisement for certain products, which makes the companies bring more advancement in production techniques (Krumm et al., 2008). The study of UGC provides marketers with

important information/knowledge about users' expectations, needs, and interests in the market (Fernando, 2007).

Online Purchase Intention

Online purchase intention “can be classified as one of the components of consumer cognitive behavior on how an individual intends to buy specific products” (Ling et al, 2010; p.64). Generally, this term refers to a consumers' intension towards buying a product through an online source or influencer. According to Chang and Chen (2008) the last step in online transactions is online purchase. That is the reason intention has a crucial role in the behavior of consumers. Intention is largely affected by UGC as this content sharpens people's ideas and intentions to buy products and services through online sources. There are a lot of factors that play a vital role in user buying intensions in which the environmental awareness, availability, quality of the product, durability, reliability, and product distribution are among the most important (Chang & Chen, 2008).

Tourism and Sustainability

Sustainable development is defined as a “process to meet the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987, p.8).The World Tourism Organization (WTO, 2001) stated that sustainable tourism development meets the needs of present tourists and host regions while protecting and enhancing opportunities for the future generations. This can be achieved through effective management of all resources in a way that economic, social, and aesthetic needs are fulfilled while cultural integrity, essential ecological processes, biological diversity, and life support systems are maintained. Some authors define sustainable tourism in broader terms, transferring the principles of sustainable

development into the context of tourism needs (Hardy et al., 2002). The development of sustainability requires the generational need for management within the specified tourism area to keep growing as an economic source of development. Moreover, ecology, and social/cultural sustainability are important factors in enhancing tourism (Mowforth & Munt, 2015). Sustainable development might influence consumers' behavioral (Bramwell & Lane, 2011). The consumers' role is maintained with the enhanced use of resources which helps in flourishing tourism through websites and social media content (Alrashid, 2012). Investigating the influence of UGC on pro-environmental consumer behavior provides insight that can be used in sustainable tourism marketing.

Research Structure

This thesis consists of five chapters:

The current chapter addresses concepts related to tourist behavior, social media, UGC, and sustainability and summarizes the research aim and objectives, key terms and research structure and significant of the thesis.

Chapter 2 discusses the related literature in sustainable tourist behavior and the role of Social media and UGC in promoting sustainable tourist purchase behavior. The literature is further narrowed down to the field of online sustainable purchase behavior and online sustainable UGC. A critical evaluation of literature is used to conceptualize a sustainable online tourist behavior model, which can add knowledge to current theories and practices. Then, the gaps identified from the current literature are highlighted. Also, chapter two presents the adopted theory and develops the conceptual framework derived from the literature.

Chapter 3 describes the research methodology, research design, and methods, and the development of the online survey instrument in detail as well as the analysis approach. Then the chapter presents the data collection plan.

Chapter 4 discusses the methods of data analysis in detail and presents data analysis and results of statistical analysis.

Chapter 5 describes the findings of this research and discusses the significant role of Sustainable online UGC in impacting tourists' online purchase behavior. It then illustrates the contributions of this research, discusses the significance of sustainable online UGC in impacting tourists' online purchase behavior in terms of its managerial implications, and later highlights the theoretical implications of this research by discussing how it has filled the research gaps identified from the literature. Finally, the limitations of this study and future research directions are mentioned.

Chapter 2

Literature Review

Introduction

This chapter will review the conceptual and theoretical basis of this study, the relationship between ecological values and environmental values, and the nature of tourists' conscious behaviors. In this study, I developed a combined theoretical framework using: the theory of planned behavior (TPB; Ajzan, 1991), the new ecological paradigm (NEP; Dunlap et al., 2000), and value-belief-norm (VBN; Stern, 2000) theory to examine the role of sustainable User Generated Contents (UGC) in sustainable purchase intentions of visitors of Vancouver Island. Finally, I will explain the conceptual model of this study and put forward relevant hypotheses. At the end of this chapter, I will discuss the gaps in the literature.

The Internet as an Information Source for Tourism

According to Yoo & Gretzel (2012), the internet can be defined as a set of interrelated networks, which link several computers allowing exchange of information at high speed. Tan and Teo (1998) identify the internet as a revolution that has transformed the means of communication and access to global information. Alrashid, (2012) stated that the internet is credited as enabling information processing and sharing, and further enabling social networking, as well as e-commerce. Studies have tried to identify factors that link internet adoption and online search behavior (Lynn & Longhi, 2011). Alrashid (2012) outlines how customer purchase patterns for tourism destinations are changing as a result of the global access to the internet. Choi et al., (2007) argued that the internet has a key role in shaping the travel industry through information accessibility. Al Rasheed and Mirza (2011) also suggest that the internet is transforming tourism that is evident in the emergence of e-tourism and e-travel services.

People's travel destination choice follows five stages (Engelet al., 1990; Kotler et al., 2017): (1) need recognition; (2) information search; (3) evaluation of alternatives; (4) purchase decision; and (5) post-purchase evaluation.

Research shows that websites are an important source of information across all stages of the travel planning process (Choi et al., 2007; Cox et al., 2009). Changes to the structure of tourism have occurred due to the opportunity to sell online by agents, hoteliers, and airlines. These processes are replacing traditional brick-and-mortar agencies and this impact has been felt strongly by travel agents (Hung & Law, 2011). According to Choi et al. (2007) customers for travel products have changed their buying habits with the development of internet applications and travel agencies or third-party suppliers now offering complementary services through the internet or apps. Customers appreciate accessibility, the reduced time needed and the convenience that has arisen due to the number of firms that can now specialize in varied tourism products (Hung & Law, 2011).

From Word of Mouth to UGC

From as early as the 1960s, researchers have studied Word of Mouth (WOM) as a form of communication that relates to customer satisfaction (Yoo & Gretzel, 2012). Arndt (1967) defined WOM as any oral communication between two or more persons that concerns a brand, product, or service on a non-commercial basis. The advent of the Internet enables users' opinion exchanging and information sharing to be directed from offline to online. Electronic word-of-mouth (eWOM) is defined as any positive or negative statement made by potential, actual, or former customers about a product or company which is made available to a multitude of people and institutions via the internet (Marine-Roig, 2017). EWOM has become one of the most

significant information sources as it provides information without regional boundaries (Yoo & Gretzel, 2011).

Cox et al. (2009) stated that Web 2.0 is the second generation of web-based services letting people collaborate and share information online, which has gained massive popularity. Web 2.0 enables any individual to post their own content, opinions, videos, audio, or imagery to the web for other users to see and respond to. Gretzel, (2006) explored the motivations of people to share their experiences on Web-based platforms and found that people's desire for social interaction and economic incentives, their concern for other users, and the chance to enhance their self-confidence are the main reasons that lead to eWOM behavior. In the field of hospitality and tourism, growth in eWOM has been especially noticed in vacation planning (Marine-Roig, 2017).

As eWOM has grown in popularity in tourism, multiple websites have been raised that contain contents submitted by real travelers (e.g., TripAdvisor, Lonely Planet, and social networking sites such as Myspace, Facebook, and YouTube), and the ways that consumers search for and evaluate travel information is potentially changing (Cox et al., 2009). This fundamental role that individual consumers have in submitting, reviewing, and responding to online content is named user-generated content (UGC) or consumer-generated media (CGM) (Gretzel, 2006, 2007). UGC refers to media content created by members of the general public rather than by paid professionals (Daugherty et al, 2008; Lu & Stepchenkova, 2015). Any forms of online content created, initiated, circulated, and used by users are classified as UGC (Daugherty et al., 2008). Examples include blog posts, photographs or video clips shared on media sharing websites, product reviews, and comments or posts (Marin-Roig, 2017; Kumar, 2012).

UGC is widely used by consumers of hospitality and tourism services both for information sharing and as an information source for making decisions. Online consumer accounts are perceived as more likely to contain up-to-date, informative, and reliable information that is rich in detail and relevant (Lu & Stepchenkova, 2015). Marine-Roig (2017) believed that in the last decade, special attention was given to UGC due to its influence on destination and business image development and UGC has grown dramatically, parallel to the rise of information and communication technologies (ICT) and social media.

In the field of tourism, most authors agree on the importance of UGC (Koltringer & Dickinger, 2015, Lu & Stepchenkova, 2015, Marine-Roig, 2017) in the construction of destination image through the eWOM effect and consider travel blogs, online travel reviews (OTRs), or online consumer reviews as rich sources of UGC data (Marine-Roig, 2014, Jalilvand, et al., 2012).

Purchase Behavior

When planning a holiday, individuals make multiple decisions involving the place, length of stay, and travel mode. Moreover, travel decisions are complex and risky, and customers often engage in extended information searches (Krumm, 2012). Jalilvand et al., (2012) stated that destination image will influence tourists in the process of choosing a destination, the subsequent evaluation of the trip, and their future intentions. Information sources include various stakeholders such as destination marketing organizations, hotels, sights, and the transportation industry.

The internet is an important information source for travelers that significantly influences decision making (Ye et al., 2013). Besides, the Internet has changed tourist purchase behavior dramatically (Gretzel & Yoo, 2007, 2010). Prospective travelers have direct access to a wealth of

information and can make online purchases themselves, instead of relying on travel agencies (Marine-Roig, 2014). Bahtar and Muda (2016) state that in travel and tourism, the internet is a critical medium for gaining information and customer evaluation may include consideration of value, cost and degree of differentiation.

This research proposes purchase behavioral intention as the key variable to be investigated. The construct takes place at the pre-purchase stage and captures the motivational aspects that affect customer behavior (Armitage & Conner, 2001). To predict consumer behavior, it is necessary to know the attitudes, assessments, and internal factors that ultimately generate the purchase intent (Fishbein & Ajzen, 1977). In this research, in line with Ye et al., (2013), online purchase intention is understood as the degree to which a consumer is willing to buy a product through an online store.

Influence of UGC on Purchase Behavior

Given the fast growth of UGC-based websites, consumers' use brand-related UGC for their purchase decision-making (Lu & Stepchenkova, 2015). Ye et al. (2011) indicated that online reviews have a significant impact on online sales. Jalilvand et al. (2012) found that online traveler reviews are an important source of information to both travelers and tourism firms. Moreover, previous studies have shown that online travel reviews may influence the decisions of travelers (Vermeulen & Seegers, 2009). Forrester Research (2006) estimated that 34.7% of total online spending is related to travel. Bahtar and Muda (2016) indicated that more than 74% of travelers use the comments of other consumers as information sources when planning trips for pleasure.

Vermeulen and Seegers (2009) conducted an experimental study with 168 participants to determine the impact of online reviews on the attitudes of hotels guests and exposed that online

reviews improved hotel awareness and that positive reviews improved the purchase attitudes of travelers toward hotels. Marine-Roig (2014) indicated that eWOM has important implications for managers for brand building, and product quality improvement. Vermeulen and Seegers (2009) also revealed that positive online reviews improve the perception of hotels among potential consumers.

Exposure to online consumer reviews increases the consumers' intention to purchase a product and maximizes the likelihood that consumers will buy a recommended product (Lu & Stepchenkova, 2015; Senecal & Nantel, 2004). Senecal and Nantel (2004) noted that product recommendations from other consumers are even more important to prospective purchasers when an experiential product (e.g. intangible services such as tourism) is concerned as opposed to a tangible product. Online consumers believe users will not only speak to the good sides of a product but the negative sides as well.

This study aims to investigate whether the UGC can influence online buyers' intentions. This is based on the premise that the usage of UGC might aid and assist the buyers' decision-making and sellers' performances (Bahtar & Muda, 2016).

Sustainable Purchase Behavior

Rapid global developments over the last few decades have offered improvements to quality of life, while simultaneously producing a host of environmental and social problems. Specifically, development has come with ecological and social problems such as climate change, exhaustion of natural assets, increased pollution, financial imbalance among different sections of the general public, etc. (Young et al., 2010).

Sustainable purchasing – described as consumers' purchasing activities that are influenced by their environmental, societal, and fair-trade concerns – includes purchasing of

sustainable, environmentally friendly, and fair-trade products (Joshi & Rahman, 2017).

Sustainable product purchasing is an important form of sustainable consumer behavior. It is important as unplanned purchasing practices may result in “environmental, social and economic degeneration” (Young et al., 2010). Over the past few decades, the number of people willing to embrace sustainable consumption has increased (Joshi & Rahman, 2017, Young et al., 2010). However, it has been found that the increased willingness has not translated into real sustainable purchase activities (Young et al., 2010). In order to study the consumer response toward purchasing sustainable products in green environmental conditions, organizations are seeking ways to match increasing consumer demands for products that could be least harmful to the environment (Hameed et al. 2019). This increasing trend in the business market like tourism is a concern for organizations. To match this market demand, organizations are molding their business strategies toward a more environmentally friendly outcome.

Influence of UGC on Sustainable Purchase Behavior

Although there has been a great deal of research on UGC (e.g., Chevalier & Mayzlin, 2006; Lee et al., 2008; Gupta and Harris, 2010), few studies have focused on how buyer intentions are impacted by UGC on tourism websites. There is considerable interest from business and industry regarding marketing on online shopping websites and social media networks (Goldsmith & Horowitz, 2006). By understanding consumers’ interaction and user expectation of UGC, marketers can use UGC in their marketing strategy by allowing consumers to feel empowered by sharing their product experience to guide purchase decisions of others (Lu & Stepchenkova, 2015). In recent years consumers have taken a larger role in driving the success of products in the marketplace (Jalilvand et al., 2012).

With the popularity of online marketing, company messages can be amplified or mitigated by brand messages created by ordinary consumers on social networks (Kim & Johnson, 2016). Consumer empowerment has therefore affected brand management beyond what can be controlled by companies (Arnold, 2010). Kim and Johnson (2016) found that UGC exerts a significant influence on marketing as it provokes consumers' word of mouth behaviour, and brand engagement. In this sense, companies need to be aware of the differences to adapt their marketing strategy. Online purchase intention is associated with tourism and the role of the economy is affected by these two terms (Bramwell & Lane, 2011).

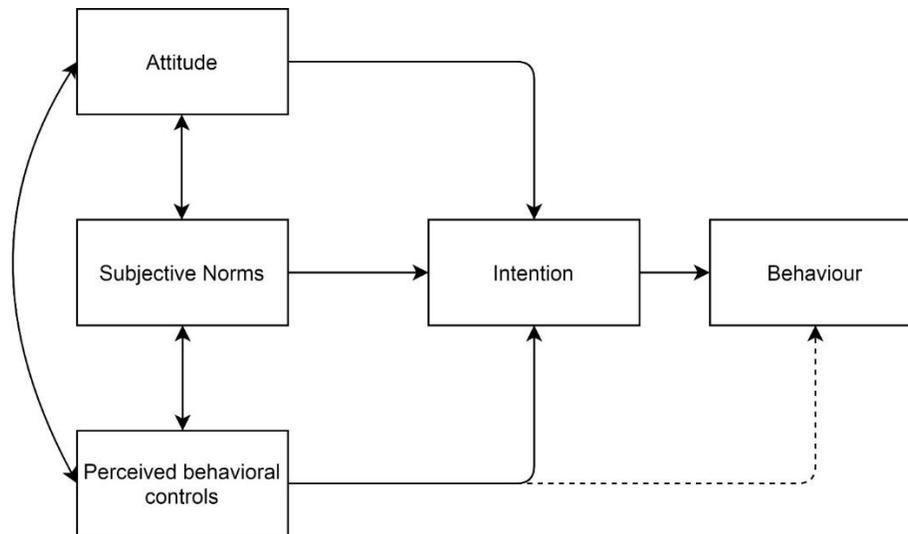
The Theory of Planned Behavior

Background

The theoretical foundation of this study rests upon the theory of planned behavior (TPB), an extended version of the theory of reasoned action (Fishbein, 1979). The theory of reasoned action (TRA) has been a popular model used in all areas of research. Its popularity has been based on its parsimonious nature, ease of use, and predictability. In its infancy, Fishbein and Ajzen (1975) developed the two-component independent construct (i.e., TRA) that consisted of attitudes and subjective norms as a way to predict the ultimate dependent variable known as intention. Later, Ajzen (1988, 1991) added another construct, perceived behavioral control, and named it the theory of planned behavior. Specifically, Ajzen's theory, TPB, maintained that attitudes, subjective norms, and perceived behavioral control, have direct impact on intention (Figure 1).

Figure 1

The theory of planned behaviour (Ajzen, 1991)



The TPB has been employed by many researchers to examine the various forms of ecological behaviors including purchasing of sustainable products (Hopfenbeck, 1993; Vermier & Verbeke, 2008; Kumar, 2012).

The theory of planned behaviour enables researchers to explore factors that influence people's intentions and behavior. Researchers have used the TPB in different environmental behavior related to issues which can be applied in systematically understanding of the factors that affect purchase behavior (Vermier & Verbeke, 2008; Oreg, & Katz-Gerro, 2006).

In addition, the TPB has been applied to tourism studies including research on tourist behavior (March & Woodside, 2005; Ajzen & Driver, 1991; Chu & Chu, 2013) and destination marketing (Moshin, 2005). The TPB has been found to be an effective tool for predicting customer behaviour relative to online shopping (Ajzen, 1991; Lee, 2009; Kumar, 2012).

The TPB Components

The TPB can predict actions by examining the relationship between attitudes, beliefs, and behavioral intention across different domains (Ajzen, 1991). Ajzen (1985) argued that the relationship between the three components of the TPB and intention could vary depending upon behaviors and situations. Some applications found that attitudes could be a significant predictor to human behavior, in others that subjective norms and perceived behavioral control could make significant contributions; thus findings are not always consistent (Oreg, & Katz-Gerro, 2006; Ulker-Demirel, & Ciftci, 2020). Conversely, behavioral intention is the ultimate function of the three independent determinants. The following section discusses behavior, then the dependent variable (intention) of the TPB, followed by the independent variables (attitudes, subjective norms, and perceived behavioral control).

Behavior

Theory of planned behavior proposes that intention is the best predictor of behavior (Ajzen, 1991). The behavior influences the degree of intention-behavior consistency. Findings confirmed that intentions are superior predictors of single concrete actions in comparison to a broad goal (Armitage & Conner, 2001). Therefore, it could be concluded that a person must have a relevant amount of control (e.g. by control factors like knowledge, resources, opportunity) over performing the behavior otherwise the intention is not translated into action. He argues that the perception of control is an accurate reflection of actual control (Ajzen, 1991). Hence, the TPB contains two elements influencing behavior directly: intention and perceived behavioral control (PBC). Indeed, PBC could improve explained variance of behaviors where the individual does not have full volitional control. It is necessary to adopt an intent-oriented definition that focuses on people's beliefs, motives, and so forth in order to understand and change the target behaviors (Stern, 2000). Across diverse fields, researchers who had interest in

human behavior began to use the theory of planned behavior to understand target behaviors such as ecological behavior (Kaiser & Biel, 2000) and tourists' behavior (Ajzen & Driver, 1991; Chu & Chu, 2013).

Intention

Ajzen and Fishbein (2000) stated that intention is a central component in the theory of planned behavior and is an immediate antecedent of an actual behavior. Intention is considered to be a motivation based upon a decision taken consciously or purposely to perform a behaviour (Kumar, 2012). Ajzen and Fishbein (2000) argued that the relationship between intention and actual performance has been empirically tested in a laboratory setting. As specified, the relationship between the two constructs is tough to measure because there are many external factors that can affect the relationship (Ulker-Demirel & Ciftci, 2020). As a result, much of the research has focused on behavioral intention rather than an actual behavior and this is appropriate for this study because as Ajzen and Fishbein proposed, finding one's behavioral intention is assumed to predict a future actual behavior. Therefore, this research is limited to measuring potential BC tourists' sustainable intended participation in future.

Attitude

As noted earlier, three constructs: attitude, subjective norms, and perceived behavioral control, compose the TPB to predict human performance (Ajzen, 1991). The first construct, attitude toward a behavior, has been explicitly studied over past decades in various tourism research settings (Chu & Chu, 2013; Scott et al., 2010; Ajzen & Driver, 1991). According to Allport (1935), attitude refers to the degree of favorable or unfavorable evaluation of the behavior under study (Ajzen, 1991). This state of mind basically influences the response of the audience towards all objects and situations with which the audience is confronted (Kumar,

2012). Attitudes are a core concept of (social) psychology (Allport, 1935). The attitude acts as an important antecedent to the behavioral intention. Most of the definitions are focused on objects and events (Castaneda et al., 2009), however, there are some definition focused on a favorable attitudes towards environmental behavior, human values, knowledge, efficacy, and image of a product, which form people's attitudes. Moreover, Gawronski (2007) explained that attitudes are stable entities stored in memory versus temporary judgments constructed on the spot from the information at hand. These definitions enhance our understanding of the significant role that attitudes play in customers' behavior.

Attitudes have been examined in different research settings, including tourism. In particular, tourists' behaviors have actively been studied from the marketing perspective (Chen, 1998; Chu & Chu, 2013). Mohsin (2005) investigated tourists' attitudes and their destination choice. They argued that the relationship between tourists' attitudes and their destination choice was not supported due to ineffective marketing campaigns that included insufficient information about the destination. Seock and Norton (2007) examined the impact of attitudes toward websites and online information. Watchrave et al. (2003) attempted to discover variables associated with online information search and shopping intention among computer users and established that the use of the internet for information search can be positively influenced by customer attitude.

Schultz and Zelezny (2000) linked attitude to environmental concerns. Cheng et al. (2006) mention that a consumer's purchasing intentions are dependent upon their environmental attitudes. A favorable attitude towards a product which is environmentally sustainable adds to sustainable consumption behavior as pointed out in several studies (Chan, 2001; Tanner & Kast, 2003; Vermeir, & Verbeke, 2004). Under this this discussion, it is hypothesized that:

H1: People's attitude towards reading sustainability related online user generated contents positively influences their intention to purchase sustainable tourism products.

Subjective Norms

Subjective norms are the perceived social pressures to perform or not perform the target behavior (Ajzen, 1991; Francis et al., 2004). Subjective norms have two components that work in interaction: beliefs about how other people – who may be in some way important to the person – would like them to behave (normative beliefs) and the positive or negative judgments about each belief (outcome evaluations). The term normative belief generally refers to the expectations of others, such as family or friends, as well as a motivation to comply with the expectations of those people (Ajzen, 1991, 2006). Subjective norms have been found to be associated with control beliefs, in relation to the behavior as well as the ability and desire to deal with them (Ajzen, 1991, 2011; Francis et al., 2004).

George (2004) also found that beliefs about subjective norms and social pressure would have a positive influence on online purchase intention. In addition, Delafrooz et al. (2011) found that subjective norm positively predicts information-seeking intention. Subjective norms also have a positive influence on intention when purchasing food online (Vermier & Verbeke, 2008)

In terms of online travel services, studies have attempted to explain the impact of subjective norms on customer intention to use online travel activities, information search and purchase. For instance, Bamberg et al. (2003) stated that the choice of travel method is a decision that might be influenced by subjective norms. Similarly, Taylor and Laohapensang (2009) investigate factors that influence online travel shopping. They identified that consumers' intention to carry out internet travel shopping is affected by attitude, subjective norm, and PBC towards the service. We can conclude, theoretically, that subjective norms are likely to have a significant impact on customer online purchase intention. Under this discussion, it is hypothesized that:

H2: Subjective norms towards reading sustainability related online user generated contents positively influences people's intention to purchase sustainable tourism products.

Perceived Behavioral Control

Ajzen (1988) introduced an additional construct to the TRA, known as perceived behavioral control (PBC), which demonstrates a magnitude of people's perception of control toward their performance. This addition resulted in the development of the theory of planned behavior (TPB). PBC deals with individuals' perception of capacity to perform in a certain way. If perception were precise, then it would reflect real control over behaviors (Ajzen, 2006). Ajzen (1991) also mentioned that the perceived behavioral control and the behavioral intention in conjunction may help in directly ascertaining a particular behavior. Armitage and Conner (2001) stated that PBC has both direct and interactive effects on behavior (through behavioral intentions). They stated that PBC should (1) facilitate the implementation of behavioral intentions into action, and (2) predict behavior directly.

Limayem et al. (2000) investigated the factors affecting online shopping. They found that PBC is an element of online shopping intention. Taylor and Todd (1995) also stated that the level of confidence that individual have in their ability to utilize the internet-based innovation was positively linked to behavioral control. Delafrooz et al. (2011) demonstrated that PBC can positively affect consumers' intention to purchase tourism products online. In terms of tourism online purchasing, several attempts have been made to explain the impact of PBC on customer intention regarding the use of online tourism activities, including information search and purchase. Taylor and Laohapensang (2009) found that user intention to carry out internet travel booking is affected by PBC, which can significantly influence the intention to shop online. As such, when using the internet for tourism information, the PBC may have a significant impact on

customer search intention. For instance, when customers have the required skills to use the internet for travel information search, the intention to utilize the service is potentially improved (Taylor & Laohapensang, 2009). According to Roberts (1996), consumers must be guided to understand that the actions undertaken by them have impact on the outcome of any changes in their behavior. Thus, it is hypothesized that:

H3: People's perceived behavioral control over reading sustainability related online user generated contents positively influences people's intention to purchase sustainable tourism products.

Value-Beliefs-Norm Theory (VBN)

Value-Beliefs-Norm Theory (VBN) derived from Schwartz's "moral norm activation" theory of altruism (Schwartz, 1977). Specifically, the VBN model links value (Stern & Dietz, 1994), ecological worldview, measured by the new ecological paradigm scale (NEP; Dunlap & Van Liere, 1978), and the norm-activation theory (Schwartz, 1977) in a model of behavior to explain the environmental movement. The VBN is a broadened version of the norm activation model that better accounts for pro-environmental intention and behavior. It is particularly designed to examine pro-environmental behavior. The VBN includes several essential concepts (i.e., values and ecological worldview) in environmentalism (Oreg & Katz-gerro, 2006; Stern, 2000; Steg et al., 2005).

The VBN proposes that values and ecological worldview affect beliefs about environmental problems, responsibility for the environmental problem, and taking corrective action. These beliefs can lead to a sense of obligation to act (personal norms), which influences behavior. The integration of multiple factors and theories within VBN enable it to be a stronger predictor of environmental action than some other behavior theories (Stern et al., 1999).

The VBN theory assumes that one's environmentally-friendly intention and behavior is determined by pro-environmental personal norms; and these personal norms are activated by the sequential process of values, ecological worldview, awareness of adverse consequences, and self-ascribed responsibility (Klockner, 2013; Stern, 2000; Stern et al., 1999; Figure 2).

The VBN enables us to explore the factors which influence the decision to engage in behaviors related to environmental issues (Stern, 2000; Choi et al., 2015). This theory can be applied in systematically understanding of different factors affecting purchase behaviors regarding environmentally sustainable products. The VBN has been widely applied to various populations. Whitley et al. (2018) extend the VBN to examine what socio-psychological factors influence sustainability behaviors among university students. Social psychologists suggest that a sequence of factors such as values, beliefs, and norms play important roles in motivating pro-environmental behaviors (Whitley et al., 2018). An important element of the VBN theory is that the link from values to environmentalism is mediated by beliefs, such as beliefs about which kinds of people or things are affected by environmental conditions (Awareness of Consequences; AC) and about whether there are individual actions that could alleviate threats to valued persons or things (Aspiration of Responsibilities; AR; Stern, 2000). The visitors' values and the norms of the individuals are discussed vividly. So they promote the integration of a relationship between the visitors' behavior control and their ability to make an appropriate decision (Choi et al., 2015).

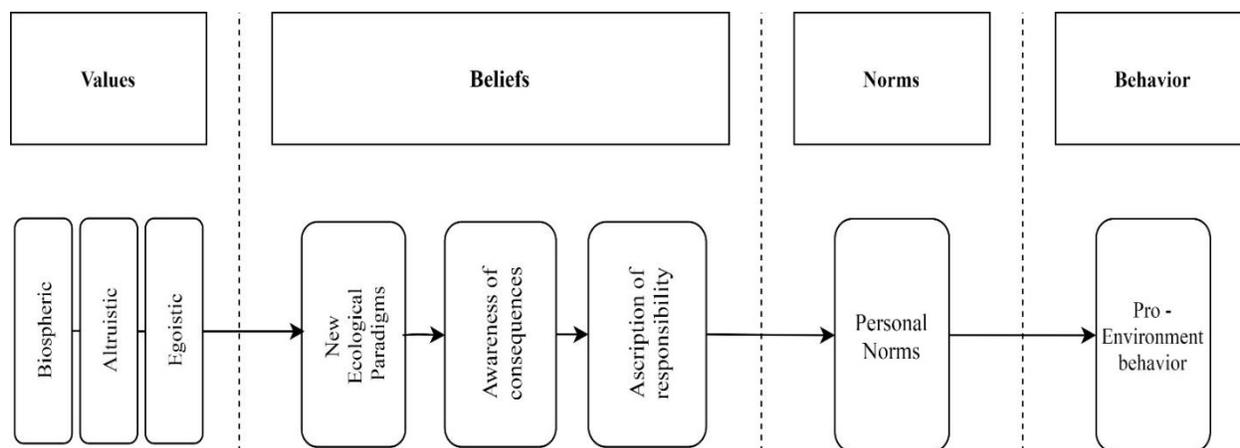
VBN's Components

The VBN theory states that a person's given behavior is a function of three factors (Stern et al., 1999). First factor is one's worldview or perception of how the world is in general or about a specific object. This worldview is determined by the person's object-relevant values (e.g., all living species have the right to exist on earth). The second factor leads to one's awareness of the consequences of an eventual behavior that might impact person's object-relevant values. If the

object is valuable, then the individual is more likely to engage in a behavior that will protect that object, or at least not to harm it, and less likely to engage in a behavior that might threaten or disadvantage that object (e.g., cutting down forests without replanting will harm the environment). The last factor on which the VBN theory is based is closely related to the second because one's awareness of the consequences of a behavior triggers (3) one's self-ascribed responsibility to act. This self-ascribed responsibility to act then leads to an attitude related to one's sense of obligation to act, called moral norms or personal norms (Choi et al., 2015; Stern, 2000). The VBN theory is a value-centered and moral norms-based theory; previous researchers found that the VBN theory was a relatively good model for predicting one's behavior because it could explain 19 to 35 percent of the variance in behavior (Kaiser et al., 2005; Stern et al., 1999).

Figure 2

The value-belief-norm-theory, (adapted from Stern, 2000)



Personal Norm

The VBN theory assumes that one's environmentally-friendly intention and behavior is determined by pro-environmental personal norms. Within the theory, the terms “pro-environmental personal norm” and “sense of obligation to take pro-environmental actions” are

used interchangeably (Stern, 2000, p. 414). Personal norm refers to “moral obligation to perform or refrain from specific actions” (Schwartz & Howard, 1981, p. 191). According to Stern et al. (1999), personal norms may influence all kinds of behaviors taken with pro-environmental intent. Thus, it is hypothesized that:

H4: Personal norm positively influences people’s intention to purchase sustainable tourism products.

Values

Rokeach (1968 as cited in Dietz et al., 2005), known as one of the first researchers to empirically examine values, defined values as “enduring beliefs that a specific mode of conduct is personally or socially preferable to an opposite or converse mode of conduct of end-state of existence” (p.5). Later, Schwartz examined values from a social-psychological perspective, and referred to them as broad guiding principles in a person’s life, principles that transcend specific situations (Schwartz, 2012). Value may also refer to “a desirable trans-situational goal varying in importance, which serves as a guiding principle in the life of a person or other social entity” (Schwartz, 1992, p. 21).

Building on Schwartz’s interpretation of values, researchers identified three general value orientations that are related to environmental behavior (de Groot & Steg, 2008; Stern et al., 1999; Stern, Kalof et al., 1995; Stern, 2000): egoistic value orientation, which reflects individuals’ concern for themselves; altruistic value orientation, which reflects concern for the welfare of other humans; and biospheric value orientation, which reflects concern for non-human species or the biosphere.

Environmental scholars argue that value is important in environmental behaviour research as it influences the decisions about the behavior (Dietz et al., 2005).

In the VBN theory, the role of value and ecological worldview is emphasized (Klockner, 2013). Value orientations such as biospheric, altruistic, and egoistic directly related to the ecological worldview (Stern, 2000). While egoistic values depart from the environmental worldview, biospheric and altruistic values are likely to embrace it (Klockner, 2013; Stern, 2000).

Values typically influence behavior through a path of other variables such as worldviews, beliefs about consequences of an environmental problem, beliefs about responsibility to act, and personal norms (Dietz et al., 2007; Steg & Vlek, 2009; Stern et al., 1999; Stern, 2000). For example, Dietz et al. (2007) found that altruistic values predicted support for climate policy but only indirectly through environmental beliefs and worldviews.

H5: Value positively influences people's intention to purchase sustainable tourism products.

Beliefs

As noted above, the VBN includes beliefs in its framework which consists of three factors: ecological worldview, aware of adverse consequences (AC) for other people, and ascription of responsibility (AR). AC and AR beliefs have been defined differently in various studies. In some studies, AC and AR beliefs focused on general environmental conditions (e.g. Stern et al., 1999), while other studies included behavior specific AC and AR beliefs (e.g. An Lier & Dunlap, 1978). Such norms create a general predisposition that influences all kinds of behavior taken with pro-environmental intent (Stern, 2000). Behavior specific beliefs are generally more strongly related to behavior than are general beliefs (e.g. Ajzen, 1985; Nordlund & Garvill, 2003). This implies that the predictive power of the VBN theory may be enhanced if AC and AR beliefs as well as PN are tuned toward the specific behavior to be explained.

The moral obligations to act also known as personal norms (PN) are triggered when individuals are aware of adverse consequences (AC) for other people, and when individuals believe their own actions have contributed to or could alleviate the consequences ascription of responsibility (i.e., AR; Schwartz, 2012.). An important element of the VBN theory is that the link from values to environmentalism is mediated by particular beliefs, such as beliefs about which kinds of people or things are affected by environmental conditions (i.e., AC) and about whether there are individual actions that could alleviate threats to valued persons or things (i.e., AR; Choi et al., 2015). Thus, environmentalist personal norms and the predisposition to pro-environmental action can be influenced by information that shapes these beliefs.

Individuals' beliefs are significant determinant of their characteristics and mindset. Thus, the development of online buying platforms should consider people's religious background and cultural affinity (Steg & Vlek, 2009). This action exemplifies that the buyer is interested in the working model of a suitable product. The exemplified response for the sustainable product models also gives a detailed evaluation of the products working and systems developments (Stern et al., 1999). Under this discussion, it is hypothesized that:

H6: People's environmental beliefs positively influences their intention to purchase sustainable tourism products.

New Ecological Paradigm (NEP)

Background

The original ecological worldview, introduced by Dunlap and Van Liere (1978), measured peoples' views about the human-environment relationship— specifically beliefs about humans' adverse effect on a fragile environment (Stern, 2000, p. 411). Dunlap et al., (2000) created an updated New Ecological Paradigm (NEP) scale because the original NEP scale was

unbalanced (two of the three aspects included only pro–NEP item, and one aspect contained only con–NEP items). The theory recognizes the innovative capacity which is allowed for the growth of the innovative capacities in humans (Pienaar et al., 2013). It predicts that humans are independent of their thoughts and working capacities. The updated version consists of 15 items that cover 5 different dimensions of people’s ecological worldview. These five dimensions are elaborated below.

H7: People’s ecological world view positively influences their intention to purchase sustainable tourism products.

NEP’s Five Dimensions

The following are the five dimensions of the NEP model:

Fragility of Nature’s Balance

The NEP holds the idea that there is balance in nature and human interference endangers this balance (Erdogan, 2009). The fragility of nature’s balance discusses the worldview that the process of life has been directed vividly into the values and beliefs of humans. Norms of life play an important role in the development of humans (Pienaar et al., 2013).

Possibility of Eco-crisis

The NEP stresses the human dependence on nature and the disastrous outcome of human interference to nature (Erdogan, 2009). The possibility of eco-crisis allows human life to progress in variant conditions and directs the development of individuals (LaLONDE, & Jackson, 2002).

Anti-anthropocentrism

Another ideology that the NEP examines is the belief that nature exists primarily for human use and has no inherent value of its own and humans have the right to modify the natural environment to suit their needs (Erdogan, 2009; Pienaar et al, 2013).

Anti-exceptionalism

The NEP assumes that people reject the human exceptionalism which is based on the worldview that humans are exempt from the constraints of nature (Erdogan, 2009). This view supports the human domination and domination of economy over nature. Anti-exceptionalism is the main dimension which leads to the characterization of human behaviors and attitudes (Lalonde, & Jackson, 2002).

Limits to Growth

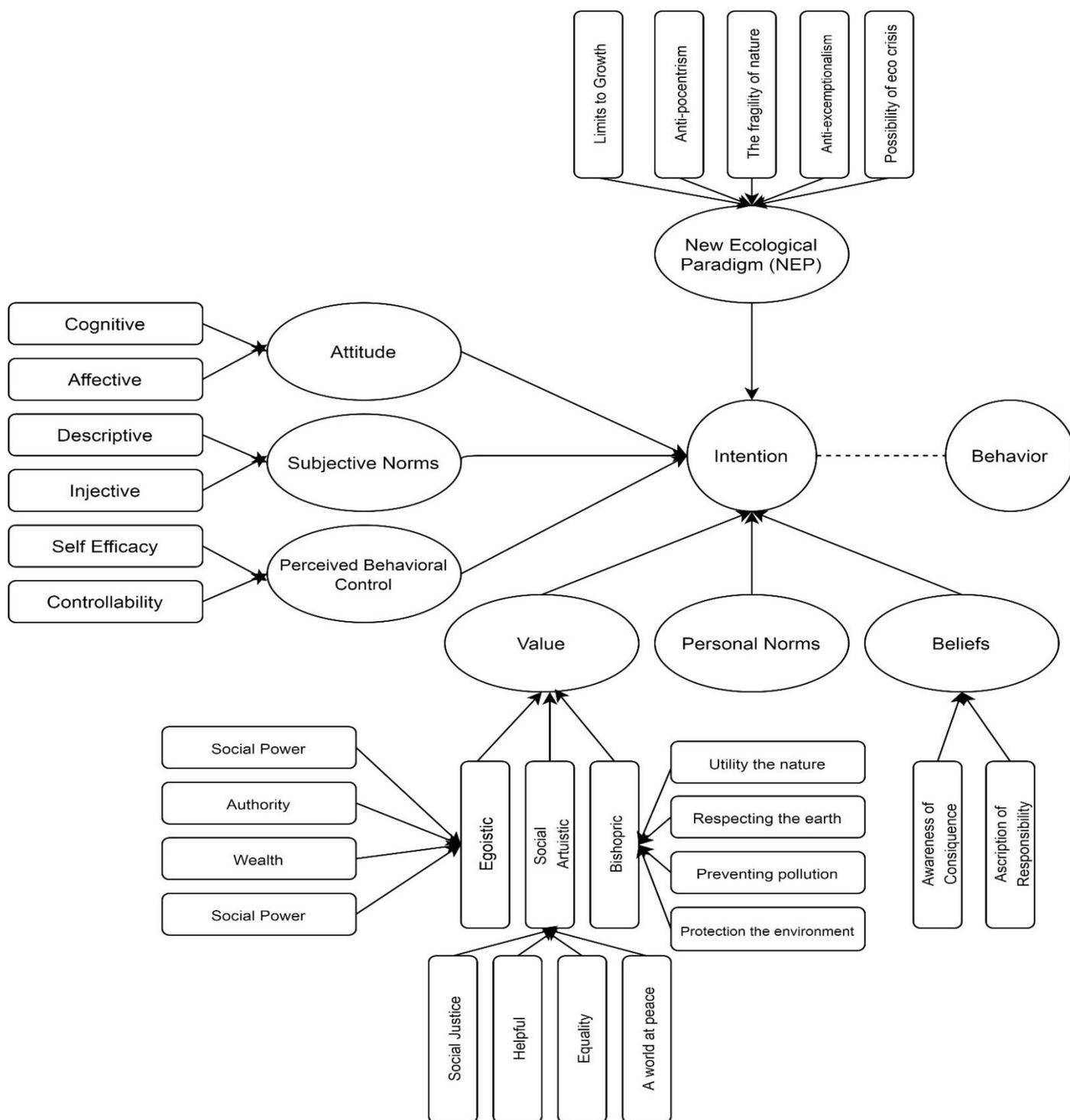
The NEP is concerned with equity, development issues, and limits to human interference (Vikan et al., 2007). This allows the progression of individuals and allows them to master the technique of development.

Theoretical Framework of this Research

The purpose of this study is to examine the role of sustainably-related user generated contents (UGC) in sustainable purchase intentions of visitors of Vancouver Island. As was explained, this study's framework was initially guided by three theories. The TPB (Ajzen, 1985) was used as the core part of this study's framework. As an addition to the TPB, this study used the VBN to link people's ecological worldview, assessed by the new environmental paradigm (NEP; Dunlap et al., 2000), to their values. Figure three presents these associations.

Figure 3

Research conceptual framework



Chapter 3

Methods

Introduction

Henderson (2010) describes research methodology as a combination of conceptual frameworks, data collection techniques, and methods of analysis, for the collected data that then provides the basis for scientific study. This chapter sets out the methodology adopted in the study and the procedures that have been used in the collection and analysis of the data. It includes the research methods I used to answer the research questions which were presented in the introduction chapter. This chapter elaborates the research design, data collection, sampling, and statistical data analysis techniques utilized.

Research Perspective

Epistemology focuses on what constitutes acceptable knowledge in a field of study and the ways of knowing and learning about the social world (Saunders, 2011). A research paradigm is a set of beliefs, feelings, and assumptions about certain aspects of the world and how it should be understood and studied (Creswell & Creswell, 2018). The current research adopts a post-positivist paradigm to guide methodological decisions as well as the research design. The post-positivism paradigm reflects the author's beliefs that there is only one reality, but researchers are unable to ever determine the absolute truth (Creswell, 2013). The post-positivism paradigm would reduce the whole idea by filtering the content to a few variables for measuring and have clear results (Burns, & Groove, 2014; Henderson, 2011). The post-positivist paradigm evolved from the positivist paradigm. It is concerned with the subjectivity of reality and moves away from the purely objective stance adopted by the logical positivists (Ryan, 2006).

Post-positivism emphasizes meanings and seeks to explicate social concerns (Henderson, 2011). Ryan (2006) described that post-positivism brings together theory and practice in order to allow acknowledgment and encouragement for the researchers' motivations and commitment to the topic. This paradigm recognizes that many correct techniques can be applied to collecting and analyzing data. This approach is firmly rooted in pragmatism. Henderson (2011) suggests that a post-positivist paradigm is often an appropriate position in leisure research given that "researchers are frequently interested in uncovering meanings from people about their multiple interpretations for reality" (p. 343). Therefore, post-positivists believe in multiple methods of observation and measurement (Trochim, 2006). Post-positivism provides a practical approach to data collection and typically supported by quantitative methods, which drives to gather facts to obtain new knowledge, which then can be tested through a deductive approach (Burns, & Groove, 2014; Henderson, 2011). Quantitative methods can be perceived as a large umbrella term, which includes the focus of the application of statistical methods, but also includes theories and practices and elements associated with quantitative methods such as sampling and questionnaire design (Creswell & Creswell, 2018).

Quantitative research in this context includes questionnaire design, descriptive statistics to characterize and interpret, inferential statistics to evaluate and reflect on relationships and links, and multivariate statistics to explore and confirm patterns (Burns, & Groove, 2014). This study used a quantitative method to study behavior. This study seeks to develop relevant statements that can explain the situation of concern or that describe the causal relationships of interest (Creswell & Creswell, 2018).

Research Design

Essentially, a research design is a plan for the collection, measurement and analysis of data. In research there are two broad methods of reasoning - inductive and deductive approaches. Christensen et al. (2011) discuss that in market research, deductive reasoning enables the researcher to develop ideas from existent studies, thus adding to the theoretical foundations.

Tashakkori and Teddlie (2003) argue that deduction is essential in the testing of theory as it has the ability to explain relationships between given variables in a study and allows for the quantitative measurements of variables. According to Christensen et al. (2011), the greatest strength of quantitative studies is the platform for description, allowing a researcher to capture larger user population data. Data in numeric form allows the application of statistical analysis, which lets researchers derive important facts or conclusions, in terms of differences between groups. Quantitative methods are noted to result in better generalizability and objectivity (Duffy et al., 2005). Tashakkori and Teddlie (2003) highlighted that quantitative approaches provide the researcher with the chance to gain distinctive variations across groups within the population, and to quantify behaviors and attitudes.

The design of this study was an online self-administered survey. A survey design provides a quantitative description of behaviors, attitudes, or opinions of a sample, allowing researchers to make inferences about the population by analyzing the data (Arghode, 2012). Researchers can accumulate large volumes of data in a short period of time and easily export responses for analysis with an online survey (Duffy et al., 2005). Online surveys are convenient for potential participants. Participants with Internet access can complete questionnaires anywhere and anytime. Because potential participants can respond to online questionnaires in a private setting, social desirability biases due to the presence of an interviewer can be reduced (Duffy et

al., 2005). Data were collected between September 2020 and January 2021. All the participants were those who used internet sources to purchase Vancouver Island's tourism products, thus coverage error resulting from implementing an online survey was not a concern.

Population of Study

Data were collected from people who are over 19 years old and visitors of Vancouver Island. All the participants were those who have used internet sources to purchase tourism products. The sample size required for this was determined using a structural equation modeling (SEM) calculator (Equation 1; Spore 2021). Given the number of observed ($n = 25$) and latent variables ($n = 8$) in the model at 95% probability level and statistical power of 80% a sample of 183 participants were required to detect a medium effect size (.3) which was also adequate for the model structure. The target sample size of this study was 250 people who have visited Vancouver Island. The sample size was calculated based on 80% power of analysis at 95% confidence interval to detect a small effect size (Spore, 2021).

Equation 1

$$n = \max(n_1, n_2)$$

where:

$$n_1 = \left[50 \left(\frac{j}{k} \right)^2 - 450 \left(\frac{j}{k} \right) + 1100 \right]$$

$$n_2 = \left[\frac{1}{2H} \left(A \left(\frac{\pi}{6} - B + D \right) + H + \sqrt{\left(A \left(\frac{\pi}{6} - B + D \right) + H \right)^2 + 4AH \left(\frac{\pi}{6} + \sqrt{A} + 2B - C - 2D \right)} \right) \right]$$

$$A = 1 - \rho^2$$

$$B = \rho \arcsin \left(\frac{\rho}{2} \right)$$

$$C = \rho \arcsin(\rho)$$

$$D = \frac{A}{\sqrt{3 - A}}$$

$$H = \left(\frac{\delta}{z_{1-\alpha/2} - z_{1-\beta}} \right)^2$$

Using a self-reported online questionnaire, the data was collected between September 2020 and January 2021. .In this study, I aimed to explore the travel purchase behaviors of people

rather than being able to generalize to a wider population. Therefore, it was appropriate to apply a non-probability sampling technique like convenience sampling to recruit the participants (Altinay et al., 2016). Participants were recruited through the link provided in the recruitment poster, invitation emails, and social media platforms (i.e. Facebook and Instagram). In this study data was screening and cleansing. Data cleansing is the process of finding, modifying (or even deleting) worthless and erroneous data from a data set or database. The purpose of data cleansing is to extract accurate information because incorrect or inconsistent data can lead to erroneous conclusions. The most important activities performed in this section are identification and removal of duplicate data, standardization of numbers, and identification of missing values.

Data Collection

Google form web survey tool was used to collect the data. The online survey consisted of six pages, of which the first five pages collected information on participants' perceptions of various constructs used in the study, the last page had demographic questions.

Participants were recruited through email and social media. A link to the survey was included in the body of the email and text which share with participants. The text and email had a letter of consent detailing the benefits of the study, voluntary participation, and confidentiality (Appendix A). The research was advertised using a recruitment poster posted on multiple social media platforms (i.e., Facebook and Instagram as well as Telegram, and WhatsApp groups) and Vancouver Island's tourism and recreation organizations' websites.

Participants consented to take the survey by clicking on the 'agree' button after reading the informed consent. Moreover, responses were viewed only by the researcher. Responses were linked directly to an Excel database, eliminating the need for data entry. The survey was completely anonymous and no personal identifiable information such as email address.

This allowed the respondents to remain anonymous and answer the questionnaire at their convenience. In addition, the electronic nature of this survey allowed the information collected to be transferred automatically into a database, thus saving time, and avoiding errors in data entry.

Research Objectives and Questions

The purpose of this study is to examine the role of sustainable User Generated Contents (UGC) in sustainable purchase intentions of visitors of Vancouver Island. This study initially drew on three well-established strands of research: the TPB, VBN, and ecological worldview.

Research Questions

The core question of this study is:

- To what extent does sustainability-focused online UGC impact consumers' online purchase behavior?

More precisely, this research's questions are:

- To what extent does the ecological worldview of tourists influence their intention to purchase sustainable online products and services?
- To what extent do the attitudes of tourists influence their intention to purchase sustainable online products and services?
- To what extent do the subjective norms of tourists influence their intention to purchase sustainable online products and services?
- To what extent does the perceived behaviour control of tourists influence their intention to purchase sustainable online products and services?
- To what extent do values of tourists influence their intention to purchase sustainable online products and services?

- To what extent do beliefs of tourists influence their intention to purchase sustainable online products and services?
- To what extent do personal norms of tourists influence their intention to purchase sustainable online products and services?

Instrument Development

Instrument development involved three important steps. In the first step, the preliminary variables were obtained from a literature review. Following a comprehensive and detailed literature review, the factors reflecting the concepts of this study were extracted. These are depicted in table 1, 2, 3, and 4. There are 59 observed variables in the framework of this research. These items included: 12 standard VBN value items adapted from Stern et al., (1999); 17 VBN items (belief and personal norms) adapted from Steg et al., (2005); 15 standard NEP items adapted from Dunlap et al., (2000) and Choi et al., (2015); and 15 TPB items adapted and modified from Ajzan (1991; 2011). A five-point Likert scale range was employed to measure intention. Typically, the NEP is administered with a Likert scale asking for respondent agreement. Often investigators use a five-point Likert scale, some with ‘agree strongly’ as 1 and ‘disagree strongly’ as 5, while some other investigators use the reverse, where 5 is ‘agree strongly’ (Amburgey & Thoman, 2012). For 7 items of NEP (1, 3, 5, 6, 10, 11, and 15) and Egoistic factor of Value, this study used reverse code before factor analyzing. The questionnaire also included questions about participants’ demographic information. After this step, the final list was sent to the thesis supervisors for their final approval and advice.

A questionnaire was developed, which included items from existing scales corresponding to the variables of interest. Then, a pilot study was conducted to gain a better

understanding of the validity and completeness of these items as well as to modify the questionnaire, if needed. Finally, the questionnaire was distributed.

The demographic characteristics collected reflect population or customer patterns such as age, income, gender, occupation, education, and marital status (Sulaiman & Mohezar, 2008). Demographic characteristics may have an impact on customer intention whether offline or online (Ratchford, 2009). Moreover, Doolin et al. (2005) demonstrated that past internet shopping experience was connected strongly with intention and works as a moderator of online shopping intention, noting a positive relationship between online shopping experiences and the number of purchases complete

Tables of Constructs

Table 1

TPB Measurement Items - Adapted and modified from Ajzan, 1991

Constructs	Dimension	Measure	Scale
Attitude (4 Items) (Adapted and modified from Ajzan, 1991)	Cognitive	Reading online sustainability-related reviews before purchasing tourism products is:	Useless - Useful
		Reading online sustainability-related reviews before purchasing tourism products is:	Harmful, Beneficial
	Affective	Reading online sustainability-related reviews before purchasing tourism products is:	Bad, Good
		Reading online sustainability-related reviews before purchasing tourism products is:	Unpleasant, pleasant
Subjective norms (4 Items) (Adapted and modified from Ajzan, 1991)	Descriptive	Most people whose opinion is important to me, read online sustainability-related reviews before they purchase tourism products.	Strongly disagree, Strongly agree
		Many people like me read online sustainability-related reviews before they purchase tourism products.	
	Injunctive	Most people who are important to me expect of me that I read online sustainability-related reviews before I purchase tourism products.	Strongly disagree, Strongly agree
		Most people who are important to me think that I should read online sustainability-related reviews before I purchase tourism products.	Strongly disagree, Strongly agree
Perceived behavior control (PBC) (4 Items) (Adapted and modified from Ajzan, 1991)	Self-efficacy	For me, to find online sustainability-related tourism reviews before purchasing tourism products would be	Difficult, Easy
		If I wanted to, I could find online sustainability-related tourism reviews before purchasing tourism products.	Strongly disagree, Strongly agree
	Controllability	It is mostly up to me whether or not I read online sustainability-related tourism reviews before purchasing tourism products.	Strongly disagree, Strongly agree
		I believe I have complete control over deciding to read online sustainability-related tourism reviews before purchasing tourism products.	

Table 2 (Continued)

Intention (3 Items) (Adapted and modified from Ajzan, 1991)	I intend to read online sustainability-related reviews before I purchase tourism products. I am willing to read online sustainability-related reviews before I purchase tourism products. I will make an effort to read online sustainability-related reviews before I purchase tourism products.	Strongly disagree, Strongly agree
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Table 3

NEP Measurement Items- Adapted from Dunlap et al., 2000

Dimensions	Items	Scale
Limits to growth (Adapted from Dunlap et al., 2000)	1. We are approaching the limit of the number of people the Earth can support. 6. Earth has plenty of natural resources if we just learn how to develop them. 11. The Earth is like a spaceship with very limited room and resources.	Strongly disagree, Strongly agree
Anti-anthropocentrism (Adapted from Dunlap et al., 2000)	2. Humans have the right to modify the natural environment to suit their needs. 7. Plants and animals have as much right as humans to exist. 12. Humans were meant to rule over the rest of nature.	Strongly disagree, Strongly agree
The fragility of nature's balance (Adapted from Dunlap et al., 2000)	3. When humans interfere with nature, it often produces disastrous consequences. 8. The balance of nature is strong enough to cope with the impacts of modern industrial nations. 13. The balance of nature is very delicate and easily upset.	Strongly disagree, Strongly agree
Anti-exceptionalism (Adapted from Dunlap et al., 2000)	4. Human ingenuity will ensure that we do not make the Earth unlivable. 9. Despite our special abilities, humans are still subject to the laws of nature. 14. Humans will eventually learn enough about how nature works to be able to control it.	Strongly disagree, Strongly agree

Possibility of eco-crisis (Adapted from Dunlap et al., 2000)	5. Humans are seriously abusing the environment.	Strongly disagree, Strongly agree
	10. The so-called “ecological crisis” facing humankind has been greatly exaggerated.	
	15. If things continue on their present course, we will soon experience a major ecological catastrophe.	

Table 4

VBN Measurement Items (Value) - Adapted from Stern et al., (1999)

Constructs	Dimensions	Items	Measure	Scale
Value Adapted from Stern et al., (1999)	Egoistic	authority	The right to lead or command.	Not important at all, Very important
		wealth	Material possessions, money.	
		social power	Control over others, dominance.	Not important at all, Very important
		influential	Having an impact on people and events.	
	Social_ altruistic	Social justice	Correction injustice, care for the weak.	Not important at all, Very important
		Helpful	Working for the welfare of others.	
		Equality	Equal opportunity for all.	
	Bishopric	A world at peace	Free of war and conflict.	Not important at all, Very important
		Protection the environment	Preserving nature.	

Preventing pollution	Reducing pollutant emissions.
Respecting the earth	Live in harmony with other species.
Unity with nature	Fitting into nature.

Table 5

Feeling and opinion about sustainability and environmental preservation.

Constructs	Dimension	Measure	Scale
Personal Norms (Adapted from Steg et al., 2005; Choi et al.,2015)		I feel an obligation to buy green products where possible.	Strongly disagree, Strongly agree
		I feel a strong personal obligation to use energy wisely.	
		I feel a moral obligation to protect the environment.	
		I feel that I should protect the environment.	
		I feel it is important that people in general protect the environment.	
		I feel I must do something to help future generations.	
		Because of my own values/principles, I feel an obligation to behave in an environmentally friendly way.	
Belief (Adapted from Steg et al., 2005; Choi et al., 2015)	Ascription of Responsibility (AR)	I should do what I can to conserve natural resources.	Strongly disagree, Strongly agree
		I feel jointly responsible for energy problems (i.e., scarcity, pollution, energy waste).	
		I feel jointly responsible for using renewable energy (i.e., solar, wind, hydro, biomass)	
		I feel jointly responsible for global warming.	
		Not only the government and industry are responsible for high energy consumption levels, but me too.	
		It is certain that global warming is a real problem.	Strongly disagree,

Awareness of Consequence (AC)	The exhaustion of fossil fuels (i.e., coal, crude oil, natural gas) is a problem. Environmental quality will improve if we use less energy. Global warming is a problem for society. Energy savings help reduce global warming.	Strongly agree
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Validity

Content validity

Key constructs were outlined and discussed at length in Chapter Two, which presented the preliminary conceptual framework. Construct items were chosen initially based on a comprehensive review of relevant academic studies (Table 5). All the items used in this study were designed and tested numerous times by previous researchers. All the questionnaire items had been validated in multiple settings prior to this research. I slightly modified the items to fit with the content of this study. For example, subjective norm from the TPB factors was measured using a scale introduced by Vermier and Verbeke (2008) in a study on sustainable dairy consumption behavior and had four items. These items were modified to fit with the content of this study. Similar questionnaire items have also been suggested by Ajzen and Fishbein (1980).

Table 6

An overview of the key sources

Variable/Construct	Key Sources from which items are selected
TPB Measurement Items	(Ajzen & Fishbein, 1980; Ajzen , 1991 ; Taylor & Todd ,1995; Ajzen , 1998; Ajzen & Driver, 1991, Liao et al., 2007; Lee, 2009; Oreg & Katz-Gerro, 2006; Vincent et al., 2015; Vermier & Verbeke , 2008; Chu & Chu, 2013; Bamberg et al., 2003)
VBN Measurement Items	(Stern et al., 1995; Stern, 2000; Choi et al., 2015;Whitley et al., 2018; Stern et al., 1999 ; Steg et al., 2014; Steg & Vlek, 2009)
NEP Measurement Items	(Dunlap & Van Liere ,1978; Dunlap et al.,2000; LaLONDE, & Jackson, 2002; Pienaar et al., 2013; Reyna et al., 2018)

Face Validity

To confirm the face validity of the questionnaire items, a group of researchers (i.e., three academic researchers specializing in these studies) evaluated the measurement items. The expert group was provided with the definition of each construct and asked to assess each item for clarity, readability, and face validity. Revisions were made based on the comments and recommendations of the expert's panel.

Reliability

Cronbach Alpha coefficient was calculated to determine the reliability of each scale used and is presented in chapter 4. As recommended by Peterson (1994), Cronbach Alpha of .70 and above was considered acceptable. The calculated Cronbach's alpha of all the constructs in this study were above .70, which confirms the internal consistency of all the items for each concept.

Pilot Study

Before the main data collection, I conducted a pilot study. The purpose of pilot testing (pilot study) is to ensure that the design of the questionnaire works correctly in practice and serves to identify and modify any problematic questions and eliminate problem areas (Gabriel, 2013). Piloting also aims to identify any problems concerning the content, wording, layout, length, and instructions, which are consequently amended (Arghode, 2012). A further advantage of piloting is that this may also enable the researcher to calculate with far greater accuracy the time required to perform the actual questionnaire. The instrument of this study was pilot tested on Vancouver Island University students.

The participants were all users of the Internet and visited Vancouver Island. The questionnaire was carefully explained, ensuring participants understood the construct measurement and that the statements were understandable. Informal conversations took place

between the researchers and the participants of the pilot test in order to get feedback from participants about the questionnaire. They were also asked to estimate the amount of time it took them to fill the survey out. Minor changes regarding questions clarity were highlighted, and appropriate alterations were made to the survey-based upon the participants' responses and suggestions.

Analysis Approach

Structural equation modeling (SEM) was the main analysis approach in this study. SEMs are multivariate regression models often used to identify the causal influences of the exogenous variables on the endogenous variables and the causal influences of endogenous variables upon one another (Hailu et al., 2005). The objective of using SEMs was to describe the relationships both between the constructs and their influence on the behavior variable. This method is nonparametric in nature, which means that this method does not need any supposition concerning the distribution of the data.

The PLS-SEM is a common multivariate analysis method used to calculate variance-based structural equation models, particularly in social sciences fields (Henseler et al., 2016). Nevertheless, PLS-SEM presents an opportunity to resolve a multifaceted procedure of associations and causal relationships that are hard to discover. PLS-SEM handle the data to assess the path coefficients. In addition, PLS-SEM handles a distribution from the data using bootstrapping technique to find out the significant value of each path coefficient.

SmartPLS 3.3.3, a Java-based program, was the data analysis software used (Kumar et al., 2017). Arguably, SmartPLS is the most widely used PLS software in tourism research (do Valle & Assaker, 2016). One key feature of SmartPLS 3.3.3 is that it is a full-featured PLS

program that requires minimal additional calculations outside the program to evaluate both the measurement and structure models.

The simulation work in calculating the effect of the observed variables and their latent constructs on construction quality was drawn in Smart-PLS version 3.3.3 (Ringle et al., 2015). PLS-SEM is mostly used for theory development in exploratory research (Hair et al., 2012). SEM permits the analysis of the linear relationships between the latent constructs and manifest variables. In general, SEM permits several relationships to be tested at once in a single model with various relationships instead of examining each relationship individually.

The hypothesized structural model of this study was analyzed using Smart-PLS version 3.3.3, which has advantages over regression-based methods in evaluating several latent constructs with various manifest variables (Sarstedt et al., 2014). PLS SEM contains a two-step procedures which involve the evaluation of the outer measurement model and evaluation of the inner structural model (Henseler et al., 2016). In this chapter, first, the descriptive statistics are presented. Then the structure model is analyzed and the results of the hypotheses testing is elaborated.

Based on Anderson and Gerbing's (1988) suggestion, a two-step procedure was employed. That is, the structural model was evaluated after the assessment of the measurement model. Structural equation modeling can be used to assess the simultaneity of all hypothesized associations among multiple constructs (Hair et al, 1998).

Mainly, this analytical method is useful when testing a theoretical model involving multiple independent and dependent variables (Henseler et al., 2016) like the present study. Modelling comparisons were also conducted to identify the superiority of the proposed theoretical framework compared to alternative models. Lastly, invariance tests containing non-restricted, full-metric invariance, baseline, and constrained models were performed to test the

proposed moderating impact. The data contained sets of items reflecting the constructs of the research. I included latent variables from each of the indicator: value, belief, personal norm, subjective norm, attitude, PBC, NEP measures. The use of a latent variable SEM framework created factors underlying the measured items to account for measurement error. I aggregated the items for each construct.

Skewness and Kurtosis Coefficients

Skewness is a measure of symmetry, or more precisely, the lack of symmetry. A distribution, or data set, is symmetric if it looks the same to the left and right of the center point. The skewness for a normal distribution is zero, and any symmetric data should have skewness near zero. Negative values for the skewness indicate data that are skewed left and positive values for the skewness indicate data that are skewed right. By skewed left, we mean that the left tail is long relative to the right tail. Similarly, skewed right means that the right tail is long relative to the left tail. If the data are multi-modal, then this may affect the sign of the skewness (George, & Mallery, 2010).

Kurtosis is the degree of peakedness of a distribution. It is a measure of whether the data are heavy-tailed or light-tailed relative to a normal distribution. That is, data sets with high kurtosis tend to have heavy tails or outliers. Data sets with low kurtosis tend to have light tails or lack of outliers (Caputo, 2016). A uniform distribution would be the extreme case. The kurtosis for a standard normal distribution is three.

In general, skewness and kurtosis values between -2 and +2 were assumed to indicate an acceptable range to prove normal univariate distribution (Caputo, 2016; George & Mallery, 2010). According to the Table7 the amount of Skewness for all variables is in the range (2, -2). That is, in terms of Skewness, the variables are normal and their distribution is symmetrical. The

Kurtosis of all variables is also in the range (2, -2). This indicates that the distribution of variables has a normal Kurtosis.

Table 7

Skewness and Kurtosis Coefficients

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Attitude	228	-.732	.161	.263	.321
subjective norm	228	-.643	.161	-.522	.321
PBC	228	-.934	.161	.177	.321
Intention	228	-1.146	.161	1.559	.321
NEP	228	.108	.161	-1.681	.321
Value	228	-.167	.161	-1.581	.321
personal norm	228	-.380	.161	-1.589	.321
Belief	228	-.360	.161	-1.600	.321

In this chapter the three phases of research are outlined, the sampling approach adopted for the study and the research instruments are set out in detail. Finally, the ethical issues that could arise in the research and the various procedures to data analysis are outlined. The focus now moves to report the findings from the data collection. Results from the statistical study of the survey data from phase three are presented in Chapter four.

Chapter 4

Results

Introduction

The purpose of this study is to examine the role of sustainable UGC in sustainable purchase intentions of visitors of Vancouver Island. The study explores the research questions from a post-positivism paradigm and through a quantitative approach. A self-reported online questionnaire was used as the primary data collecting method. All the participants were visitors of Vancouver Island who used internet sources to purchase tourism products. This chapter solely focuses on presenting the results of data collection and analysis in a meaningful way to facilitate the discussion, which will be presented in Chapter five. In order to analyze the data, two levels of descriptive statistics including (demographic information, frequency) and inferential statistics (Construct Reliability and Validity) were used. Then, path analysis was conducted to answer the research hypotheses.

Descriptive Statistics

Data were collected between September 2020 and January 2021. All the participants were visitors to Vancouver Island who used internet sources to purchase tourism products. The total responses to the questionnaire were 242, and among them 228 were analyzed.

Demographic Information

According to the results (presented in table 8), the majority of respondents (34.6%) were aged 25-34. In addition, 57% of respondents were woman and 39.5% were man. Regarding the annual household income, 41.7% of respondent reported an income of less than 50.000 CAD and 28.9 % reported an income of between 50.000 to 100.000 CAD. In addition, 38.952% of

respondents had bachelor's degree, 34.6% held master's degree and 12.7% had college diploma. Most of the respondent (84.6%) were Canadian residents; 7.5 % were US resident and 4.8% were from other countries such as Iran and India. Moreover, 53.5% were married, 36.4% were single, and 5.7% were divorced. Most of the respondents (75.9%) had 7 years and more of experience using internet; 16.2% had 5 to 7 years of experience in the use of internet. More than 92% of the respondents had the experience of online booking of travel products; and 7.9% of respondents did not have the experience of online booking of travel products. Among respondents, 36.8% reported 7 years or more of experience in buying travel products online.

Table 8

Demographic results

Respondents' profile	Frequency	Percent	Valid Percent	Cumulative Percent
Age				
19-24	33	14.5	14.5	14.5
25-34	79	34.6	34.6	49.1
35-44	50	21.9	21.9	71.1
45-54	41	18.0	18.0	89.0
55-64	16	7.0	7.0	96.1
65 and above	9	3.9	3.9	100.0
Gender				
Female	130	57.0	57.0	57.0
Male	90	39.5	39.5	96.5
Gender diverse	5	2.2	2.2	98.7
Prefer not to say	3	1.3	1.3	100.0
Income				
Less than \$50,000	95	41.7	41.7	41.7
\$50,000 to \$100,000	66	28.9	28.9	70.6
\$100,000 to \$150,000	45	19.7	19.7	90.4
\$150,000 to \$200,000	17	7.5	7.5	97.8
More than \$200,000	5	2.2	2.2	100.0
Education				
High school diploma or below	21	9.2	9.2	9.2
College diploma	29	12.7	12.7	21.9
Bachelor's degree	87	38.2	38.2	60.1
Master's degree	79	34.6	34.6	94.7

Doctoral degree	9	3.9	3.9	98.7
Other	3	1.3	1.3	100.0
<hr/>				
Residency				
Canadian	193	84.6	84.6	84.6
US	17	7.5	7.5	92.1
Other (Asian countries)	11	4.8	4.8	96.9
International visitor	6	2.6	2.6	99.6
Other (Europe)	1	.4	.4	100.0
<hr/>				
Marital				
Single	83	36.4	36.4	36.4
Married	122	53.5	53.5	89.9
Widowed	7	3.1	3.1	93.0
Divorced	13	5.7	5.7	98.7
Separated	2	.9	.9	99.6
Other	1	.4	.4	100.0
<hr/>				
Using internet				
Less than 3 years	5	2.2	2.2	2.2
Between 3 to 5 years	13	5.7	5.7	7.9
Between 5 to 7 years	37	16.2	16.2	24.1
7 years and more	173	75.9	75.9	100.0
<hr/>				
Online booking experience				
Yes	210	92.1	92.1	92.1
No	18	7.9	7.9	100.0
<hr/>				
Purchased travel products online				
Less than 1 year	24	10.5	10.5	10.5
1 to less than 3 years	23	10.1	10.1	20.6
3 to less than 5 years	62	27.2	27.2	47.8
5 to less than 7 years	35	15.4	15.4	63.2
7 years or more	84	36.8	36.8	100.0
<hr/>				
Frequency of purchasing travel products online				
Never	16	7.0	7.0	7.0
Occasionally	66	28.9	28.9	36.0
Sometimes	68	29.8	29.8	65.8
Often	40	17.5	17.5	83.3
Always	38	16.7	16.7	100.0

Inferential Statistics

Evaluation of Outer Measurement Model

The outer measurement model is aimed to calculate the reliability, internal consistency, and validity of the variables (measured through the questionnaire). In this study,

composite reliability, and the average variance extracted (AVE) were used to determine the adequacy of the measurement model. Composite reliability (sometimes called construct reliability) is a measure of internal consistency in scale items, much like Cronbach's alpha (Niemeyer, 2003). It can be thought of as being equal to the total amount of true score variance relative to the total scale score variance (Brunner & Süß, 2005). AVE is a measure of the amount of variance that is captured by a construct in relation to the amount of variance due to measurement error (Fornell & Larcker, 1981). The results of conformity factor analysis indicate the Cronbach's Alpha of all variables in this study were higher than 0.7, which confirms the reliability of the items in each factor (Table 8). Additionally, the calculated AVE in this study was higher than 0.5, the Composite Reliability (CR) was higher than 0.7, the communality was higher than 0.6.

The internal consistency or reliability was measured through composite reliability (also known as Dillon-Goldstein's rho or Jöreskog's) as proposed by Chin (1998). Dillon-Goldstein's rho can be considered as a better reliability measure than Cronbach's alpha in SEM analysis, since it is based on the loadings rather than the correlations observed between the observed variables (Sarstedt et al., 2014).

The Rho_A , is a cut-off value of coefficient and must be higher than 0.7 (Hair et al., 2006). According to the results the Rho_A was above 0.7. All these were in the acceptable range according to Wetzels et al., (2009). As table 9 shows, the Cronbach's Alpha, rho, CR, and AVE of the variables of this study are within the acceptable ranges.

Table 8*Construct Reliability and Validity*

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Attitude	0.982	0.987	0.986	0.823
Belief	0.851	0.882	0.898	0.689
Intention	0.717	0.733	0.825	0.544
NEP	0.934	0.945	0.945	0.685
Perceived behavior control (PBC)	0.764	0.789	0.863	0.679
Personal Norm	0.967	0.974	0.972	0.793
Subjective Norm	0.884	0.883	0.921	0.746
Value	0.974	0.979	0.977	0.777

The next attempt was to examine the discriminant validity of the latent constructs. Discriminant validity examines whether the manifest variable in any construct is distinct from other constructs in the path model, where its cross-loading value in the latent variable is greater than that in any other constructs (Sarstedt et al., 2014). The Fornell and Larcker's (1981) criterion and cross-loadings were used to evaluate the discriminant validity in this research. The suggested standard is that a construct should not show the same variance as any other construct that is more than its AVE value (Sarstedt et al., 2014).

Table 10 shows the Fornell and Larcker criterion test for the model. The squared correlations were compared with the correlations from other latent constructs. Results showed that all of the correlations were smaller relative to the squared root of average variance exerted along the diagonals, implying satisfactory discriminant validity. This demonstrated that the variables in every construct indicated the given latent variable, confirming the discriminant validity of the model. Table 11 shows that the cross-loading of all observed variables was more than the inter-correlations of the construct of all the other observed variables in the model. Therefore, these findings confirmed the cross-loadings assessment standards and provided

acceptable validation for the discriminant validity of the measurement model.

Table 9

Fornell-Larcker Criterion

	NEP	PBC	Attitude	Belief	Intention	PN	SN	Value
NEP	0.907							
PBC	0.048	0.830						
Attitude	0.031	0.315	0.737					
Belief	0.032	0.147	0.115	0.828				
Intention	0.122	0.515	0.545	0.215	0.824			
PN	0.216	0.135	0.035	0.756	0.180	0.890		
SN	0.097	0.432	0.344	0.119	0.472	0.092	0.864	
Value	0.065	0.230	0.096	0.202	0.332	0.085	0.125	0.881

Table 10*Cross Loading*

Questions	NEP	PBC	Attitude	Belief	Intention	Personal norm	Subjective norm	Value
Q1	-0.063	0.264	0.787	0.058	0.442	0.009	0.349	-0.018
Q2	0.004	0.191	0.775	0.085	0.374	0.033	0.194	0.102
Q3	0.014	0.272	0.772	0.177	0.451	0.094	0.145	0.108
Q4	-0.05	0.187	0.598	-0.005	0.321	-0.053	0.355	0.107
Q5	-0.114	0.375	0.286	0.085	0.402	0.046	0.903	0.098
Q6	-0.011	0.351	0.311	0.173	0.421	0.167	0.755	0.133
Q7	-0.109	0.366	0.272	0.07	0.39	0.046	0.88	0.109
Q8	-0.101	0.396	0.314	0.079	0.409	0.053	0.907	0.088
Q9	0.012	0.889	0.331	0.11	0.529	0.128	0.462	0.204
Q10	0.053	0.838	0.261	0.18	0.44	0.122	0.428	0.236
Q11	0.041	0.815	0.246	0.063	0.39	0.083	0.249	0.119
Q12	0.066	0.775	0.17	0.141	0.301	0.113	0.235	0.203
Q13	0.154	0.53	0.43	0.174	0.863	0.159	0.444	0.412
Q14	0.017	0.305	0.419	0.167	0.746	0.092	0.309	0.181
Q15	0.107	0.406	0.502	0.193	0.856	0.184	0.397	0.194
Q16	0.953	0.153	-0.034	-0.085	0.109	0.035	-0.04	0.096
Q17	0.925	0.066	-0.05	0.011	0.088	0.181	-0.094	0.068
Q18	0.932	0.031	-0.021	0.033	0.108	0.201	-0.086	0.07
Q19	0.96	0.015	-0.028	0.01	0.094	0.176	-0.086	0.032
Q20	0.955	-0.006	-0.05	0.026	0.059	0.204	-0.108	0.036
Q21	0.923	0.087	-0.023	0.036	0.112	0.234	-0.082	0.066
Q22	0.938	0.059	-0.029	0.013	0.103	0.188	-0.087	0.037
Q23	0.945	0.071	-0.029	0.037	0.137	0.204	-0.043	0.06
Q24	0.928	0.037	-0.016	0.06	0.122	0.22	-0.123	0.057
Q25	0.917	0.042	-0.034	0.012	0.1	0.185	-0.102	0.052
Q26	0.931	0.004	-0.014	0.064	0.1	0.237	-0.099	0.01
Q27	0.923	-0.009	-0.046	0.02	0.103	0.191	-0.095	0.072
Q28	0.947	-0.004	-0.017	0.051	0.104	0.191	-0.101	0.051

Questions	NEP	PBC	Attitude	Belief	Intention	Personal norm	Subjective norm	Value
Q30	0.93	0.039	-0.01	0.054	0.134	0.215	-0.111	0.035
Q31	0.104	0.179	0.095	0.145	0.293	0.038	0.131	0.925
Q32	0.068	0.149	0.067	0.188	0.264	0.058	0.103	0.902
Q33	0.043	0.164	0.141	0.172	0.348	0.056	0.124	0.89
Q34	0.083	0.242	0.11	0.189	0.346	0.108	0.155	0.861
Q35	0.16	0.184	0.067	0.156	0.233	0.063	0.08	0.846
Q36	0.03	0.219	0.078	0.161	0.218	0.061	0.078	0.883
Q37	0.102	0.155	0.048	0.111	0.248	0.069	0.07	0.875
Q38	0.072	0.22	0.068	0.195	0.279	0.082	0.113	0.913
Q39	0.049	0.176	0.088	0.164	0.269	0.026	0.102	0.925
Q40	0.059	0.247	0.089	0.231	0.345	0.106	0.071	0.89
Q41	-0.058	0.259	0.085	0.191	0.299	0.079	0.153	0.841
Q42	0.001	0.213	0.052	0.201	0.29	0.137	0.11	0.82
Q43	-0.01	0.12	0.072	0.801	0.185	0.657	0.102	0.126
Q44	0.003	0.1	0.073	0.704	0.129	0.525	0.101	0.268
Q45	-0.067	0.102	0.107	0.761	0.123	0.531	0.067	0.188
Q46	0.06	0.178	0.15	0.878	0.194	0.685	0.114	0.157
Q47	0.02	0.087	0.095	0.862	0.181	0.656	0.061	0.146
Q48	0.078	0.163	0.125	0.903	0.212	0.704	0.134	0.179
Q49	0.02	0.1	0.084	0.833	0.199	0.561	0.114	0.147
Q50	0.062	0.11	0.049	0.861	0.172	0.657	0.084	0.175
Q51	0.184	0.14	0.055	0.713	0.175	0.914	0.085	0.11
Q52	0.17	0.124	-0.028	0.662	0.141	0.886	0.021	0.091
Q53	0.294	0.053	0.024	0.522	0.097	0.765	0.09	0.116
Q54	0.174	0.113	0.027	0.656	0.177	0.888	0.061	0.078
Q55	0.181	0.132	0.055	0.724	0.177	0.938	0.106	0.071
Q56	0.199	0.081	0.018	0.67	0.154	0.895	0.052	0.022
Q57	0.218	0.129	0.042	0.73	0.159	0.941	0.122	0.073
Q58	0.184	0.147	0.05	0.668	0.179	0.893	0.088	0.071
Q59	0.177	0.136	0.025	0.678	0.161	0.88	0.109	0.069

Evaluation of the Inner Structural Model

The next step was to measure the Inner Structural Model outcomes. This included observing the model's predictive relevancy and the relationships between the constructs. The coefficient of determination (R^2), Path coefficient (β value) and T-statistic value, and Goodness-of-Fit (GOF) index are the key standard factors for evaluating the inner structural model.

The bootstrap resampling method of PLS was used to determine the significance of the path coefficients, and hypotheses were tested by estimating the path coefficients. Through the β value, the significance of the hypothesis was tested. The β values of every path in the hypothesized model was computed, the greater the β value, the more the substantial effect on the endogenous latent construct. However, the β value had to be verified for its significance level through the T-statistics test. The bootstrapping procedure was used to evaluate the significance of the hypothesis (Chin, 1998).

The T-value is the main criterion for confirming or rejecting hypotheses. If this value is higher than 1.64, 1.96 and 2.58, respectively, we conclude that the hypothesis is confirmed at the confidence levels of 90, 95 and 99%.

According to Table 11 the people's attitude towards reading sustainability related online user generated contents online reviews positively influenced their intention to purchase sustainable tourism products is accepted (H1; $t = 5.962, p < 0.05$). In addition, subjective norms towards reading sustainability related online reviews significantly positively influenced peoples' intention to purchase sustainable tourism products (H2; $t = 3.611, p < 0.05$). The impact of PBC (H3) on the intention to purchase sustainable tourism products (H3; T-value= 3.669, p-value ≤ 0.001) was also confirmed and this hypothesis accepted at 99% confidence level. In addition, values (H5; $t = 3.460, p \leq 0.05$) and NEP (H7; $t = 1.998, p \leq 0.05$) have a significant, positive

impact on the intention to purchase sustainable tourism products. Therefore, this hypothesis accepted at 95% confidence level. Therefore, these hypotheses were also accepted. But, the impact of personal norm (H4; T-value of 0.741, and p-value ≥ 0.05) and belief (H6; t-value of 0.469, and p-value ≥ 0.05) on people's intention to purchase sustainable tourism products were rejected.

Results are shown in Table 12 and figure 4 shows the graphical representation of all path coefficients of the model.

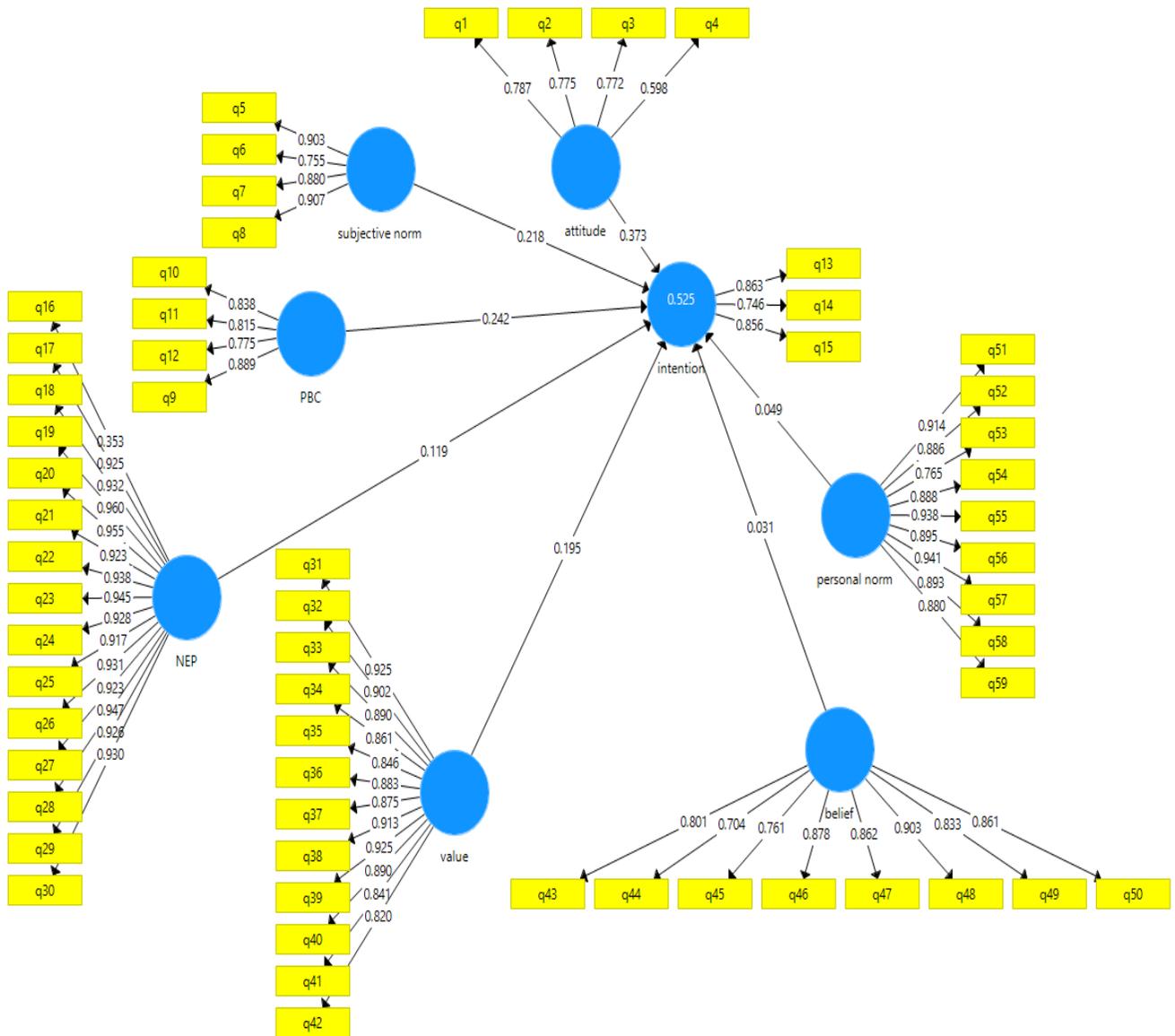
Table 11

Path Coefficients

Hypotheses	Hypothesized Path	Path Coefficients (β)	T Statistics (O/STDEV)	P Values	Results
H1	Attitude \rightarrow Intention	0.373	5.962	0.046	Accepted
H2	Subjective Norm \rightarrow Intention	0.218	3.611	0.000	Accepted
H3	PBC \rightarrow Intention	0.242	3.669	0.000	Accepted
H4	Personal Norm \rightarrow Intention	0.049	0.741	0.459	Rejected
H5	Value \rightarrow Intention	0.195	3.460	0.001	Accepted
H6	Belief \rightarrow Intention	0.031	0.469	0.639	Rejected
H7	NEP \rightarrow Intention	0.119	1.998	0.000	Accepted

Figure 4

Research standard model



Model fit

The Standardized Root Mean Square Residual (SRMR)

The standardized root mean square residual (SRMR) is defined as the difference between the observed correlation and the model implied correlation matrix. Thus, it allows assessing the average magnitude of the discrepancies between observed and expected correlations as an absolute measure of (model) fit criterion. When $SRMR = <0.08$, then the study model has a good fit, with a lower SRMR being a better fit (Hu & Bentler, 1999). Table 12 shows that this study model's SRMR was 0.05, which revealed that this study model had a good fit, according to this indicator.

Chi-Square and Normed fit index (NFI)

. Chi-Square goodness of fit test is a non-parametric test that is used to find out how the observed value of a given phenomenon is significantly different from the expected value. In Chi-Square goodness of fit test, the term goodness of fit is used to compare the observed sample distribution with the expected probability distribution. Chi-Square goodness of fit test determines how well theoretical distribution (such as normal, binomial, or Poisson) fits the empirical distribution. In Chi-Square goodness of fit test, sample data is divided into intervals. Then the numbers of points that fall into the interval are compared, with the expected numbers of points in each interval. In this study, the Chi-Square (χ^2) test is significant ($\chi^2 = 3687.40$, $p < 0.05$) and indicates the distinctiveness of the latent constructs.

Since the Chi-square value of the proposed model in itself does not provide sufficient information to judge model fit, the NFI uses the Chi-square value from the null model, as a yardstick. The NFI results in values between 0 and 1. Normed Fit Index (NFI) is the very first measure of fit proposed in the literature (Bentler & Bonett, 1980) and it is an incremental

measure of fit. The best model is defined as model with a Chi-Square (χ^2) of zero and the worst model by the χ^2 of the null model. The NFI value ranges from 0 to 1. The model can be said to be fit when the NFI value approaches the value of 1 (Lohmoeller, 1989). The NFI denotes an incremental fit measure. A major disadvantage is that it does not penalize model complexity. The more parameters in the model, the (i.e., better) the NFI result. Due to this disadvantage the value is not expected to be very high (Khan et al., 2019). It is for this reason that this measure is not recommended, but alternatives such as the non-normed fit index (NNFI) or Tucker-Lewis index, which penalizes the χ^2 values by the degrees of freedom (df). However, the NNFI has not been implemented in Smart PLS, yet. Table 11 shows that the NFI values is 0.793, which is close to 1 and shows the acceptable model fit.

d-ULS and d-G

d-ULS and d-G are bootstrap-based inferential statistics testing to measure the difference between the empirical covariance matrix and covariance matrix implied in the composite factor model (Dijkstra & Henseler, 2015).. The bootstrap routine provides the confidence intervals of these discrepancy values. The d_G criterion builds on PLS-SEM eigenvalue computations. Actually, the value of the d_ULS and d_G in itself do not pertain to any value. Only the bootstrap results of the exact model fit measures allow an interpretation of results. If the original value of d_G and d_ULS is smaller than the upper bound of the bootstrap confidence interval, the model fit is confirmed. Based on Table 12 the values for d_ULS and d_G are 41.2% and 32.5 %, which are lower than 95%.

RMS Theta

The RMS Theta with values of 0.12 or below reflect a well-fitting model, and higher values indicating a lack of fit (Henseler et al., 2015). In this study the RMS Theta is equal to 0.11

(RMS Theta <0.12). Therefore, the conditions of reliability, convergence and discrimination values of the study variables are consistent with the research data and the model was presented to be a good fit model. The distinction of estimated and saturated models in PLS-SEM is in its very early stages. The saturated model assesses correlation between all constructs. The estimated model is a model which is based on a total effect scheme and takes the model structure into account. It is hence a more restricted version of the fit measure.

R-Square

R-square (R^2) of the latent endogenous (dependent) variables of the model is the second criterion which is used for examining the structural model. It represents the effect of an exogenous variable on an endogenous variable. According to Chin (1998), an R^2 higher than 0.67 is strong, higher than 0.33 is mediated and 0.19 is weak. The higher the R^2 for the endogenous structures of a model indicates the better the fit of the model. Therefore, the greater the number of independent variables in explaining a dependent variable, the higher the value of R-square is needed to fit the model (Hensler et al., 2016). According to the results of Table 14, R^2 of intention is 0.525, which was approaching strong and, indicated the good fit of the model.

Table 12

Model Fit Summary

	Saturated Model	Estimated Model
confidence interval= 95%		
SRMR	0.052	0.048
d_ULS	4.890	4.102
d_G	3.426	3.250
Chi-Square (χ^2)	3687.405	3687.405
NFI	0.793	0.793
RMS Theta	0.11	

Table 13*R Square*

	R Square	R Square Adjusted
Intention	0.525	0.510

Goodness-of-Fit Index

Goodness-of-Fit (GOF) is applied as an index for the complete model fit to verify that the model sufficiently explains the empirical data (Chen, 2007). The GOF values lie between 0 and 1, where values of 0.10 (small), 0.25 (medium), and 0.36 (large) indicate the global validation of the path model. A good model fit shows that a model is parsimonious and plausible. The GOF is calculated by using the geometric mean value of the average communality (AVE values) and the average R^2 value(s), and the GOF of the model is calculated by Equation 2 (Chen, 2007).

Equation 2 $GOF = \sqrt{\text{Average } R^2 * \text{Average communality}}$

The calculated GOF index for this study was 0.609, which shows that empirical data fits the model satisfactory and has substantial predictive power in comparison with baseline values.

Table 14*Goodness-of-Fit index calculation*

Construct	AVE	R2
Attitude	0.823	
Belief	0.689	
Intention	0.544	0.525
NEP	0.685	
Perceived behavior control (PBC)	0.679	
Personal Norm	0.793	
Subjective Norm	0.746	
Average Values	0.708	0.525
$\sqrt{\text{Average } R^2 * \text{Average communality}}$	0.609	

Structural Model Coefficients

Structural model coefficients for the relationships between the constructs are derived from estimating a series of regression equations (Becker et al., 2015). Before assessing the structural relationships, collinearity must be examined to make sure it does not bias the regression results. This process is similar to assessing formative measurement models, but the latent variable scores of the predictor constructs in a partial regression are used to calculate the variance inflation factor (VIF) values. VIF values above 5 are indicative of probable collinearity issues among the predictor constructs, but collinearity problems can also occur at lower VIF values of 3-5 (Mason & Perreault, 1991; Becker et al., 2015). Ideally, the VIF values should be close to 3 and lower (Hair et al., 2012). According to the results the VIF for all variables are below 3 and shows that there is no collinearity among the predictor constructs.

Table 15

Variance Inflation Factor (VIF)

	intention
NEP	1.126
PBC	1.345
Attitude	1.195
Belief	2.597
Personal Norm	2.625
Subjective Norm	1.334
Value	1.113

Correlation Coefficient of Latent Variables

Finally, Table 17 shows that there was a strong correlation between the latent exogenous constructs and the latent endogenous construct.

Table 16*Correlation Coefficient of Latent Variables*

	NEP	PBC	Attitude	Belief	Intention	Personal norms	Subjective norms	Value
NEP	1.000							
PBC	0.048	1.000						
Attitude	0.031	0.315	1.000					
Belief	0.032	0.147	0.115	1.000				
Intention	0.122	0.515	0.545	0.215	1.000			
Personal norms	0.216	0.135	0.035	0.756	0.180	1.000		
Subjective norms	0.097	0.432	0.344	0.119	0.472	0.092	1.000	
Value	0.065	0.230	0.096	0.202	0.332	0.085	0.125	1.000

Note. All the associations were significant at 95% confidence interval.

Chapter 5

Discussion and Conclusion

Introduction

Although human desires are without limit, our resources are not. Therefore, it is important for destination managers to utilize the resources effectively and efficiently without wasting them (Lobler, 2017). This study used the TPB, VBN, and ecological worldview theories to enhance the predictability of pro-environmental online purchase behavior. In general, such pro-environmental intentions or behaviors are activated by either pro-social or self-interest motives. Researchers who studied pro-social motives' influence on individuals' environmentally responsible behavioral intentions often utilized the VBN theory, while researchers who considered eco-friendly behavioral intentions as self-interest motives mostly relied on rational-choice theories such as the TPB (Achchuthan et al., 2017; Lin et al., 2017; Wei et al., 2017). The present study implements both of these approaches. The purpose of this study is to examine the influence of sustainability-related User Generated Contents (UGC) on Vancouver Island's visitors' sustainable purchase intentions. In this study, I initially drew on three well-established behavior theories. The theory of planned behavior was used as the core framework. The new ecological paradigm (NEP) and value-belief-norm-theories were added to the TPB to investigate the influence of the predictors of behavior on Vancouver Island's visitors' intention to purchase sustainable products and services. In short, this research attempted to answer the main questions of the research by extending the TPB by adding values, beliefs, norms, and ecological worldview as predictors of behavioural intention.

This chapter will discuss relationships between key findings presented in chapter four to relevant literature in the significant role of sustainable online UGC in impacting tourists' online

purchase behavior. This chapter also includes the contributions of the research, the significance of sustainable online UGC in tourists' online purchase behavior in terms of its managerial implications are discussed followed by the theoretical implications of the research are highlighted by discussing how it has filled the research gaps identified from the literature. Then, the limitations of the study is stated. Finally, recommendations for future research and a conclusion. and future research directions are mentioned.

Theoretical Implications

The TPB proposes that intention is the best predictor of behavior (Vermeir & Verbeke, 2004). The theory posits that attitude, subjective norms, and perceived behavioral control act as important antecedents to the behavioral intention (Shin & Hancer, 2016). First, attitude towards purchasing environmentally sustainable products was found to be positively and significantly related to the purchase intention ($H1; t = 5.962, p < 0.05$). This finding is consistent with prior studies relating attitudes to purchase intentions such as Ajzen (1991), Chan and Lau (2002), Zarei et al. (2020), Ramayah et al. (2012), and Achchuthan et al. (2017). Chan (2001), Tanner and Kast (2003), and Vermeir and Verbeke's (2004) studies also indicated that the favorable attitude towards a product which is environmentally sustainable encourages sustainable consumption behavior. This is consistent with the results of Irland's (1993) research as well, which mentioned consumers' purchasing intentions are dependent upon their environmental attitudes. Thus, the idea of green product purchase and the tendency for using green products increase green product and services purchase intention. Watchrave et al. (2003) also found that the use of the internet for information search can be positively influenced by customer attitude. The rise in popularity of online shopping can be attributed to the motivation of online consumers. Previous research findings confirmed that consumers' attitude towards green and sustainable products can be enhanced by creating awareness in the society, which, in turn, may create a

favorable image of the green products among the people (Chen & Chai, 2010). The positive attitude can work as a “behavioral stabilizer” that protects against self-complacency and goal disengagement – it keeps people on track (Brügger & Höchli, 2019). By contrast, a negative attitude can fuel two tendencies that threaten pro-environmental behavior (Yang, 2017). First, it can make people susceptible to the kind of behavioral fluctuations or the tendency to “rest on one’s laurels”. Second, a negative attitude can increase the susceptibility to disengage entirely from environmental goals after an initial setback (i.e., the recall of a goal-inconsistent behavior). Consumers’ environmental concerns, their tendency to reduce the consumption of environmentally harmful goods, their commitments to significant political and social reforms for environmental sustainability, and strict anti-pollution personal beliefs lead to positive green purchasing attitudes (Watchrave et al., 2003). The consumer’s positive attitude could increase availability and allocation of sufficient resources, highlight sustainable tourism products, increase the impact of peers and people’s views on their sustainable purchase behavior, and thus increase sustainable purchase (Yue et al., 2020).

In addition to the influence of attitude on intentions, the results showed that subjective norm positively and significantly influence sustainable purchase intention (H_2 ; $t = 3.611$, $p < 0.05$). This finding is consistent with other studies such as Ajzen and Schmidt (2003), and Taylor and Laohapensang (2009) ; George (2004); Delafrooz et al.’s (2011); Zarei et al. (2020). Taylor and Laohapensang (2009) addressed the factors influencing internet shopping by Thai consumers in order to answer the question of how well TPB explains online shopping intentions in Thailand. The results which supported the impact of subjective norm on people’s intention to purchase sustainable products. The result of current study is consistent with Zarei et al. (2020) which highlight the significance of individuals’ perception of their abilities to engage in pro-

environmental behaviors. The result is also consistent with Delafrooz et al.'s (2011) findings. This study investigated how consumers form their attitudes and make the purchase intentions toward online shopping. Further, the research focuses on the issues that are related to online shopping intention and provides strategy and directions for the development of online shopping in Malaysia. They found that subjective norm positively predicts information-seeking intention. The results of this study are also consistent with George (2004) who reported that subjective norms and social pressure, regarding purchasing had a positive influence on online purchase intentions. Therefore, subjective norm is an important factor in predicting one's behavior to purchase sustainable tourism products. If people whose opinion is important to individuals ask them to purchase sustainable products, one who values those opinions will be more likely to purchase green products online.

The justification for the effect of subjective norms on intention is that an individual might choose to carry out a particular behavior if they believe that a person who is important to them would encourage them to perform this behavior (Francis et al., 2004). The results suggested possible directions for the marketing activities of various stakeholders interested in the dissemination of the environmentally-oriented behavior of individuals. Because of the clear impact of descriptive norms, it is possible to assume that in terms of moving social change in a positive direction, it would be effective to highlight the environmentally-oriented behavior of certain people with whom individuals can identify. Similarly, the positive effect can be achieved by emphasizing the general growth in the consumption of sustainable tourism products, because individuals will be more inclined to do what a growing number of people seem to be doing (Ham et al., 2015).

Perceived behavioral control has been shown to influence intention in various contexts, such as leisure activities (Ajzen & Driver, 1992). Pro-environmental behavior has also been found significant in energy conservation (Albayrak et al., 2013). Ajzen (1988) suggests that perceived behavioral control should predict behavioral intention.

In this study, the elements of perceived behavior control, i.e., control of the availability of environmentally sustainable products and perceived consumer effectiveness was found to have a positive and significant relation with the purchase intention for the environmentally sustainable products ($H3$; $t = 3.662$, $p < 0.05$). The findings are in sync with the results obtained from Taylor and Laohapensang (2009) who identified the effect of attitude, subjective norm, and PBC towards the service on consumers' intention to carry out internet travel shopping. The result is also consistent with Limayem et al., (2000) and Delafrooz et al., (2011) who demonstrated the positive impact of PBC on consumers' intention to purchase tourism products online. In the context of green product consumption, Arli et al. (2018) found that perceived behavioral control has positive influence on individuals' readiness to be green and on their purchase intention towards green products. Perceived behavioral control has been considered a good predictor of individuals' intentions to buy green products (Cheng et al., 2006, Baker et al., 2007, Chen & Tung, 2014). The positive influence of PBC on recognizing consumers' intentions to buy green products and services is important for marketers (Chan and Lau, 2002), as it helps to formulate suitable strategies for developing green product markets.

Value-Beliefs-Norm Theory (VBN; Stern, 2000) explains behaviors related to environmental protection from the perspectives of both self-interest and altruism (Henry & Dietz, 2012). This theory proposes that a sequence of factors such as values, beliefs, and personal norms play important roles in motivating pro-environmental behaviors (Achchuthan et al., 2017).

For instance, using VBN theory, Han (2015) investigated travelers' pro-environmental behavior in a green lodging context, while using behavior intention as an outcome variable.

The findings of this study confirmed the significant impact of perceived value on sustainable purchase intention (H5; $t = 3.460$, $p < 0.05$). This result is consistent with the findings of Bamberg, (2003) and Steg et al., (2005) which confirmed that value is a significant factor in explaining environmentally friendly behaviors. These results are also aligned with the finding of Dietz et al., (2005), de Groot and Steg (2008) that confirmed the influence of values on behavior through a path of other variables such as worldviews, beliefs about consequences of an environmental problem, beliefs about responsibility to act, and personal norms. Therefore, the perceived value of sustainable products will increase sustainable purchase. Customers initially tend to consume services which reduce costs or have earnings for them (Yu et al., 2014). Thus, one of the primary goals of firms should be a focus on the continuous improvement of customer-related values and deployment of mechanisms, which increase customers' perceived value for sustainable products.

Personal norms are an individual's sense of self-ethical obligation to perform a behavior (Bai & Bai, 2020). The results indicated that the influence of personal norm on sustainable purchase intention is not significant (H4; $t = 0.741$, $p < 0.05$) This finding is inconsistent with the result of Quoquab et al. (2020) who found support for the positive relationship between personal norm and green purchase behavior. The result is also inconsistent with the results of Stern et al., (1999) who indicated the possible influence of personal norms in all kinds of behaviors taken with pro-environmental intent. Therefore, the Personal norm does not increase sustainable purchase.

Based on this finding, to enhance consumer's behavioural intentions to purchase green products, providers like hotels should develop their service offerings based on the consumers' personal norms. In order to implement these findings, it is important for providers to use their marketing initiatives to communicate to their consumers their dedication to environmentally friendly practices. In terms of the personal standard (PN), only those consumers who believe they have a responsibility to protect the environment are likely to show their beliefs by their behavior.

The reason also would be the fact that personal norms are influenced by other attitudinal factors, such as problem awareness, social norms, and adherence to an ecological worldview (Jansson & Dorrepaal, 2015). Awareness of potentially harmful consequences and a sense of personal responsibility activate a person's personal norms and thereby lead to behavior. Thus, increasing people's environmental awareness can be helpful in this regard.

Based on the results, the influence of beliefs on sustainable purchase intention was not statistically significant ($H6; t = 0.469, p < 0.05$). This finding is inconsistent with those of Quoquab et al. (2020), Stern, (2000) and Steg and Vlek, (2009) who confirmed the positive relationship between beliefs and green purchase behavior. This inconsistency might be a result of the focus of this study on 'online' green purchase behavior. Feeling personal responsibility for a threat and feeling perceived ability to alleviate the threat may be related, but they are not synonymous (Choi et al., 2015). For example, hotels could advertise online about their sustainable strategies, and educate the customers about their responsibilities (AR), but may not think they can do much to alleviate the problem (ability to reduce threat).

Another reason may be that users lack an understanding of the true influence of their behavior on the environment and potential costs, time and entrenched habits or external barriers

that drive consumers to engage in unsustainable consumer behavior rather than environmentally friendly behavior. For example, consumers often purchase green products online, if providers offer competitive price and quality as compared to traditional products to those customers who are willing to purchase sustainable products. Furthermore, Afzal et al., (2011) reported that mostly, the perception of green products is negatively associated with customer's intention to purchase them if they are of higher prices and low quality in comparison to traditional products.

According to the findings of this study, belief in sustainable products does not increase sustainable purchase. Thus, positive environmental beliefs or attitudes do not necessarily translate into environmental behaviors. However, in order to foster purchasing and consuming of sustainable products, the most important task is to educate consumers about the advantages of sustainable products for environment and their health as well (Lundmark, 2007).

Ecological worldview is a belief-based, value-oriented predictor of consumer intentions to behave in a pro-environmental way (Derdowski et al., 2020). Ecological worldview (often referred to as the New Ecological Paradigm; NEP) acts as an important antecedent to behavioral intention. The findings of this study are consistent with Derdowski et al. (2020) that indicated a positive link between ecological worldview and a person's pro-environmental purchasing behaviors ($H7; t = 1.998, p < 0.05$). The result is consistent with Moghimehfar et al. (2018) who found that New Ecological Paradigm has a direct, positive effect on camper's intention to engage in pro-environmental camping behaviours. The result is also consistent with Dunlap et al., (2000) who recognized that innovative capacity is allowed for the growth in humans. They predicted that humans are independent of their thoughts and working capacities.

The anthropocentric stances that humans are more deserving than other creatures are well reflected by the ecological worldview scales. Furthermore, it represents the separation of humans

from nature, which is depicted as a massive warehouse of resources that humans are entitled to use in order to increase their wealth and well-being. The scale also captures anthropocentrism's optimism regarding human capacity to solve environmental problems (Erdogan, 2009). This optimism is, however, exaggerated when viewed from the perspective of contemporary theorizing on environmental ethics. More modern (yet more modest) interpretations of anthropocentrism recognize ecological dependency, at least in the sense that humans depend on nature's resources for survival and well-being. From this follows sensitivity for risks involved in human–nature relations, including the risk that natural resources might run out. These are all central notions of the NEP position of the scale that stress the negative side-effects of human interference with nature. The results confirmed the positive and significant impact of five NEP items including Fragility of nature's balance, Possibility of eco-crisis, Anti-anthropocentrism, Anti-exceptionalism, and Limits to growth on sustainable purchase intention.

This study makes one of the first attempt to enhance the predictability of pro-environmental online purchase behavior by merging the TPB, VBN, and ecological worldview theories. According to Ajzen (1991), extending the TPB with the new variables was acceptable if the theory's structure remained consistent and the new predictors were capable of improving the theory's explanatory power through improvements in the captured variance. Hoeksma et al., (2017) explored the model based on the theory of planned behavior explained 55% of the variance in Dutch consumers' intention to purchase meat, but it is noteworthy that, when this model was extended with personal norm from VBN theory, 59% of the variance could be explained.

The original TPB model does not include moral drivers of behaviors, and VBN does not include non-moral motivations to predict the behavior at stake (Klößner, 2013). The present

research addressed this gap by adding the VBN variables to the intention, resulting in an extended TPB model. VBN has already been added to TPB in other research (e.g., Parker et al., 1995, Hoeksma et al., 2017, Thøgersen (2002), Verbeke and Vackier, 2005, Zarei et al. 2020). This would mean, for the current study, that the extended model can predict more completely consumers' intention to purchase sustainable product online more than TPB and VBN alone can. In this study, the R square measured when the TPB alone was associated and when the VBN and NEP were added to TPB. There were 5 % differences in measuring the power of predictability of purchase intention.

Considering the limited number of available empirical studies that merge these theories to predict and enhance the pro-environmental purchase intention and behavior, this study can serve as a reference to investigate the validity of the proposed model for study on subject related to environmental issues in other geographical areas and cultural settings.

Practical Implications

There are several important implications of the results obtained from this study. First, drawing on the critical review of TPB, VBN, and ecological worldview theories with the customer centric concept as green perceived value, this work proposes a more comprehensive model to predict and enhance pro-environmental purchase intentions. In this study the TPB and VBN theories were used to enhance the predictability of pro-environmental purchase behavior. In general, Turaga et al., (2010) explained that pro-environmental intention is activated by either pro-social or self-interest motives. Social media influencers can act as important groups that can change peoples' online purchase behavioral intentions by using UGC and power of social media. Social media influencers are ordinary people who have knowledge in some specific areas and become online celebrities as content creators with a social media following (Lou & Yuan, 2019).

They can act as a promotional tool in the process of consumer decision making and will be effective on their sustainable purchase behavior by creating the related contents (Sánchez-Fernández & Jiménez-Castillo, 2021). For example, one sustainability oriented hotel can call on social media influencers for offering free stays to promote their sustainability activities of the hotel such as using bio-based detergents for washing towels or plastic free strategies in the hotel through social media platforms by creating videos and photos. Furthermore, hotels can offer discounts for the influencers' followers to encourage them to behave more sustainably. Thus, tourism managers should employ these influencers' impact towards promoting sustainable tourism product purchase. Self-interest motives are a factor of awareness (Onel & Mukherjee, 2017). Improving people's awareness about environmental tourism products will improve their purchase behavior. Destination marketing managers such as Tourism Vancouver Island, should emphasize the environmental aspects of Vancouver Island's tourism products in their content developments in order to achieve this goal. Focusing on environmental issues and providing education to people through online channels can be an effective method to achieve this goal.

Findings of this research have contributed to both theories and practice in the tourism industry. They have provided valued knowledge on the prerequisite of the purchase intention, which finally leads to purchase behavior for environmentally sustainable products in the studied context. These findings can help policy makers as well as marketers to formulate policy actions that would enhance the purchase and usage behavior of the consumers towards environmentally sustainable products.

It is important for the policy makers working towards the improvement of the environment to understand the behavioral aspects of consumption so that they can encourage people to change and believe in certain aspects of their actions, leading to the betterment of the

environment and ecology (Kumar et al., 2017). This can be done through the following steps: First, the role of educating people about environmental protection should be strengthened, in order to foster a sense of environmental responsibility, particularly in young people.

Environmental protection willingness is a key factor that affects residents' environmental protection behavior. To promote environmental protection willingness and generate more environmental protection behavior, government should start with personal norms. In other words, it is necessary to strengthen people sense of environmental responsibility, guide residents on the path to establish environmental protection values, and allow people to sincerely and deeply realize and understand the importance of environmental protection behaviors. Then, they will consciously and voluntarily practice environmental protection in daily life.

Second, environmental protection activities should continually be publicized and promoted throughout the whole of society. Appropriate pressure should be maintained in the form of public opinion with regard to environmental protection. The government should improve the current monitoring mechanisms; environmental protection requirements should not be relaxed. The government should also continue to encourage environmental protection behaviors and actively guide people to participate in environmental protection (Bai & Bai, 2020).

Consumers prefer a green product with favorable functional attributes. So, a producer or marketer should not only focus on the green characteristics of the product, but also on functional attributes. Companies need to introduce innovative products which combine green and functional attributes. Further, producers and marketers should not only introduce products with eco-labels, but also make efforts to develop consumer trust in the eco-label. To this end, marketers can run campaigns to promote public awareness of eco-labels,

inform citizens about the meaning and availability of the eco-labels, and the benefits of using eco-labelled products. Government should also monitor the credibility

The landscape of marketing is changing rapidly due to ever increasing attention being paid to issues like pro-environmental behavior (Kumar et al., 2017). The pertinent issues like climate change, greenhouse gas emissions, etc. are threatening sustainable development with pervasive impacts on the global socio-economic scenarios (Quoquab et al., 2020). Hence, more and more producers and consumers are expected to shift towards products which are environmentally sustainable in nature. At this stage, it is of immense importance for marketers to include the element of environmental sustainability in their marketing strategy and product development. The current study would help them in understanding an important element of the marketing strategy, which is the behavior of consumers.

Social marketers, environmental activists, and relevant institutions are recommended to use the conceptualized model of this study to promote sustainable tourism behaviors. Given the fact that social media is viewed as a more reliable and trustworthy source of information, these relevant people and institutions are recommended to use social media as a channel to promote the pro-environmental behavior of tourists.

Policy makers and marketers need to keep in mind that environmental knowledge has a significant and positive impact on the attitudes towards environmentally sustainable products (Kumar et al., 2017). It provides them with the opportunity to design their communication content in line with requirements to enhance the knowledge level of their target audience. There is always a concern towards the authenticity of the claims made by marketers for the environmentally sustainable products. A right set of knowledge is expected to have a positive impact on the attitudes of the consumers as per the findings of this study. Therefore, a tourist

awareness and community relations program should be launched to educate the local community members and inform them about pro-environmental behaviors. At the same time, it is also essential to show local communities how they can participate in the management, operation, and ownership of the tourist facilities in their respective areas. The objective behind the program should be to create goodwill and a positive attitude among the local communities, particularly the landowners who live in that area.

It is also important to note that the perception of reward or punishment affects the factors like perceived consumer effectiveness (Poortinga et al., 2003). Also actions from agencies aimed at increasing pro-environment behavior is seen more favorably compared to reducing the environmentally harmful behavior (Steg et al., 2006). Hence, the notion of perceived consumer effectiveness shall be aligned accordingly by the marketers or policy makers while designing their strategies for environmentally sustainable products.

Limitations and Future Research Avenues

Despite the significant implications of this study, there are still some limitations that need to be addressed, which suggest research opportunities and investigative opportunities for the future research.

First, this study examines the pro-environmental tourist behavior through a self-reported questionnaire. Collecting all of the data from an online survey platform, this study has the general problems of online surveys such as self-selection bias and non-response error. The respondents are attracted by the survey platform and personal social media account, so it is quite common for people to not respond to the survey due to privacy concerns. This cannot fully reflect the actual behavior of the tourists in tourism destinations. Besides, the sample size of the study was small compared to the size of the model. Therefore, it is suggested that future studies

do non-probability sampling and select samples based on the subjective judgment of the researcher rather than random selection.

The online self-reported survey, which is a popular method in the TPB guided behavior studies was used due to limited resources, the need for a large sample size, and difficulty of engaging in observation as a method of documenting environmentally-significant behaviors had limits. However, results obtained by this method may be different from studies of actual behavior that utilized observation (Duffy et al., 2005). The online self-report approach has many advantages, but it also suffers from specific disadvantages due to the way that subjects generally behave. Self-reported answers may be exaggerated; respondents may be too embarrassed to reveal private details; various biases may affect the results, like social desirability bias (Lucas, 2018).

Based on self-reported data on the respondents' pro-environmental behavior, the study cannot fully evaluate the individuals' actual behavioral intention under specific conditions. As a result, there may be the social desirability issue, which, as an issue that has been considered the scholars for a long time, refers to the tendency of individuals to convey a positive image to keep consistent with social norms and avoid criticism (Hebert et al., 1995). Therefore, future research studies are encouraged to use a different method for intentional behavior measurement.

Another limitation of this study is that the research was carried out in Canada. In some studies on intention, cultural context proved to be important (Trivedi , 2016). Individuals coming from countries that are more collectivist seem to experience stronger pressure from significant others and are more willing to comply with their opinions. On the other hand, individuals born and raised in predominantly individualistic countries may have stronger attitudes toward certain behaviors and may pay less attention to what other people think or do (Gawronski, 2007).

Therefore, the study cannot be generalized to the general Canadian population or other contexts which are more multicultural. Considering that the power of interpersonal influence is culturally dependent, further studies can apply the research model of this study to different contexts to achieve cross-cultural analyses concerning the pro-environmental tourist behavior.

This study was conducted during the COVID-19 Global pandemic in 2020. Travel intentions were extensively impacted by the global pandemic. The economic crisis linked to COVID-19 will have repercussions on purchasing power. This will have an effect on the response of participants in this study. Thus, this study suggests that future studies consider the impact of COVID-19. There is a need for a “community-centered tourism framework” with responsible approaches to reset, redescribe, and refamiliarize the tourism industry in the interest of local communities.

Finally, considering overall research based on the theory of planned behavior, what happens between the moment the intention was formed and the moment the behavior is undertaken is still substantially a black box (Krueger, 2009). In the framework of this study, I did not include actual behaviors as a factor due to time limitations and COVID-19 pandemic research restrictions. Future efforts should be directed to that area of research.

Conclusions

This research is among the first studies that combined NEP, VBN, and the TPB to investigate the influence of the predictors of behavior on Vancouver Island’s visitors’ intention to purchase sustainable products and services. This study has contributed to the research on sustainable tourism and provided valuable knowledge on the prerequisite of the intention to purchase sustainable products. In conclusion, findings of this research may be of interest to social marketers and environmental activists who intend to be opinion leaders. Furthermore, they

may also be helpful to relevant government institutions such as destination management organizations in working out effective information to encourage sustainable tourism since they have a huge control over Vancouver Island's internet. Meanwhile, travel website managers who want to contribute to sustainable tourist behaviour promotion may also use the findings of this research.

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Appendix A: VIU Research Ethics Board Approval

June 05, 2020

Mrs. Sepideh Shahidi
Faculty of Management\Master of Arts in Sustainable Leisure Management
Vancouver Island University

File No: 100661

Approval Date: June 05, 2020

Expiry Date: June 04, 2021

Dear Mrs. Sepideh Shahidi,

The Vancouver Island University Research Ethics Board (VIU REB) has reviewed the Application for Ethical Review of your project entitled 'The relationship between online destination sustainable User-Generated Contents and Vancouver Island's visitors' sustainable online purchase behaviour'.

I am pleased to relay that your application has been approved and, as at June 05, 2020, you are authorized to commence the research as outlined in the approved application. This REB approval is valid for one year less a day, until: June 04, 2021.

Throughout the duration of this REB approval, all requests for modifications to the approved ethical protocol must be submitted via the Research Portal.

If you have any questions about the REB review and approval process, please contact the REB Office at reb@viu.ca or by telephone at (250) 740-6631. If you encounter any issues when working in the Research Portal, please contact our system administrator at romeo@viu.ca.

Sincerely,
Vancouver Island University Research Ethics Board

Chris Turner, PhD
VIU Research Ethics Officer
www2.viu.ca/reb | reb@viu.ca | chris.turner@viu.ca | (250) 741-6631

Appendix B: Participant's Consent Form

The relationship between online destination sustainable User-Generated Contents and Vancouver Island's visitors' sustainable online purchase behaviour

Principal Investigator

Sepideh Shahidi
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Vancouver Island University, Canada
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Project Supervisor

Dr. Farhad Moghimehfar
Recreation and Tourism Management
Department
Vancouver Island University, Canada
Farhad.Moghimehfar@viu.ca

Greetings,

You are being invited to participate in a research study that will help us understand people's opinion about online user-generated contents and their influence on people's online purchase behaviour. You were selected as a potential participant because you represent a Vancouver Island visitor who is above the age of 19 and has used online platforms to obtain online information about visiting Vancouver Island. This study is being conducted by Sepideh Shahidi under the supervision of Dr. Farhad Moghimehfar from Vancouver Island University, Canada.

We ask that you read this form and if you have any concerns or questions before agreeing to be in the study, please feel free to contact the researcher at the email listed at the end of this document.

Google Forms is being used to collect your survey responses. Data may be stored on Google's servers located in the United States. (Google's privacy policy: <https://policies.google.com/>). I will delete all survey data from Google's servers soon after project data collection has been completed. I will not collect any identifying information, such as Internet Protocol (IP) address. Privacy will be maintained to the degree permitted by the technology. Thus no guarantees can be made regarding the interception of data by any third parties while data is transmitted across international borders. Please note that because Google may store data on servers located in the United States, your data may be accessed by US authorities under US security legislation.

I kindly request about 15-20 minutes of your time to answer the following questions concerning your opinions about different statements regarding visiting Vancouver Island.

Your Rights as a Research Participant

Your participation in this research is voluntary, and you can exit at any time before submitting your survey. You can skip any question that you do not like to answer. Your personal information, including name and affiliation, will not be recorded in the study. All data will be aggregated. Your participation is therefore anonymous, and no one but the VIU researcher will see your survey responses. After collection, we'll hold on to the original surveys in a password-protected computer in the researcher's office until a specific time after the data is analyzed and published then we'll delete your survey responses. In any sort of report, we might publish, we will not include any information that will make it possible to identify a participant.

Survey Risks and Benefits

Risks are minimal for involvement in this study—no apparent risk to subjects beyond what would be encountered in daily life or conversation. There are no direct benefits for participation. However, it is hoped that through your participation, the information will contribute to our general understanding of Vancouver Island visitors' opinions about online user-generated contents and online tourism service and products. The results of this research will be published in my Master's thesis and may be used in conference presentations or published in academic journals. If you are comfortable participating in this survey, completing this questionnaire will indicate to us that you have voluntarily agreed to participate and understand your rights in this research.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, you are encouraged to contact the Vancouver Island University Research Ethics Officer at reb@viu.ca or +1 250-740-6631.

You may print or save a copy of this letter for your records.
Thank you!

