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The Role of Culture in Sustainable Tourist Behaviour in Thailand

Porramate Jaratmetakul
Bachelor of Business Administration (Finance), Khon Kaen University, Thailand
Master of Business Administration (Marketing), Khon Kaen University, Thailand

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Porramate Jaratmetakul

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The research associated with this thesis abides by National Statement on Ethical Conduct in Human Research and the ruling of safety and Ethics of the Human Research Ethics Committee of the University of Tasmania.

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Porramate Jaratmetakul

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ABSTRACT

Sustainable tourism, especially its environmental dimension, is a topic of great significance, and concerns balancing the number of tourists and the development of tourism infrastructure. Many scholars and practitioners discuss sustainability and the management of the environmental impacts of tourism, as tourist behaviour may directly or indirectly impact the destination environment (Lee, Jan & Yang 2013a). One factor that has been under-used in the study of sustainable tourism behaviour is culture. Culture can have a strong impact on behaviour, and a large number of studies have focused on culture at a national or societal level. However, less research has explored culture at the individual level, that is, the extent to which the individual displays certain cultural characteristics. Yoo, Donthu and Lenartowicz (2011) state that culture at the individual level can be a useful approach for market segmentation, and as stated, there is a deficit of research of the significance of culture in sustainable tourist behaviour at this level. Understanding tourists' cultural characteristics and background at the individual level could benefit and link to tourists' attitudes and behaviour.

This study aims to develop a new model of the relationship between cultural characteristics, tourist attitudes, subjective norms, perceived behavioural control, perceptions of Thailand's destination image and sustainable tourist behaviour. The primary objective of the study is to develop a conceptual framework to explain the relationship between individual culture, as measured using Hofstede's (2001) framework, and sustainable tourist behaviour. The Theory of Planned Behaviour (TPB) and destination image are also used as theoretical bases for the research. Tourist attitudes, divided into the three components of cognition (environmental knowledge), affect (New Ecological Paradigm) and past behaviour, are used as mediators of the relationship between the individual's cultural characteristics and sustainable tourist behaviour. Subjective norms, perceived behavioural control and destination image are examined as moderators of the relationship.

The study employed a quantitative research methodology, using self-administered questionnaires via an onsite intercept in national parks in Chiang Mai, Thailand. Data from 485 international and domestic tourists were collected. The results showed the five Hofstede

cultural dimensions were related to sustainable tourist behaviour. Uncertainty avoidance was the strongest predictor of sustainable tourist behaviour, followed by power distance, masculinity/femininity and long-term orientation. Mediation and moderation effects were found for environmental knowledge and the New Ecological Paradigm as mediators, and subjective norms, perceived behavioural control, and destination image as moderators.

The findings advance knowledge in marketing and sustainable tourism by offering a theoretical explanation for the relationship between cultural characteristics at the individual level, tourist attitudes, subjective norms, perceived behavioural control, perceptions of Thailand's destination image and sustainable tourist behaviour. In a practical context, this study shows the implications for businesses and tourism organisations of a better understanding of tourists' culture influences and behaviour in a Thai context. Moreover, the result of this study will be useful for businesses to provide effective marketing strategies for specific tourists, especially in sustainable tourism.

CHAPTER ONE

Introduction

1.1 Introduction

The tourism industry plays an important role in the world economy, accounting for at least 3.9% of Global GDP; contributing a record US$8.8 trillion in 2018 and providing over 319 million jobs (WTTC 2019). Tourism and travel industries are recognised as being in the top five industries providing job creation, projected to contribute 100 million new jobs worldwide over the next ten years (WTTC 2017). According to the World Tourism organization (WTO), the growth of tourism has increased dramatically in past years. In 1950, 25 million tourists travelled internationally, compared with 674 million in 2000 and 1.5 billion in 2019. Meanwhile, the economic contribution of tourism globally has also increased from US$2,000 million in 1950, to US$495,000 million in 2000, US$1,260,000 million in 2005, and US$2,600,000 million in 2017 (WTTC 2018). The revenue from the tourism industry has become an important source of economic contribution for both developed and developing countries. Some scholars also point to the growth of the tourism industry in terms of increasing economic development (e.g., Qin et al. 2018; Qing & Yu 2016; Schubert, Brida & Risso 2011). Consequently, many tourism destinations around the world attempt to improve their tourism attractions in order to entice large numbers of tourists. With such growth, competition among tourism destinations is also extremely fierce (Bornhorst, Ritchie & Sheehan 2010; Keating & Harrington 2003).

With the continued growth and expansion of the travel and tourism industry, some tourism scholars have indicated both positive and negative impacts of tourism on economic, socio-cultural, and environmental issues (Gursoy, Jurowsky & Uysal 2002; McGehee & Andereck 2004; Nunkoo & Ramkissoon 2012; Stylidis & Terzidou 2014). The positive impact of tourism includes raising incomes, enhancing social welfare, and the creation of public facilities. In contrast, the negative impacts include an expansion of various pollutants, environmental problems, waste, and noise (Pizam, Milman & King 1994; Wu & Chen 2015). For example, increasing the number of tourists also increases the level of traffic and waste problems that can be incurred in a tourism destination such as a national park, rural city, special event, and

heritage site. This problem cannot be solved by the public and/or private sectors alone. Research indicates that human (tourist) behaviour may directly or indirectly impact the destination environment (Lee, Jan & Yang 2013a). As a result of the increased awareness of environmental concerns, the concept of sustainable tourism has developed as a feature in the work of government authorities, the private sector and tourism related industries, as well as tourism scholars so as to demonstrate a more balanced approach to dealing with the cumulative negative effects of tourism activity (Ruhanen et al. 2015). Sustainable tourism refers to 'tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, and the environment and host communities' (UNEP-WTO 2005 p. 12). Prior empirical research on sustainable tourism has focused on different areas of eco-tourist travel behaviour, behavioural intention and socio-economic impacts of tourism (e.g., Phoummasak, Kongmanila & Changchun 2014; Tangeland 2011). Sustainable tourism scholars suggest that tourists' environmental concern, assessed as perceived importance of environmental sustainability in vacation choices, is influenced by sex, age, education and income (Hedlund, Marell & Garling 2012). Tourist motives, perceived value, satisfaction with the destination can be examined to predict future behavioural intentions and differences in tourist environmental attitudes (Chiu, Lee & Chen 2014; Lee 2009). Tourists travel to natural (ecological) tourism destinations because they are motivated by the destination attributes and resources. Sustainable tourist behaviour assists in avoiding damage to the such environments. For this reason, understanding the impact of tourist *behaviour* in the context of sustainable tourism is worth consideration.

While the impact of tourism on economic, social, and environmental issues has received considerable attention in the tourism literature, not all of tourists engage in sustainable tourist behaviour. People from different cultures may differ in terms of their environmental concern and environmental attitudes which may impact sustainable tourist behaviour. Regrettably, there has been limited research which attempts to measure different cultural characteristics and explain how these different cultural characteristics play a role in effecting differences in environmental attitudes and sustainable tourist behaviour. While sustainable tourism is a key concept, it is useful to also investigate the role of cultural differences in creating and understanding tourist behaviour. Previous studies have only begun to look at the topic of cultural differences and the effect on tourist behavioural outcomes (Kim & Ritchie

2014). Their research, for example, found that in a cross-cultural setting, the memorable tourism experience scale showed comparable validity; but the research did not specifically look at cultural charactersitics. The current research is aimed at adding to the sustainable tourism literature by focusing on tourists with different cultural characteristics and their behaviour in terms of environmental issues in the context of sustainable tourism. Sustainable tourism is an important concept which aims to balance the number of tourists and the development of tourism infrastructure (Kontogeorgopoulos 1999). This concept has become of increasing interest since the 1980s (Andereck et al. 2007). The World Tourism Organisation (1993, p.7) defines sustainable tourism as 'tourism protecting and enhancing opportunity for the future'. Yu, Chancellor and Cole (2011) state that sustainable tourism aims to decrease negative impacts on local culture and the environment while generating benefits for host residents. However, the environment remains the most researched dimension of tourism, and discussions on sustainability and the management of the environmental impacts of tourism are very common in the literature (Kang & Moscardo 2006). Since the notion of sustainable development has arisen in relation to tourism, this concept relates as well to the area of carrying capacity (CC). In this regard, the Pacific Asia Travel Association (PATA) espouses that environmentally responsible policies fully respect the natural and cultural identity of tourism resources (Chon 2013).

Wei, Crompton and Reid (1989) state that cultural differences can increase the level of cultural conflict that relates to lifestyle, individual behaviour, expectations, value systems, traditions, safety and moral conduct. It is not surprising that the level of recognition of the significance of culture in tourist behaviour is increasing (Hudson & Ritchie 2001). However, there is still a lack of research on the significance of cultural differences in sustainable tourist behaviour at an individual versus a societal/national level. Understanding of tourist's cultural characteristics has been realised to create market segmentation (Yoo, Donthu & Lenartowicz 2011). Thus, understanding the tourist's cultural characteristics at an individual level could benefit understanding of tourists' attitudes and behaviour. In order to create new marketing strategies, it is important to examine the role of sustainable tourist behaviour and individual culture.

Kaynak and Herbig (2014, p.11) define culture as:

> the sum total of a way of life, including such things as expected behaviour, beliefs, values, language, and living practices shared by members of a society; it is the pattern of values, traits, or behaviours shared by the people within a region.

According to cultural characteristics research, culture is indicated as one of the primary forces behind tourist decision making from the stage of need recognition to post consumption behaviour (Yacout & Hefny 2015). In the literature, many scholars postulate that measuring different cultural characteristics including Hofstede's concept (2001), is a broadly accepted means to quantify dominant national cultural values (Reisinger & Crotts 2010). Moreover, this measure has underpinned various key factors in tourism literature (Litvin, Crotts & Hefner 2004; Mazanec et al. 2015; Reisinger & Crotts 2010). Hofstede identifies five cultural dimensions in the cultural systems of different countries (Hofstede 2001).

The purpose of this study, therefore, is to explore factors affecting the influence of cultural characteristics on sustainable tourist behaviour. This study aims to develop a new model of the relationship between different cultural characteristics as measured using Hofstede's (2001) framework, tourists' attitudes, subjective norms, perceived behavioural control, perceptions of Thailand's destination image and sustainable tourist behaviour. The current study examines the relationship between individual cultural characteristics and sustainable tourist behaviour in a national park context in Thailand. In this regard, culture is seen as an antecedent of sustainable tourist behaviour. The Theory of Planned Behaviour (TPB) is used to identify the extent to which attitudes, subjective norms and perceived behavioural control impact the cultural characteristics and sustainable tourist behaviour relationship (e.g., Hsu & Huang 2010; Jalilvand & Samiei 2012; Lam & Hsu 2006). Tourist attitudes toward environmental issues (comprising cognitive, affective and behavioural components) is examined as a mediator of the relationship. Subjective norms, perceived behavioural control, as well as Thailand's destination image, are examined as moderating factors.

The objective of this chapter is to introduce the thesis. The chapter is divided into ten sections. The following Section 1.2 presents the research background of this study with a summary of the research problems, which will be followed by research context and research objectives/

questions (in Section 1.3 to Section 1.4). The next section (Section 1.5) illustrates the contribution of the study. Section 1.6 discusses the definition of constructs and terms in this study. A brief overview of the research methodology and delimitations of scope are provided in Section 1.7 and Section 1.8. Then, Section 1.9 provides the overall structure of the thesis. Finally, the conclusion of this chapter is provided in Section 1.10.

1.2 Research background

1.2.1 Sustainable tourism and sustainable tourist behaviour

As stated earlier, tourism is one of the world's largest sources of revenue and has been officially accepted as a major factor leading to economic growth and in-country development (Tan et al. 2018; Wu & Chen 2015). Due to these advantages, over the last ten years the tourism industry has entered an era of intense competition (Han et al. 2017; Webster & Ivanov 2014). However, the growth of tourism may not have produced only positive impacts but also negative ones on host destinations, encompassing economic, societal, cultural, and environmental issues. These negative impacts can be very visible in a tourism destination where tourists interact with the local environment, economy, and culture (Mason 2003). These factors can be also form the basis of a sustainability assessment tool (e.g., Mowforth & Munt 2009; Sangchumnong & Kozak 2018).

The notion of sustainable tourism can be defined in several ways. Lu and Nepal (2009) say that sustainable tourism has different definitions depending on different groups. For instance, UNEP-WTO (2005, p.12) defines sustainable tourism as, 'tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry and the environment and host communities'. In this sense, the sustainable tourism concept was created to avoid negative circumstances and rather increase economic, social, environmental and cultural benefits for the host community. In the same vein, Bramwell and Lane (1993) suggest that sustainable tourism is an approach that aims to decrease pressure and negative impacts between the tourism industry, tourists, visitors, the environment and local communities. Further, some scholars have argued for the significance of sustainable tourism as a key factor in a destination's competitiveness (Pulido-Fernández, Andrades-Caldito & Sánchez-Rivero 2015; Ritchie & Crouch 2000). Ritchie and Crouch (2000,

p.5), for example, noted that competitiveness is 'illusory without sustainability'. In this study, the environment dimension of sustainability will be focussed on.

Sustainable tourist behaviour has emerged as a new development paradigm applied to several activities in the tourism context (Eusébio, Kastenhoiz & Breda 2014), and only a limited number of studies have investigated sustainable tourist behaviour specifically. Previous relevant studies have looked at attitudes and behaviours in a specific segment, for example, young tourists (Buffa 2015), while other studies have focussed on particular types of tourism destination or product (e.g., Dolnicar 2010; Miller, Merrilees & Coghlan 2015), nature-based tourism (e.g., Lee & Jan 2015; Miller, Merrilees & Coghlan 2015), island destinations (e.g., Moscardo & Murphy 2016), urban destination (e.g., Miller, Merrilees & Coghlan 2015), events (e.g., Mair & Laing 2013) and hotel markets (e.g.,Mohd Suki & Mohd Suki 2015). The environmental dimension has received a lot of work in general in terms of sustainable tourism (e.g., Barr, Shaw & Coles 2011; Dolnicar 2010; Dolnicar, Crouch & Long 2008; Doran, Hanss & Larsen 2015; Juvan & Dolnicar 2016; Lee & Jan 2015; Mair & Laing 2013; Sriarkarin & Lee 2018). As a main driver of tourist decision-making, this is understandable, as the state of a destination's environment is going to be directly related to visit and revisit choices within the broad area of sustainable tourism (Asadzadeh & Mousavi 2017; Sadat & Chang 2016). For this reason, this study investigates only environmental aspect of sustainable tourism, in order to extend the existing literature related to sustainable tourism by focussing on actual, tourism behaviour as the outcome variable of interest. Indeed, the literature review (in the following chapter) did not reveal any study examining sustainable tourist behaviour in national parks in Thailand considering the environment dimension.

1.2.2 Theoretical approaches to sustainable tourist behaviour
1.2.2.1 Culture
Artal-Tur, Villena-Navarro and Alamá-Sabater (2018) argue for the importance of culture as a characteristic influencing patterns of tourist behaviour. Reisinger and Turner (2003) also state that cultural differences are especially relevant to the tourism industry. There are several studies which have found that cultural background is a significant issue that affects the attitudes of tourists (Hudson & Ritchie 2001; Kang & Moscardo 2006; McKercher, Pang & Prideaux 2011; Tsang & Ap 2007), and their behaviour (Meng 2010; Seongseop Kim &

McKercher 2011). Culture can be defined in various ways (Srnka 2004).According to Reisinger and Crotts（2010）, culture involves collective thought and values, and assumes more between-group differences than within-group differences. A large number of studies have used the cultural dimensions of Hofstede (1997) in research in tourism (Litvin, Crotts & Hefner 2004), and others have adopted the cultural dimensions in tourist cross-cultural comparisons （Hofstede & Hofstede 2005）. Reisinger and Crotts（2010）also affirmed that Hofstede's five cultural dimensions (power distance, uncertainty avoidance, individualism versus collectivism, masculinity versus femininity, and long-term orientation) have a good level of measurement stability, and thus reliability over time. These studies have used Hofstede's dimension to describe a *national* culture; that is, the dimensions have been used to describe an entire society, for example, of China, the United States, the United Kingdom and so forth. Specifically, the study by Seongseop Kim and McKercher（2011）indicated that tourists with different cultural characteristics generate different evaluations of tourism destinations in both positive and negative ways（e.g., satisfaction and dissatisfaction with a tourism destination）. National culture may be useful for cross cultural study; however, tourists from the same society may have different cultural traits and individual behaviours (Seongseop Kim & McKercher 2011).

Although culture has often been cited as a variable that can influence environmental concern and behaviour, the available research is restricted in several ways. Some studies have focused only on ethnic groups (e.g., Cordell, Green & Betz 2002); others focused on one culture (e.g., Carmi 2013; Cho et al. 2013; Halkos & Zisiadou 2018; Morren & Grinstein 2016; Synodinos 2001）; in comparison with other cultures（e.g., Hashimoto 2001; Lee, Thad Barnowe & McNabb 2005; Xiao & Dunlap 2007). However, there is a limited research of individual cultural traits at the present to identify cultural market segmentation (Yoo, Donthu & Lenartowicz 2011). For example, Cole (2004) investigated the different cultural characteristics of tourists in the context of sustainable tourism. Cole claimed that a tourist's culture plays an important role in determining sustainable tourist behaviour, but it is still unclear from his work what the key types of cultural characteristics of tourists are that impact their behaviour. In the tourism literature, while many studies also reveal that a tourist's culture affects their behaviour related to environment concerns and sustainable tourism, the research does not contain an examination of which cultural dimensions are strongest (or not) in terms of their relationship

with environmental concern and behaviour (e.g., Arnocky, Milfont & Nicol 2014; Cordell, Green & Betz 2002; Cox, Friedman & Tribunella 2011; Husted 2005; Katz, Swanson & Nelson 2001; Wolch & Zhang 2004). Considering the cultural dimensions proposed by Hofstede (1980) could lead to a deeper understanding of tourist behavioural outcomes, such as sustainable tourist behaviour.

1.2.2.2 Theory of Planned Behaviour

Ajzen (1991) introduced the Theory of Planned Behaviour (TPB) to describe the processes that shape an individual's behaviour. The theory states that attitudes toward the behaviour, subjective norms and perceived behavioural control can determine behavioural intentions (Ajzen 1985). Ajzen (1991 p. 188) defined attitudes as 'the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question'. Subjective norms refer to the factors that encompass perceived social pressures to accomplish or not accomplish a certain behaviour (Vesci & Botti 2019), and perceived behavioural control describes the individual's perceived capacity to perform a certain behaviour (Vesci & Botti 2019).

The TPB is a well-known behavioural framework and has been used to investigate tourist motivations, and to predict a wide range of tourist behaviours and intentions (Han, Hsu & Sheu 2010; Kaplan et al. 2015; Vesci & Botti 2019; Wang et al. 2018). Chien, Yen and Hoang (2012) also suggest that the TPB can be a useful theory for tourism research in the future. Moreover, various cross-cultural studies have used this theory in both Eastern and Western cultures (Chang 2006). Untaru, Epuran and Ispas (2014) also state that this theory is commonly used in a tourism context and also in pro-environmental attitudes and behaviours. It is proposed in this study that attitudes, subjective norms and perceived behavioural control can be used as variables that affect the relationship between culture and sustainable tourist behaviour.

1.2.2.3 Destination image

Crompton (1979 p. 18) defined destination image as 'the sum of beliefs, ideas, and impressions that a person has of a destination'. Correia and Guillet (2013) state that destination image is one of the most researched issues in tourism marketing. Several scholars

interested in the concept of destination image state it plays a significant role in the tourist destination decision making process, and that consumers rely on their image of alternative destinations during their decision-making process regarding vacation destinations (Chen, Lin & Petrick 2013; Tasci & Gartner 2007). Additionally, the destination image assessment process has been presented as an important foundation for destination marketing, as destination images can identify both the perceived strengths and weaknesses of a destination from a future tourist perspective (Baloglu & McCleary 1999; Tasci & Gartner 2007).

Jenkin (1999, p1) indicates that 'destination images influence a tourist's travel decision-making, cognition and behaviour at a destination as well as satisfaction levels and recollection of the experience'. Tasci and Gartner (2007) also state that destination image has an impact on consumer behaviour before, during and after their visit. The cognitive – affective dichotomy has been used to apply to destination image studies (Baloglu & McCleary 1999; del Bosque & San Martín 2008; Lin et al. 2007; Pike & Ryan 2004; Zhou 2014). San Martín and del Bosque (2008) indicate that the *cognitive* dimension refers to beliefs about a destination image related to the destination's attributes; whereas the *affective* dimension refers to feelings related to the emotion a destination evokes. Zhou (2014) argues that the cognitive dimension has an important contribution to overall destination image formation. Destination image has been postulated to influence various consumer behaviour variables. Kang and Moscardo (2006) also state that tourists with different cultural backgrounds will possess different attitudes toward destinations and attractions as affected by their image of a destination. Some scholars have found a significant impact for destination image in the context of marketing and tourism. For instance, destination image can influence the relationship between attitudes and behaviour (e.g. San Martín and del Bosque 2008). Researchers have also found that destination image is one of the most significant components needed to identify tourist behaviour, and that destination image has a strong influence on tourist behaviour (e.g., Baloglu & McCleary 1999; Chen & Tsai 2007; Dongfeng 2013; Prayag 2009; Ramkissoon, Uysal & Brown 2011; Tavitiyaman & Qu 2013; Wang & Hsu 2010). Hence, destination image is an important factor that can help to understand the relationship between cultural characteristics and sustainable tourist behaviour.

Further research is required to examine specifically the relationship between individual culture and sustainable tourist behaviour, as well the factors that both mediate and moderate this relationship. This study contributes to the literature by using Hofstede's (2001) cultural dimensions as a way of understanding an individual's cultural characteristics as a predictor of sustainable tourist behaviour and applying the TPB and destination image as potential mediators and moderators of this relationship.

1.3 Research context

1.3.1 Sustainable tourism in Thailand

Thailand is an attractive tourist destination, well-known for its national parks; more than 39 million foreign tourists visited Thailand in 2019 (Ministry of Tourism and Sports of Thailand 2020). Thailand is in the top five major destinations in the Asia Pacific region (Enright & Newton 2005) and is ranked as a second tourist destination behind China in 2018 (UNWTO 2019). According to Sriarkarin and Lee (2018), Thailand is known for nature-based tourism, with a full diversity of landscapes, with mountains, forests and seashore. There are 127 national parks, 58 wildlife sanctuaries and other types of protected area such as non-hunting areas and forest parks, instituted through a conservation system by Thai government (DNP 2016a). These areas cover about 20.46 percent of the total area of the country, and are managed by the Department of National Parks, Wildlife, and Plant Conservation (DNP 2016a). McDowall and Choi (2010) state that tourism is a significant factor that has a strong impact on the economy of Thailand. Although the rapid growth of Thailand's tourism benefits Thailand's economy, it has consequences for the environment.

The Tourism Authority of Thailand (TAT) has established sustainable tourism policies and strategies since 1997 in order to maintain the local environment and cultural protection of Thailand's attractions (Dabphet, Scott & Ruhanen 2012). Since the early 2000s, Thailand has used ecotourism to encourage sustainable tourism development. The Thai government also announced the '7 Greens' campaign in 2008 and instigated Thailand's national tourism plan 2012–2016. This campaign has the ambitious goal to take responsibility from all parties by establishing practical guidelines to balance tourism with a healthy and sustainable environment (TAT 2009). However, as a result, some national parks have encountered

development budget insufficiency, service staff limitations, and other management issues such as waste and overcrowding (Gössling 1999; Mahdayani 2011). This study is focused on Thailand due to Thailand being an attractive tourist destination (Henkel et al. 2006), with abundant cultural and natural attractions (Hui & Wan 2003), and a mature tourism infrastructure in the South-east Asian context (King 2015).

1.3.2 Sustainable tourism in Chiang Mai

Chiang Mai is one of the most popular provincial capital cities in Thailand's Northern region (Laverack & Thangphet 2007) and attracts many visitors from surrounding rural areas as well as from around the world (Çakmaka, Lieb & McCabe 2018; Okumus et al. 2015). Chiang Mai is known as Thailand's 'Rose of the North' and is an attractive cultural and natural destination with ethnic diversity, a wide variety of attractions and a high level of service (TAT 2015). Chiang Mai province is a well-known natural, agricultural and cultural tourist destination in Thailand. A large number of tourists, both domestic and international, visit and holiday in this province due to there now being direct flights both from other cities in Thailand as well as international flights Chiang Mai. The TAT (2019) state that Chiang Mai had 7 million Thai and 3 million foreign tourists in 2018. There are thirteen national parks located in this province, including Doi Inthanon National Park, Doi Suthep National Park, and Pha hom Pok National Park, not including wildlife sanctuaries and other types of protected area. Doi Inthanon National Park is one of the most popular destinations for nature study (Kim et al. 2010). Since the establishment of many national parks near Chaing Mai, the city has been promoted as the preferred destination in terms of natural heritage tourism and sustainability. In doing so, the number of tourists in Chiang Mai has increased year by year, and so the level of negative impact on tourism resources is also increasing. Based on this logic, Chiang Mai can be considered a sustainable tourist destination in Thailand and is appropriate to be the context of this study. In the same vein, few tourism scholars have used Chiang Mai as a sustainable tourism destination to conduct their research (e.g., Amnaj 2014; Hvenegaard & Dearden 1998; Kontogeorgopoulos, Churyen & Duangsaeng 2014; Walter 2016).

This research context allows generalisation to other similar tourist destinations globally. In terms of sustainable tourism studies, for example, Budeanu (2007), He, He and Xu (2018) and Su and Swanson (2017) found that the demand by tourists for green tourism has been

increasing in the past few years; in order maintain competitiveness as well as expand to a larger market share, the green operation of firms should be examined. The trend towards sustainable tourism is increasing, therefore, the results of the study can be used to apply to other contexts.

1.4 Research objectives and research questions

Due to the intensifying impact of tourism and particularly mass tourism, some tourism destinations such as those focussing on ecotourism and sensitive tourism, have had an increased number of tourists over many years. In part, this has been due to tourism being touted as a key sustainable development strategy for enhancing conservation and alleviating poverty. According to the sustainable tourism literature, if tourism destinations are implemented and managed properly, then everybody wins: the environment, local communities, tourists, and the economy (Friefenberg 1998). However, these destinations as a consequence gain more domestic and international tourists, and more tourism facilities such as accommodation and resorts, restaurants, and related shops and traders, thus creating adverse impacts on nature. This creates a vicious circle – the increased number of tourists, the greater the economic benefit but the greater the potential for negative impacts to the destination (Ashton & Ashton 1993; Kersten 1997). Therefore, this study investigates sustainable tourism behaviour in the current context of the tourism sector in Chiang Mai, Thailand. The research focuses on tourists with different cultural characteristics and responds to the importance of sustainable tourist behaviour (including attitude toward environmental issues, subjective norms, perceived behavioural control and destination image) (e.g., Untaru, Epuran & Ispas 2014; Husted 2005; Katz, Swanson & Nelson 2001; Kastenholz 2010).

Different characteristics of tourists' culture offer an interesting perspective for a deeper understanding of why tourists make the environmental awareness that they do. Cultural orientation is not well explored in terms of being an antecedent of consumers' environmental behaviour (Cho et al. 2013; Kilbourne, Beckmann & Thelen 2002). Therefore, this study explores the five main cultural characteristics of Hofstede (2001) as antecedents of environmental behaviour. Investigation of the cultural characteristics of tourists also provides an insight into how tourists engage in environmental issues. Moreover, the study attempts to

frame tourist's attitudes, subjective norms, and perceived behavioural control along with destination image as mediators and moderators of the relationship between cultural characteristics and sustainable tourist behaviour.

The assessment of destination image can also explain the strengths and weaknesses of the destination and help tourist in terms of decision-making processes related to their behaviour (Castro, Armario & Ruiz 2007; Chen & Tsai 2007; Qu, Kim & Im 2011). When tourists have a positive evaluation or impression of a tourism destination, they are more favourably disposed to choose that destination (Pike & Ryan 2004; Zhang, Fu, et al. 2014). In addition, the impact of a positive destination image can motivate a tourist to behave in such a way as to protect that destination (Hou, Lin & Morais 2005; Qu, Kim & Im 2011).

The study posits that providing an understanding of these factors impacting sustainable tourist behaviour will enable researchers and tourism destination marketers to create new and comprehensive plans for sustainable tourism, both in Chiang Mai and in general. In order to address the research problem, the following research questions have been developed:

RQ1: What is the relationship between different cultural characteristics and sustainable tourist behaviour?

RQ2: Does a tourist's attitudes mediate the relationship between different cultural characteristics and sustainable tourist behaviour?

RQ3: Do subjective norms and perceived behavioural control moderate the relationship between different cultural characteristics and a tourist's attitudes?

RQ4: Do subjective norms, perceived behavioural control, and Thailand's destination image moderate the relationship between a tourist's attitudes and sustainable tourist behaviour?

RQ5: Do subjective norms, perceived behavioural control, and Thailand's destination image moderate the relationship between different cultural characteristics and sustainable tourist behaviour?

1.5 Contributions of the study

This research makes a number of contributions to both theoretical and practical outcomes. The purpose of the study is to develop a model of the relationship between cultural differences and sustainable tourist behaviour, as well as highlighting the impact of both mediation and moderation factors on this relationship. This research attempts to contribute in two aspects: theoretical and practical.

In terms of theoretical contribution, this study develops a new model of the relationship between different cultural characteristics and sustainable tourist behaviour through tourist's attitudes, subjective norms, perceived behavioural control and perceptions of Thailand's destination image. Firstly, the results of the study will extend the literature about these relationships within the sustainable tourism sector especially the environmental aspect. Sustainable tourism is commonly recognised in the literature on tourism competitiveness as the key element (Pulido-Fernández, Andrades-Caldito & Sánchez-Rivero 2015). Additionally, Cucculelli and Goffi (2016) argue that variables of sustainability have a significant impact on the competitiveness of a tourist destination. Environmental sustainability plays an important role for tourism destination competitiveness over the long term, and the quality of life of the local population (Farsari, Butler & Prastacos 2007; Hu & Wall 2005; Huybers & Bennett 2003a, 2003b). The sustainable tourism sector, therefore, can have a completely different strategic focus than the general tourism sector, and investigating sustainable tourism is a significant contribution.

Second, as mentioned above, the study contributes by providing a model of the relationship between different cultural characteristics and sustainable tourist behaviour. Wei, Crompton and Reid (1989) state that cultural differences can increase the level of 'cultural conflict' that relates to lifestyle, individual behaviour, expectations, value systems, traditions, safety and moral conduct. In addition, there is evidence in the literature that different socio-demographic profiles influence the way tourists are motivated to choose a destination (Alhemoud & Armstrong 1996; Hudson & Ritchie 2001). Thus, understanding a tourist's cultural characteristics could benefit and link to their attitudes and behaviour.

Third, the TPB is a used to predict tourist behaviour (Hamid & Isa 2015; Isa & Ramli 2014). According to the TPB, attitudes, subjective norms, and perceived behavioural control all operate to affect behaviour (Hamid & Isa 2015), in this case, sustainable tourist behaviour. Tourism organisations and services in Thailand could be improved based on a better understanding of the awareness of, and attitudes towards, sustainability and the consequent impact on actual behaviour. For these reasons, it could be stated that there is limited study identifying sustainable tourist behaviour especially in terms of the TPB; therefore, the present research adapts and extends the TPB to better understand tourist behaviour in a sustainable tourism context in Thailand.

In terms of practical contribution, in a competitive environment such as the tourism sector, sustainable tourism research needs to examine ways to provide better experiences for tourists, one of which is to improve understanding of sustainable tourist behaviour. It is expected that the results of the study will lead to recommendations of methods and improvements in destination management, to increase the competitiveness of Thailand's environmentally sustainable tourism sector, as well as the management and marketing of the parks in Chiang Mai. Indeed, understanding sustainable tourist behaviour could help relevant tourism organisations to create and provide marketing strategies more effectively, such as defining the segment of sustainable tourists by cultural characteristics and defining the appropriate marketing strategies aimed at them.

1.6 Definition of constructs and terms

To deliver an understanding of the theoretical model developed in this study, it is necessary to provide definitions pertaining to the constructs of interest. The definition of constructs and terms is provided in Table 1.1.

Table 1.1 Definitions of Constructs and Terms

Constructs	Definitions
Cultural Characteristics	The five Hofstede cultural dimensions, here measured at an individual level using the Cultural Value Scale (CVSCALE) are: power distance, uncertainty avoidance, individualism versus collectivism, masculinity versus femininity, and long- term orientation (Hofstede 2001).
Tourist Attitudes	Overall evaluations of performing a specific individual behaviour or with regard to a specific attitude object. Tourist attitudes have three components: cognitive, affective and behavioural/ conative (Baron, Branscombe & Byrne 2002).
Environmental Knowledge	Environmental knowledge is defined as what individuals think they know about environmental issues in tourism (in this case) (Kim, Kim and Thapa 2018) and is defined as a cognitive attitude component.
New Ecological Paradigm (NEP)	The NEP scale is a measure of people's ecological worldview. NEP is defined as an affective attitude component (Dunlap et al. 2000).
Past Behaviour	Past behaviour concerns the experience and knowledge (Petrick 2002) of tourists in visiting environmental attractions and is defined as a behavioural attitude component.
Theory of Planned Behaviour (TPB)	The TPB is a model explaining deliberate behaviour as affected by attitudes, subjective norms, and perceived behavioural control (Ajzen 2005).

Table 1.1 Definitions of Constructs and Terms (Cont.)

Constructs	Definitions
Subjective Norms	Subjective norms are a person's estimation of the social pressure to carry out the sustainable behaviour (in this case) (Ajzen 1991; Ajzen 2005; Fishbein & Ajzen 1976). .
Perceived Behavioural Control (PBC)	PBC refers to a person's perception of their ability to perform the sustainable behaviour (in this case) (Ajzen 1991).
Destination Image	Destination image refers to the sum of beliefs, ideas, and impressions that a person has of a Thailand's destination image (Crompton 1979).
Sustainable Tourist Behaviour	Sustainable Tourist Behaviour consists of sustainable behaviour, pro-environmental behaviour, and environmentally friendly behaviour (i.e. Lee, Jan and Yang (2013a)).

1.7 Research methodology

This research employs a quantitative method using a self-administered questionnaire. Data is collected from international and local tourists who are visiting Chiang Mai, Thailand, using a convenience sampling technique.

The questionnaire consists of tourist cultural characteristics (Hofstede), attitudes of tourists (including sustainable tourism knowledge, environmental concern, and past behaviour), subjective norms, perceived behavioural control, Thailand's destination image, sustainable tourist behaviour, and demographic information. Due to Thailand being one of the more popular Chinese tourist destinations (Zhang 2012), and due to the fact that this study also collects data from domestic tourists, the questionnaire is developed in English, then translated into Thai and Chinese using a back-translation technique. Four versions of questionnaire are employed, with different item order, in order to reduce the item priming effect. A pilot study is conducted to examine any problems in regard to questionnaire format, wording and design.

Following the pilot study procedure, the four versions of the questionnaire are administered with the appropriate language version of the questionnaire for the respondents. In total, 485 questionnaires are completed. A range of data analyses are used for data preparation and preliminary analyses including factor analysis with parallel analysis, convergent and discriminant validity, and Cronbach's Alpha reliability. Then, mediation and moderation analyses are conducted to investigate the conceptual framework of this study.

1.8 Delimitations of scope

There are several delimitations concerning the extent of the study as follows. First, the construct of sustainable tourism consists of three pillars including society, economics and the environment (Weaver 2006). This study focuses on arguably the most significant part of sustainable tourism, namely the environment aspect. Mazanec, Wöber and Zins (2007) also indicate that the sustainable environment issue is one of the main factors in destination competitiveness. Additionally, UNEP (2011) state the significance of the environment to a sustainable tourism industry. Consequently, this study focusses only on the sustainable environmental tourism aspect.

Secondly, the culture variables in this study are measured at an individual level rather than as broad national culture. As such, the study aims to explore cultural characteristics in terms of the individual tourist rather than have tourists be categorised by nationality. Thus, the generalisation of the cultural dimensions in this study to national culture should proceed with care.

Finally, the study is limited by its regional scope. The data collection is from Chiang Mai province located in the northern region of Thailand, a developing country. Therefore, other countries or geographic regions should be explored. Testing the model and the proposed measurement scales from other countries or geographic regions is necessary to see if the model and the proposed measurement scales hold. Moreover, the findings of the study should be generalised to developed countries with care.

1.9 Thesis structure

The objective of this research is to develop a new model of the relationship between tourist cultural characteristics, attitudes of tourists to sustainable tourism (knowledge, environmental concern, and past behaviour), subjective norms, perceived behavioural control, Thailand's destination image, and sustainable tourist behaviour. The thesis is organised into six chapters.

Chapter One, Introduction: this chapter provided a general introduction to the research. The issues related to the topic under investigation, with a brief background to the study including research objectives and research questions, significance of the study, methodology, definition and terms, limitations and an outline of the thesis.

Chapter Two, Literature Review: this chapter reviews the current literature related to the aim of the study, including an overview of different cultural characteristics, tourists' attitudes (including subjective knowledge, New Ecological Paradigm (NEP), and past behaviour as cognitive, affective and behavioural attitude components respectively), the Theory of Planned Behaviour (TPB), including subjective norms and perceived behavioural control, Thailand's destination image and sustainable tourist behaviour.

Chapter Three, Hypothesis Development and Proposed Conceptual Model: this chapter presents the development of the conceptual framework, that is, the relationship between all constructs as derived from the literature review in Chapter Two including mediating and moderating factors. The chapter also discusses the hypotheses to be tested and analysed, that directly link to the research questions, outlined in Chapter One.

Chapter Four, Research Methodology: this chapter provides an overview of the research design, justifies the use of a quantitative method, and describes the sample frame and characteristics. Then, it discusses the research process which includes scale development, the questionnaire, pilot study, data collection and data analysis methods. Finally, it presents ethical considerations related to the study.

Chapter Five, Data Analysis and Results: this chapter presents the results of the data preparation and preliminary analyses in terms of the psychometric properties and the measurement of convergent and discriminant validities. Then, hypothesis testing is conducted to examine the relationship between constructs. Hypothesis testing also directly links to the research objectives, research questions and conceptual framework.

Chapter Six, Discussion and Conclusions: this chapter provides a discussion of the analyses in Chapter Five, including the results of hypothesis testing, proposed in Chapter Three, including mediation and moderation analyses. This chapter provides both academic and practical contributions. Finally, future research suggestions are provided.

1.10 Conclusion

This Chapter provided an introduction to the research topic for the thesis, as a foundation for the study. The chapter began with the research background following by the research context, research objectives and questions. Then, the contribution of the study from both academic and practical perspectives was provided. The definition of constructs of interest related to the theoretical framework in this study was explained. A summary of the methodology used in this study was provided, as well as the delimitations of scope. Finally, an outline of this thesis was provided. The next chapter provides a literature review concerning culture, behaviour, sustainable tourism, sustainable tourist behaviour, and theories from other fields which have been applied in sustainable tourism behaviour research.

CHAPTER TWO

Literature Review

2.1 Introduction

This chapter discusses the relationship between the individual cultural characteristics of tourists and their behaviour regarding sustainable tourism in Thailand. This study focusses on this relationship in terms of environmentally friendly behaviour, pro- environmental behaviour and sustainable behaviour. The following literature review includes a discussion of sustainable tourist behaviour, followed by a discussion of individual cultural characteristics which is then used as a basis for further discussion about the constructs underpinning the proposed model of this study. The next sections will present overviews of sustainable tourism and sustainable tourist behaviour (Sections 2.2 and 2.3), individual culture theory (Section 2.4), the Theory of Planned Behaviour (Section 2.5) and destination image (Section 2.6). Finally, a brief summary concludes Chapter Two (Section 2.7).

2.2 Sustainable tourism

2.2.1 The definition of sustainable tourism

Lu and Nepal (2009) state that sustainable tourism has different definitions depending on the different disciplines and individuals who provide them. Definitions are often influenced by the characteristics of the source, such as their background, education, culture and even political agenda. A range of definitions which have been given for sustainable tourism are presented in Table 2.1.

Table 2.1 Definitions of Sustainable Tourism

Author (s)	Definition
WTO (1993, p.7)	'Tourism which meets the needs of present tourists and host regions while protecting and enhancing opportunity for the future'
Butler (1993, p.29)	'Tourism which is in a form which can maintain its viability in an area for an indefinite period of time'
Countryside Commission (1995, p.2)	'Tourism which can sustain local economics without damaging the environment on which it depends'
UNWTO (1996, p.29)	'… tourism which leads to management of all areas, in such a way, that the economic, social and environmental needs are being fulfilled with cultural integration, ecological processes, biodiversity and supporting the development of societies'
UNEP and WTO (2005, p.12)	'Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, and the environment and host communities'

The sustainability of tourism has become more important over recent decades. According to the United Nations Environment Programme (UNEP, 2011), the tourism industry has a growing interest in investing in the development of the environmental dimension of sustainability. The United Nations World Tourism Organization (UNWTO) has also asserted that sustainable tourism 'is a vehicle to foster economic and social growth' (2013, p. 12). dos Santos, Méxas & Meiriño (2017) state that presently, public administrations have become more intent on controlling the use of natural and cultural resources and are concerned about the negative impact of tourism toward the environment, society and people. The concept of sustainable tourism has become more significant for the tourism sector due to people's greater concern about preserving nature (e.g., Gabriel Brida, Osti & Faccioli 2011; Giannoni 2009; Saveriades 2000; Weaver 2012).

2.2.2 The concept of sustainable tourism

Sustainable tourism aims to balance the number of tourists and the development of tourism infrastructure with the potential impact on the environment (Kontogeorgopoulos 1999). This concept has seen an increase in interest since the 1980s (Andereck et al. 2007), and focusses on preventing the negative environmental effects of tourism-related activities (Marion et al. 2016; SCDB 2015). Yu, Chancellor and Cole (2011) indicate that sustainable tourism seeks to decrease negative impacts on local culture and the environment, while at the same time generating benefits for host residents. Tsaur and Wang (2007) also suggest that the origin of the term sustainability came from the desire to increase and maintain the quality of the environment. Previous researchers have suggested that sustainability has a strong impact on peoples' lives (see Godfrey 1998; Mathew & Sreejesh 2017; Mowforth & Munt 1998; Romeril 1985; Simpson 2001). The concept of sustainability represents long-term economic, environmental and community health (Vehbi 2012). The environment is one of the most important dimensions of sustainable tourism, and discussions of sustainability and the management of the environmental impacts of tourism are very common in the literature (Kang & Moscardo 2006; Weaver 2012).

Buckley (2009) characterises sustainable tourism as comprising three main dimensions:

- Environmental dimension – The quality of the environment and natural resources often attracts tourists to visit a destination. However, high numbers of tourists could lead to negative environmental effects on resources in the long term, decreased levels of natural resources at the destination, and may eventually negatively impact the number of visitors to the destination, decreasing the overall revenue for that destination.

- Socio-cultural dimension – This dimension is important for tourism destinations with a high level of cultural and artistic value, traditions and beliefs. It refers to areas in which tourism is one of the major sources of income to the local economy. Tourism leads to the creation of new career positions and requires actions to preserve local heritage.

- Economic dimension – The sustainability concept can lead to contributions to social and environmental costs over a long-term period but can also generate more financial income for the destination.

Table 2.2 shows a review of papers on the impact of sustainable tourism.

Table 2.2 A Review of Literature on Sustainable Tourism

Impact of Sustainable Tourism	Authors
Environment	Bramwell and Lane (1993); Kang and Moscardo (2006); Kang et al. (2012); Marion et al. (2016); SCDB (2015); Sharp and Wells (2013); Vehbi (2012); Yu, Chancellor and Cole (2011)
Economics	dos Santos, Méxas & Meiriño (2017); Dwyer and Thomas (2012); Lundie et al. (2007); Pulido-Fernández, Andrades-Caldito and Sánchez-Rivero (2015); UNWTO (2013); Vehbi (2012); Yu, Chancellor and Cole (2011)
Community/Society/Local	Bramwell and Lane (1993); dos Santos, Méxas & Meiriño (2017); Godfrey (1998); Hu and Wall (2005); Huybers and Bennett (2003a, 2003b); Mathew and Sreejesh (2017); Mowforth and Munt (1998); Romeril (1985); Simpson (2001); UNWTO (2013); Vehbi (2012); Yu, Chancellor and Cole (2011)

Sustainable tourism can potentially create financial benefits for the destination, including the ability to maintain social, cultural, traditional, and environmental heritages. This means that this form of tourism should be developed while taking into account the various impacts relevant to a destination (Harris, Griffin & Williams 2002).

2.2.3 Previous studies related to sustainable tourism

Previous scholars have explored the concept of sustainable tourism in different destinations from different points of view and using different terms of interest (Bell & Morse 2008; Buckley 2009; Cernat & Gourdon 2012; Guijt, Moiseev & Prescott-Allen 2001; Huang, Pepper & Bowrey 2011; IUCN 1997; Ko 2001, 2005; Prescott-Allen 1996; Razali & Ismail 2014; Reihanian et al. 2015; Vehbi 2012; WTO 2004). Hughes (1995) considered the ethical perspective of the sustainability concept. This is concerned with the moral character that influences much of the drive for sustainability. Further, in terms of tourism competitiveness, sustainability can be considered as a key element in the literature (Pulido-Fernández, Andrades-Caldito & Sánchez-

Rivero 2015). Hu and Wall (2005) and Huybers and Bennett (2003a, 2003b) also identify that environmental sustainability plays a significant role in the competitiveness of tourist destinations in the long term, and as a result develops local people's quality of life. Additionally, Juvan and Dolnicar (2016) indicate that tourists can decrease the negative impact on a destination by decision-making that is concerned with taking environmentally sustainable holidays and behaving in environmentally sustainable ways. In order to promote tools for developing and/or creating new marketing strategies to identify and attract tourists to act in these ways, empirical study is important. The results of research can be useful in particular for understanding sustainable tourist behaviour. Even though there is an increasing amount of literature in the sustainable tourism sector, as has been shown, there is a paucity of research investigating individual tourists' sustainable tourist behaviour.

2.3 Sustainable tourist behaviour

Research has demonstrated that a relationship exists between tourist behaviours and attitudes toward the environment (Clark et al. 2019; Dolnicar, Crouch & Long 2008; Fang et al. 2018; Goldberg et al. 2018; Imran, Alam & Beaumont 2014; Pearce, Moscardo & Ross 1996). Dunlap and Van Liere (1981, cited in Vining & Ebreo 1992) suggested that a specific environmental problem is a reason why different people decide to show their concerns for the environment in different ways. For instance, some people may be more concerned about wildlife habitats while others might be more concerned about water conservation. Earlier research about behaviour towards the environment has used statements that focus on responsible behaviour as the means to identify individuals who behave in responsible ways, such as by recycling waste or saving energy (Lee & Moscardo 2005). Other solutions to environmental behaviour measurement have been statements about interest in nature-based destinations, interest when travelling, observing nature in the wild, and interest in unrestricted settings (Weaver & Lawton 2002). Another measurement to identify environmental behaviour is provided by environmental awareness statements (Weaver & Lawton 2002). Buying behaviour also helps explain sustainable tourist behaviour, for example, tourists may avoid purchasing any souvenirs made from animal parts (Swarbrooke & Horner 1999). Unsustainable behaviour statements are also a way to measure environmental behaviour in a negative way toward the environment (Fairweather, Maslin & Simmons 2005).

Budeanu (2007) stated that tourist behaviour is one of the most significant factors influencing progress in sustainable tourism. A number of studies have examined tourist behaviour within the environmental context. For instance, Becken (2007) segmented tourists into five groups that reflected different levels of awareness in accepting responsibility for the environment. Seongseop Kim and McKercher (2011) stated instead that tourist behaviour is a combination of national and tourist culture. The study of Dodds, Graci and Holmes (2010) found, for example, that Western culture has higher levels of environmental awareness.

In the field of sustainability, green consumption is considered as one of the broadest categories of ethical consumption (Carrington, Neville & Whitwell 2010). Hughes (1995) has supported the relationship between sustainability and ethical consumption. Ethical consumers are described by different individual expressions, concerns, and issues. Previous researchers in ethical consumerism have been interested in understanding ethically-minded consumers and their purchase decision-making (Fukukawa 2003; Grimmer & Bingham 2013). Additionally, a number of scholars have also argued that there is a gap between attitude and intention; even though many people may hold favourable attitudes and intentions towards a sustainable or socially-responsible product, they do not always follow through on these beliefs and exhibit purchasing behaviour at the point of purchase (Carrington, Neville & Whitwell 2010, 2014; Grimmer & Miles 2017).

Previous studies have developed measures related to sustainable tourist behaviour whilst focusing on various aspects: community-based tourists (Lee, Jan & Yang 2013a), nature-based tourists (Lee & Jan 2015; Lee, Jan & Yang 2013b), tourist services (Penz, Hoffman & Hartl 2017), the function of sustainable development (Strugar, Boljević & Boljević 2017), environmental protection at home while engaging in vacation behaviour (Juvan & Dolnicar 2014), wildlife tourism (Ballantyne, Packer & Falk 2011; Ballantyne, Packer & Sutherland 2011), ecotourism and eco-resorts (Lee & Moscardo 2005; Miller, Merrilees & Coghlan 2015), and protected area tourism (Imran, Alam & Beaumont 2014). In terms of factors influencing sustainable tourist behaviour, several scholars have examined culture (Bamberg & Möser 2007; Lee 2011; Lee & Moscardo 2005; Milfont, Duckitt & Cameron 2006), psychological factors (Lee 2011), recreational experience (Ballantyne, Packer & Falk 2011), personal factors (Tabernero & Hernández 2011) and external factors (Vining & Ebreo 1992).

The impact of tourism can be divided into four important domains: economic, social, environmental, and cultural. Researchers have found that these domains have a strong impact on local residents' quality of life (Ap 1992; Aspinall 2006; Honey 2008; Jurowski & Gursoy 2004; Mathew & Sreejesh 2017). Because of this impact, the tourism industry has promoted the ecotourism concept, which was known as green or nature tourism during the 1980s, and aims to retain and increase development in all these domains. In the 1990s, sustainable tourism was initially established using the term ecotourism by the World Tourism Organisation (WTO). Ecotourism and sustainable tourism are linked in that they both focus on economic, social and environmental aspects (Pforr 2001). In the last two decades, the sustainable tourism concept has become a major trend in tourism which has led to strategies being developed by destination management organizations to increase levels of responsible behaviour by tourists as well as increasing awareness from consumers (Amiryan & Silva 2013).

Lee and Lin (2001) suggest identifying environmentally responsible behaviour by tourists, such as respecting the local culture, conserving the natural environment, and reducing interference with the local environment. Pro-environmental behaviour is used as another measurement construct and refers to behaviour that has an impact on the environment or creates some benefit for the environment (Grimmer & Miles 2017). Several scholars state that pro-environmental behaviour is about personally taking action to protect one's surroundings especially with regard to nature and environmental issues (Lee, Jan & Yang 2013b; Schultz 2000; Stern 2000). Lastly, behaviour that is not environmentally friendly refers to when tourists visiting a destination damage the ecosystem by disturbing creatures and vegetation, overturning rocks and feeding wildlife. According to Halpenny (2010), daily lifestyle and tourism activities may cause an increase in the number of environmental problems. In order to reduce all damage, environmentally friendly behaviours need to be practised more.

As shown in Table 2.3, various terminologies, definitions and descriptions have been proposed over the last three decades to conceptualise the desired behaviour. This study defines sustainable tourist behaviour as the behaviour of tourists who are interested in reducing their environmental impact, contributing to preserving the environment and/or

making efforts in conservation, and are concerned with avoiding disturbing the ecosystem and biosphere of a destination.

Table 2.3 Different Terminology Associated with Sustainable Tourism Behaviours

Study	Term used	Definition/Description
Sivek and Hungerford (1990)	Environmentally responsible behaviour	'Environmentally responsible behaviour (ERB) is defined as any action, individual or group, directed toward the remediation of environmental issues/problems' (p. 35)
Wood and House (1991)	Alternative or responsible tourist; Good tourist	'A tourist with the need to avoid having a negative impact on the destination' (p.101)
Poon (1993)	New tourist	'Sensitive to environment' (p.115); 'See and enjoy, but does not destroy' (p.145)
Axelrod and Lehman (1993)	Environmentally-concerned behaviour	' Actions which contribute towards environmental preservation and/or conservation' (p. 153)
Ioannides and Debbage (1997)	Post- Fordist tourist	'An experienced, independent , flexible (sun-plus) traveller, fewer repeats visits and demands for green tourism and other alternative forms' (p.232)
Swarbrooke and Horner (1999)	Totally green tourist;	'Not take holidays away from home at all so as not to harm the environment in any way, as a tourist' (p.202);
	Dark green tourist;	'Boycott hotels and resorts which have poor reputation on environmental issues' (p.202), and 'pay to go on holiday to work on a conservation project' (p.202);
	Light green tourist;	'Think about green issues and try to reduce normal water consumption in destinations where water is scarce' (p.202) and 'use public transport...while on holiday' (p.202)

Table 2.3 Different Terminology Associated with Sustainable Tourism Behaviours (cont.)

Study	Term used	Definition/Description
Stern (2000)	Environmentally significant behaviour	'Environmentally significant behaviour can reasonably be defined by its impact: the extent to which it changes the availability of material or energy from the environment or alters the structure and dynamics of ecosystems or the biosphere itself' (p. 408)
Dinan and Sargeant (2000)	Sustainable tourist	'Someone who appreciates the notion that they are a visitor in another person's culture, society, environment and economy and respects this unique feature of travel' (p.7)
Kollmuss and Agyeman (2002)	Pro-environmental behaviour	'An individual who consciously seeks to minimise the negative impact of one's actions on the natural and built world' (p. 240)
Miller (2003)	Green consumers [in a tourism context]	'Actively seeking and then using that information [green product information] in the decision-making process for their holiday' (p.33)
Dolnicar (2004)	Sustainable tourist	Tourists 'who care about maintaining and protecting the natural environment at the travel destination' (p.212)
Crouch et al. (2005)	Environmentally caring tourist	'The efforts to maintain unspoilt surroundings play a major role' (p.14)
Dolnicar (2006)	Nature-conserving tourist	'Want to protect the natural resources and act in a nature-conserving way during their vacation' (p.237)
Dolnicar and Matus (2008)	Green tourist	'Behave in an environmentally friendly manner when on vacation in a wide range of tourism contexts' (p.320)
Stanford (2008)	Responsible tourist	Has several dimensions, including 'the concepts of respect, awareness engagement (and taking time to engage), excellence and reciprocity, as well as the harder facts of spending money' (p.270)

Table 2.3 Different Terminology Associated with Sustainable Tourism Behaviours (cont.)

Study	Term used	Definition/Description
Dolnicar and Long (2009)	Environmentally responsible tourist	' Assigns some value to the environmental responsibility demonstrated by the tour operator' (p.10)
Bergin-Seers and Mair (2009)	Green tourist	'Are interested in being environmentally friendly on holiday; at times select holidays by considering environmental issues; and are potentially willing to pay extra for products and services provided by environmentally friendly tourism operators' (p.117)
Mehmetoglu (2009)	Sustainable tourist	Have a 'consumption attitude or behaviour that intends to contribute to ecological … sustainability in a holiday context' (p.8)
Mehmetoglu et al. (2010)	Sustainable tourist	'Someone who was [is] concerned about sustainability issues (i.e., of economic benefit to local people)' (p.184)
Wehrli et al.(2011)	Sustainability aware tourist	' Sustainability is among the top three influencing factors while booking vacations' (p.2)
Shamsub and Lebel (2012)	Sustainable tourist	' Those who (1) agree with a code of conduct that recommends how they as visitors should behave, (2) appreciate that their activities have impacts on the environment and tailor their actions accordingly; (3) would like to make economic contribution to the host economy and therefore purchase local products such as food and crafts' (p.27)

Table 2.3 Different Terminology Associated with Sustainable Tourism Behaviours (cont.)

Study	Term used	Definition/Description
Lee, Jan and Yang (2013a)	Sustainable tourist;	'A person [tourist] respects to local culture, conserves natural environment, and reduce interference of local environment' (p.457);
	Pro-environmental tourist;	'A person [tourist] voluntarily visits a destination less or none while the spot needs to recover because of environmental damage' (p.457)
	Environmentally responsible tourist;	'A person [tourist] takes action to reduce the damage of a specific destination' (p.457)
	Environmentally responsible behaviour	'Any action that alleviates the adverse environmental impact of an individual or group' (p.466)
Chiu, Lee and Chen (2014)	Environmentally responsible tourist	'A tourist who helps limit or avoid damage to the ecological environment' (p.322)
Juvan and Dolnicar (2016)	Environmentally responsible tourist	'Intended environmentally sustainable tourist behaviour is when a person makes a vacation-related decision or displays behaviour at the destination that is different from how they would have otherwise decided or behaved for reasons of environmental sustainability' (p.34)

Note: adapted from Juvan and Dolnicar (2016)

2.4 Culture

In terms of research on the relationship between sustainable tourist behaviour and culture, a large number of studies have examined the awareness of responsible travel behaviour of tourists in general as well as sustainable tourist behaviour in relation to national culture. A large number of scholars have used the dimensions of national culture developed by Hofstede (1980; 1984; 2001). However, few have investigated tourist characteristics by applying these cultural dimensions at an individual level. Rinuastuti et al. (2014) suggested that in cross-cultural research, culture has been typically investigated at the national level while their study examined cultural characteristics at an individual level of impact on behaviour. According to Kale (1991), in the study of culture, conduct at the individual level can create results that are similar to or different from those conducted at the national level; differences in various segments in particular can have varied impacts. According to culture literature, there are two main approaches to the measurement of culture, namely the CVSCALE and Schwartz's Value scales. The CVSCALE scale is used to measure Hofstede's cultural dimensions at an individual level (Yoo, Donthu & Lenartowicz 2011). The Schwartz Value measurement on the other hand is focused on aggregating value scores from individual responses to measures of values in a culture (Schwartz 2006). Many studies on cross-cultural consumer behavior have found the CVSCALE scale to be applicable at an individual level (Chekima et al. 2016; Sharma 2010). More importantly, marketing scholars advocate that the nation scores on Hofstede's factors are useful dimensions to predict cross-cultural differences in consumer attitudes and behaviour (e.g., Nguyen, Lobo & Greenland 2017; Sreen, Purbey, & Sadarangani 2018; Yoo, Donthu & Lenartowicz 2011).

Recently, the study of Ghazali et al. (2017) has identified a different approach than looking at national cultural using Hofstede. They measured culture at the individual level by using the CVSCALE in their study. Some researchers (Keillor, Hult & Kandemir 2004; Kongsompong, Green & Patterson 2009; Patterson, Cowley & Prasongsukarn 2006; Patterson & Mattila 2008; Reid 2011) have also indicated that marketers would achieve a higher level of success when they focus directly on consumers' characteristics more than on a country's characteristics. Also, individual level values are shown to be more accurate predictors of individual behaviour and characteristics (Lenartowicz & Roth 2001). Therefore, as mentioned in Chapter One, this

study explores the impact of tourist cultural characteristics on their behaviour as sustainable tourists.

Culture has a significant impact on human behaviour, and the preconditions of a culture's orientation includes the attitudes and actual behaviour of individuals (Li, Zhang & Cai 2003). In consumer behaviour studies, cross-cultural examinations are important, especially with an increasing globalised economy. A large number of dimensions that differ between cultural groups have been identified in previous research studies (Ackoff, Ackoff & Emery 2005; Mead & Newton 1967; Parsons & Shils 1951). Due to the many factors that influence culture (Franke & Nadler 2008), House et al. (2004) state that culture is very stable over time.

Nationality has been used to define cultural dimensions, and to investigate the role of cultural dimensions or factors that influence or create differences in behaviours (Earley & Singh 1995). In cross-cultural studies, as alluded to above, a large number of scholars use the set of cultural dimensions proposed by Hofstede (Fang 2003), especially in tourism research (Reisinger & Crotts 2009). From the extent of use by other scholars, Hofstede's (1980, 2001) cultural dimensions can be identified as an effective tool for investigating differences across cultures in tourism contexts; this cultural dimension framework is clearly the most widespread as applied in academic settings. While Hofstede's cultural dimensions are widely used in a tourism context, the framework is mostly applied in nationality-based examinations (Rinuastuti et al. 2014).

As mentioned above, national cultures have been predominant in relevant cultural research in tourism (Reisinger & Crotts 2009). This has also been the basis of specific 'stereotypes' that have been applied to certain nations' tourists (Crotts & Erdmann 2000). Based on their national culture, a tourist's individual behaviour is 'predicted' to be of a certain type. However, several scholars argue that it is misleading when generalising the cultural stereotype of one country directly to people of other countries (Irawanto, Ramsey & Ryan 2011; Yoo, Donthu & Lenartowicz 2011). Dann (1993) also suggests that nationality is not always an indicator of culture; his study found that in terms of culture, very few nations are completely homogeneous. McCleary, Weaver and Hsu (2007) also state that nationality is inadequate solely for clarifying consumer behaviour as most countries contain subgroups

categorized by different ethnicities, social classes, lifestyles and other forms of behaviour. Reisinger and Turner (2003) state that people from different cultural backgrounds generally have different rules of social interaction, values and perceptions. This implies that people of similar nationalities may not have similar cultural characteristics, thus national culture may not be appropriate for a study that aims to explore tourist cultural characteristics or segmentation.

The study of culture at an individual level has been raised by a number of scholars. Individuals from different cultures have different cultural values, rules of social behaviours, perceptions, and social interaction, which in turn affect their lifestyles, work patterns, how they relax and mingle or socialize with other people and the patterns of their consumption behaviours (Irawanto, Ramsey & Ryan 2011; Meng 2010; Richardson 1988; Yoo, Donthu & Lenartowicz 2011). These could all lead to differences in behaviour as a tourist. According to Browaeys and Price (2011), the concept of culture as manifested at an individual level is the basis of all types of culture. Family, social, national, environmental, professional, organisational and corporate culture are formed from the values of individuals or group members. Chong (2008) supported this by stating that culture influences an individual's perception and behaviour toward a job. Adler (2002) states the significance of cultural differences and the diversity of individuals can lead to increasing levels of positive and/or negative impacts on organisational outcomes. Therefore, culture as experienced at an individual level can influence individual behaviours (Meyer & Allen 1991).

Previous researchers have adapted the idea of Hofstede's cultural dimensions to investigate culture at an individual level – such as Adler (2002), Browaeys and Price (2011), Chong (2008), Meyer and Allen (1991), Yoo (2009), Yoo and Donthu (1998; 2002; 2005) and Yoo, Donthu and Lenartowicz (2011) – in order to clarify individual segmentation and behaviour. Hofstede's (1980, 2001) cultural dimensions, in this regard, have been used to inform investigations of culture at the individual level. In a program of research, Yoo (2009), Yoo and Donthu (1998; 2002; 2005) and Yoo, Donthu and Lenartowicz (2011) developed the individual Cultural Values Scale (CVSCALE) that used Hofstede's dimensions to measure culture at the individual level, for use in segmentation.

Several scholars have used the CVSCALE in cross-cultural studies (e.g., Mazanec et al. 2015; Soares, Farhangmehr & Shoham 2007). However, there are only a few studies that have used the CVSCALE in a sustainable tourism or environmental context (Dimo & Zollo 2007; Peng & Lin 2009; Sarigöllü 2009). The CVSCALE has provided appropriate reliability and validity; due to its effectiveness, it has been considered adequate for market segmentation in global contexts (Yoo, Donthu & Lenartowicz 2011). Moreover, there is strong evidence to indicate that this scale can be useful for investigating comparisons between countries. The CVSCALE of Yoo, Donthu and Lenartowicz (2011) is, therefore, an important mechanism for determining individual environmental perspectives and behaviours. Thus, to better understand sustainable tourist behaviours, the CVSCALE by Yoo, Donthu and Lenartowicz (2011), developed from Hofstede's (1980, 2001) cultural dimensions, will be used as an antecedent construct in the current research. These dimensions will be explained in the following sections.

2.4.1 Individual cultural values scale (CVSCALE)

Yoo (2009), Yoo and Donthu (1998; 2002; 2005) and Yoo, Donthu and Lenartowicz (2011) developed cultural dimensions measured at the individual level based on Hofstede's (1980, 2001) five dimensions. They measured these dimensions as cultural orientations of global consumers. Their dimensions have been used to investigate culture in different contexts: general (Prasongsukarn 2009), service recovery programs (Patterson, Cowley & Prasongsukarn 2006), sustainability (Chekima et al. 2015), and tourism (Ahn & McKercher 2018; Nath, Devlin & Reid 2014; Rinuastuti 2015; Rinuastuti et al. 2014). The CVSCALE was developed from Hofstede's (1980,2001) five dimensions: power distance (PDI), uncertainty avoidance (UAI), individual/collectivism (IDV), masculinity/femininity (MAS) and long-term orientation (LTO). The difference between Hofstede's dimensions and the CVSCALE is that the latter is used to assess cultural orientation at the individual level and is used to generate primary data. Yoo, Donthu and Lenartowicz (2011) developed their scale to evaluate cultural values by using personality at the centre of their methodological approach. This scale allows researchers to evaluate an individual's cultural orientation and to use primary, empirical data instead of just stereotypes of culture. The scale can explain and help explore cultural characteristics of a sample, and consists of 26 items that assess the cultural values of individuals consistent with Hofstede's (1980, 2001) five-dimensional typology of culture.

2.4.2 Five-dimensional typology of culture

2.4.2.1 Power distance

According to Hofstede & Hofstede (2005), power distance refers to the extent to which status differences are expected and accepted within a culture. In terms of the CVSCALE, power distance is the extent to which the less powerful members of institutions and organizations expect and accept that power is distributed unequally (Yoo, Donthu & Lenartowicz 2011). In general, power distance is one of the most influential cultural characteristics affecting several factors, such as decision making (Correia, Kozak & Ferradeira 2011). Related to the current study within the sustainable tourism sector, the power distance dimension has been found to have both positive (e.g., Ho, Wang & Vitell 2012; Ioannou & Serafeim 2012) and negative (e.g., Dimo & Zollo 2007) impacts on various issues, including corporate social performance, corporate concern for different stakeholders and charitable behaviour. With high levels of power distance, people tend to be differentiated based on various criteria, tend to be stable, and power distance is considered as providing social order and relational harmony. High levels of power distance lead to having higher service expectations (Mueller et al. 2003), and reporting higher satisfaction during the service recovery process (Prasongsukarn & Patterson 1998).

Several scholars examined the relationship between power distance and concepts related to sustainability and found negative relationships (e.g., Husted 2005) while others found positive relationships (e.g., Ho, Wang & Vitell 2012; Ioannou & Serafeim 2012). Husted (2005) argues that high levels of respect for authority and power distance have led to a weaker capacity for debate and responsiveness, and thus have limited the development of sustainability. Self-protective behaviours (Carl, Gupta & Javidan 2004), self-centred and face-saving approaches (Javidan et al. 2006) have been found to be correlated with power distance practices. On the other hand, Ho, Wang and Vitell (2012) found a strong positive correlation between power distance and environmental performance. The impact of power distance has been identified in societal sustainability practices rather than environmental sustainability practices. Previous studies state that when higher levels of environmental sustainability occur, the level of power distance is low (Cox, Friedman & Tribunella 2011; Park, Russell & Lee 2007; Husted 2005). Therefore, in a sustainability context, power distance is a significant characteristic that needs

to be examined in order to explain the relationship between tourist cultural characteristics and sustainable tourist behaviour.

2.4.2.2 Uncertainty avoidance

Hofstede (2011) described uncertainty avoidance as follows:

> Research has shown that people in uncertainty avoiding countries are also more emotional, and motivated by inner nervous energy. The opposite type, uncertainty accepting cultures, are more tolerant of opinions different from what they are used to; they try to have fewer rules, and on the philosophical and religious level they are empiricist, relativist and allow different currents to flow side by side. People within these cultures are more phlegmatic and contemplative, and not expected by their environment to express emotions. (p. 11)

In terms of the CVSCALE, uncertainty avoidance is defined as the extent to which the members of a culture feel threatened by uncertain or unknown situations (Yoo, Donthu & Lenartowicz 2011). Cultures higher in uncertainty avoidance tend to interact carefully with others, more strongly prefer established rules and accept taking moderate risks. High uncertainty avoidance practices are related to quality of life, human development and satisfaction in general (Sully de Luque & Javidan 2004). Some studies (e.g., Ho, Wang & Vitell 2012; Peng, Dashdeleg & Chih 2014) present the positive effects of uncertainty avoidance on sustainability; others found no relationship (e.g., Arnold et al. 2007; Parboteeah, Addae & Cullen 2012; Scholtens & Dam 2007; Thanetsunthorn 2015). Moreover, high costs and uncertain benefits have tended to be associated with sustainability practices (Slawinski & Bansal 2015). A positive relationship between uncertainty avoidance and companies' economic, social and environmental sustainability practices could exist (Miska, Szőcs & Schiffinger 2018). Therefore, in a sustainability context, in order to explain the relationship between tourist cultural characteristics and sustainable tourist behaviour, uncertainty avoidance is a characteristic that needs to be examined in this study.

2.4.2.3 Individualism and collectivism

The individualism versus collectivism dimension has been used to examine behavioural variance in terms of both similarities and differences between individuals (Smith & Bond 1998) and describes the relationship of individuals to the larger group. Individualism can be

defined as when 'people prefer to act as individuals rather than as members of groups' (Hofstede 1984, p.6). In contrast, collectivism refers to when 'people from birth onwards are integrated into strong, cohesive in-groups, which throughout people's lifetime continue to protect them in exchange for unquestioning loyalty' (Hofstede 2001, p. 225). In terms of the CVSCALE, individualism pertains to societies in which the ties between individuals are loose; everyone is expected to look after himself or herself, and his or her immediate family, while collectivism is its opposite (Yoo, Donthu & Lenartowicz 2011). People in an individualistic society are more likely to complain to a third party than individuals from a collectivistic one, who are more likely to contact friends and relatives (Huang, Huang & Wu 1996).

Liu and McClure (2001) identified that public behaviour is less significant for collectivists, because they are more likely to engage in private behaviour than those in an individualistic society. Hui and Au (2001) reported that individualists generally perceive a higher level of fairness and indicated more favourable post-complaint behaviours than did collectivists. In terms of decision making in the tourism sector, collectivist cultures decide based on brand, price and the number of alternatives, and friends and relatives, whereas individualist cultures tend to decide based only on their own criteria (Correia, Kozak & Ferradeira 2011). In a study related to a sustainability context, collectivist cultures generally follow social norms more than follow attitudes to green purchasing behaviour compared with individualistic cultures (Chan & Lau 2002). Husted (2005) states that higher levels of individualism are associated with a higher social and environmental sustainability. Moreover, in a study of environmental sustainability, Katz, Swanson and Nelson (2001) also suggested that environmental activism may be more widespread in individualistic cultures than in collective cultures. Therefore, in a sustainability context, individualism and collectivism is a significant characteristic that needs to be examined in order to explain the relationship between tourist cultural characteristics and sustainable tourist behaviour.

2.4.2.4 Masculinity and femininity

The masculinity versus femininity dimension represents the elements of individual personality and behaviour associated with human gender by its social manifestation, that is, an understanding of what it means to be a 'man' or a 'woman' (Laurie et al. 1999). In terms of the CVSCALE, masculinity versus femininity represents the dominant gender role pattern

in the vast majority of both traditional and modern societies (Yoo, Donthu & Lenartowicz 2011). High masculinity cultures are more likely to address dissatisfaction directly (Crotts & Erdmann 2000) while high femininity societies demonstrate more sensitivity. Masculine cultures prefer to get things in a straightforward fashion, resulting in a high number of complaints to management and third parties, whereas feminine societies are less likely to complain (Huang, Huang & Wu 1996). From Hofstede's (2001) discussion of identity, masculinity is linked to the preference for material wealth, and he argues that masculinity creates a preference for economic growth over environmental conservation. However, cultures with greater gender equality rely less on gender to determine the roles and minimise role differences between sexes. Equality of genders can lead to more gains in human development (Emrich, Denmark & Den Hartog 2004). In a sustainability context, previous scholars have stated that Hofstede's dimension of masculinity versus femininity has a significant impact on a country's environmental performance (Dimo & Zollo 2007; Peng & Lin 2009; Park, Russell & Lee 2007). Park, Russell and Lee (2007) stated that femininity is expected to be higher than masculinity in terms of developing environmental sustainability. Due to the role that masculinity versus femininity can have on influencing behaviour in a sustainability context, this is a significant characteristic of concern to explore the relationship between tourist cultural characteristics and sustainable tourist behaviour.

2.4.2.5 Long-term orientation

Bearden, Money and Nevins (2006, p. 2) define long-term orientation as '… the cultural value of viewing time holistically, valuing both the past and the future rather than deeming actions important only for their effects in the here and now or the short term'. Hofstede, Hofstede and Minkov (2010) stated that long term orientation refers to an attribution between a forward-looking versus a present- and past-looking view, that is, a 'future' (long-term) versus a 'now' (short-term) view (Hofstede, Hofstede & Minkov 2010). In terms of the CVSCALE, this component also refers to the long-term versus short-term orientation towards the future (Yoo, Donthu & Lenartowicz 2011). Countries with a high long-term orientation have a concern for the future. Previous studies indicate that many countries are focusing more on long-term orientations towards environmental sustainability. Kumar et al. (2018) identify that long-term orientation cultures have a positive influence on environmental performance, moreover, they are more likely to place a high priority on long-term success, long-term

strategic orientation, and flexible approaches. Miska, Hilbe and Mayer (2014) suggest that long term orientation practices have a strong impact on economic, social, and environmental sustainability practices.

In a sustainability context, Ortiz-de-Mandojana and Bansal (2016) state that sustainable longer-term practices in business have shown a lower financial volatility, higher sales growth and higher chances of survival. Indeed, the environmental aspects of sustainability result in longer-term timeframes (e.g., Egri & Herman 2000; Starik & Rands 1995). Similarly, it has been shown that future-oriented people are more likely to be environmentally-minded (Polonsky et al. 2014). Amiryan and Silva (2013) stated that one of the main features of sustainable tourism is a balance between present and future generations, which is related to the idea of a long-term orientation. Moreover, Bramwell and Lane (1993) indicate that a long-term orientation focuses on the future and a short-term orientation focuses on the present and near future period. Although, in cross-cultural studies, the long-term orientation dimension is usually considered the least important component (Miska, Hilbe & Mayer 2014), due to the current study's aims to clarify culture at an individual level, a long-term orientation may indeed be significant. As mentioned earlier, a long-term orientation is more likely to create a positive influence in a sustainable context. Thus, a long-term orientation will be used to investigate the relationship between tourist cultural characteristics and sustainable tourist behaviour.

2.5 Theory of Planned Behaviour (TPB)

In order to establish that culture is a key component in influencing behaviour in a tourism context, there are many examples in the literature. Previous studies have identified the impact of cultural dimensions on tourist behaviour, especially when focused on national culture (see in Greenslade & White 2005; Han 2015; Lam & Hsu 2004; Lee & Jan 2015; Quintal, Lee & Soutar 2010). Reisinger and Turner (2002b, p.347) have also considered culture and its relationship to tourism as 'differences and similarities in values, rules of behaviour, and perceptions, which influence interpersonal contact between international tourists and hosts and their satisfaction with each other'.

To investigate behaviour, the Theory of Planned Behaviour (TPB), an extension of the Theory of Reasoned Action (TRA) of Fishbein & Ajzen (1975), is a helpful model used to identify and measure its components. TRA theory was developed to describe behavioural intentions of customer; indeed, Ajzen and Fishbein (1980) indicated that one of the most important predictors of human behaviour is intentions. However, the TRA emphasises the impact of cognitive components (Guo et al., 2007), and the model was considered more appropriate for non-routine thinking decisions (Oppermann, 1995). The TRA was extended to the TPB by the addition of perceived behavioural control to the prediction of behaviour (Ajzen, 1985, 1991). Several scholars have used the TPB to clarify behaviour in several contexts, including in the tourism sector (see Brown, Ham & Hughes 2010; Chien, Yen & Hoang 2012; Kim & Han 2010), and specifically in a sustainable tourism context (Untaru, Epuran & Ispas 2014). As mentioned above, this study will focus on culture as manifested at an individual level. Thus, the study will examine tourist cultural characteristics' influence on their attitudes and behaviour through adapting the TPB as outlined in the following section.

The TPB was first proposed by Ajzen (1991). Figure 2.1 presents the dimensions of planned behaviour that show the relationships between attitudes and behaviour.

Figure 2.1 Theory of Planned Behaviour (Ajzen 1991)
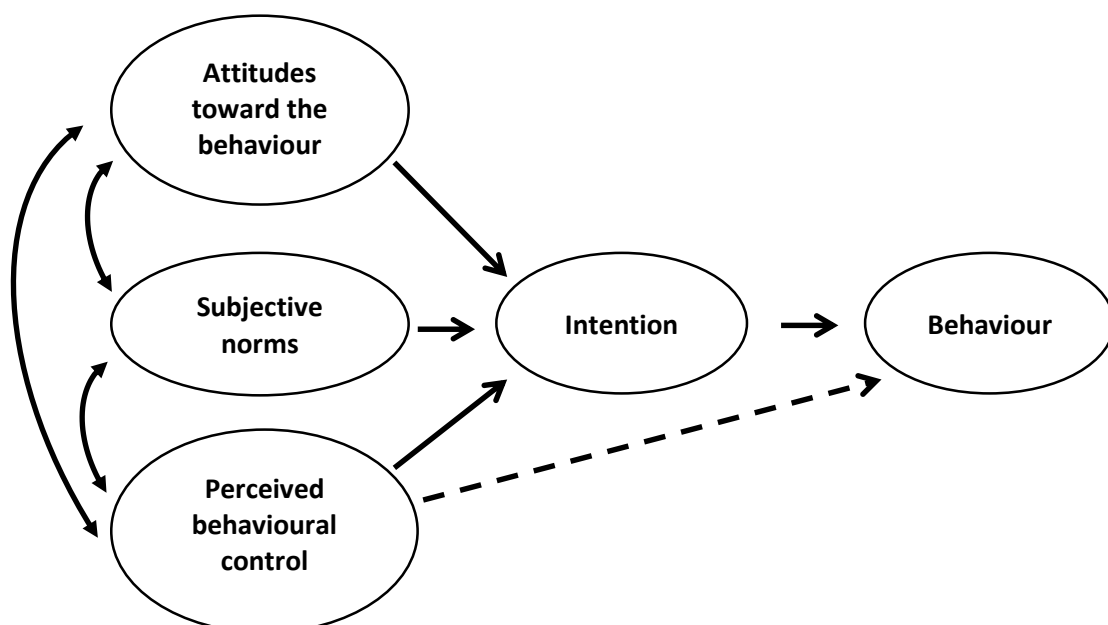
The TPB (Ajzen 1991) represents the relationships among attitudes, subjective norms and perceived behavioural control which affect intentions to behaviour and ultimately behaviour. The TPB has been applied to study and predict intentions and behaviour of people in several contexts.

The Theory of Planned Behaviour (TPB) has been commonly used, for example, by Ajzen (1991), Chatzidakis, Hibbert and Smith (2007), De Pelsmacker and Janssens (2007) and Vermeir and Verbeke (2008). From their studies, the TPB framework has been used to focus on integrating factors that influence the formation of ethical purchasing intentions, including internal ethics (Shaw & Clarke 1999; Shaw & Shui 2002), information quality and quantity (De Pelsmacker & Janssens 2007) and personal values (Vermeir & Verbeke 2008). However, the TPB is not without criticism; some scholars using the TPB indicate results that contrast with the exact nature of the relationship proposed between intention and behavior (Eagly & Chaiken 1993; Gärling, Gillholm & Gärling 1998). Some researchers state that study of the TPB indicates that intention and perceived behavioral control represent only 34% of the variation in actual behavior (Godin & Kok 1996; Sutton 1998). Moreover, several empirical studies also show that the relationship between intention and behaviour is relatively weak (Bergin-Seers & Mair, 2009; McDonald et al., 2012; McKercher & Tse, 2012). There are also several empirical studies in the broader context of consumer behaviour that suggest that purchase intentions may not translate exactly into actual buying behaviour (Ajzen, Brown & Carvajal 2004; Bagozzi 2000; Morwitz, Johnson & Schmittlein 1993; Young, DeSarbo & Morwitz 1998). Here, only three predictors of TPB are used in this study (attitudes, subjective norms, and perceived behavioural control).

In the context of tourism, attitudes refer to personal judgments about either being in favour of, or objecting to, performing certain behaviours, such as intention to visit a destination (Lam & Hsu 2006; Ryu & Jang 2006). A subjective norm is a perception of an individual's social reference, that is, how a person should or should not behave (Hsu & Huang 2012). Perceived behavioural control refers to 'an individual's perceptions of his or her ability to perform a given behaviour' (Hsu & Huang 2012, p. 392). These terms will be explained in more detail in following sections.

Ajzen (1985, 1991) argued for a strong relationship between attitudes, subjective norms and perceived behavioural control; these three dimensions were found to have a positive impact on intention and behaviour in a tourism context. Many tourism researchers suggest that the TPB can be a useful theory for tourism research to predict and explore tourist intention and behaviour in the future (Brown, Ham & Hughes 2010; Chien, Yen & Hoang 2012; Kim & Han 2010) Several scholars state that the TPB assumes that attitude toward the behaviour, subjective norms and perceived behavioural control are important forms of behavioural, normative and control beliefs (Lee, Back & Kim 2009; Oh & Hsu 2001; Perugini & Bagozzi 2001). Untaru, Epuran and Ispas (2014) also describe that the TPB is commonly used in a tourism context especially in describing pro-environmental attitudes and behaviours. This theory is effective for predicting and explaining ecological behaviour (Kaiser & Gutscher 2003), which is related to the current study that aims to clarify the context of sustainable tourism behaviour.

The current study aims to investigate the relationship between cultural characteristics and sustainable tourist behaviour through applying the TPB with its three main components to clarify their impact on the relationship between cultural characteristics and behaviour. This study does not use intention; instead, as discussed, actual tourist behaviour is measured as an outcome variable in the study. The following sections provides additional detail on these three main components.

2.5.1 Attitudes

One of the most significant components of the TPB is attitudes. Fisbein and Ajzen (1975, p.6) define attitudes as 'a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object'. Eagly and Chaiken (1993, p. 1) state that an attitude is 'a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour'. Attitudes are generally categorised into three components (the so-called tri-component model of attitudes): cognitive, affective and behavioural (Baron, Byrne & Branscombe 2002). Since 1940, the tri-component model has been widely used in the psychology literature (Breckler 1984). In the TPB, attitudes are defined as overall evaluations of performing a specific individual behaviour or with regard to a specific attitude object (Ajzen 1991). Attitudes are used in the TPB model as the perceived

positive or negative evaluation of the behaviour in question (Fishbein & Ajzen 1975). Atkinson (1985) indicates that the concept of attitude relates to a significant interest in culture and individual behaviour. Sarigöllü (2009) also supports that different dimensions of culture can create different attitudes toward the environment. Attitudes refer to intellectual, emotional and behavioural responses to objects, things and people. Heberlein and Black (1976) state that specific attitudes are more strongly correlated with behaviour than general ones. Bamberg, Ajzen and Schmidt (2003) also states that specific behaviours can be impacted through specific attitudes. This is in alignment with the current research to investigate sustainable tourist behaviour. The following section will provide details of each component and also measurements used in terms of tourist attitudes toward sustainable tourism.

2.5.1.1 Cognitive component (environmental knowledge: EK)

The cognitive component of attitudes refers to the beliefs and knowledge held by a person. According to Fishbein and Ajzen (1975), the cognitive component describes an attitude that consists of beliefs, thoughts and attributes that are associated with people, an establishment or an object. In addition, Yeung and Leung (2007) state that the cognitive component is an indicator of a verbal attitude, expressions of beliefs and thoughts. The cognitive component of attitude can be divided into two main categories, subjective knowledge and objective knowledge (Alba & Hutchinson 2000). Subjective knowledge refers to how an individual knows about something personally or their own evaluation of their state of knowledge, while objective knowledge defines knowledge external to an individual's unique experiences (Klerck & Sweeney 2007). Gursoy and McCleary (2004) found that tourist decision-making is significantly influenced by knowledge, and this can be useful for travel information (Chen & Gursoy 2000). Based on Liu et al (2018) objective knowledge is more difficult to measure than subjective knowledge and some scholars support that subjective knowledge may predict effective pro-ecological behaviors better than objective knowledge (Ellen 1994; Liu 2018). Hence, this study uses only subjective knowledge.

In terms of sustainable tourism, the conceptualization of environmental knowledge has been used to clarify the cognitive component of attitudes, often categorised as subjective knowledge, which ranges from actual specific information to conceptual understanding to self-definition by the visitor. Cheng and Wu (2015) indicate that environmental knowledge is

an important cognitive component that impacts tourist engagement in increasing responsible behaviours and decreasing negative environmental impacts. Since environmental knowledge can increase the ability of tourists to act responsibly, it may strengthen the cognition of environmental conservation of tourists. Kim, Kim and Thapa (2018) state that evaluating environmental knowledge can be accomplished as tourists demonstrate their empathy, appreciation and greater concern towards nature at the destination. This implies that developing tourists' environmental knowledge can lead to more positive emotional responses to nature, therefore, in order to clarify the cognitive component of attitudes in sustainable tourism, environmental knowledge is used in this study.

2.5.1.2 Affective component (New Ecological Paradigm: NEP)

The affective component can be described as the emotional aspect of attitudes that includes emotions, feelings and physiological responses; these may come with accompanying affective experiences (Schimmack & Crites 2005). Verbal expressions of feelings towards the attitude object have been described by affective responses, and also physiological reactions, facial expressions and other non-verbals that may be present as indicators of both positive and negative feelings (Yeung & Leung 2007). As this study focuses on the sustainable tourism sector, the environmental concerns of tourists are of great concern. Imran, Alam and Beaumont (2014) indicate the significance of environmental concerns that can influence the process of sustainable tourism. The New Ecological Paradigm (NEP), developed by Dunlap and Van Liere (1978) and then revised by Dunlap et al. (2000), is one the most well-known measurements used in an environmental context in order to identify affective attitudes toward the environment. Dunlap (2008) reports that the NEP scale has been used worldwide by many scholars. Indeed, the NEP scale is defined as a standard measure of general environmental concern (Jurowski et al. 1995, as quoted in Lee & Moscardo 2005). According to Anderson (2012), the NEP has had a significant impact on discussions around sustainable tourism. Moreover, previous studies utilizing the NEP have been conducted in various countries (Milfont, Duckitt & Cameron 2006) and been applied and evaluated within a cultural context (Hawcroft & Milfont 2010).

The NEP-scale is 'focused on beliefs about humanity's ability to upset the balance of nature, the existence of limits to growth for human societies, and humanity's right to rule over the

rest of nature' (Dunlap et al. 2000, p. 427). The NEP-scale implies that a higher level of individual environmental concern should involve more conscious consumer behaviour regarding ecology (Antil 1984; Roberts 1991; Shetzer, Stackman & Moore 1991, as cited in Roberts & Bacon 1997). In early studies on the behaviour of ecotourists, several researchers used the NEP to investigate the understanding of tourists' environmental behaviour (Fairweather, Maslin & Simmons 2005; Lee & Moscardo 2005; Roberts & Bacon 1997; Vining & Ebreo 1992;). Also, several researchers have examined and clarified the relationship between environmental concern and the behaviour of consumers (Fairweather, Maslin & Simmons 2005; Franzen & Mayer 2009; Grimmer & Woolley 2014; Lee & Moscardo 2005; Roberts & Bacon 1997). The NEP scale has been found to have a high level of power to predict actual environmental behaviour, and its use in empirical studies has found it to be both reliable and valid (Lee & Moscardo 2005; Vining & Ebreo 1992). Several studies indicate that the NEP has had an impact on identifying site specific preferences and motivational factors (Khan 2004; Kim, Borges & Chon 2006; Uysal et al. 1994). In order to examine the affective component of attitudes in sustainable tourism in this study, the NEP is one of the most appropriate measurements in this context and will be used in this study.

2.5.1.3 Behavioural component (past behaviour: PB)

The last component of attitudes is behaviour, and refers to actions toward the attitude object including intentions to act. Yeung and Leung (2007) define the behavioural component of attitudes as acting or behaving in certain ways towards the attitude object by predilections, intentions, plans and commitments. Regarding the attitude object, the behavioural component also refers to past behaviour or past experiences (Bem 1972). Indeed, Rajagopal and Montgomery (2011) state that the experiences of customers have a significant influence on their attitudes.

In the tourism sector, the research of Chiu, Lee and Chen (2014) and Loureiro (2014) shows that the experiences of tourists strongly impact their attitudes. Past experiences are a significant factor that impacts individual decision making. Kerstetter and Cho (2004) state that when tourists decide to travel and seek information to be used to select a destination, past experiences are needed as a reference point. In an empirical study, Wirtz et al. (2003) found that when an individual decides to pursue a similar vacation in the future, past

experiences and behaviour are the best predictors. Previous researchers have conceptualized past experience and behaviour as subjective (e.g., Larsen 2007; Ryan 2002). In order to predict behaviour, frequency of the past behaviour is one of the most used measures (Kahneman & Tversky 1973). Thus, in order to examine the behavioural component of attitudes in sustainable tourism past behaviour is used in this context.

2.5.2 Subjective norms (SN)

Ajzen (1991) defined subjective norms as pressure at a social level felt by a person with regard to behaviour. Subjective norms are the perceived opinions of important others who are close to an individual and who influence his/her given behaviour. In other words, subjective norms can be described as the feelings of an individual of social pressure from other people or groups (Ajzen 1991; Ajzen 2005; Fishbein & Ajzen 1976). In the TPB model, a subjective norm is a second determinant of behavioural intention and behaviour. The term 'subjective norm' is also defined as 'the perceived social pressure to perform or not to perform the behaviour' (Ajzen 1991, cited in Ajzen 2005; Fishbein & Cappella 2006; Gale et al. 2013; Han, Hsu & Sheu 2010; Norman, Conner & Bell 1999). Park (2000) emphasised the impact of others, such as close friends, family, cousins, colleagues, or business partners. In the marketing and consumer behaviour context, several studies have indicated subjective norms as a significant factor of intention, including participation intention (Lee 2005), technology-use intention (Baker et al. 2007), organic food purchase intention (Dean, Raats & Shepherd 2012; Ha & Janda 2012; Kumar 2012), and green hotel revisit intention (Chen & Tung 2014; Han, Hsu & Sheu 2010; Teng, Wu & Liu 2015). Subjective norms have also been examined in other contexts, such as environmental conscious consumption (Grimmer & Miles 2017; Khare 2015; Moser 2015; Tsarenko et al. 2013) and sustainable tourist behaviour (Budeanu 2007; Prillwitz & Barr 2009). In this regard, subjective norms may play an important role in determining the influence of culture at the individual level and sustainable tourist behaviour. The following section will provide more detail about the last TPB component used: perceived behavioural control.

2.5.3 Perceived Behavioural Control (PBC)

Perceived behavioural control (PBC) refers to 'the perceived ease or difficulty of performing the behaviour and it is assumed to reflect past experience as well as anticipated impediments and obstacles' (Ajzen 1991, p. 188). PBC consists of the internal factors which relate to the

concept of self-efficacy (Ajzen 1991; Bandura 1988). Fishbein and Ajzen (2011) indicate that in order to change PBC, changing beliefs is required. In other words, PBC is an extension of individual feelings toward the capability to perform a desired behaviour. Several scholars state that control beliefs are significant for PBC, which refers to individual beliefs about both barriers and facilitating factors that lead to performing behaviour (Ajzen 1991). PBC also predicts the execution of a behaviour, not only behavioural intentions (Ajzen 1985). An individual with a high PBC level is more likely to perform behaviours. PBC may consist of two components (Ajzen 1991; Taylor & Todd 1995). The first component refers to the availability of resources needed to engage in the behaviour, such as access to money, time, and so forth. The second component is the ability to conduct the behaviour, that is, the focus of the person's self-confidence.

Of the three antecedents of the TPB as mentioned above, PBC can be described as one of the most important to investigate an individual's ease or difficulty in performing behaviours in particular situations or contexts (Ajzen 1991). Previous studies have shown that PBC is positively related with intention in several contexts, especially in environmental concerns, such as conservation (Albayrak, Aksoy & Caber 2013), green hotels (Chang, Tsai & Yeh 2014; Chen & Tung 2014; Han, Hsu & Sheu 2010; Teng, Wu & Liu 2015), organic foods (Tarkiainen & Sundqvist 2005; Thøgersen 2007), and green products in general (Moser 2015). Therefore, in terms of this study, the TPB has been applied to clarify the relationship between culture at an individual level and sustainable tourist behaviour. PBC is one of the main components used to examine how well one can execute required actions to deal with specific situations.

As mentioned above, the TPB has been applied to study and predict individual behaviour in several studies. In terms of a sustainable behaviour context, the TPB has been used regularly as a basis for investigating environmentally sustainable behaviour in general (Anable, Lane & Kelay 2006; Bamberg, Ajzen & Schmidt 2003; Chen & Tung 2010; Fielding, McDonald & Louis 2008; Kalafatis et al. 1999; Shaw, Shiu & Clarke 2000), and environmentally sustainable tourist behaviour in particular (Han, Hsu & Sheu 2010; Han & Kim 2010; Ong & Musa 2011). The purpose of this study is to investigate the relationship between culture as manifested at an individual level and sustainable tourist behaviour; the TPB can be a significant theory to clarify this relationship. Thus, this study applies the TPB with three main components to directly

clarify their impact on behaviour – attitudes, subjective norms, and perceived behavioural control. In term of attitudes, they are divided into three components: (1) a cognitive component using environmental knowledge, (2) an affective component using the NEP, and (3) a behavioural component using past behaviour.

2.6 Destination image

A study of TPB and destination image found that destination image is a moderator variable that can influence the relationship between attitudes and behaviour. San Martín and del Bosque (2008) found that a destination image generates feelings and thoughts toward the destination in terms of both cognitive and affective components. Moreover, Line and Hanks (2016) also report that destination image plays a significant role as a moderator in the relationship between consumer beliefs toward a destination and subsequent attitudes and behaviours. Previous research has identified the impact of destination image on several factors, such as perceived value (Kim, Holland & Han 2013), consumer attitudes toward green product consumption (Line & Hanks 2016), satisfaction (Prayag & Ryan 2012), and behavioural intention (Chen & Tsai 2007). Thus, due to the lack of study in a sustainable tourism context, this study will also examine destination image as a moderator of the relationship between attitudes and behaviour in sustainable tourism.

Destination image plays a significant role in destination marketing (Fakeye & Crompton 1991). Some scholars define destination image as a personal mental construct that represents the knowledge, feeling and overall perception of a specific destination (Crompton 1979; Fakeye & Crompton 1991). Tasci, Gartner and Tamer Cavusgil (2007) present three dimensions of destination image (similar to attitudes): cognitive, affective and conative. The cognitive component refers to the knowledge, beliefs, and attributes concerning the destination. Second, the affective component refers to the feelings of the person toward the destination. Lastly, the conative component is defined as a behavioural intention regarding the destination. The literature includes a large number of studies that have used the cognitive component to clarify understanding of the destination image and tourist perceptions in a tourism context. According to Pike (2002), the cognitive component has been used to measure the destination image in most of these studies. However, previous researchers have

stated that destination images naturally consist of cognitive *and* affective components (Baloglu & McCleary 1999; San Martín & del Bosque 2008). Previous studies indicate that the destination image affects various factors, such as behavioural intention (Chen & Tsai 2007; Crompton 1992; Dongfeng 2013;Kozak & Rimmington 1999; Prayag 2009; Ramkissoon, Uysal & Brown 2011; Tavitiyaman & Qu 2013; Wang & Hsu 2010), satisfaction (Chen & Tsai 2007; Hernández-Lobato et al. 2006; Kozak & Rimmington 1999; Mykletun, Crotts & Mykletun 2001; Prayag 2009; Song, Su & Li 2013), a person's destination of choice (Chen 2001; Chen & Uysal 2002; Haahti 1986; Hu & Ritchie 1993), image modification (Chon 1991; Lee, Lee & Lee 2014), perceptions of benefits and motivations (Kim, Crompton & Botha 2000; Woodside 1982), positive perceptions of opinion leaders (Kozak & Rimmington 1999), destination loyalty (Chi & Qu 2008; Hernández-Lobato et al. 2006; Kim, Holland & Han 2013; Rajesh 2013; Zhang, Fu, et al. 2014) and destination personality (Hosany, Ekinci & Uysal 2006; Klabi 2012).

Destination image is commonly used as a significant aspect in the development of tourism success and in destination marketing. Scholars have found significant impacts of destination image in the context of marketing (Correia & Guillet 2013), such as positioning and promotion (Baloglu & Brinberg 1997; Baloglu & McCleary 1999; Calantone et al. 1989; Chen & Kerstetter 1999; Walmsley & Young 1998). Previous researchers describe the importance of proper image development to the overall success of a tourism destination (Chen & Kerstetter 1999; Crompton 1979; Dadgostar & Isotalo 1992; Hunt 1975), especially in terms of demand-side aspects, such as the tourist behaviour of decision-making (Alhemoud & Armstrong 1996; Baloglu & Brinberg 1997; Chen & Hsu 2000; Chen & Kerstetter 1999; Crompton 1979; Dadgostar & Isotalo 1992; Dann 1996; Fakeye & Crompton 1991; Gartner 1994; Goodrich 1977; Hunt 1975; MacKay & Fesenmaier 1997; Mayo 1973; Mayo & Jarvis 1981; Tapachai & Waryszak 2000; Walmsley & Young 1998).

For more than three decades, various scholars have focused on the concept of destination image in relation to tourist destination management and marketing (Baloglu & McCleary 1999; Chon 1991; Echtner & Ritchie 1993, 2003; Hosany, Ekinci & Uysal 2006; Tasci, Gartner & Tamer Cavusgil 2007). Fakeye and Crompton (1991) state that the significance of destination image can lead to present tourist perceptions toward the destination. Most destination image research studies have been used to prepare the most appropriate

destination marketing strategies. Chi and Qu (2008) also identify that greater destination satisfaction and destination loyalty are generated by tourist perceptions concerning destination image. Moreover, the benefit of tourist perceptions of destination image could lead to creating a positive impact on businesses in general, increase tourist numbers (Beerli & Martín 2004; Hosany, Ekinci & Uysal 2006), impact higher levels of tourist satisfaction and loyalty (Ashworth & Goodall 1988; Chen & Tsai 2007; Hernández-Lobato et al. 2006; Lee, Lee & Lee 2005; Yoon & Uysal 2005), impact the tourist destination selection process (Baloglu & McCleary 1999; Beerli & Martín 2004), affect subsequent travel behaviour (Baloglu & McCleary 1999), and provide better strategies in the organization through the development of destination management (Chen & Tsai 2007).

Previous research indicates that images of a destination influence decision-making behaviour for travel (Crompton 1979; Tapachai & Waryszak 2000; Walmsley & Young 1998). Chen and Kerstetter (1999) identify that positive image aspects of a destination lead tourists to choose one destination over another. Some studies also state that a destination image must not only include positive aspects but also need to be strong to be chosen by tourists (Alhemoud & Armstrong 1996; Hunt 1975; Ross 1993). Some other researchers suggest that destination choice is based on tourists' needs and wants (Joppe, Martin & Waalen 2001). Dadgostar and Isotalo (1992) found tourists who stay close to home city destinations had a moderate impact of image along with other variables, such as recreation time consumption, while enjoyment and satisfaction are other variables assumed to be affected by destination image. Ross (1993, p. 57) indicated that 'the image involving resident friendliness was found to be the most potent, being related to enjoyable experiences, (and) positive destination evaluations.'

Different characteristics of tourists could impact a destination image. If a tourist does not show dissatisfaction when the feeling occurs, the visitor will experience satisfaction (Alhemoud & Armstrong 1996; Britton 1979; Fakeye & Crompton 1991; Ross 1993). Milman and Pizam (1995) describe that once tourists are satisfied with their experience toward a destination, they might prefer to revisit a destination. Thus, this study also used destination image as a moderator of the relationship between cultural characteristics, attitudes and sustainable tourist behaviour. Previous studies have identified the correlation between cultural characteristics and destination image. Hirschman and Holbrook (1982) suggested that

the differences between cultural sub-groups, such as ethnic groups, gender, and social classes of tourist, would lead to an impact on the image what is considered pleasurable in a destination. Reisinger and Turner (2002a, 2002b) also state that culture has a relationship with several other components, which can lead to impact on people's perceptions, impressions and interpretations about places as well as people at the destination. Prior researchers state that destination image is one of the most significant components needed to identify tourist behaviour, and that destination image has a strong influence on tourist behaviour (e.g., Baloglu & McCleary 1999; Chen & Tsai 2007; Crompton 1992; Dongfeng 2013; Kozak & Rimmington 1999; Prayag 2009; Ramkissoon, Uysal & Brown 2011; Tavitiyaman & Qu 2013; Wang & Hsu 2010). This study has identified destination image as one factor that influences the behaviour of sustainable tourists. In order to clarify the role of destination image for sustainable tourism destinations in this study, only the cognitive component has been chosen. This is due to it being one of the most widely-used components in several studies, as described by Pike (2002).

2.7 Conclusion

Due to the significant trend in sustainability in the tourism industry, it is important for tourism businesses to understand the factors influencing sustainable tourist behaviour. This chapter outlined the sustainable tourism concept, and sustainable tourist behaviour, as well as the importance of culture as manifested at an individual level. It also described the use of the Theory of Planned Behaviour, with attitudes, subjective norms and perceived behavioural control, as well as destination image acting as mediators and moderators on the effect of culture on sustainable tourist behaviour (e.g., Hsu & Huang 2010; Jalilvand & Samiei 2012; Lam & Hsu 2006). The chapter explained how the relevant concepts could be applied with regard to the aims of this study of sustainable tourist behaviour. Some of the specific measures to be used in this study were also described. The next chapter provides the proposed conceptual model to be tested in this study and the development of hypotheses.

CHAPTER THREE

Hypothesis Development and Proposed Conceptual Model

3.1 Introduction

This chapter outlines the development of the hypotheses and the proposed conceptual model of the study. The conceptual model is grounded in the cultural dimensions and sustainable tourism literature. In particular, this study examines individuals' cultural characteristics as antecedents of sustainable tourist behaviour. The Theory of Planned Behaviour (TPB) is used to identify the extent to which attitudes, subjective norms and perceived behavioural control impact the cultural characteristics and sustainable tourist behaviour relationship. Tourist attitudes toward environmental issues (comprising cognitive, affective and behavioural components) is examined as a mediator of the relationship. Subjective norms perceived behavioural control, as well as Thailand's destination image, are examined as moderating factors. Taking this into account, the following research questions were developed, as shown in Chapter One:

RQ1**:** What is the relationship between different cultural characteristics and sustainable tourist behaviour?

RQ2: Does a tourist's attitudes mediate the relationship between different cultural characteristics and sustainable tourist behaviour?

RQ3**:** Do subjective norms and perceived behavioural control moderate the relationship between different cultural characteristics and a tourist's attitudes?

RQ4**:** Do subjective norms, perceived behavioural control, and Thailand**'**s destination image moderate the relationship between a tourist' s attitudes and sustainable tourist behaviour?

RQ5**:** Do subjective norms, perceived behavioural control, and Thailand**'**s destination image moderate the relationship between different cultural characteristics and sustainable tourist behaviour?

Based on the literature review and research questions, the objective of this study is to develop a new model of the relationship amongst cultural characteristics, tourists' attitudes, subjective norms, perceived behavioural control, perceptions of Thailand's destination image and sustainable tourist behaviour. The first stage involves exploring the relationships amongst cultural characteristics and sustainable tourist behaviour. With regard to the Theory of Planned Behaviour (TPB), the study uses three aspects (attitudes, subjective norms and perceived behavioural control). In this study, these aspects are suggested to act as mediators (attitudes) and moderators (subjective norms and perceived behavioural control) between the cultural characteristics and sustainable tourist behaviour relationship. Finally, the proposed model adds perceptions of Thailand's destination image as a moderator variable between the attitudes and sustainable tourist behaviour relationship, which addresses a gap between attitudes and behaviour in the TPB. The perception of the destination image can provide a better understanding of the role of culture, attitudes, subjective norms, and perceived behavioural control. Figure 3.1 presents the conceptual model of this study

This chapter is divided into four sections. Section 3.2 presents the development of the hypotheses (including Section 3.2.1 on the direct effects, and Sections 3.2.2 to 3.2.3 that illustrate the mediating and moderating effects). Section 3.3 represents the summary of hypotheses in this study. Finally, Section 3.4 provides a conclusion of the chapter.

Figure 3.1: Proposed Conceptual Model
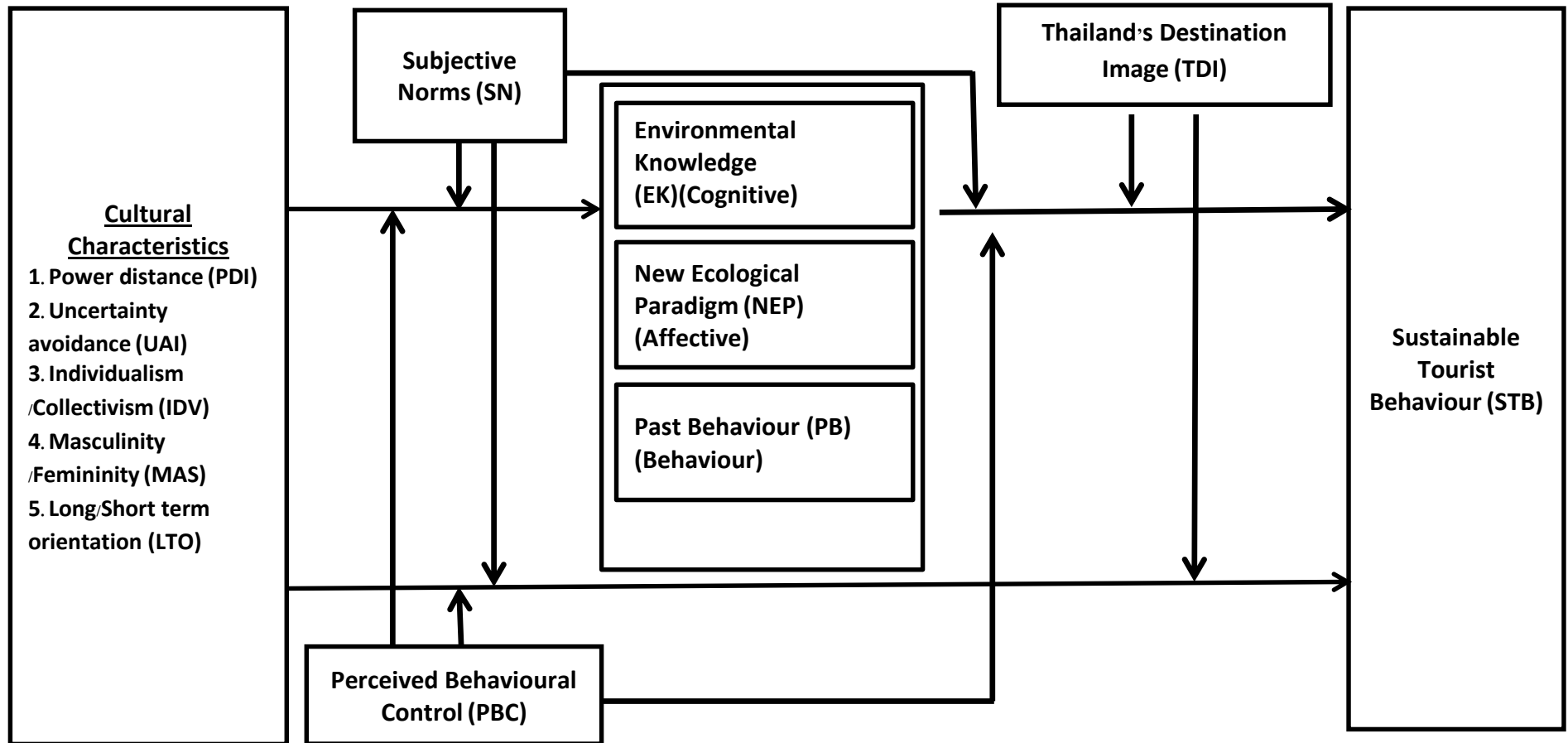
3.2 Hypothesis development

3.2.1 The direct effect- Hypothesis 1: The direct effect of different cultural characteristics and sustainable tourist behaviour

With a rise in global tourism, an increasing number of researchers are focusing on national culture as a factor in their studies (Huang, Chen & Lin 2013; Litvin, Crotts & Hefner 2004). On the other hand, few studies focus on culture as expressed and measured at the individual level. According to Kale (1991), the results of cultural conduct at the individual level can be similar to or different from those conducted at the national level for a particular segment. Ghazali et al. (2017) also identified different results regarding cultural dimensions between Hofstede's national cultures, and culture at the individual level. This implies that even if they have similar nationalities, the cultural characteristics and values of individuals may be different. Dann (1993) supports the view that nationality is not always a true indicator of culture; his study suggested that very few nations are homogenous. Lenartowicz and Roth (2001) have found that individual values are more likely to accurately predict individual behaviours or characteristics. According to the purpose of this study, which aims to focus on the cultural characteristics of tourists, national culture, therefore, may not appropriate for this examination.

As discussed in Chapter Two (Section 2.3), an understanding of cultural characteristics is beneficial for testing the level of cultural impacts for market segmentation, and for serving various international tourism markets in an effort to tap into that market's tastes and preferences (Litvin, Crotts & Hefner 2004). According to some research in a marketing context, if marketers focus directly on consumers' characteristics more than focusing on a country's characteristics, it would possibly increase their level of success (Keillor, Hult & Kandemir 2004; Kongsompong, Green & Patterson 2009; Patterson. Cowley & Prasongsukarn 2006; Patterson & Mattila 2008; Reid 2011). To advance the knowledge of cultural characteristics in a sustainable tourism context, the current study employs the CVSCALE, which was developed from the Hofstede (1980, 2001) dimensions, by Yoo, Donthu and Lenartowicz (2011), to examine the effect of cultural characteristics on sustainable tourist behaviour. The application of the CVSCALE in the context of sustainable tourism in an

emerging market could be considered as a research limitation as only a few studies have used this scale in terms of a sustainable tourism context.

Prior research in the context of tourism literature has recognised the importance of national culture as a characteristic that influences patterns of tourism (Moscardo 2004). The concept of national culture is useful for the study of societies and nations (Yoo, Donthu & Lenartowicz 2011). However, due to this study's focus on characteristics of culture, the concept of culture as expressed at an individual level is more important and relevant (see Kamakura & Mazzon 1991; Kamakura & Novak 1992). Research has developed a model of cultural differences established by Hofstede (1997) and further developed in the CVSCALE. In order to identify the cultural characteristics of tourists and impact toward sustainable tourist behaviour, the five dimensions from this model are used: power distance (PDI), uncertainty avoidance (UAI), individual /collectivism (IDV), masculinity/femininity (MAS), and long-term orientation (LTO) (Hofstede, Hofstede & Minkov 2010; see also Yoo, Donthu & Lenartowicz 2011).

A number of research efforts have been made to better understand how cultural differences explain patterns of tourist behaviour (Correia, Kozak & Ferradeira 2011; Woodside, Hsu & Marshall 2011). The concept of cultural differences has been investigated in a variety of tourism settings (e.g., Lai, Li & Harrill 2013; Matzler et al. 2016; Meng 2010; Ng, Lee & Soutar 2007). Cultural differences can affect tourist behaviour in many different ways. Thus, it is useful to determine the possible relationship between tourist cultural differences and their sustainable tourist behaviour. More precisely, the elements of cultural difference influence the openness to be aware of sustainable behaviour in the 'consumption' of national park destinations.

Chong (2008) identified that culture has a strong influence on an individual's perception and behaviour. Adler (2002) stated cultural differences and the diversity of individuals can lead to increased levels of positive and/or negative impacts on organisational outcomes. Cultural characteristics can influence individual behaviours (Meyer & Allen 1991). Thus, cultural characteristics are a significant factor that influences the behaviour of tourists in sustainable tourism destinations (see Section 2.4). Several studies have found positive linkages between the proposed dimensions of cultural characteristics used in this study and sustainable tourist behaviours (Aguinis & Glaves 2012; Ho, Wang & Vitell 2012; Husted 2005; Miska, Szőcs & Schiffinger 2018). Therefore, it is possible to hypothesise that there is a positive relationship between the construct of individual cultural characteristics (as expressed in the five dimensions) and sustainable tourist behaviour. As such, hypothesis one is:

H1:   Different cultural characteristics are a significant predictor of sustainable tourist behaviour.

In order to test possible cultural influence further, five sub-hypotheses regarding the influence of culture expressed at an individual level on sustainable tourist behaviour are created.

As outlined in Chapter Two, power distance refers to a tolerance for class differentials in society. Previous research in a sustainability context has found that power distance had positive impacts (e.g., Ho, Wang & Vitell 2012; Ioannou & Serafeim 2012) as well as negative impacts (e.g., Dimo & Zollo 2007), on various relevant outcomes, such as corporate social performance, corporate concern for different stakeholders and charitable behaviour. In terms of relative environmental performance, Ho, Wang and Vitell (2012) found a positive correlation with power distance.

Uncertainty avoidance refers to the intolerance of risk. Thanetsunthorn (2015) suggests that a high uncertainty avoidance culture can produce a strict enforcement of environmental laws and regulations in the society; as a result, it increases the level of awareness toward environmental impacts. In addition, Peng, Dashdeleg and Chih (2014) indicate that to

decrease levels of uncertainty avoidance toward environmental issues, engagement in sustainability practices need to be more concerted.

Individualism refers to the degree to which the welfare of individuals is valued more than the group, while collectivism is the opposite. In an individualistic culture, the environmental effects of activity are shown to be much more widespread and diverse than in a collectivist culture (Katz, Swansons & Nelson 2001). Cultures with high individualistic practices are more likely to dominate the outside world and 'molest' the environment, potentially endangering environmental sustainability (Cullen, Parboteeah & Hoegl 2004; Parboteeah, Addae & Cullen 2012).

Masculinity/femininity refers to achievement orientation, competition and materialism. A high-masculinity culture results in a slower adoption of environmental technology (Palmer, Oates & Portney 1995), and responsiveness to environmental problems is reduced. Miska, Szőcs and Schiffinger (2018) indicate that high masculinity practices are focused on self-expansion and instrumentality in contrast to the logic of environmental sustainability, which aims to preserve an integrity of the ecology and reduce one's ecological footprint.

Long-term orientation refers to stability, thrift, respect for tradition, and future orientation. High long-term orientation cultures are more likely to create opportunities for long-term success, long-term strategic orientations, and flexibility. A long-term orientation is mostly associated with sustainable practices (e.g., Egri & Herman 2000; Starik & Rands 1995). A high long-term orientation culture results in preserving environmental sustainability. Parboteeah Addae and Cullen (2012) suggest that planning and implementing environmental sustainability programs will occur with high long-term orientations.

In summary, there is a hypothesised relationship between the five cultural dimensions and sustainable tourist behaviour (Figure 3.1). It is hypothesised that each dimension has a positive influence on sustainable tourist behaviour, stated as follows:

H1a: Power distance is a significant positive predictor of sustainable tourist behaviour.

H1b: Uncertainty avoidance is a significant positive predictor of sustainable tourist behaviour.

H1c: Individualism/ collectivism is a significant positive predictor of sustainable tourist behaviour.

H1d: Masculinity/femininity is a significant positive predictor of sustainable tourist behaviour.

H1e: Long-term orientation is a significant positive predictor of sustainable tourist behaviour.

3.2.2 The mediation effects - Hypothesis 2: The mediating effects of tourist attitudes towards environmental issues

In order to further investigate sustainable tourist behaviour in this study, the Theory of Planned Behaviour (TPB) has been used to explain the effect of individual cultural characteristics. Several tourism researchers have indicated that the TPB is a useful theory to predict and explore tourist intention and behaviour in the tourism sector (Brown, Ham & Hughes 2010; Chien, Yen & Hoang 2012; Kim & Han 2010). This study has applied the TPB to clarify the impact of culture on behaviour. Three components of the TPB are used in this study: attitudes, subjective norms and perceived behavioural control.

Tourist attitudes are well established in the tourism and services marketing literatures and play an important role in understanding tourist behaviour (Cai & Shannon 2012; Lee 2009; Prayag et al. 2013). As discussed in Chapter Two, tourist attitudes explain the degree to which a tourist has a positive or negative evaluation of performing a certain behaviour (Ajzen 1991; Schiffman & Kanuk 1994). The literature suggests that tourist attitudes include cognitive, affective and behavioural aspects (Lee 2009; Vincent & Thompson 2002). In the current study, a combination of TPB (Ajzen 1991) and the New Ecological Paradigm (NEP) (Dunlap & Van Liere 1978; Dunlap et al. 2000) are used to explain tourist attitudes towards environmental issues. The cognitive aspect focuses on environmental knowledge; the affective component refers to the NEP, and the behavioural aspect is evaluated as past behaviour related to environmental travel.

Scholars examined the direct and indirect effects of tourist attitudes on tourist behaviour. In this regard, it can be said that tourist characteristics will have an influence on specific behaviour through attitudes. (e.g., Han 2015; Hsu & Huang 2010; Kil, Holland & Stein 2014; Prayag et al. 2013). For instance, Hsu and Huang (2010) identified that tourist attitudes have significant and direct impacts in determining their intention to visit a tourism destination, and in triggering actual behaviour in visiting the destination. Chen and Peng (2012) found that tourist attitudes toward a green hotel setting and their favourable evaluations toward a green lodging product fostered strong intentions to stay at a green hotel when visiting a tourism destination. The extant literature also shows that attitudes have been found to be mediating factors that assist to explain behavioural intention and behaviour (Cai & Shannon 2012; Prayag et al. 2013; Shim & Eastlick 1998).

Despite some researchers having investigated the links between culture differences and behaviour as mediated by attitudes (e.g., Cai & Shannon 2012; Yoon, Gursoy & Chen 2001), limited studies have examined the mediating role of tourist attitudes on the relationship between the five different cultural dimensions of Hofstede's model and behaviour in the context of sustainable tourism. Thus, the current study attempts to investigate differences in the cultural characteristics of tourists that result in attitudes to environmental issues, and those attitudes which, in turn, determine stronger sustainable tourist behaviour. Based on this information, it is argued that the different culture characteristics of tourists will have a significant impact on their attitudes, and that attitudes will also significantly impact sustainable tourist behaviour. Therefore:

H2:   Attitudes positively mediate the relationship between cultural characteristics and sustainable tourist behaviour.

H2.1: Environmental knowledge positively mediates the relationship between cultural characteristics and sustainable tourist behaviour.

H2.1a: Environmental knowledge positively mediates the relationship between power distance and sustainable tourist behaviour.

H2.1b: Environmental knowledge positively mediates the relationship between uncertainty avoidance and sustainable tourist behaviour.

H2.1c: Environmental knowledge positively mediates the relationship between individualism/ collectivism and sustainable tourist behaviour.

H2.1d: Environmental knowledge positively mediates the relationship between masculinity/ femininity and sustainable tourist behaviour.

H2.1e: Environmental knowledge positively mediates the relationship between long- term orientation and sustainable tourist behaviour.

H2.2: The New Ecological Paradigm positively mediates the relationship between cultural characteristics and sustainable tourist behaviour.

H2.2a: The New Ecological Paradigm positively mediates the relationship between power distance and sustainable tourist behaviour.

H2.2b: The New Ecological Paradigm positively mediates the relationship between uncertainty avoidance and sustainable tourist behaviour.

H2.2c: The New Ecological Paradigm positively mediates the relationship between individualism/ collectivism and sustainable tourist behaviour.

H2.2d: The New Ecological Paradigm positively mediates the relationship between masculinity/ femininity and sustainable tourist behaviour.

H2.2e: The New Ecological Paradigm positively mediates the relationship between long- term orientation and sustainable tourist behaviour.

H2.3: Past behaviour positively mediates the relationship between cultural characteristics and sustainable tourist behaviour.

H2.3a: Past behaviour positively mediates the relationship between power distance and sustainable tourist behaviour.

H2.3b: Past behaviour positively mediates the relationship between uncertainty avoidance and sustainable tourist behaviour.

H2.3c: Past behaviour positively mediates the relationship between individualism/collectivism and sustainable tourist behaviour.

H2.3d: Past behaviour positively mediates the relationship between masculinity/femininity and sustainable tourist behaviour.

H2.3e: Past behaviour positively mediates the relationship between long-term orientation and sustainable tourist behaviour.

3.2.3 The moderation effects - Hypothesis 3 to Hypothesis 10

3.2.3.1 The moderating effects of subjective norms: Hypotheses 3 to 5

As mentioned in Section 3.2.2, the use of the TPB is embedded in the conceptual model of the study. The second component employed is subjective norms. Subjective norms refer to '… the perceived social pressure to perform or not to perform the behaviour' (Ajzen 1991, p. 188). In the marketing and tourism literatures, the concept of subjective norms is employed to indicate either normative beliefs or the tourist's perceptions of a significant referent or another's opinion related to the tourist's performance of the behaviour (Han 2015; Jalilvand & Samiei 2012; Kaushik, Agrawal & Rahman 2015). A number of studies use subjective norms as a factor influencing a tourist or customer in terms of intention to consume (e.g., purchasing and visiting a tourism destination) (Lopez-Nicolas & Molina-Castillo 2008; Nunkoo & Ramkissoon 2010; Pavlou & Fygenson 2006; Ryu & Han 2010).

An examination of the literature shows that most prior research investigates the direct relationship between subjective norms and tourist intention in a variety of tourism contexts (Lee 2005). For example, Wang, Zhang, et al. (2018) suggest that subjective norms positively affect tourist behaviour in the context of sustainable tourism. Specifically, multiple subjects (such as relevant government departments, schools, families, communities, work units, tourism practitioners, relatives and friends) effectively motivate tourists to comply with

norms concerning correct environmental response behaviours. However, some studies show that subjective norms do not significantly affect behavioural intentions, but the indirect effect through attitudes is highly significant (Chang 1998). In this sense, a high level of subjective norms will increase the effect of individual's cultural differences on the tourist's attitudes towards environmental issues, because when tourists perceive higher levels of subjective norms, they will feel confident to act and capture a self-imposed obligation (Lam & Hsu 2004; Stern & Dietz 1994). As such, under the condition of high cultural characteristics and high subjective norms, the synergy between these variables increases tourists' attitude toward the environment. Therefore:

H3: The relationship between cultural characteristics and attitudes is moderated by subjective norms.

H3.1: The relationship between cultural characteristics and environmental knowledge is moderated by subjective norms.

H3.1a: The relationship between power distance and environmental knowledge is moderated by subjective norms.

H3.1b: The relationship between uncertainty avoidance and environmental knowledge is moderated by subjective norms.

H3.1c: The relationship between individualism/ collectivism and environmental knowledge is moderated by subjective norms.

H3.1d: The relationship between masculinity/ femininity and environmental knowledge is moderated by subjective norms.

H3.1e: The relationship between long- term orientation and environmental knowledge is moderated by subjective norms.

H3.2: The relationship between cultural characteristics and the New Ecological Paradigm is moderated by subjective norms.

H3.2a: The relationship between power distance and the New Ecological Paradigm is moderated by subjective norms.

H3.2b: The relationship between uncertainty avoidance and the New Ecological Paradigm is moderated by subjective norms.

H3.2c: The relationship between individualism/collectivism and the New Ecological Paradigm is moderated by subjective norms.

H3.2d: The relationship between masculinity/femininity and the New Ecological Paradigm is moderated by subjective norms.

H3.2e: The relationship between long-term orientation and the New Ecological Paradigm is moderated by subjective norms.

H3.3: The relationship between cultural characteristics and past behaviour is moderated by subjective norms.

H3.3a: The relationship between power distance and past behaviour is moderated by subjective norms.

H3.3b: The relationship between uncertainty avoidance and past behaviour is moderated by subjective norms.

H 3.3c: The relationship between individualism/collectivism and past behaviour is moderated by subjective norms.

H3.3d: The relationship between masculinity/femininity and past behaviour is moderated by subjective norms.

H3.3e: The relationship between long-term orientation and past behaviour is moderated by subjective norms.

The proposed conceptual model also examines the moderating effect of subjective norms on the link between the five cultural dimensions and sustainable tourist behaviour (see Figure 3.1, to be discussed subsequently). Examination of the contingent role of subjective norms is considered important to understand the impact of different cultural characteristics. Subjective norms in the tourism context reveal the beliefs of tourists regarding how they would be seen by their reference groups if they perform a certain behaviour (Al-Swidi et al. 2014). Specifically, in different cultural contexts, the motivation to behave and comply with the most crucial reference group(s) is either high or low and is linked with cultural influences (Lam, Baum & Pine 2003).

In this regard, it is proposed that subjective norms may also moderate the relationships between the cultural characteristics and sustainable tourist behaviour. Such moderation tests are of critical interest as they postulate the functional significance of a variety of social processes that allow understanding of the relationships between the variables in the model. It is proposed that the five distinct cultural dimensions will be more predictive of tourist behaviour when the social environment is conducive and favourable with respect to environmental awareness. Thus, in order to test the moderation effects of subjective norms in the context of sustainable tourism, it is hypothesised that:

H4:   The relationship between cultural characteristics and sustainable tourist behaviour is moderated by subjective norms.

H4a: The relationship between power distance and sustainable tourist behaviour is moderated by subjective norms.

H4b: The relationship between uncertainty avoidance and sustainable tourist behaviour is moderated by subjective norms.

H4c: The relationship between individualism/collectivism and sustainable tourist behaviour is moderated by subjective norms.

H4d: The relationship between masculinity/femininity and sustainable tourist behaviour is moderated by subjective norms.

H4e: The relationship between long-term orientation and sustainable tourist behaviour is moderated by subjective norms.

Previous research suggests that the notion of attitudes and subjective norms differ depending on their origin and motivation. Because subjective norms identify the individual-received expectations of salient others, such as close friends, peers, and family, the accompanying pressure to comply is more extrinsically motivated (Amabile et al. 1994). As suggested by Deci, Koestner and Ryan (1999), both internal and external motivations can be said as prompting behaviour in isolation; internal motivation can be undermined by external motivation processes. Specifically, the controlling nature of the perceived social support influence fosters or thwarts the attitude related to the behaviour, facilitating an increased or a diminished effect of internal motivation. Because of this, the current study expects that tourists' externally generated expectations (e.g., subjective norms) will significantly moderate

the impact of attitudes towards environmental issues on the sustainable tourist behavioural responses. Therefore:

H5:   The relationship between attitudes and sustainable tourist behaviour is moderated by subjective norms.

H5a: The relationship between environmental knowledge and sustainable tourist behaviour is moderated by subjective norms.

H5b: The relationship between New Ecological Paradigm and sustainable tourist behaviour is moderated by subjective norms.

H5c: The relationship between past behaviour and sustainable tourist behaviour is moderated by subjective norms.

3.2.3.2 The moderating effects of perceived behaviour control: Hypotheses 6 to 8

Perceived Behavioural Control (PBC) is concerned with people's own judgment about their capabilities to engage in behaviours of interest (Ajzen 1991). As discussed in Chapter Two, PBC also considers resources and opportunities available to an individual that are of importance to their behaviour (Ajzen 1991). Taking this into account, the current research adopts the concept of PBC into the context of sustainable tourism and refers to the perception of the tourist's ability to perform environmentally friendly behaviour. Research on PBC has demonstrated that individual behaviour is significantly affected by self-confidence in the ability to perform the behaviour (e.g., Al-Swidi et al. 2014; Han, Hsu & Sheu 2010; Hughner et al. 2007). The results of these research findings indicate that when people hold little control over carrying out a behaviour of interest because of the lack of availability of resources, such as costs or time, the individual's behavioural responses will be decreased in spite of the fact that the individual has positive attitude/subjective norms concerning the intended act.

According to Hofstede (1980) and Han and Hwang (2013), culture is a combination of universal characteristics influencing a group's responses to its general environment. In doing so, culture may influence individual beliefs, attitudes, and practices (Cho et al. 2013). This research proposes, therefore, that PBC will act as a moderator of the relationships between the five cultural characteristics, and tourists' attitudes, and the relationships between the five distinct cultural characteristics and sustainable tourist behaviour. Considering first the impact

of PBC on tourist attitudes towards environmental issues (i.e., environmental knowledge, New Ecological Paradigm, and past behaviour), according to the TPB, if a tourist has a favourable disposition toward performing environmental issues and if their individual cultural characteristics influence performance of that behaviour, then the tourists should behave based on their cultural orientation. But if the tourists also believe that they don't have actual control over performing the behaviour (such as the skill and ability to perform the behaviour related to the environmental issue), it is possible that the tourists with less favourable cultural characteristics may reduce their attitudes toward the environmental issue. When tourists believe the behaviour is under their control, tourist's attitudes toward environmental issues should be primarily driven by their characteristics based on their cultural background. On the other hand, when the tourists do not experience PBC, the impact of tourist's cultural characteristics on their attitudes should be decreased. Therefore:

H6: The relationship between cultural characteristics and attitudes is moderated by perceived behavioural control.

H6.1: The relationship between cultural characteristics and environmental knowledge is moderated by perceived behavioural control.

H6.1a: The relationship between power distance and environmental knowledge is moderated by perceived behavioural control.

H6.1b: The relationship between uncertainty avoidance and environmental knowledge is moderated by perceived behavioural control.

H6.1c: The relationship between individualism/ collectivism and environmental knowledge is moderated by perceived behavioural control.

H6.1d: The relationship between masculinity/ femininity and environmental knowledge is moderated by perceived behavioural control.

H6.1e: The relationship between long- term orientation and environmental knowledge is moderated by perceived behavioural control.

H6.2: The relationship between cultural characteristics and New Ecological Paradigm is moderated by perceived behavioural control.

> H6.2a: The relationship between power distance and New Ecological Paradigm is moderated by perceived behavioural control.
>
> H6.2b: The relationship between uncertainty avoidance and New Ecological Paradigm is moderated by perceived behavioural control.
>
> H6.2c: The relationship between individualism/collectivism and New Ecological Paradigm is moderated by perceived behavioural control.
>
> H6.2d: The relationship between masculinity/ femininity and New Ecological Paradigm is moderated by perceived behavioural control.
>
> H6.2e: The relationship between long- term orientation and New Ecological Paradigm is moderated by perceived behavioural control.

H6.3: The relationship between cultural characteristics and past behaviour is moderated by perceived behavioural control.

> H6.3a: The relationship between power distance and past behaviour is moderated by perceived behavioural control.
>
> H6.3b: The relationship between uncertainty avoidance and past behaviour is moderated by perceived behavioural control.
>
> H6.3c: The relationship between individualism/collectivism and past behaviour is moderated by perceived behavioural control.
>
> H6.3d: The relationship between masculinity/ femininity and past behaviour is moderated by perceived behavioural control.
>
> H6.3e: The relationship between long- term orientation and past behaviour is moderated by perceived behavioural control.

Environmentally responsible behaviour is crucial to discussions of sustainable tourist behaviour (Kang & Moscardo 2006). Scholars suggested that tourist often engage or

disengage in environmental activities based on the way tourist assess their ability to carry out the behaviour (Kang & Moscardo 2006; Luo & Deng 2008; Zhang, Fu, et al. 2014). According to the TPB, perceived behavioural control is considered as a determinant of tourist behaviour which allows tourists' evaluation of the opportunities and resources available for performing the target behaviour (Budeanu 2007). Perceived behavioural control may also vary based on different tourists' cultural characteristics regarding their capability to control situations influencing them (cf. Allen, Weeks & Moffitt 2005). In this regard, the interaction between tourist cultural characteristics and perceived behavioural control may lead to either fostering or reducing environmentally responsible behaviour (e.g., sustainable tourist behaviour). If the tourists believe in their capability to undertake the behaviour and believe it will make a difference, they will be more likely to attempt to carry out the behaviour in question. In contrast, if the tourists believe that the performance of the behaviour is not really up to them, they will be less likely to carry out the behaviour. Therefore:

H7: The relationship between cultural characteristics and sustainable tourist behaviour is moderated by perceived behavioural control.

 H7a: The relationship between power distance and sustainable tourist behaviour is moderated by perceived behavioural control.

 H7b: The relationship between uncertainty avoidance and sustainable tourist behaviour is moderated by perceived behavioural control.

 H7c: The relationship between individualism/collectivism and sustainable tourist behaviour is moderated by perceived behavioural control.

 H7d: The relationship between masculinity/femininity and sustainable tourist behaviour is moderated by perceived behavioural control.

 H7e: The relationship between long-term orientation and sustainable tourist behaviour is moderated by perceived behavioural control.

It is also the aim of the current research to consider the relationship between tourist attitudes towards environmental issues (e.g., environmental knowledge, New Ecological Paradigm, and past behaviour) and sustainable tourist behaviour, and it is proposed that this too is moderated by PBC. It is anticipated that when tourists feel in control of their behaviour, the influence of their attitudes towards environmental issues will be increased. This is because

tourists who engage with their behaviour about environmental issues leads to increasing environmental awareness and as such a greater level of sustainable tourist behaviour. Therefore:

H8:   The relationship between attitude and sustainable tourist behaviour is moderated by perceived behavioural control.

H8a: The relationship between environmental knowledge and sustainable tourist behaviour is moderated by perceived behavioural control.

H8b: The relationship between the New Ecological Paradigm and sustainable tourist behaviour is moderated by perceived behavioural control.

H8c: The relationship between past behaviour and sustainable tourist behaviour is moderated by perceived behavioural control.

3.2.3.3 The moderating effects of Thailand's destination image: Hypotheses 9 to 10

In the tourism and services marketing literatures, destination image is acknowledged as an important factor that fosters tourist decision-making, destination choice, post-trip evaluation, and behavioural intentions (e.g., Baloglu & McCleary 1999; Qu, Kim & Im 2011; Zhang, Fu, et al. 2014). The review of literature in Chapter Two revealed that destination image is identified as having three points of view consisting of affective image, cognitive image and overall image (or different integrations of the three as a proxy for destination image) (Campo Martínez, Garau-Vadell & Martínez-Ruiz 2010; Chen & Tsai 2007). But there is no consensus among scholars as to the definition of destination image. Some scholars define destination image as the sum of beliefs, ideas and impressions that a person has of a destination (Crompton 1979). In contrast, Echtner and Ritchie (1991) define destination image as the perceptions of tourism destination environments or attributes and the holistic impression offered by the tourism destination. Although there are different views of destination image, many academics agree that a distinctive destination image will provide the destination a competitive advantage when compared with others (Hallmann, Zehrer & Müller 2015; Prayag & Ryan 2012; Tavitiyaman & Qu 2013).

As discussed in Chapter One (Section 1.3), Thailand is the context of the study because it represents a destination for adventure activities and provides natural and scenic beauty, rich

culture, good-value cuisine and hotels, and easy access (Rittichainuwat, Qu & Leong 2003; Tavitiyaman & Qu 2013). Thailand provides a distinctive destination image which motivates a large number of tourists to visit the destinations of Thailand (McDowall & Choi 2010) and represents the best destination compared with other Asian countries so that it is known as a 'true Asian' destination (Changsorn 2003). Typically, these perceptions are impacted by the physical characteristics of the destination in question (Obenour, Groves & Lengfelder 2006). Based on this logic, this study defines Thailand's destination image as the sum of beliefs, idea, and impression that a person has of Thailand.

Examination of the destination image literature shows that destination image directly and indirectly impacts tourist behavioural consequences, including attitudes, satisfaction, attachment and behavioural intention (e.g., Chen & Phou 2013; Chen & Tsai 2007; Chew & Jahari 2014; del Bosque & Martín 2008; Prayag & Ryan 2012; Lee, Scott & Kim 2008). However, the relationship between destination image and tourist attitudes toward environmental issues and sustainable tourism are newly articulated. The current study examines the extent to which the relationship between tourist attitude components that involve cognition, affect, and behaviour toward sustainable tourist behaviour is moderated by the destination image of Thailand. When tourists have positive attitudes towards environmental concerns, such as environmental knowledge (cognition), the New Ecological Paradigm (affect), and past behaviour, they may be more likely to have a positive attitude toward the destination and intend to protect the destination through sustainable tourist behaviour. As such, how tourists perceive attributes of a tourism destination of Thailand can affect the destination image (Chiu, Lee & Chen 2014). Ajzen (2011) postulates that people integrate a belief about an object and an affective evaluation of this occurrence to form an attitude. According to the proposed model, as presented in Figure 3.1, Thailand's destination image can be seen as a construct that can potentially influence the attitude evaluation of environmental issues and thus, sustainable tourist behaviour toward the national park destinations under investigation. In addition, when tourists think a destination is concerned with environmental issues, they are more likely to build a positive destination image. Therefore, Thailand's destination image amplifies a tourist's attitudes towards environmental concerns that can be significantly related to sustainable tourist behaviour. Therefore:

H9: The relationship between attitudes and sustainable tourist behaviour is moderated by Thailand's destination image.

   H9a: The relationship between environmental knowledge and sustainable tourist behaviour is moderated by Thailand's destination image.

   H9b: The relationship between the New Ecological Paradigm and sustainable tourist behaviour is moderated by Thailand's destination image.

   H9c: The relationship between past behaviour and sustainable tourist behaviour is moderated by Thailand's destination image.

In the tourism context, destination image may also be obtained from cultural differences. A positive destination image should therefore be contingent upon interaction with cultural differences which may be influenced by tourist behaviour (Kastenholz 2010). With respect to different cultural orientations, the image an individual tourist holds of a destination and their actual behaviour in the destination may reflect the cultural orientation of the societal milieu they come from (Lee & Lee 2009; Reisinger & Turner 2002a, 2002b). Although there may be a significant impact of cultural differences on destination image, there has been very little research into the moderating effect of destination image.

According to the conceptual model of the study, different cultural characteristics influence sustainable tourist behaviour. Hudson and Ritchie (2001) found that there are significant differences in environmental awareness and concern among cultural groups. Considering the moderating effect of destination image on the relationship between the different cultural characteristics and sustainable tourist behaviour may be useful to help explain what tourists think about sustainable behaviour. In this regard, destination image may influence the impact of the five cultural characteristics on sustainable tourist behaviour. Destination image is closely related to tourist satisfaction, which in turn, influences tourists' sustainable behaviour at the destination (Kim, Holland & Han 2013; Liu, Li & Kim 2017; Prayag et al. 2017). Therefore:

   H10: The relationship between cultural characteristics and sustainable tourist behaviour is moderated by Thailand's destination image.

   H10a: The relationship between power distance and sustainable tourist behaviour is moderated by Thailand's destination image.

H10b: The relationship between uncertainty avoidance and sustainable tourist behaviour is moderated by Thailand's destination image.

H10c: The relationship between individualism/collectivism and sustainable tourist behaviour is moderated by Thailand's destination image.

H10d: The relationship between masculinity/femininity and sustainable tourist behaviour is moderated by Thailand's destination image.

H10e: The relationship between long-term orientation and sustainable tourist behaviour is moderated by Thailand's destination image.

3.3 Summary of hypotheses

According to the conceptual framework and research questions, this study proposes five main research questions which will be tested. The first research question consists of Hypothesis 1 (H1a to H1e) reflecting the influence of different cultural characteristics on sustainable tourist behaviour. The second research question consists of Hypothesis 2 (H2.1 to H 2.3) which reflects the influence of attitudes as mediator of the relationship between cultural characteristics and sustainable tourist behaviour. The third research question reflects subjective norms and perceived behavioural control as moderators of the relationship between cultural characteristics and tourist's attitudes as presented in Hypothesis 3 (H3.1 to H 3.3) and Hypothesis 6 (H6.1 to H6.3). The fourth research question concerns subjective norms, perceived behavioural control and Thailand's destination image as moderators of the relationship between tourist's attitudes and sustainable tourist behaviour as presented in Hypothesis 5, Hypothesis 8 and Hypothesis 9. Finally, the fifth research question concerns subjective norms, perceived behavioural control and Thailand's destination image as moderators of the relationship between different cultural characteristics and sustainable tourist behaviour as presented in Hypothesis 4, Hypothesis 7 and Hypothesis 10.

3.4 Conclusion

This chapter described the conceptual model for the study. Based on the Theory of Planned Behaviour (TPB) and the New Environmental Paradigm (NEP), the development of the model was made on the basis of research gaps identified from existing literature. The use of the TPB offers a better understanding of how attitudes, subjective norms, and perceived behavioural control shapes sustainable tourist behaviour, when tourists with different cultural characteristics visit destinations in the context of sustainable tourism. The model comprises key factors in understanding the impact of the five different cultural characteristics in building strong sustainable tourist behaviour. Specifically, the conceptual model combines both the mediation effects of tourist attitudes and the moderation effects of subjective norms, perceived behavioural control and Thailand's destination image. Importantly, the theoretical arguments advanced also address the issue of how the different cultural characteristics of tourists exert an impact on sustainable tourist behaviour. The theoretical framework developed in Chapter Three provides a guideline for the research design which will be discussed in Chapter Four.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 Introduction

In Chapter Three the theoretical model was presented and hypotheses for the study were developed. This chapter details the research methodology and design used to address the research questions and examine the theoretical model. The outline of the research methodology is based upon the research objectives and review of the literature. This chapter is organised into six sections. It starts with an overview of the methodology used in the thesis (Section 4.2), and is followed by the sample frame and characteristics (Section 4.3). Following this, Section 4.4 presents the instruments used in the study and the research process including scale development, drafting of the questionnaire, common method bias, the pilot study, data collection, and data analysis methods. Section 4.5 discusses the ethical considerations related to this study. Finally, Section 4.6 provides a summary of the chapter.

4.2 An overview of the research method

In order to clarify the research questions, and to analyse the proposed hypotheses, an overview of the methods used in this study is provided in this section. As mentioned in Chapter One, the objective of this study was to develop a new model of the relationship between different cultural characteristics, tourist attitudes, subjective norms, perceived behavioural control, perceptions of Thailand's destination image and sustainable tourist behaviour. In order to extend an understanding of the model, tourist attitudes were defined as mediator variables between different cultural characteristics and sustainable tourist behaviour. Subjective norms perceived behavioural control and Thailand's destination image were defined as moderators between cultural characteristics and tourist attitudes, and tourist attitudes and sustainable tourist behaviour.

A quantitative survey methodology with a questionnaire was used to collect data from respondents. Quantitative research involves counting and measuring events and performing statistical analyses on a body of numerical data (Smith 1988). Quantitative research is an approach for testing objective theories by examining the relationships amongst variables

(Creswell & Clark 2007). Quantitative research typically follows a positivist paradigm which assumes there is an objective truth existing in the world that can be measured and explained scientifically. Bryman (1988) also stated that a quantitative methodology is concerned with the testing of theories and with accumulating a body of knowledge. The main concerns of the quantitative paradigm are that measurement is reliable, valid, and generalisable in its clear prediction of cause and effect (Cassell & Symon 1994). Additionally, Veal (2006) noted that a quantitative method is common for investigating attitudes and behaviour in leisure and tourism research. Consequently, a quantitative methodology is appropriate for this research.

To examine the research objectives, this study employs descriptive research. Descriptive research is applied to explain and measure phenomena at a point in time (Burns Alvin & Bush 2000). In this technique, the researcher already knows a significant amount about the research problem before the research begins. This approach investigates relationships between the constructs of interest that do not imply causation (Hair et al. 2000). The current study developed a survey questionnaire to collect data from tourists to investigate the constructs proposed in the theoretical model. These constructs were applied from the Theory of Planned Behaviour (TPB) with various other constructs including cultural dimensions, destination image, and sustainable tourist behaviour added. Furthermore, this study examines the effect of individual cultural dimensions on sustainable tourist behaviour in the specific context of sustainable tourism. This methodology might be labelled a deductive approach to theory building (Neuman 2014; Zikmund et al. 2013).

The study makes use of a self-administered questionnaire via onsite intercept, to collect data from both international and domestic (Thai) tourists in Chiang Mai, Thailand. The study adopted a 5-point Likert scale to measure all items of the constructs of interest, excepting past behaviour and demographic information. The items for past behaviour used a ranking technique, as recommended by Churchill Jr (1979) and Kline (2005). Demographic information used dichotomous and multiple-choice question formats. The questionnaire was divided into seven parts covering individual cultural characteristics, attitudes of tourists including sustainable tourism knowledge, environmental concern, and past behaviour, subjective norms, perceived behavioural control, Thailand's destination image, sustainable tourist behaviour, and demographic information. All items were first prepared and developed in

English. The study collected the data from both international and domestic (Thai) tourists. Therefore, a forward and back translation approach was used to ensure the quality of the questionnaire.

According to the Ministry of Tourism and Sports (2016), the majority of international tourists who visited Chiang Mai in 2015 were Chinese (570,000), follow by Japanese (200,000), American (160,000), French (158,000), British (157,000), Australian (140,000), and German (130,000). For this reason, the final questionnaire was administered in three languages including Thai and Chinese versions for Non-English speakers and an English version for English-speakers. In doing so, the questionnaires for Thai and Chinese versions were translated from the original English version forward into Thai and Chinese, and then another translator, back translated from Thai and Chinese to English. The translation and back translation process is important in order to confirm the wording of the survey questionnaire is clearly understandable and achieves equivalence of the instrument (Malhotra, Schwartz & Hameed 2004; Temple 1997).

Prior to conducting data collection with the final questionnaire, a pilot test was conducted to adjust questions, interpretation problems, meaning, ambiguity and other issues that may have occurred. A pre-test is important to identify any problems that may impact the instrument, and to assess validity and determine variables before launching the final survey. After pre-testing, the final survey was launched, and four versions of the questionnaire (in terms of item order) were used to reduce common method bias. Finally, 485 useable questionnaires were collected in this study. Descriptive statistics, data preparation and preliminary analyses, and hypothesis testing were analysed using the Statistical Package for the Social Sciences (SPSS) program with the PROCESS macro function for mediation and moderation (Hayes 2013b).

The research method is a strategy of enquiry, which moves from the underlying assumptions to research design, and data collection (Myers 2009). An overview of the methods and research design used in this thesis are provided in order to answer the research questions and to analyse the hypotheses proposed. Figure 4.1 provides an overview of the research methodology; further details will be described in the following sections.

Figure 4.1: Overview of Methodology

Domain of Constructs	**Proposed model from conceptualisation developed based on literature review (see Chapter Two and Three)**
Sample and Characteristics	**To specify the sample and results of sample characteristics (see Section 4.3)**
Scale Development	**Items based on previous tested scales from literature (see Section 4.4.1)**
Questionnaire Design	**Questionnaire divided into seven parts and translated into Thai and Chinese version (see Section 4.4.2)**
Pilot Study	**To scale the validity of the instrument (see Section 4.4.4)**
Data Collection	**To collect data at Chiang Mai, Thailand (see Section 4.4.5)**
Data Analysis Methods	**Including descriptive statistics, data preparation and preliminary analyses, and hypothesis testing (see Section 4.4.6)**

Source: Adapted from Myers (2009)

4.3 Sample frame and characteristics

Malhotra, Schwartz and Hameed (2004) state that the sampling design process begins with identifying the target population, which is the group of people or objects that the researcher seeks to investigate. The target population must be defined precisely. The population for the research was identified and defined as international and domestic tourists who travelled to national parks in Chiang Mai, Thailand. According to Aaker et al. (2013), defining the population is crucial stage in research because a poorly defined population can create misleading findings. Therefore, the target population of this study was defined as those 18 years of age and older that met the screening criteria of being either an international or

domestic tourist travelling in the national parks in Chiang Mai. This population was deemed appropriate to test the conceptual framework and hypotheses discussed in Chapter Three. Chiang Mai province is a famous attraction for international and domestic tourists in Thailand. This is because Chiang Mai represents a distinctive tourist destination (i.e., unique culture, natural attraction, and special events and festivals). Specifically, Chiang Mai has many famous national parks, such as Doi Inthanon National Park, and Doi Suthep National Park. These two national parks are the main source of tributaries and streams in Chiang Mai. Sacred places, religious attractions and historical sites are located in the park complex. In addition, Doi Inthanon National Park has Thailand's highest mountain and one of the coolest peaks for all tourists. Besides the actual mountain itself, there are a variety of other attractive locations such as Mae Ya, Wachirathan and Siriphum waterfalls, and Bori Chinda Cave. For this reason, a large number of international and domestic tourists are motivated to visit Chiang Mai (TAT 2013). Therefore, Thailand is an appropriate place to collect data for this research on sustainable tourism. As per ethics requirements, the respondents were asked about their age (over 18 year of age) and participated voluntarily under a convenience sampling technique. A convenience sampling approach refers to units of people who are most conveniently available to the researcher. The study adopted this approach because the participants were chosen as they were in the right place at the right time (Malhotra, Schwartz & Hameed 2004). In addition, convenience sampling is adequate for this study because of its ease of application and rate in receiving the needed information (Aaker et al., 2013). Moreover, this approach has been commonly applied by other tourism scholars in similar research (e.g., Lu, Chi & Liu 2015; San Martín & del Bosque 2008). The respondents were asked about their personal details including gender, age, education, marital status, occupation, and nationality.

As stated above, 485 useable questionnaires were collected in this study and 34 questionnaires were eliminated due to being incomplete. As presented in Table 4.1, the sample profile demonstrates that the participants were 40.2% male and 59.8% female, aged between 19 and 71 years, with the average age of 30 - 33 years. The respondents were asked to indicate their educational level. Most of the respondents had a bachelor's degree (63.1%), followed by master's degree and above (20.0%). More than half the respondents were single or never married (54.2%), one third were married (33.0%), and being in a de-facto relationship was third with 9.1%. Respondents were predominantly employees (33.6%) or

students (17.1%). Respondents were also asked to identify their nationality. The English native speakers were American (12.6%), Australian (7.6%), and from the United Kingdom (9.1%). Thai respondents were 22.7%, and Chinese respondent were 22.9% respectively. Other nationalities were German, French, New Zealander, Canadian, Spanish, at 25.2%. These figures accord with the overall international visitor numbers to Thailand discussed in Section 4.2. Data were collected from tourists across different countries because the study concerned tourists with different cultural characteristics as proposed by Hofstede (1980, 2001) and this approach was more likely to create variation across these characteristics.

Table 4.1 Profiles of the Respondents

Characteristic	Sample Total (n = 485) Frequency	Percentage
Gender		
Male	195	40.2%
Female	290	59.8%
Educational level		
Primary school	4	0.8%
Senior high School	47	9.7%
Vocational education	31	6.4%
Bachelor's degree	306	63.1%
Master's degree and above	97	20.0%
Marital status		
Single; never married	263	54.2%
Married	160	33.0%
In a de-facto relationship	44	9.1%
Separate, but not divorced	3	0.6%
Divorced	10	2.1%
Widowed	5	1.0%
Occupation		
Student	83	17.1%
Government employee	73	15.1%
Employee	163	33.6%
Business owner	65	13.4%
Retired	4	0.8%
Agriculturist	7	1.4%
Unemployed	16	3.3%
Home duties	11	2.3%
Other	63	13.0%
Nationality		
American	61	12.6%
Australian	37	7.6%
United Kingdom	44	9.1%
Chinese	111	22.9%
Thai	110	22.7%
Other	122	25.2%

4.4 Research process

This section discusses the research process, consisting of five parts. First, scale development; this step presents the development and source of scale items used in the research. The second section describes the overall compilation of the questionnaire and the translation process conducted in this study. Third, the pilot study is described which speaks to the validity of the questionnaire. Fourth, the data collection process in Chiang Mai, Thailand, is outlined. Finally, the data analysis method is described.

4.4.1 Scale development

This section describes the selection of scale items that were chosen to measure the constructs in the thesis. In order to choose the appropriate items to measure the constructs of interest, further consideration is given to the literature. The items chosen for this study are from previous literature surveys that relate to tourist cultural characteristics, attitudes of tourists (encompassing sustainable tourism knowledge, environmental concern, and past behaviour), subjective norms, perceived behavioural control, Thailand's destination image, sustainable tourist behaviour, and demographic information. Churchill Jr (1979, p. 68) states 'the researcher probably would want to include items with slightly different shades of meaning because the original list will be refined to produce the final measure'. Thus, some items needed to be revised to fit with the thesis context. All constructs in this study, except past behaviour, were measured with multiple items which can enhance the validity of the survey instrument for the study, as recommended by Kline (2005). However, a single item can be used when the construct is concrete and singular (Bergkvist & Rossiter 2007). Thus, validity is also considered to ensure that the survey instrument is acceptable before launching a data collection process.

A total of 69 scale items, excluding demographic information, were used to measure the constructs in this thesis. Table 4.2 presents a summary of the number and source of the items used to test each construct.

Table 4.2: Total of Scale Items Used in this Thesis

Construct	Number of Items	Sources
Tourist cultural characteristics		Yoo, Donthu and Lenartowicz (2011)
- Power Distance Characteristic	5	
- Uncertainty Avoidance Characteristic	5	
- Individualism / Collectivism Characteristic	6	
- Masculinity / Femininity Characteristic	4	
- Long-term Orientation Characteristic	6	
Attitudes of tourist to sustainable tourism		Cheung, Lau and Lam (2015), Dunlap et al. (2000) and Huang and Hsu (2009)
- Subjective Knowledge	2	
- New Ecological Paradigm	15	
- Past behaviour	1	
Subjective Norms	3	Lam and Hsu (2006)
Perceived Behavioural Control	3	Cleveland, Kalamas and Laroche (2012)
Thailand's destination image	7	Rittichainuwat, Qu and Brown (2001), Tapachai and Waryszak (2000), and Tavitiyaman and Qu (2013)
Sustainable tourist behaviour	12	Lee, Jan and Yang (2013a)
Overall	**69**	

A Likert scale is a psychometric scale commonly used in questionnaires and is the most widely used scale in marketing and tourism studies (e.g., Hung & Petrick 2011; Leong et al. 2015; Wang & Ritchie 2012). In addition, the use of the Likert scale is also relatively easy to construct and administer and suits a research method that employs a self-administered approach (Hair et al. 2017; Sarantakos 2012). As suggested by Aaker et al. (2013), a suitable number of response categories in the Likert scale should be no less than three, and no more than nine.

Thus, the study adopted a 5-point Likert scale to measure the items for all constructs of interest, except the demographic information sections. The measurement scale selected ranged from 1 (totally disagree) to 5 (totally agree), with the exception of: long-term orientation which ranged from 1 (totally unimportant) to 5 (totally important), subjective knowledge which ranged from 1 (no knowledge at all) to 5 (a lot of knowledge), and past behaviour which ranged from 1 (never had experience) to 5 (more than 6 times per year).

Tables 4.3-4.8 list the items used to measure each construct in the thesis. Scale items are adapted from previous literature in a similar context to this study. This section explains all items used to measure the underlying constructs in the proposed theoretical model. Following in Section 4.4.2 the questionnaire procedure is described.

4.4.1.1 Tourist cultural characteristics

The first construct to be discussed is related to the tourists' cultural characteristics as proposed by Hofstede (1980, 2001) which includes five dimensions: Power distance (PDI), Uncertainty avoidance (UAI), Individualism/Collectivism (IDV), Masculinity / Femininity (MAS), and Long-term orientation (LTO). A large number of scholars have used this conceptualisation to study cross cultural management (Fang 2003), and in tourism research (Reisinger & Crotts 2009). Hofstede's cultural dimensions are the most comprehensive and reliable in terms of national culture (Soares, Farhangmehr & Shoham 2007) in a tourism context because Hofstede's cultural dimensions represent those aspects of national culture which are likely to play a role in travel behaviour (Chen 2000; Lee, Khan & Ko 2008).

Many scholars (e.g., Chen 2000; Reisinger & Crotts 2009) also examine the significance of national culture on tourist behaviour. However, there have been criticisms specific to cross-cultural research in tourism. Dann (1993), for example, was concerned with the limitations of using nationality as an indicator of culture and argued that few nations are homogenous in terms of culture. The Hofstede dimensions are not appropriate when a study examines the effect of cultural orientation taking all individuals in a given country as being the same (Irawanto, Ramsey & Ryan 2011; Yoo, Donthu & Lenartowicz 2011). Kongsompong, Green and Patterson (2009) argue that if marketers focus on a consumer's characteristics instead of focusing on the characteristics of a country, this will be more valid. Subsequently, some

researchers created and developed the Cultural Value Scale (CVSCALE) based on Hofstede' cultural dimensions focusing at an individual level (Prasongsukarn 2009; Yoo, Donthu & Lenartowicz 2011). The CVSCALE reflects the five-dimensional typology of culture including Power distance (PDI), Uncertainty avoidance (UAI), Individualism / Collectivism (IDV), Masculinity / Femininity (MAS), and Long-term orientation (LTO). The CVSCALE has achieved satisfactory reliability in various countries (e.g., Mazanec et al. 2015; Yoo & Donthu 2002), including Thailand (Prasongsukarn 2009), indicating that this measure can be used for the current research. Therefore, twenty-six items which reflect the five characteristics of culture are adopted from the CVSCALE by Yoo, Donthu and Lenartowicz (2011) and are shown in Table 4.3.

Table 4.3: Tourist Cultural Characteristics

Construct	Number of Items
Power Distance Characteristic - People in higher positions should make most decisions without consulting people in lower positions. - People in higher positions should not ask the opinions of people in lower positions too frequently. - People in higher positions should avoid social interaction with people in lower positions. - People in lower positions should not disagree with decisions by people in higher positions. - People in higher positions should not delegate important tasks to people in lower positions.	5

Table 4.3: Tourist Cultural Characteristics (Cont.)

Construct	Number of Items
Uncertainty Avoidance Characteristic - It is important to have instructions spelled out in detail so that I always know what I'm expected to do. - It is important to closely follow instructions and procedures. - Rules and regulations are important because they inform me of what is expected of me. - Standardised work procedures are helpful. - Instructions for operations are important.	5
Individualism / Collectivism Characteristic - Individuals should sacrifice self-interest for the group. - Individuals should stick with the group even through difficulties. - Group welfare is more important than individual rewards. - Group success is more important than individual success. - Individuals should only pursue their goals after considering the welfare of the group. - Group loyalty should be encouraged even if individual goals suffer.	6
Masculinity / Femininity Characteristic - It is more important for men to have a professional career than it is for women. - Men usually solve problems with logical analysis; women usually solve problems with intuition. - Solving difficult problems usually requires an active, forcible approach, which is typical of men. - There are some jobs that a man can always do better than a woman.	4

Table 4.3: Tourist Cultural Characteristics (Cont.)

Construct	Number of Items
Long-term Orientation Characteristic - Being careful with the management of money. - Going on resolutely in spite of opposition. - Personal steadiness and stability. - Long-term planning. - Giving up today's fun for success in the future. - Working hard for success in the future.	6
Total	**26**

Note: All of these items were adopted from Yoo, Donthu and Lenartowicz (2011).

4.4.1.2 Attitudes of tourist to sustainable tourism

Attitudes are generally conceptualised as having three components: cognitive, affective and behavioural (Baron, Byrne & Branscombe 2002). Heberlein and Black (1976) stated that specific attitudes are more highly correlated with behaviour than general attitudes. The measurement of tourist attitudes was adapted from previous literature in the context of sustainable tourism, especially regarding environmental issues.

The cognitive aspect of attitudes consists of associations that people establish between an attitude object and various attributes that they ascribe to it (Fishbein & Ajzen 1975). Chiu, Lee and Chen (2014) also state that a tourist's cognitive attitudes are developed by understanding the related attributes of products. These implies that the definition of the cognitive component of an attitude relates to knowledge.

As discussed in Chapter Two, subjective knowledge is defined as what individuals think they know about the attitude object (Klerck & Sweeney 2007). Cheung, Lau and Lam (2015) explored residents' environmental knowledge in a metropolitan city of Hong Kong and this study used respondents' self-reported environmental knowledge, with the respondents being asked to indicate how much they know about environmental issues. The measurement of the

cognitive component of an attitude was therefore adapted from Cheung, Lau and Lam (2015) (see Table 4.4).

Table 4.4: Cognitive Component of Attitudes of Tourist to Sustainable Tourism

Construct	Number of Items
Subjective Knowledge as cognitive component - In general, how much do you think you know about environmental issues in tourism? - Compared with 10 years ago, how much do you think you know about environmental issues in tourism?	**2**

Note: All of these items were adapted from Cheung, Lau and Lam (2015)

The affective component of attitudes consists of feelings, emotions and physiological responses that may accompany affective experiences (Schimmack & Crites 2005). As this research aims to study the sustainable tourism sector, it could mean that tourists to national parks are more likely to have environmental concerns over other tourists. Imran, Alam and Beaumont (2014) found that environmental concern can influence interest in sustainable tourism.

One of the most widely used environmental concern measures is the New Ecological Paradigm (NEP) developed by Dunlap and Van Liere (1978), and revised by Dunlap et al. (2000). Anderson (2012) used the revised NEP from Dunlap et al. (2000), and the work of Anderson (2012) illustrated that the NEP provides the most effective affective attitude scale in the context of sustainable tourism. Moreover, the NEP has been used in various countries (Milfont, Duckitt & Cameron 2006) and increasingly applied and tested within diverse cultural contexts (Hawcroft & Milfont 2010). The NEP is thus suitable to measure the affective component of attitudes. The scale consists of fifteen items reflecting: the reality of the limits of growth, anti- anthropocentrism, the fragility of nature's balance, rejection of exceptionalism, and the possibility of an eco-crisis (Dunlap et al. 2000). These items are demonstrated in Table 4.5.

Table 4.5: Affective Component of Attitudes of Tourist to Sustainable Tourism

Construct	Number of Items
New Ecological Paradigm (NEP) as affective component - We are approaching the limit of the number of people that the earth can support. - Humans have the right to modify the natural environment to suit their needs. - When humans interfere with nature it often produces disastrous consequences. - Human ingenuity will ensure that we do not make the earth unliveable. - Humans are severely abusing the environment. - The earth has plenty of natural resources if we just learn how to develop them. - Plants and animals have as much right as humans to exist. - The balance of nature is strong enough to cope with the impacts of modern industrial nations. - Despite our special abilities, humans are still subject to the laws of nature. - The so-called 'ecological crisis' facing humankind has been greatly exaggerated. - The earth is like a spaceship with very limited room and resources. - Humans were meant to rule over the rest of nature. - The balance of nature is very delicate and easily upset. - Humans will eventually learn enough about how nature works to be able to control it. - If things continue on their present course, we will soon experience a major ecological catastrophe.	15

Note: All of these items were adopted from Dunlap et al. (2000)

Bem (1972) stated that the behavioural component of an attitude refers to past behaviour or past experiences regarding an attitude object. Rajagopal and Montgomery (2011) stated that a customer's experience significantly reflects their attitudes. Chiu, Lee and Chen (2014) and Loureiro (2014) also indicated that a tourist's experience does reveal their attitude. One of the measures of past behaviour in tourism is indicated by the number of times a destination

is visited or number of trips. Thus, a measure of past behaviour is appropriate for accessing the behavioural component of attitudes, and encompasses a single item measure. Bergkvist and Rossiter (2007) indicate that when a construct is concrete and singular, a single item can be employed, as shown in Table 4.6.

Table 4.6: Behaviour Component of Attitudes of Tourist to Sustainable Tourism

Construct	Number of Items
Past Behaviour as behaviour component - How many times in the past would you estimate you have travelled to an environmental attraction (e.g., national park)?	1

Note: Item is adapted from Huang and Hsu (2009)

4.4.1.3 Subjective norms

A subjective norm is a perception by the individual of social reference, rules or beliefs about what a person should or should not do (Hsu & Huang 2010). Subjective norms in this thesis were based on the measurement scales of the Theory of Planned Behaviour (TPB) (Ajzen 1991). The items were derived from Lam and Hsu (2006) as presented in Table 4.7.

Table 4.7: Subjective Norms

Construct	Number of Items
Subjective norms - Most people I know would choose environmentally sustainable tourism attractions as a travel destination. - People who are important to me would think that I should visit environmentally sustainable tourism attractions. - People who are important to me would approve of me visiting environmentally sustainable tourism attractions.	3
Total	**3**

Note: Item is adapted from Lam and Hsu (2006)

4.4.1.4 Perceived behavioural control

Perceived Behavioural Control (PBC) refers to 'an individual's perceptions of his or her ability to perform a given behaviour' (Hsu & Huang 2012, p.392) and it is one component of the TPB. The concept of PBC is closely related to 'locus of control' (Simons-Morton, McLeroy & Wendel 2011). Locus of control refers to a tendency of behaviour which is influenced by perceptions about the extent to which a certain action is under an individual's control or rather environmental conditions (Rotter 1966). As this research study in sustainable tourism was focussed on environmental issues, the concept of 'environmental locus of control' (ELOC), derived the items from Cleveland, Kalamas and Laroche (2012), was used as a measure (see Table 4.8).

Table 4.8: Perceived Behavioural Control

Construct	Number of Items
Perceived Behavioural Control - The sooner consumers start travelling to environmentally sustainable tourism attractions, the sooner the destination will transform to respond to their demands. - The more I travel to environmentally sustainable tourism attractions, the more I help persuade destinations to become friendlier to the environment. - By travelling to environmentally sustainable tourism attractions, I can make a difference in helping the environment.	**3**
Total	**3**

Note: Item is adapted from Cleveland, Kalamas and Laroche (2012)

4.4.1.5 Thailand's destination image

Thailand's destination image is key to attracting international and local tourists (Tavitiyaman & Qu 2013). The measurement of Thailand's destination image was specifically related to sustainable tourism, and was derived from Rittichainuwat, Qu and Brown (2001), Tapachai and Waryszak (2000), and Tavitiyaman and Qu (2013), using seven items as shown in Table 4.9.

Table 4.9: Thailand's Destination Image

Construct	Number of Items
Thailand's destination image	**7**
- Thailand has interesting customs and cultural activities, and attractions.	
- Thailand has a unique culture.	
- Thailand has interesting historical attractions.	
- Thailand has scenic and natural beauty.	
- Thailand has a pleasant climate.	
- Thailand has a unique climate.	
- Thailand has friendly people.	
Total	**7**

Note: Item is adapted from Rittichainuwat, Qu and Brown (2001), Tapachai and Waryszak (2000), and Tavitiyaman and Qu (2013)

4.4.1.6 Sustainable tourist behaviour

Lee, Jan and Yang (2013a) developed a reliable and valid measurement to assess site-specific environmentally responsible behaviour, which consists of three critical factors: sustainable behaviour, pro-environmental behaviour, and environmentally friendly behaviour. Sustainable behaviour is measured using five items, pro-environmental behaviour is measured using three items and four items measure environmentally friendly behaviour. All measurement items were adapted from the work of Lee, Jan and Yang (2013a). There were twelve items used as the sustainable tourist behaviour measure in this study (See Table 4.10).

Table 4.10: Sustainable Tourist Behaviour

Construct	Number of Items
Sustainable tourist behaviour **- Sustainable Behaviour** - I understand local residents' culture. - I respect the history and culture heritage of the places I visit. - I respect the nature and wildlife of the places I visit. - I pick up litter left by other people. - I buy (or use) local products and services during my travel/trips. **- Pro-environmental behaviour** - I voluntarily visit a favourite location less often if it needs to recover from environmental damage. - I voluntarily stop visiting a favourite location if it needs to recover from environmental damage. - I prefer to choose products or services with eco-labels during my travel /trips. **- Environmentally Friendly Behaviour** - I do not intend to disturb any creature or vegetation during my travel /trips. - I tell my companions not to feed the animals during my travel /trips. - After travelling, I leave where I have visited as clean as it was originally. - I do not overturn rocks and dried wood arbitrarily during my travel /trips.	**12**
Total	**12**

Note: Item is adapted from Lee, Jan and Yang (2013a)

4.4.2 The initial questionnaire

After generating the initial item measures and the scaling and formatting of the instrument, the next step was drafting the questionnaire. This approach involved examining and critiquing the initial items by the researcher and supervisory team. This process became a part of content validity assessment of the measures utilised in this study. Through a process of measurement item validation employing a panel of expert judges, various alterations were undertaken relating to content validity of the questionnaire (DeVillis 2003). Based on the

content validity, this process resulted in the development of wordings which were consistent within the context of the study. In addition, wordings of all measurement items were revised to ensure the items were clear and unambiguous.

Having looked at content validity, the questionnaire was constructed following the advice of Zikmund et al. (2013, p. 219) that 'a general rule of thumb is that questionaries should not exceed six pages'. This questionnaire meets this general rule. For the current study, all questions including the cover letter filled only five pages. The questionnaire was printed double-sided on A3 paper, folded into A4 size, in order to reduce the impression of the survey being long, with the wording assessed for simplicity to account for differences in international and local tourists' backgrounds. The questionnaire was divided into seven parts (See Appendix B):

Part 1: Comprised twenty-six questions asking respondents to evaluate their individual cultural characteristics. These questions represented Hofstede's cultural dimensions at an individual level using the CVSCALE.

Part 2: Comprised eighteen questions asking respondents to evaluate their attitudes to sustainable tourism, reflecting the three attitude dimensions: subjective knowledge (cognitive component), New Ecological Paradigm (NEP) (affective component), and past behaviour (behavioural component).

Part 3: Comprised three questions asking respondents to evaluate subjective norms regarding sustainable tourism.

Part 4: Comprised three items asking respondents to evaluate their perceptions of their ability to act in a sustainable manner as measured by the ELOC scale.

Part 5: Comprised seven questions asking respondents about Thailand's destination image.

Part 6: Comprised twelve items asking respondents to evaluate their perceptions of sustainable tourist behaviour, focused on environmentally responsible behaviour consisting of three factors including sustainable behaviour, pro- environmental behaviour and environmentally friendly behaviour.

Part 7: Comprised seven questions asking respondents' demographics, including gender, age, nationality, marital status, educational background and occupation.

4.4.3 Common method bias

A concern for undertaking any research is common method biases. Podsakoff et al. (2003, p.882) describes one type of common method biases which is the item priming effect which 'refers to the fact that the positioning of the predictor (or criterion) in the questionnaire can make that variable more salient to the respondents and imply a causal relationship with other variables'. Counterbalancing items was thus undertaken in order to reduce item priming effects. Thus, this research used four versions of the questionnaire in order to avoid the likelihood of any item priming effect. The study also used an anonymous response format to both meet ethical requirements and to reduce common method bias. The order of presentation of constructs across the administration and variations is in Table 4.11.

Table 4.11 Item Order Across Administration and Survey Variations

Survey Variations	Administration
Survey Variation 1	CVSCALE – SK – NEP – PB – SN – PBC - TDI - STB
Survey Variation 2	CVSCALE – SK – NEP – PB – SN – PBC - TDI - STB (Reordering the questions in each construct from survey variation 1)
Survey Variation 3	STB – TDI - PBC – SN – SK – NEP – PB - CVSCALE
Survey Variation 4	STB – TDI - PBC – SN – SK – NEP – PB - CVSCALE (Reordering the questions in each construct from survey variation 3)

Note: CVSCALE = Cultural characteristics; SK = Subjective knowledge; NEP = New Ecological Paradigm; PB = Past behaviour; SN = Subjective norms; PCB = Perceived behavioural control (ELOC scale); TDI = Thailand's destination image; STB = Sustainable tourist behaviour.

4.4.4 Pilot study

A pilot study is a process that aims to avoid problems related to questionnaire design. As suggested by Cooper and Schindler (2003) , a pilot test is conducted to identify any weaknesses in the instruments of a study and also to reduce unnecessary questions. In addition, a pilot test ensures that the questions are not ambiguous, unclear and that the questionnaire is comprehensive in the eyes of the respondent (Burns & Bush 2000; Malhotra, Schwartz & Hameed 2004).

4.4.4.1 Pilot study sampling frame

A convenience sample of 40 respondents was used to conduct the pilot testing. These involved 20 native English speakers and 20 native Thai speaker students who were studying at the University of Tasmania. The number selected followed the recommendation by Green, Tull and Albuam (1988) that between 30 to 60 participants are appropriate to conduct a pilot test.

4.4.4.2 Pilot study stages

In the first stage, the supervisory team assessed the draft of the questionnaire to suggest any problems in regard to questionnaire format, wording and design and to provide any comments and suggestions. As a result of this procedure, it was suggested to change some words to simplify expression and to make the questionnaire easier to read. The questionnaires were then modified and edited before conducting the pilot study survey.

In the second stage, 40 questionnaires were distributed to students who were studying at the University of Tasmania. Some minor changes to wording and layout were made to the instrument following the pilot study to enhance understanding. However, no major change was made to the instrument. Moreover, a clear font size and highlighting and underlining for key instructions (Dillman 2011; Tull & Hawkins 2003) was adopted. A copy of the final survey instrument used for the thesis is provided in Appendix B.

4.4.5 Data collection

After the pilot study, the questionnaire was improved for final data collection during January – February 2016. As mentioned, data collection was conducted in Chiang Mai, Thailand. Thailand is one of the top five tourist destinations in Asia and has growing travel and tourism sectors. Thailand has a variety of tourist attractions, including natural areas with a wide variety of flora and fauna especially in Northern regions such as Chiang Mai. There are various national parks located in Chiang Mai. Doi Inthanon National Park and Doi Suthep National Park are used in this research. These two national parks were the most popular national parks in 2015 (DNP 2016b). This research includes Thailand's destination image and a number of previous studies have investigated the effect of previous destination experience on destination image (e.g., Baloglu 2001; Beerli & Martin 2004). Fakeye and Crompton (1991) suggest that destination image might become more valid after actual visitations which affects the behaviour of tourists (Ashworth & Goodall 1988). This survey administration timing also has the advantage that recall of actual behaviour and attitudes is likely to have a higher level of validity Hence, the final four questionnaire versions were administered to respondents after they visited national parks in Chiang Mai by using convenience sampling with voluntary participation of the next person after a survey was finished and using the appropriate language version of the questionnaire.

The objective was to obtain a minimum sample size of approximately 400 fully completed responses with the large sample size reflective of the intention to use advanced multivariate techniques in the analysis (Hair et al. 1995). There were 519 questionnaires returned. Of these, 485 questionnaires were fully answered which equates to 93.45% of the overall returned questionnaires. The Table 4.12 below represents the number of 485 completed questionnaires in each version.

Table 4.12 Number of the Completed Questionnaire with Different Versions

Version of the questionnaire	Total	
	Amount	Percent
Version 1	123	25.4%
Version 2	120	24.7%
Version 3	122	25.2%
Version 4	120	24.7%
Total	485	100.0%

4.4.6 Data analysis methods

The Statistical Package for the Social Sciences (SPSS) Version 23 was used to analyse the data including descriptive statistical measures with hypothesis testing undertaken using the PROCESS macro for mediation and moderation analysis using linear regression (Hayes 2013b). The following section justifies and describes an overview of the statistical techniques used in this study.

4.4.6.1 Descriptive analysis

In order to analyse preliminary data from these study calculations were made of means, standard deviations, and frequencies. The frequency counts were initially used to identify any sample responses lying out of range or missing.

4.4.6.2 Data preparation

Principal Component Analysis (PCA) is a technique for reducing the number of variables in a large data set down to more fundamentally describable dimensions (Lam, Baum & Pine 2003; Zaman et al. 2016). These dimensions in turn have the advantage of taking into account numerous question responses simultaneously which can be argued to be a closer analogy to the way in which humans think and associate numerous subtler issues. Parallel Analysis (PA) as suggested by Horn (1965) as method to improve the accuracy of determining the appropriate number of factors, was also employed. Çokluk and Koçak (2016) concluded that PA is found to provide consistent results with constructs obtained in scale development. The dimensions derived in this research were also intended to be further analysed in the

hypothesis testing process. Thus, factor analysis, using PA and PCA with varimax rotation, was employed to reduce the number of variables in the first stage of data preparation. Reliability and validity were also considered. In terms of reliability, Cronbach's Alpha and construct reliability were used. Convergent and discriminant validity were also considered. Convergent validity was investigated by examining the Average Variance Extracted (AVE) for each variable, with at least 0.50 being required (Fornell & Larcker 1981). Discriminant validity was investigated by examining the square root of the AVEs, which should be greater than the respective correlations with each relevant variable.

4.4.6.3 Hypothesis testing

Hypothesis testing was undertaken in SPSS using the PROCESS macro developed by Hayes (2013a) to test for mediation and moderation using linear regression. According to the conceptual framework, five models (Power Distance, Uncertainty Avoidance, Individualism / Collectivism, Masculinity / Femininity, and Long-term Orientation Model) were analysed in this process.

4.5 Ethics and confidentiality

As part of the University of Tasmania's requirements, projects involving human subjects must apply for and obtain ethics approval from the University Human Research Ethics Committee before conducting data collection. In order to ensure the rights and safety of the participants and that no one was negatively affected by conducting this study the current research was required to meet these University standards. First, the ethics application was submitted to the Ethics committee for examination of the aims and procedures involved in this research, and to confirm that there is no potential risk to participants and the researchers. Second, an information sheet was provided with the questionnaire to explain the purpose of the study (see Appendix A). In the letter, participants were informed that they were voluntary participants, would incur no risks through being involved, and were ensured genuine anonymity. Completed questionnaires collected from the respondents were kept in the principal investigator's locked office at the University of Tasmania, and only team members of this study had permission to use the data. This research was approved by the University Human Research Ethics Committee, with the approval number H0015318 (see Appendix C).

4.6 Conclusion

This chapter explained the research methodology used to collect data for quantitative analysis and to test the hypotheses developed in previous chapters. The methods used to develop and administer a survey questionnaire were outlined including the use of a pilot study. The choice of location used and the sampling frame were discussed. Further, an introduction of the statistical techniques used to test the hypotheses derived from the conceptual model was provided, and the descriptive statistics and data preparation outlined. The following Chapter Five provides the analysis of the results and the findings.

CHAPTER FIVE
Data Analysis and Results

5.1. Introduction

The objective of Chapter Five is to present the data analysis and results of the study. To investigate the research model as presented in Chapter Three (Figure 3.1), several analytical procedures were used. This chapter begins with data preparation and preliminary data analysis including descriptive statistics for all constructs. Preliminary analyses including for reliability, convergent and discriminant validity are presented in Section 5.2. Following this, the results of the hypothesis testing are discussed in Section 5.3. Finally, the chapter closes with a summary of results against the hypotheses in Section 5.4. The conclusion is presented in Section 5.5.

5.2. Data preparation and preliminary analysis

As presented in Chapter Four, the study gathered data from both international and domestic (Thai) tourists who had just visited national parks in Chiang Mai, Thailand. A self-administered survey via on-site intercept was used to collect the data. As discussed in Chapter One, Thailand's national parks in Chiang Mai were chosen as a suitable tourism destination for understanding the context of sustainable tourism. The previous chapter provided the total sample size and profile of the respondents, with 485 usable surveys collected. The preliminary analysis consists of two sections. Firstly, factor analysis is conducted to interpret factor loadings and Cronbach's Alpha for the factors is also calculated. Then, convergent and discriminant validity tests are performed to ensure measurement validity.

5.2.1. Factor analysis with parallel analysis

After data were gathered and entered into SPSS, data preparation and preliminary analyses were undertaken. As discussed in Chapter Four, factor analysis using Parallel Analysis (PA) and Principal Component Analysis (PCA) with varimax rotation, was employed to reduce the number of variables in the first stage of data preparation. As suggested by Fabrigar et al. (1999), PA was undertaken to ascertain an appropriate number of factors to extract. PA seeks to determine the number of eigenvalues above the 95th percentile in a random distribution

of eigenvalues of similar dimensions as the one under consideration. Therefore, an indicator of the 'significance' of a factor structure is obtained. In this study, two variables, namely, past behaviour and environmental knowledge, were measured using a single item; therefore, no further data processing, and no internal consistency or reliability assessment, was required. The results of the PA indicated that each variable contains only 1 factor, except the New Ecological Paradigm: NEP (Affective Component of Attitude) which showed 2 factors, and sustainable tourist behaviour, which showed 3 factors as presented in Table 5.1. This will be discussed further below.

Table 5.1 Number of Factors by Parallel Analysis

Variables	Number of Factor(s)
1.Cultural Characteristics	
1.1 Power Distance Characteristic: PDI	1
1.2 Uncertainty Avoidance Characteristic: UAI	1
1.3 Individualism / Collectivism Characteristic: IDV	1
1.4 Masculinity / Femininity Characteristic: MAS	1
1.5 Long-term Orientation Characteristic: LTO	1
2. Attitude Components	
2.1 Environmental Knowledge: EK (Cognitive Component)*	
2.2 New Ecological Paradigm: NEP (Affective Component)	2
2.3 Past Behaviour: PB (Behavioural Component)*	
3. Subjective Norms: SN	1
4. Perceived Behavioural Control: PBC	1
5. Thailand's Destination Image: TDI	1
6. Sustainable Tourist Behaviour: STB	3

Note * = Single item

Principal Component Analysis (PCA) with varimax rotation was subsequently undertaken. As suggested from the work of Shlens (2005), PCA is one of the most popular approaches to dimension reduction used in the fields of marketing and tourism (e.g., Gallarzaa & Saura 2006;

Lu, Chi & Liu 2015; Rid, Ezeuduji & Pröbstl-Haider 2014). The main purpose of the PCA is to reduce each large set of variables into a smaller set of inter-related variables that can hopefully describe any underlying dimensionality, while retaining most of the variation present in the data set (Hubert, Rousseeuw & Vanden Branden 2005; Ringnér 2008). To interpret the factor solution, a factor loading of 0.50 is set here as the minimum value for a loading to be considered (Hair et al. 2000). The factor loadings or the various constructs will be presented in subsequent sections.

Cronbach's Alpha shows the reliability of the constructs in the survey instrument, and refers to the property of stability. Santos (1999) states that 'reliability comes to the forefront when variables developed from summated scales are used as predictor components in objective models' (p.1). The Cronbach's Alpha results showed that each variable has result higher than 0.60 (as suggested by Hair et al.,1998). According to Hair et al. (1998), the coefficient alpha value in the range from 0.6 – 0.7 can be considered as the minimum acceptable level of reliability for preliminary research. Factor loadings and Cronbach's Alpha scores are illustrated in Tables 5.2-5.5.

5.2.1.1. Cultural characteristics

As shown in Table 5.2, the respondents answered questions regarding the five cultural characteristics identified by Hofstede (1980, 2001). The characteristics were conceptualised in this study as involving the reflective elements of a variety of human cultures: Power Distance (PDI), Uncertainty Avoidance (UAI), Individualism/ Collectivism (IDV), Masculinity/Femininity (MAS), and Long-term Orientation (LTO). As presented in Table 5.2, five factors were evaluated with the factor loadings of the items ranging from 0.50 to 0.83, all greater than the benchmark value of 0.50 recommended by Hair et al. (2000). In addition, the reliability tests for the five cultural dimensions were satisfactory, being greater than 0.70, the benchmark suggested by Nunnally (1978).

Table 5.2 Factor Loadings and Cronbach's Alpha of Cultural Characteristics

Scale Items	Factor Loadings	Cronbach's Alpha
Cultural Characteristics		
Power Distance Characteristics: PDI		**0.83**
a1.1.1 People in higher positions should make most decisions without consulting people in lower positions.	0.66	
a1.1.2 People in higher positions should not ask the opinions of people in lower positions too frequently.	0.74	
a1.1.3 People in higher positions should avoid social interaction with people in lower positions.	0.76	
a1.1.4 People in lower positions should not disagree with decisions by people in higher positions.	0.77	
a1.1.5 People in higher positions should not delegate important tasks to people in lower positions.	0.60	
Uncertainty Avoidance Characteristics: UAI		**0.72**
a1.1.6 It is important to have instructions spelled out in detail so that I always know what I'm expected to do.	0.53	
a1.1.7 It is important to closely follow instructions and procedures.	0.59	
a1.1.8 Rules and regulations are important because they inform me of what is expected of me.	0.64	
a1.1.9 Standardized work procedures are helpful.	0.63	
a1.1.10 Instructions for operations are important.	0.57	

Table 5.2 Factor Loadings and Cronbach's Alpha of Cultural Characteristics (Cont.)

Scale Items	Factor Loadings	Cronbach's Alpha
Individualism / Collectivism Characteristic: IDV		**0.75**
a1.1.13 Group welfare is more important than individual rewards.	0.66	
a1.1.14 Group success is more important than individual success.	0.74	
a1.1.15 Individuals should only pursue their goals after considering the welfare of the group.	0.62	
a1.1.16 Group loyalty should be encouraged even if individual goals suffer.	0.61	
Masculinity / Femininity Characteristic: MAS		**0.80**
a.1.1.17 It is more important for men to have a professional career than it is for women.	0.72	
a.1.1.18 Men usually solve problems with logical analysis; women usually solve problems with intuition.	0.73	
a.1.1.19 Solving difficult problems usually requires an active, forcible approach, which is typical of men.	0.83	
A1.1.20 There are some jobs that a man can always do better than a woman.	0.57	
Long-term Orientation Characteristic: LTO		**0.71**
a1.1.21 Careful with the management of money.	0.50	
a1.1.22 Going on resolutely in spite of opposition.	0.65	
a1.1.23 Personal steadiness and stability.	0.70	
a1.1.24 Long-term planning.	0.63	

5.2.1.2. Attitude components

The attitude constructs were measured reflecting environmental knowledge (cognition), New Ecological Paradigm (NEP) (affect), and past behaviour (behaviour). The environmental knowledge and past behaviour constructs were measured using a single item each. The NEP was measured using multiple items. The NEP items were extracted as one factor solution of six items; despite two factors being obtained, this was the one which showed the best dimensionality in terms of loadings. Table 5.3 presents the factor loadings of the NEP which ranged from 0.53 to 0.77. Further, the reliability test for the NEP shows a Cronbach's Alpha coefficient of 0.79, which is greater than the benchmark recommended by Nunnally (1978).

Table 5.3 Factor Loadings and Cronbach's Alpha of Attitude Components

Scale Items	Factor Loadings	Cronbach's Alpha
Attitude Components		
Environmental Knowledge: EK (Cognitive Component)*		
New Ecological Paradigm: NEP (Affective Component)		**0.79**
b2.2.2 Humans have the right to modify the natural environment to suit their needs	0.61	
b2.2.4 Human ingenuity will ensure that we do not make the earth unliveable.	0.53	
b2.2.8 The balance of nature is strong enough to cope with the impacts of modern industrial nations	0.57	
b2.2.10 The so-called 'ecological crisis' facing humankind has been greatly exaggerated.	0.60	
b2.2.12 Humans were meant to rule over the rest of nature.	0.77	
b2.2.14 Humans will eventually learn enough about how nature works to be able to control it.	0.64	
Past Behaviour: PB (Behavioural Component)*		

Note * = Single item

5.2.1.3. Subjective norms

A single factor solution was evaluated for the subjective norms construct with the three items loading from 0.56 to 0.87. Furthermore, the reliability test for subjective norms showed a Cronbach's Alpha coefficient of 0.73, which is greater than the benchmark recommended by Nunnally (1978).

Table 5.4 Factor Loadings and Cronbach's Alpha of Subjective Norms

Scale Items	Factor Loadings	Construct Reliability
Subjective Norms: SN		**0.73**
c1 Most people I know would choose environmentally sustainable tourism attractions as a travel destination.	0.56	
c2 People who are important to me would think that I should visit environmentally sustainable tourism attractions	0.87	
c3 People who are important to me would approve of me visiting environmentally sustainable tourism attractions	0.70	

5.2.1.4. Perceived behavioural control

A single factor solution was evaluated for perceived behavioural control with loadings for the three items ranging from 0.50 to 0.74. Furthermore, the reliability test for perceived behavioural control showed a Cronbach's Alpha coefficient of 0.64, below the benchmark of 0.7, but still acceptable as recommended by Hair et al. (1998).

Table 5.5 Factor Loadings and Cronbach's Alpha of Perceived Behavioural Control

Scale Items	Factor Loading	Construct Reliability
Perceived Behavioural Control: PBC		**0.64**
d1 The sooner consumer start travelling to environmentally sustainable tourism attractions, the sooner the destination will transform to respond to their demands.	0.50	
d2 The more I travel to environmentally sustainable tourism attractions, the more I help persuade destination to become friendlier to the environment.	0.61	
d3 By travelling to environmentally sustainable tourism attractions, I can make a difference in helping the environment.	0.74	

5.2.1.5. Thailand's destination image

A single factor solution was evaluated for the construct of Thailand's destination image, with loadings of the five items ranging from 0.57 to 0.77. Furthermore, the reliability test for Thailand's destination image showed a Cronbach's Alpha coefficient of 0.83, which is greater than the benchmark recommended by Nunnally (1978).

Table 5.6 Factor Loadings and Cronbach's Alpha of Thailand's Destination Image

Scale Items	Factor Loading	Construct Reliability
Thailand's Destination Image: TDI		**0.83**
i1 Thailand has interesting customs and cultural activities, and attractions.	0.75	
i2 Thailand has a unique culture.	0.77	
i3 Thailand has interesting historical attractions.	0.76	
i4 Thailand has scenic and natural beauty.	0.68	
i7 Thailand has friendly people.	0.57	

5.2.1.6. Sustainable tourist behaviour

For sustainable tourist behaviour, a three-factor solution was evaluated for the 7 items. The first factor was labelled as sustainable behaviour which consisted of two items with loadings ranging from 0.73 to 0.76 and a Cronbach's Alpha coefficient of 0.71. The second factor was labelled as pro-environmental behaviour which included two items with loadings ranging from 0.63 to 0.87 and a Cronbach's Alpha coefficient of 0.70. The final factor was labelled as environmentally friendly behaviour which included three items with loadings ranging from 0.58 to 0.72 and a Cronbach's Alpha coefficient of 0.70. The factor loadings of the three factors were greater than the benchmark value of 0.50. In addition, the reliability coefficients for the three factors were greater than the benchmark recommended by Nunnally (1978).

Table 5.7 Factor Loadings and Cronbach's Alpha of Sustainable Tourist Behaviour

Scale Items	Factor Loading	Construct Reliability
Sustainable Tourist Behaviour: STB		
<u>Sustainable Behaviour: SB</u>		**0.71**
f2 I respect the history and culture heritage.	0.73	
f3 I respect the nature and wildlife.	0.76	
<u>Pro-Environmental Behaviour: PEB</u>		**0.70**
f6 I voluntarily visit a favourite location less often if it needs to recover from environmental damage.	0.63	
f7 I voluntarily stop visiting a favourite location if it needs to recover from environmental damage.	0.87	
<u>Environmentally Friendly Behaviour: EFB</u>		**0.70**
f9 I do not intend to disturb any creature or vegetation during my travel /trips.	0.65	
f11 After travelling, I leave where I have visited as clean as it was originally.	0.72	
f12 I do not overturn rocks and dried wood arbitrarily during my travel /trips.	0.58	

5.2.2. Convergent validity

Convergent validity refers to the extent to which items measuring the same construct are related (Campbell & Fiske 1959; Carlson & Herdman 2012). Convergent validity can be examined by exploring the Average Variance Extracted (AVE). Fornell and Larcker (1981) suggest that Cronbach's Alpha is a less conservative measure of reliability than AVE, indicating that AVE scores should fall above 0.50, that is, where the scale construct explains an amount of variance that is greater than the amount of variance due to chance.

As presented in Table 5.8, the AVE scores for the sustainable tourist behaviour constructs ranged from 0.35-0.56, some lower than the suggested 0.5; therefore, this study combined the three factors of sustainable tourist behaviour into one factor, used as the outcome variable for the research. Several other constructs were found to have AVEs below 0.50, including Uncertainty avoidance (UAI), Individualism/Collectivism (IDV), Long term orientation (LTO), New Ecological Paradigm and Perceived behavioural control (PBC) which show AVE at 0.35, 0.43, 0.39, 0.39 and 0.39 respectively. Although these constructs present AVE scores lower than 0.5, the respective measures of Cronbach's Alpha and the factor loading are all acceptable (as shown in previous sections). As Hair et al. (1998) propose when scales are newly used, Cronbach's Alphas above 0.60 are acceptable. Similarly, composite reliabilities were also acceptable, with all except that for perceived behavioural control being above 0.7. Moreover, the factor loading for multi-item scales ranged from 0.50 to 0.87. This supports the conclusion of convergent validity while not as strong as would be ideal. The results from the analysis of convergent validity indicate that all constructs are acceptable for further analysis.

5.2.3. Discriminant validity

Discriminant validity amongst the multi-items scales was also determined. Discriminant validity is shown when two measures that are not supposed to be related are in fact, unrelated; this is, they are distinct constructs (Campbell & Fiske 1959). Evidence of discriminant validity is provided when 'indicators of theoretically distinct constructs are not highly intercorrelated' (Brown 2006, p. 3). In order to investigate discriminant validity, the square root of the AVE for each construct is calculated (shown in the diagonal in Table 5.8), and compared with the intercorrelations between that and the other constructs. When the square root of the AVE of each construct is larger than the correlation between that construct and each of the others, discriminant validity between these constructs is indicated, as is the case here. In addition, the mean scores and standard deviations range from 2.26 to 4.23 and 0.46 to 0.99 respectively. The mean scores show a level of variation across the contructs which suggests both that any relevant differences will be evaluable, and that each of the constructs have a level of independence. This also supports a conclusion of acceptable discriminant validity.

Table 5.8 Convergent and Discriminant Validity and Reliability

	Mean	Std. Deviation	AVE	CR	Cronbach's Alpha	PDI	UAI	IDV	MAS	LTO	EK	NEP	PB	SN	PBC	TDI	STB
PDI	2.26	0.80	0.51	0.84	0.83	**0.71**											
UAI	3.83	0.52	0.35	0.73	0.72	-0.07	**0.59**										
IDV	3.56	0.60	0.43	0.75	0.75	0.14^{**}	0.30^{**}	**0.66**									
MAS	2.66	0.87	0.52	0.81	0.80	0.35^{**}	0.04	0.18^{**}	**0.72**								
LTO	3.90	0.57	0.39	0.71	0.71	-0.15^{**}	0.31^{**}	0.07	0.05	**0.62**							
EK	3.23	0.77	-	-	-	0.09	0.07	-0.01	0.15^{**}	0.13^{**}	**-**						
NEP	3.92	0.46	0.39	0.79	0.79	-0.45^{**}	0.07	-0.22^{**}	-0.02^{**}	0.13^{**}	-0.13^{**}	**0.62**					
PB	2.90	0.99	-	-	-	-0.13^{**}	-0.02	-0.09	-0.11^{*}	-0.03	0.05	0.09^{*}	**-**				
SN	3.59	0.64	0.51	0.75	0.73	-0.08	0.15^{**}	-0.03	-0.11^{*}	0.16^{**}	0.09^{*}	0.07	0.12^{*}	**0.72**			
PBC	3.60	0.62	0.39	0.65	0.64	-0.03	0.02	-0.07	-0.09	0.19^{**}	0.13^{**}	0.04	0.07	0.30^{**}	**0.63**		
TDI	4.23	0.51	0.51	0.83	0.83	-0.13^{**}	0.19^{**}	0.07	-0.12^{**}	0.26^{**}	0.07	0.11^{*}	0.02	0.21^{**}	0.19^{**}	**0.71**	
STB	4.12	0.51	0.56	0.78	0.76	-0.19^{**}	0.28^{**}	-0.02	-0.17^{**}	0.13^{**}	0.11^{*}	0.33^{**}	0.02	0.19^{**}	0.14^{**}	0.39^{**}	**0.75**

NOTE: **. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

AVE=Average Variance Extracted

CR= Composite Reliability

Square roots of AVEs are reported in bold in the diagonal

5.3. The results of hypotheses testing

Consistent with marketing and tourism research, the proposed structural model was formulated by using the PROCESS macro for SPSS Version 23, developed by Hayes (2013a) to investigate the hypotheses embedded in the conceptual framework outlined in Chapter Three (see also Finoti et al. 2017; Garg & Dhar 2014; Kim 2017). PROCESS analysis is useful for making inferences about the effects in mediation and moderation models, that is, direct, indirect, and total effects (Hayes, Preacher & Myers 2011). Moreover, this approach is able to deal with mediation and moderation models of any level of complexity (Hayes 2009). For this reason, the SPSS PROCESS macro is an appropriate technique for analysing a complex model as presented in Figure 3.1 in Chapter Three. Section 5.3.1 presents the results of the proposed direct relationships. Following this, Section 5.3.2 presents the results of the mediation analyses and Section 5.3.3 shows the moderation effects.

5.3.1. The results of the direct relationship: Hypothesis 1 different cultural characteristics and sustainable tourist behaviour

Following previous research (e.g., Finoti et al. 2017; Kim 2017), PROCESS analysis was adopted to test the direct relationship between different cultural characteristics and sustainable tourist behaviour (H1a, H1b, H1c, H1d and H1e). To this end, a succession of proposed process models was established, in each of which the coefficient, the significant effects (i.e., when the 95% confidence interval does not contain zero), standard error, and p-value was evaluated.

In Hypothesis 1a, it was postulated that power distance is a significant positive predictor of sustainable tourist behaviour. As presented in Table 5.9, the influence of power distance on sustainable tourist behaviour is significant but with a negative relationship (β = -0.12, 95% CI -0.18 to -0.10, p < .001), providing overall partial support for Hypothesis 1a but not in the direction expected.

In Hypothesis 1b, it was posited that uncertainty avoidance is a significant positive predictor of sustainable tourist behaviour. As shown in Table 5.9, the influence of uncertainty avoidance

on sustainable tourist behaviour is significant (β = 0.28, 95% CI 0.19 to 0.36, p < .001), providing support for Hypothesis 1b.

In Hypothesis 1c, it was posited that individualism/collectivism is a significant positive predictor of sustainable tourist behaviour. As shown in Table 5.9, the influence of individualism/collectivism on sustainable tourist behaviour is not significant (β = -0.01, 95% CI -0.10 to 0.10, p > .05), providing no support for Hypothesis 1c.

In Hypothesis 1d, it was posited that masculinity/femininity is a significant positive predictor of sustainable tourist behaviour. As shown in Table 5.9, the influence of masculinity/femininity on sustainable tourist behaviour is significant but with a negative relationship (β = -0.10, 95% CI -0.15 to -0.05, p < .001), providing overall partial support for Hypothesis 1d but not in the direction intended.

In Hypothesis 1e, it was posited that long-term orientation is a significant positive predictor of sustainable tourist behaviour. As shown in Table 5.9, the influence of long/short term orientation on sustainable tourist behaviour is significant (β = 0.11, 95% CI 0.03 to 0.19, p < .01), providing support for Hypothesis 1e.

Regression coefficients indicate that uncertainty avoidance was the strongest predictor of sustainable tourist behaviour, followed by power distance, masculinity/femininity and long-term orientation.

Table 5.9 Results of Direct Relationships for Hypotheses 1a to 1e

Hypothesis	Paths	R^2	Coefficient	Bootstrap 95% CI Lower	Upper	Standard Error	p-Value
H1a	PDI → STB	0.04	-0.12	-0.18	-0.06	0.03	< .001
H1b	UAI → STB	0.08	0.28	0.19	0.36	0.43	< .001
H1c	IDV → STB	0.00	-0.01	-0.09	0.06	0.04	n.s.
H1d	MAS → STB	0.03	-0.10	-0.15	-0.05	0.03	< .001
H1e	LTO → STB	0.02	0.11	0.03	0.19	0.04	< .0.01

Note: power distance (PDI); uncertainty avoidance (UAI); individualism/collectivism (IDV); masculinity/femininity (MAS); long-term orientation (LTO); sustainable tourist behaviour (STB)

5.3.2. The results of the mediation effects: Hypothesis 2 attitudes mediate the relationship between the five cultural characteristics and sustainable tourist behaviour

Mediation analyses were undertaken to understand the mediating effect of attitudes on the relationship between the cultural characteristics and sustainable tourist behaviour. The study followed the recommendations of Preacher and Hayes (2004) and Preacher, Rucker and Hayes (2007), whereby the upper and lower bounds of Confidence Intervals (CI) at the 95 percent significance level were formulated and obtained from 5,000 bias-corrected bootstrap samples. This is justified by the fact that error rates may have been slightly elevated by the bias-corrected limits (Hayes & Scharkow 2013). The mediation is recognised to be significant statistically when the CI at 95 percent does not include zero. Rucker et al. (2011) cited in Grimmer and Miles (2017, p.6) argue that due to 'the sensitivity of mediation effects to sample and total effect size, the concepts of "partial" and "full" mediation are meaningless'. Thus, this study also followed their argument. The results of the mediation analyses are presented in the sections below.

5.3.2.1. The results of the mediating role of attitudes (environmental knowledge): Hypothesis 2.1a, 2.1b, 2.1c, 2.1d and 2.1e

In Hypothesis 2.1a, it was predicted that environmental knowledge would mediate the relationship between power distance and sustainable tourist behaviour. As shown in Table 5.10, the bootstrap method shows that the indirect effect of power distance on sustainable tourist behaviour through environmental knowledge is statistically significant ($\beta = 0.08$, LLCI = 0.00, ULCI = 0.02, p-value <0.05). The finding supports Hypothesis 2.1a and indicates that the relationship between power distance and sustainable tourist behaviour is mediated by environmental knowledge.

In Hypothesis 2.1b, it was predicted that environmental knowledge would mediate the relationship between uncertainty avoidance and sustainable tourist behaviour. As shown in Table 5.10, the bootstrap method shows that the indirect effect of uncertainty avoidance on sustainable tourist behaviour through environmental knowledge is not significant ($\beta = 0.10$, LLCI = -0.00, ULCI = 0.03, p-value >0.05). Similarly, In Hypothesis 2.1c, the indirect effect of individualism/collectivism on sustainable tourist behaviour through environmental knowledge is not significant ($\beta = -0.02$, LLCI = -0.00, ULCI = 0.01, p-value >0.05), thus providing no support for Hypothesis 2.2b and 2.2c.

In Hypothesis 2.1d, it was predicted that environmental knowledge would mediate the relationship between masculinity/femininity and sustainable tourist behaviour. As shown in Table 5.10, the bootstrap method shows that the indirect effect of masculinity/femininity on sustainable tourist behaviour through environmental knowledge is statistically significant ($\beta = 0.13$, LLCI = 0.01, ULCI = 0.03, p-value <0.001). Similarly, In Hypothesis 2.1e, the indirect effect of long-term orientation on sustainable tourist behaviour through environmental knowledge is statistically significant ($\beta = 0.18$, LLCI = 0.01, ULCI = 0.04, p-value <0.01), thus providing support for Hypotheses 2.2d and 2.2e.

This indicates that environmental knowledge acts as a mediator for power distance, masculinity/femininity and long-term orientation in terms of their relationship with sustainable tourist behaviour, and thus environmental knowledge facilitates the translation of these cultural characteristics into behaviour.

Table 5.10 Results of Mediation Effects for Hypotheses 2.1a to 2.1e

Hypothesis	Paths	Direct Effect	Indirect Effect	Lower	Upper	t-value	p-value
				Bootstrap 95% CI			
H2.1a	PDI→EK→STB	0.04	0.01	0.00	0.02	-1.28	<0.05
H2.1b	UAI→EK→STB	0.24	0.01	-0.00	0.03	5.99	n.s.
H2.1c	IDV→EK→STB	0.05	-0.07	- 0.01	0.01	1.48	n.s.
H2.1d	MAS→EK→STB	-0.08	0.02	0.01	0.03	-2.96	<0.001
H2.1e	LTO→EK→STB	0.05	0.02	0.01	0.04	1.40	<0.01

Note: power distance (PDI); uncertainty avoidance (UAI); individualism/collectivism (IDV); masculinity/femininity (MAS); long-term orientation (LTO); environmental knowledge (EK); sustainable tourist behaviour (STB)

5.3.2.2. The results of the mediating role of attitudes (New Ecological Paradigm): Hypothesis 2.2a, 2.2b, 2.2c, 2.2d and 2.2e

In Hypothesis 2.2, it was predicted that the NEP would mediate the relationship between the five cultural characteristics and sustainable tourist behaviour. As shown in Table 5.11, the results of the bootstrap method show that the indirect effect of power distance, individualism/collectivism, masculinity/femininity, and long-term orientation on sustainable tourist behaviour through the NEP are statistically significant (β = -0.44, LLCI = -0.12, ULCI = -0.07, p-value <0.001), (β = -0.29, LLCI = -0.11, ULCI = -0.04, p-value <0.001), (β = -0.21, LLCI = -0.07, ULCI = -0.03, p-value <0.001), (β = 0.18, LLCI = 0.02, ULCI = 0.07, p-value <0.001) respectively. Therefore, the results provide to support Hypothesis 2.2a, 2.2c, 2.2d and 2.2e.

In Hypothesis 2.2b, however, the bootstrap method shows that the indirect effect of uncertainty avoidance on sustainable tourist behaviour through the NEP is not significant (β = 0.10, LLCI = -0.01, ULCI = 0.05, p-value >0.05), and so these findings provide no support for Hypothesis 2.2b and indicate that the relationship between uncertainty avoidance sustainable tourist behaviour is not mediated by the NEP.

This indicates that environmental affect acts as a mediator for power distance, individualism/collectivism, masculinity/femininity and long-term orientation in terms of their relationship with sustainable tourist behaviour, and thus environmental affect facilitates the translation of these cultural characteristics into behaviour.

Table 5.11 Results of Mediation Effects for Hypotheses 2.2a to 2.2e

Hypothesis	Paths	Direct Effect	Indirect Effect	Bootstrap 95% CI Lower	Upper	t-value	p-value
H2.2a	PDI→NEP→STB	0.04	-0.09	-0.12	-0.07	-1.28	<0.001
H2.2b	UAI→NEP→STB	0.24	0.02	-0.01	0.05	5.99	n.s.
H2.2c	IDV→NEP→STB	0.05	-0.07	-0.11	-0.04	1.48	<0.001
H2.2d	MAS→NEP→STB	-0.08	-0.04	-0.07	-0.03	-2.96	<0.001
H2.2e	LTO→NEP→STB	0.05	0.00	0.02	0.07	1.40	<0.01

Note: power distance (PDI); uncertainty avoidance (UAI); individualism/collectivism (IDV); masculinity/femininity (MAS); long-term orientation (LTO); New Ecological Paradigm (NEP); sustainable tourist behaviour (STB)

5.3.2.3. The results of the mediating role of attitudes (past behaviour): Hypothesis 2.3a, 2.3b, 2.3c, 2.3d and 2.3e

In Hypothesis 2.3, it was predicted that past behaviour would mediate the relationship between the five cultural characteristics and sustainable tourist behaviour. As shown in Table 5.12, the results of the bootstrap method show that the indirect effect of the five distinct cultural characteristics on sustainable tourist behaviour through past behaviour is not statistically significant, thus providing no support for Hypothesis 2.3. Thus, past behaviour does not facilitate the translation of any of the cultural characteristics into behaviour.

Table 5.12 Results of Mediation Effects for Hypotheses 2.3a to 2.3e

| | | | | Bootstrap | | | |
| | | | | 95% CI | | | |
Hypothesis	Paths	Direct Effect	Indirect Effect	Lower	Upper	t-value	p-value
H2.3a	PDI→PB→STB	0.04	0.00	-0.01	0.01	-1.28	n.s.
H2.3b	UAI→PB→STB	0.24	0.00	-0.00	0.01	5.99	n.s.
H2.3c	IDV→PB→STB	0.05	0.00	-0.01	0.01	1.48	n.s.
H2.3d	MAS→PB→STB	-0.08	0.00	-0.00	0.01	-2.96	n.s.
H2.3e	LTO→PB→STB	0.05	0.00	-0.00	0.01	1.40	n.s.

Note: power distance (PDI); uncertainty avoidance (UAI); individualism/collectivism (IDV); masculinity/femininity (MAS); long-term orientation (LTO); past behaviour (PB); sustainable tourist behaviour (STB)

5.3.3. The results of the moderation effects: Hypothesis 3-10

5. 3. 3. 1 The results of the moderation role of subjective norms on cultural characteristics and tourists' attitudes: Hypothesis 3

The results from Section 5.3.2.1 shows that there was no support for environmental knowledge as mediator between the relationship of uncertainty avoidance and individualism/collectivism to sustainable tourist behaviour, and so only power distance, masculinity/femininity and long-term orientation were analysed in Section 5.3.3.1.1. The result from Section 5.3.2.2 shows that there was no support for the NEP as a mediator of the relationship between uncertainty avoidance and sustainable tourist behaviour, thus, all cultural characteristics except uncertainty avoidance were analysed in Section 5.3.3.1.2. The result in Section 5.3.2.3 shows that there was no support for past behaviour as a mediator between any of the cultural characteristics and sustainable tourist behaviour, therefore, Hypothesis 3.3 was not analysed.

5.3.3.1.1 The results of the moderation role of subjective norms on the relationship between power distance, masculinity/femininity, long-term orientation and environmental knowledge: Hypothesis 3.1a, 3.1d and 3.1e

In Hypothesis 3.1a, it was predicted that the relationship between power distance and environmental knowledge is moderated by subjective norms. As shown in Table 5.13, the bootstrap method shows that the moderating effect of subjective norms on the relationship between power distance and environmental knowledge is not statistically significant (β = -0.7, LLCI = -0.20, ULCI = 0.06, n.s.), thus providing no support for Hypothesis 3.1a.

In Hypothesis 3.1d, it was posited that the relationship between masculinity /femininity and environmental knowledge is moderated by subjective norms. As shown in Table 5.13, the bootstrap method shows that the moderating effect of subjective norms on the relationship between masculinity /femininity and environmental knowledge is statistically significant (β = -0.10, LLCI = -0.21, ULCI = 0.02, p-value <0.10). Similarly, in Hypothesis 3.1e, the moderating effect of subjective norms on the relationship between long-term orientation and environmental knowledge is statistically significant (β = - 0.16, LLCI = -0.32, ULCI = 0.00, p-value <0.05), thus providing support for Hypotheses 3.1d and 3.1e.

Table 5.13 Results of Moderation Effects for Hypotheses 3.1a – 3.1e

| | | | | | Bootstrap | | | |
| | | | | | 95% CI | | | |
Hypothesis	Paths	R^2	B	F-value	Lower	Upper	t-value	p-value
H3.1a	PDI x SN→EK	0.02	-0.07	1.24	-0.20	0.06	-1.11	n.s.
H3.1b	UAI x SN→EK	-	-	-	-	-	-	-
H3.1c	IDV x SN→EK	-	-	-	-	-	-	-
H3.1d	MAS x SN→EK	0.04	-0.10	2.86	-0.21	0.02	-1.70	<0.10
H3.1e	LTO x SN→EK	0.03	-0.16	3.72	-0.32	0.00	-1.92	<0.05

Note: power distance (PDI); uncertainty avoidance (UAI); individualism/collectivism (IDV); masculinity/femininity (MAS); long-term orientation (LTO); subjective norms (SN); environmental knowledge (EK)

Figures 5.1-5.2 illustrate the moderation effect of subjective norms on the masculinity/femininity and environmental knowledge relationship and on the long-term orientation and environmental knowledge relationship. Figure 5.1 shows masculinity had a stronger effect on environmental knowledge when subjective norms was low than when it was high. Similarly, Figure 5.2 shows long-term orientation had a stronger effect on environmental knowledge when subjective norms was low than when it was high. Thus, stronger perceptions of subjective norms seem to reduce the impact of these two cultural characteristics on environmental knowledge.

Figure 5.1 Moderation Effect of Subjective Norms (SN) on the Effect of Masculinity/Femininity (MAS) on Environmental Knowledge (EK)
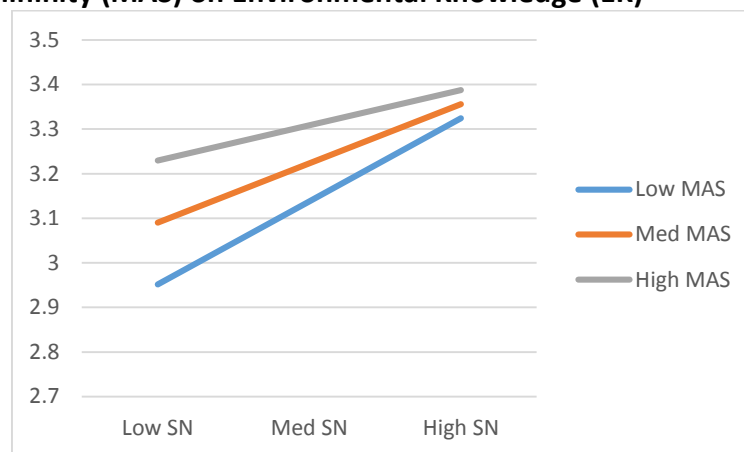
Figure 5.2 Moderation Effect Subjective Norms (SN) on the Effect of Long-term Orientation (LTO) on Environmental Knowledge (EK)
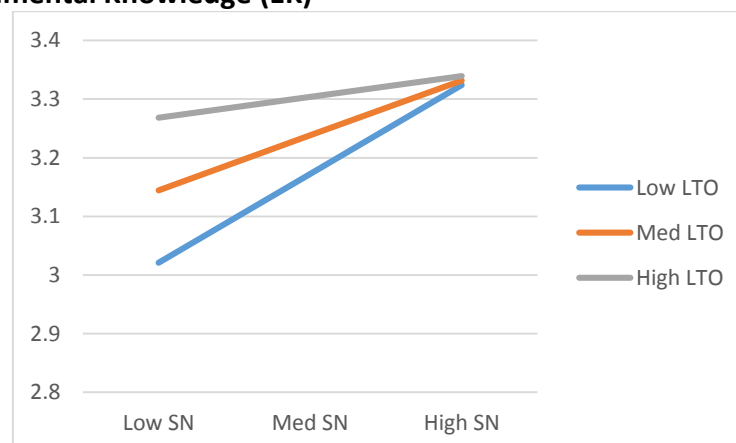
5.3.3.1.2 The results of the moderation role of subjective norms on the relationship between power distance; individualism/ collectivism; masculinity/ femininity; long- term orientation and New Ecological Paradigm: Hypothesis 3.2a, 3.2c. 3.2d and 3.2e

In Hypothesis 3.2a, it was posited that the relationship between power distance and the NEP is moderated by subjective norms. As shown in Table 5.14, the bootstrap method shows that the moderating effect of subjective norms on the relationship between power distance and the NEP is not statistically significant (β = -0.04, LLCI = -0.16, ULCI = 0.08, n.s.). Similarly, in Hypothesis 3.2d, the moderating effect of subjective norms on the relationship between masculinity /femininity and the NEP is not statistically significant (β = 0.03, LLCI = -0.09, ULCI = 0.14, n.s.), thus providing no support for Hypotheses 3.2a and 3.2d.

In Hypothesis 3.2c, it was posited that the relationship between individualism /collectivism and the NEP is moderated by subjective norms. As shown in Table 5.14, the bootstrap method shows that the moderating effect of subjective norms on the relationship between individualism /collectivism and the NEP is statistically significant (β = 0.22, LLCI = 0.07, ULCI = 0.37, p-value <0.01). Similarly, in Hypothesis 3.2e, the moderating effect of subjective norms on the relationship between long-term orientation and the NEP is statistically significant (β = 0.16, LLCI = -0.01, ULCI = 0.32, p-value <0.10), thus providing support for Hypotheses 3.2c and 3.2e.

Table 5.14 Results of Moderation Effects for Hypotheses 3.2a – 3.2e

| | | | | | Bootstrap | | | |
| | | | | | 95% CI | | | |
Hypothesis	Paths	R^2	Coeff	F-value	Lower	Upper	t-value	p-value
H3.2a	PDI x SN→NEP	0.20	-0.04	0.51	-0.16	0.08	-0.71	n.s.
H3.2b	UAI x SN→NEP	-	-	-	-	-	-	-
H3.2c	IDV x SN→NEP	0.07	0.22	8.28	0.07	0.37	2.88	<0.01
H3.2d	MAS x SN→NEP	0.05	0.03	0.18	-0.09	0.14	0.43	n.s.
H3.2e	LTO x SN→NEP	0.03	0.16	3.51	-0.01	0.32	1.87	<0.10

Figures 5.3-5.4 illustrate the moderation effect of subjective norms on the individualism/collectivism and the NEP relationship and on the long-term orientation and the NEP relationship. Figure 5.3 shows high individualism had a stronger effect on the NEP when subjective norms was high than when it was low. Similarly, Figure 5.4 shows long-term orientation had a stronger effect on the NEP when subjective norms was high than when it was low. Thus, stronger perceptions of subjective norms seem to increase the impact of these two cultural characteristics on environmental affect.

Figure 5.3 Moderation Effect of Subjective Norms (SN) on the Effect of Individualism/Collectivism (IDV) on the NEP
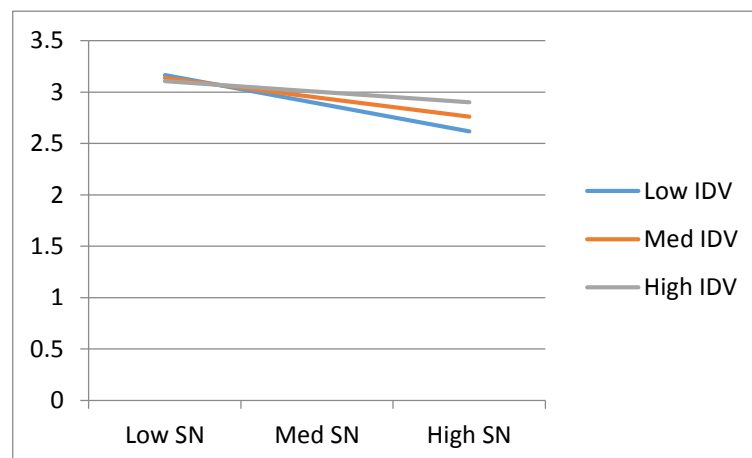
Figure 5.4 Moderation Effect of Subjective Norms (SN) on the Effect of Long-term Orientation (LTO) on the NEP
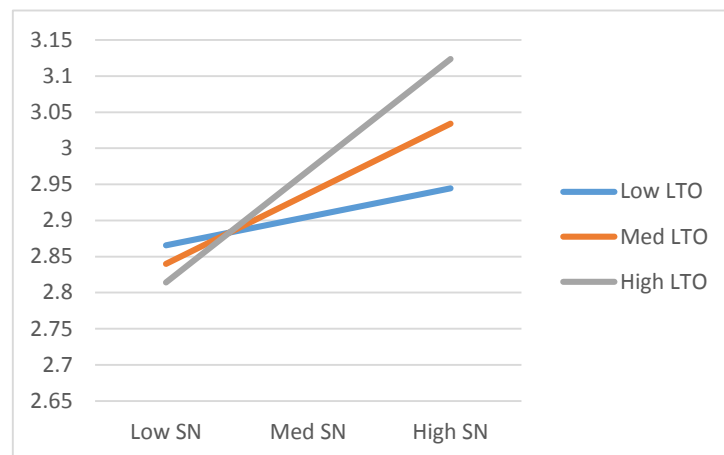
5.3.3.2 The results of the moderation role of subjective norms on the relationship between power distance, uncertainty avoidance, masculinity/ femininity, long- term orientation and sustainable tourist behaviour: Hypothesis 4a, 4b, 4d and 4e

The results from Section 5.3.1 show that there was no support for a relationship between individualism/ collectivism and sustainable tourist behaviour, thus, all cultural characteristics except individualism/ collectivism were analysed.

In Hypotheses 4, it was predicted that the relationship between four of the cultural dimensions (power distance, uncertainty avoidance, masculinity/femininity, long-term orientation and sustainable tourist behaviour) and sustainable tourist behaviour is moderated by subjective norms. As shown in Table 5.15, the results of the bootstrap method show that the moderating effect of subjective norms on the relationship between four cultural dimensions and sustainable tourist behaviour were not statistically significant, thus providing no support for Hypothesis 4.

Table 5.15 Results of Moderation Effects for Hypotheses 4a – 4e

Hypothesis	Paths	R^2	Coeff	F-value	Bootstrap 95% CI Lower	Upper	t-value	p-value
H4a	PDI x SN→STB	0.07	-0.04	0.80	-0.12	0.05	-0.90	n.s.
H4b	UAI x SN→STB	0.10	0.05	0.56	-0.08	0.18	0.75	n.s.
H4c	IDV x SN→STB	-	-	-	-	-	-	-
H4d	MAS x SN→STB	0.06	-0.02	0.26	-0.09	0.05	-0.51	n.s.
H4e	LTO x SN→STB	0.05	0.05	0.94	-0.05	0.16	0.99	n.s.

Note: power distance (PDI); uncertainty avoidance (UAI); individualism/collectivism (IDV); masculinity/femininity (MAS); long-term orientation (LTO); subjective norms (SN); sustainable tourist behaviour (STB)

5.3.3.3 The results of the moderation role of subjective norms on the relationship between environmental knowledge, New Ecological Paradigm, past behaviour and sustainable tourist behaviour: Hypothesis 5a – 5c

In Hypotheses 5, it was predicted that the relationship between attitudes (i.e., environmental knowledge, the NEP, and past behaviour) and sustainable tourist behaviour is moderated by subjective norms. As shown in Table 5.16, the results of the bootstrap method show that the moderating effect of subjective norms on the relationship between attitude and sustainable tourist behaviour is not statistically significant, thus providing no support for Hypothesis 5.

Table 5.16 Results of Moderation Effects for Hypotheses 5a – 5c

Hypothesis	Paths	R^2	Coeff	F-value	Bootstrap 95% CI		t-value	p-value
					Lower	Upper		
H5a	EK x SN→STB	0.04	0.01	0.06	-0.08	0.10	0.23	n.s.
H5b	NEP x SN→STB	0.14	-0.05	1.15	-0.13	0.04	-1.07	n.s.
H5c	PB x SN→STB	0.04	0.04	1.18	-0.03	0.10	1.08	n.s.

Note: environmental knowledge (EK); New Ecological Paradigm (NEP); past behaviour (PB); subjective norms (SN); sustainable tourist behaviour (STB)

5.3.3.4 The results of the moderation role of perceived behavioural control on cultural differences and tourists' attitudes: Hypothesis 6

The results from Section 5.3.2.1 show that there was no support for environmental knowledge as mediator between the relationship of uncertainty avoidance and individualism/ collectivism to sustainable tourist behaviour, and so only power distance, masculinity/ femininity and long-term orientation were analysed in Section 5.3.3.4.1. The results from Section 5.3.2.2 show that there was no support for the NEP as a mediator of the relationship between uncertainty avoidance and sustainable tourist behaviour, thus, all cultural dimensions except uncertainty avoidance were analysed in Section 5.3.3.4.2. The results in Section 5.3.2.3 show that there was no support for past behaviour as mediator between cultural characteristics and sustainable tourist behaviour, therefore, the Hypothesis 6.3 was not analysed.

5.3.3.4.1 The results of the moderation role of perceived behavioural control on the relationship between power distance, masculinity/femininity, long-term orientation and environmental knowledge: Hypothesis 6.1a, 6.1d and 6.1e

In Hypotheses 6.1, it was predicted that the relationship between three of the cultural dimensions (i.e., power distance, masculinity/femininity, and long-term orientation) and environmental knowledge is moderated by perceived behavioural control. As shown in Table 5.17, the results of the bootstrap method show that the moderating effect of perceived

behavioural control on the relationship between the three cultural characteristics analysed and environmental knowledge is not statistically significant, thus providing no support for Hypothesis 6.1.

Table 5.17 Results of Moderation Effects for Hypotheses 6.1a – 6.1e

					Bootstrap			
					95% CI			
Hypothesis	Paths	R^2	Coeff	F-value	Lower	Upper	t-value	p-value
H6.1a	PDI x PBC→EK	0.03	-0.07	0.97	-0.20	0.07	-0.10	n.s.
H6.1b	UAI x PBC→EK	-	-	-	-	-	-	-
H6.1c	IDV x PBC→EK	-	-	-	-	-	-	-
H6.1d	MAS x PBC →EK	0.04	0.01	0.04	-0.11	0.13	0.20	n.s.
H6.1e	LTO x PBC →EK	0.03	0.02	0.03	-0.18	0.21	0.18	n.s.

Note: power distance (PDI); uncertainty avoidance (UAI); individualism/collectivism (IDV); masculinity/femininity (MAS); long-term orientation (LTO); perceived behavioural control (PBC); environmental knowledge (EK)

5.3.3.4.2 The results of the moderation role of perceived behavioural control on the relationship between power distance, masculinity/femininity, long-term orientation and the New Ecological Paradigm: Hypothesis 6.2a, 6.2c, 6.2d and 6.2e

In Hypothesis 6.2a, it was posited that the relationship between power distance and the NEP is moderated by perceived behavioural control. As shown in Table 5.18, the bootstrap method shows that the moderating effect of perceived behavioural control on the relationship between power distance and the NEP is not statistically significant (β = 0.10, LLCI = -0.03, ULCI = 0.21, n.s.). Also, Hypothesis 6.2d, that the relationship between masculinity/femininity and the NEP is moderated by perceived behavioural control, is not statistically significant (β = -0.00, LLCI = -0.12, ULCI = 0.12, n.s.), thus providing no support for Hypotheses 6.2a and 6.2d.

In Hypothesis 6.2c, it was posited that the relationship between individualism /collectivism and the NEP is moderated by perceived behavioural control. As shown in Table 5.18, the

bootstrap method shows that the moderating effect of perceived behavioural control on the relationship between individualism /collectivism and the NEP is statistically significant (β = 0.13, LLCI = -0.02, ULCI = 0.29, p-value <0.10). Similarly, in Hypothesis 6.2e, that the relationship between long-term orientation and the NEP is moderated by perceived behavioural control, is statistically significant (β = -0.20, LLCI = -0.40, ULCI = -0.00, p-value <0.05), thus providing support for Hypotheses 6.2c and 6.2e.

Table 5.18 Results of Moderation Effects for Hypotheses 6.2a – 6.2e

					Bootstrap			
					95% CI			
Hypothesis	Paths	R^2	Coeff	F-value	Lower	Upper	t-value	p-value
H6.2a	PDI x PBC→NEP	0.20	0.10	2.15	-0.03	0.21	1.47	n.s.
H6.2b	UAI x PBC→NEP	-	-	-	-	-	-	-
H6.2c	IDV x PBC→NEP	0.10	0.13	3.00	-0.02	0.29	1.73	<0.10
H6.2d	MAS x PBC→NEP	0.10	-0.00	0.00	-0.12	0.12	-0.02	n.s.
H6.2e	LTO x PBC→NEP	0.03	-0.20	3.94	-0.40	-0.00	-1.98	<0.05

Note: power distance (PDI); uncertainty avoidance (UAI); individualism/collectivism (IDV); masculinity/femininity (MAS); long-term orientation (LTO); perceived behavioural control (PBC); New Ecological Paradigm (NEP)

Figures 5.5-5.6 illustrate the moderation effect of perceived behavioural control on the individualism/collectivism and NEP relationship, and on the long-term orientation and NEP relationship. Figure 5.5 shows individualism had a stronger and inverse effect on the NEP when perceived behavioural control was high than when it was low. Figure 5.6 shows that long-term orientation had a stronger and inverse effect on the NEP when perceived behavioural control was low than when it was high. In this case, high individualism had more of an effect on the NEP when perceived behavioural control was also high, but a longer term orientation had more of an impact on the NEP when perceived behavioural control was low.

Figure 5.5 Moderation Effect of Perceived Behavioural Control (PBC) on the Effect of Individualism/Collectivism (IDV) on the NEP

Figure 5.6 Moderation Effect of Perceived Behavioural Control (PBC) on the Effect of Long-term Orientation (LTO) on the NEP
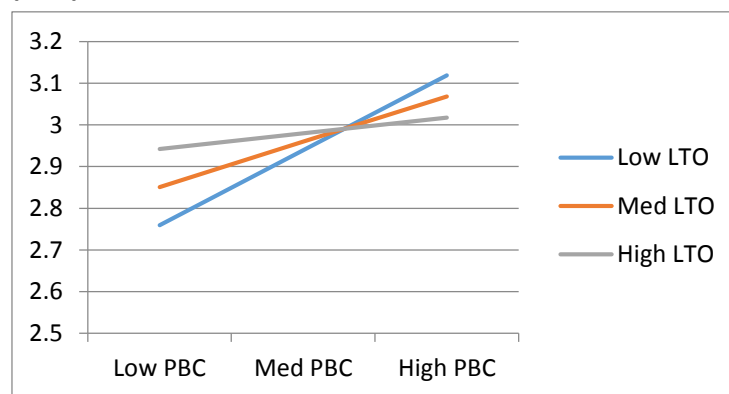
5.3.3.5 The results of the moderation role of perceived behavioural control on the relationship between power distance; uncertainty avoidance; masculinity/femininity; long-term orientation and sustainable tourist behaviour: Hypothesis 7a, 7b, 7d and 7e

The results from Section 5.3.1 show that there was no support for the relationship between individualism/ collectivism and sustainable tourist behaviour, thus, all cultural characteristics except individualism/ collectivism were analysed.

In Hypothesis 7a, it was posited that the relationship between power distance and sustainable tourist behaviour is moderated by perceived behavioural control. As shown in Table 5.19, the bootstrap method shows that the moderating effect of perceived behavioural control on the relationship between power distance and sustainable tourist behaviour is statistically significant (β = 0.10, LLCI = 0.01, ULCI = 0.18, p-value <0.05), thus providing support for Hypothesis 7a.

In Hypothesis 7b, it was posited that the relationship between uncertainty avoidance and sustainable tourist behaviour is moderated by perceived behavioural control. As shown in Table 5.19, the bootstrap method shows that the moderating effect of perceived behavioural control on the relationship between uncertainty avoidance and sustainable tourist behaviour is statistically significant ($\beta = 0.10$, LLCI = -0.03, ULCI = 0.22, p-value <0.10), thus providing support for Hypothesis 7b.
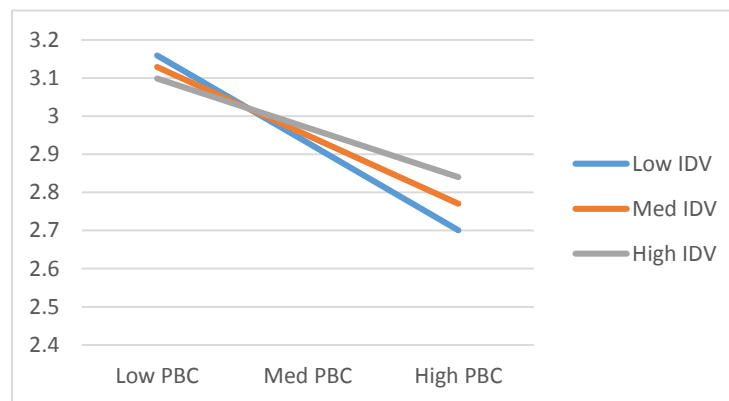
In Hypothesis 7d, it was posited that the relationship between masculinity /femininity and sustainable tourist behaviour is moderated by perceived behavioural control. As shown in Table 5.19, the bootstrap method shows that the moderating effect of perceived behavioural control on the relationship between masculinity /femininity and sustainable tourist behaviour is not statistically significant ($\beta = -0.02$, LLCI = -0.10, ULCI = 0.06, n.s.). Also, in Hypothesis 7e, that the relationship between long-term orientation and sustainable tourist behaviour is moderated by perceived behavioural control, is not statistically significant ($\beta = -0.10$, LLCI = -0.07, ULCI = 0.18, n.s.), thus providing no support for Hypotheses 7d and 7e.

Table 5.19 Results of Moderation Effects for Hypotheses 7a – 7e

|					Bootstrap			
					95% CI			
Hypothesis	Paths	R^2	Coeff	F-value	Lower	Upper	t-value	p-value
H7a	PDI x PBC→STB	0.07	0.10	5.33	0.01	0.18	2.31	<0.05
H7b	UAI x PBC→STB	0.10	0.10	2.41	-0.03	0.22	1.55	<0.10
H7c	IDV x PBC→STB	-	-	-	-	-	-	-
H7d	MAS x PBC→STB	0.05	-0.02	0.15	-0.10	0.06	-0.38	n.s.
H7e	LTO x PBC →STB	0.03	0.10	0.72	-0.07	0.18	0.85	n.s.

Note: power distance (PDI); uncertainty avoidance (UAI); individualism/collectivism (IDV); masculinity/femininity (MAS); long-term orientation (LTO); perceived behavioural control (PBC); sustainable tourist behaviour (STB)

Figures 5.7-5.8 illustrate the moderation effect of perceived behavioural control on the power distance and sustainable tourist behaviour relationship, and on the uncertainty avoidance and sustainable tourist behaviour relationship. Figure 5.7 shows high power distance had a stronger effect on sustainable tourist behaviour when perceived behavioural control was high than when it was low. Similarly, Figure 5.8 shows high uncertainty avoidance had a stronger effect on sustainable tourist behaviour when perceived behavioural control was high than when it was low. Thus, stronger perceptions of behavioural control seem to increase the impact of these two cultural characteristics on sustainable tourist behaviour.

Figure 5.7 Moderation Effect of Perceived Behavioural Control (PBC) on the Effect of Power Distance (PDI) on Sustainable Tourist Behaviour (STB)

Figure 5.8 Moderation Effect of Perceived Behavioural Control (PBC) on the Effect of Uncertainty Avoidance (UAI) on Sustainable Tourist Behaviour (STB)
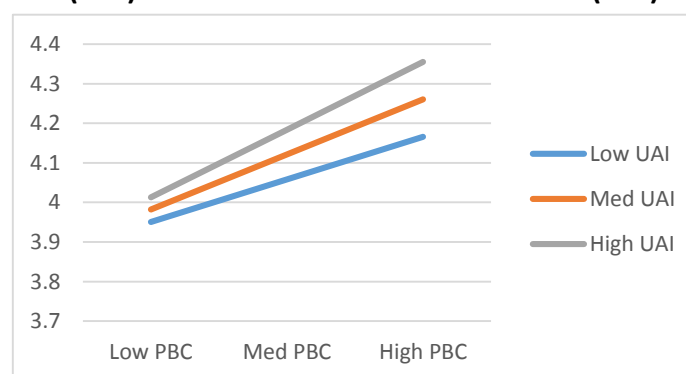
5.3.3.6 The results of the moderation role of perceived behavioural control on the relationship between environmental knowledge, New Ecological Paradigm, past behaviour and sustainable tourist behaviour: Hypothesis 8a – 8c

In Hypothesis 8a, it was posited that the relationship between environmental knowledge and sustainable tourist behaviour is moderated by perceived behavioural control. As shown in

Table 5.20, the bootstrap method shows that the moderating effect of perceived behavioural control on the relationship between environmental knowledge and sustainable tourist behaviour is not statistically significant ($\beta = 0.02$, LLCI = -0.11, ULCI = 0.08, n.s.). Also, Hypothesis 8b, that the relationship between the NEP and sustainable tourist behaviour is moderated by perceived behavioural control, is not statistically significant ($\beta = -0.02$, LLCI = -0.10, ULCI = 0.06, n.s.), thus providing no support for Hypotheses 8a and 8b.

In Hypothesis 8c, it was posited that the relationship between past behaviour and sustainable tourist behaviour is moderated by perceived behavioural control. As shown in Table 5.20, the bootstrap method shows that the moderating effect of perceived behavioural control on the relationship between past behaviour and sustainable tourist behaviour is statistically significant ($\beta = 0.13$, LLCI = 0.07, ULCI = 0.20, p-value <0.01), thus providing support for Hypothesis 8c.

Table 5.20 Results of Moderation Effects for Hypotheses 8a– 8c

Hypothesis	Paths	R^2	Coeff	F-value	Bootstrap 95% CI Lower	Upper	t-value	p-value
H8a	EK x PBC →STB	0.03	-0.02	0.14	-0.11	0.08	-0.37	n.s.
H8b	NEP x PBC→STB	0.13	-0.02	0.26	-0.10	0.06	-0.51	n.s.
H8c	PB x PBC→STB	0.05	0.13	14.82	0.07	0.20	3.85	<0.01

Note: environmental knowledge (EK); New Ecological Paradigm (NEP); past behaviour (PB); perceived behavioural control (PBC); sustainable tourist behaviour (STB)

Figure 5.9 illustrates the moderation effect of perceived behavioural control on the past behaviour and sustainable tourist behaviour relationship. Figure 5.9 shows high past (environmental) behaviour had a much stronger effect on sustainable tourist behaviour when perceived behavioural control was high than when it was low. Past behaviour had a much weaker effect on sustainable tourist behaviour when perceived behavioural control was low.

Figure 5.9 Moderation Effect of Perceived Behavioural Control (PBC) on the Effect of Past Behaviour (PB) on Sustainable Tourist Behaviour (STB)
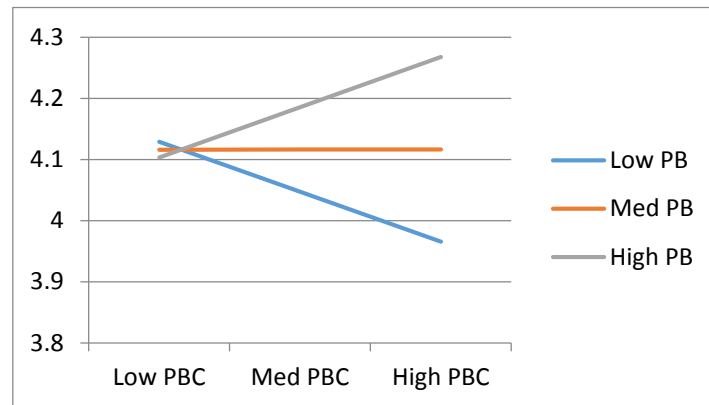
5.3.3.7 The results of the moderation role of Thailand's destination image on the relationship between environmental knowledge, New Ecological Paradigm, past behaviour and sustainable tourist behaviour: Hypothesis 9a – 9c

In Hypothesis 9a, it was posited that the relationship between environmental knowledge and sustainable tourist behaviour is moderated by Thailand's destination image. As shown in Table 5.21, the bootstrap method shows that the moderating effect of Thailand's destination image on the relationship between environmental knowledge and sustainable tourist behaviour is not statistically significant ($\beta = 0.02$, LLCI = -0.07, ULCI = 0.11, n.s.). Also, Hypothesis 9b, that the relationship between New Ecological Paradigm and sustainable tourist behaviour is moderated by Thailand's destination image, is not statistically significant ($\beta = 0.07$, LLCI = -0.03, ULCI = 0.17, n.s.), thus providing no support for Hypotheses 9a and 9b.

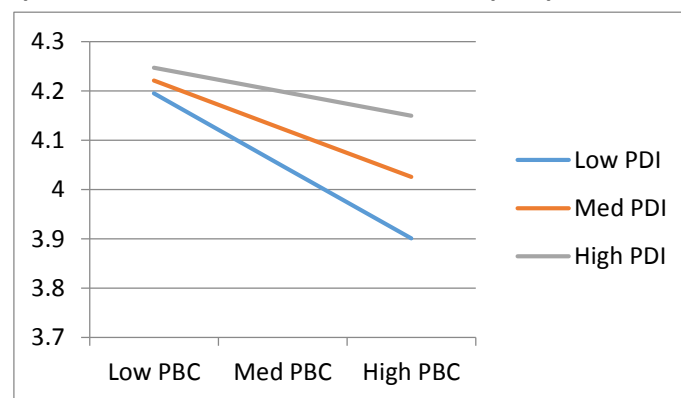In Hypothesis 9c, it was posited that the relationship between past behaviour and sustainable tourist behaviour is moderated by Thailand's destination image. As shown in Table 5.21, the bootstrap method shows that the moderating effect of Thailand's destination image on the relationship between past behaviour and sustainable tourist behaviour is statistically significant ($\beta = 0.08$, LLCI = 0.00, ULCI = 0.15, p-value <0.05), thus providing support for Hypothesis 9c.

Table 5.21 Results of Moderation Effects for Hypotheses 9a – 9c

Hypothesis	Paths	R²	Coeff	F-value	Bootstrap 95% CI Lower	Upper	t-value	p-value
H9a	EK x TDI→STB	0.16	0.02	0.21	-0.07	0.11	0.46	n.s.
H9b	NEP x TDI→STB	0.24	0.07	1.79	-0.03	0.17	1.34	n.s.
H9c	PB x TDI→STB	0.16	0.08	3.97	0.00	0.15	1.99	<0.05

Note: environmental knowledge (EK); New Ecological Paradigm (NEP); past behaviour (PB); perceived behavioural control (PBC); Thailand's destination image (TDI); sustainable tourist behaviour (STB)

Figure 5.10 illustrates the moderation effect of Thailand's destination image on the past behaviour and sustainable tourist behaviour relationship. Figure 5.10 shows high past (environmental) behaviour had a stronger effect on sustainable tourist behaviour when Thailand's destination image was high. However, past (environmental) behaviour had a weaker effect on sustainable tourist behaviour when Thailand's destination image was low.

Figure 5.10 Moderation Effect of Thailand's Destination Image (TDI) on the Effect of Past Behaviour (PB) on Sustainable Tourist Behaviour (STB)
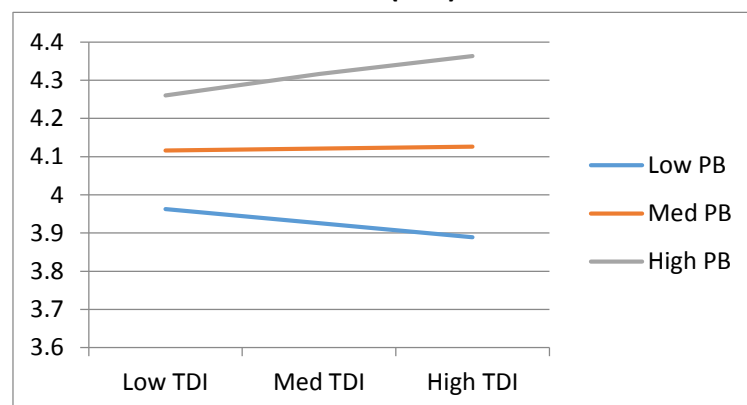
5.3.3.8 The results of the moderation role of Thailand's destination image on the relationship between power distance, uncertainty avoidance, masculinity/femininity, long-term orientation and sustainable tourist behaviour: Hypothesis 10a, 10b, 10d and 10e

The results from Section 5.3.1 show that there was no support for the relationship between individualism/ collectivism and sustainable tourist behaviour, thus, all cultural characteristics except individualism/ collectivism were analysed**.**

In Hypothesis 10a, 10b and 10d, it was posited that the relationship between power distance, uncertainty avoidance, masculinity/ femininity and sustainable tourist behaviour are moderated by Thailand's destination image. As shown in Table 5.22, the bootstrap method shows that the moderating effect of Thailand's destination image on the relationship between the cultural dimensions: power distance, uncertainty avoidance, masculinity/femininity and sustainable tourist behaviour are not statistically significant, thus providing no support for Hypotheses 10a, 10b and 10d.

In Hypothesis 10e, it was posited that the relationship between long-term orientation and sustainable tourist behaviour is moderated by Thailand's destination image. As shown in Table 5.22, the bootstrap method shows that the moderating effect of Thailand's destination image on the relationship between long/short term orientation and sustainable tourist behaviour is statistically significant (β = 0.12, LLCI = 0.04, ULCI = 0.20, p-value <0.01), thus providing support for Hypothesis 10e.

**Table 5.22 Results of Moderation Effects for Hypotheses 10a – 10e**

Hypothesis	Paths	R^2	Coeff	F-value	Bootstrap 95% CI Lower	Upper	t-value	p-value
H10a	PDI x TDI→STB	0.17	-0.03	0.43	-0.13	0.07	-0.65	n.s.
H10b	UAI x TDI→STB	0.19	-0.02	0.05	-0.15	0.12	-0.23	n.s.
H10c	IDV x TDI→STB	-	-	-	-	-	-	-
H10d	MAS x TDI→STB	0.17	-0.06	1.52	-0.16	0.04	-1.23	n.s.
H10e	LTO x TDI→STB	0.16	0.12	8.58	0.04	0.20	2.93	<0.01

Note: power distance (PDI); uncertainty avoidance (UAI); individualism/collectivism (IDV); masculinity/femininity (MAS); long-term orientation (LTO); Thailand's destination image (TDI); sustainable tourist behaviour (STB)

Figure 5.11 illustrates the moderation effect of Thailand's destination image on the long-term orientation and sustainable tourist behaviour relationship. Figure 5.11 shows long-term orientation had a stronger effect on sustainable tourist behaviour when Thailand's destination image was high. However, short-term orientation had a weaker effect on sustainable tourist behaviour when Thailand's destination image was low.

Figure 5.11 Moderation Effect of Thailand's Destination Image (TDI) on the Effect of Long-term Orientation (LTO) on Sustainable Tourist Behaviour (STB)
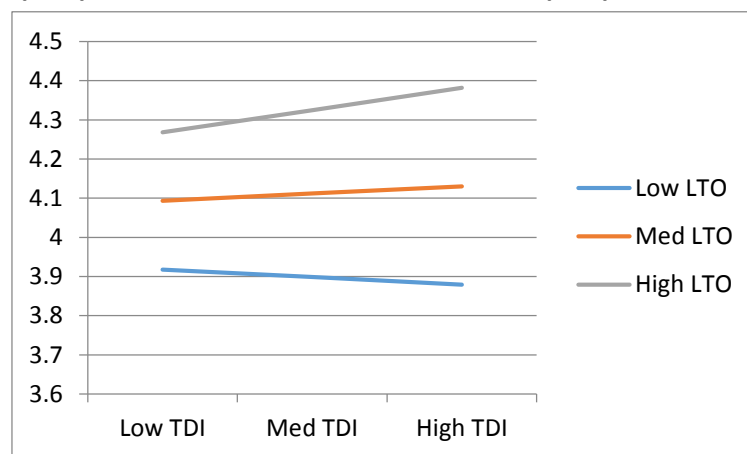
5.4. Summary of hypothesis results

Table 5.23 Summary of Hypothesis Results

Different cultural characteristics and sustainable tourist behaviour		Result
Hypothesis 1	**Different cultural characteristics are a significant predictor of sustainable tourist behaviour**	
Hypothesis 1a	Power distance is a significant positive predictor of sustainable tourist behaviour	**Partially Supported With Negative Impact**
Hypothesis 1b	Uncertainty avoidance is a significant positive predictor of sustainable tourist behaviour	**Supported**
Hypothesis 1c	Individualism / Collectivism is a significant positive predictor of sustainable tourist behaviour	**NOT Supported**
Hypothesis 1d	Masculinity / Femininity is a significant positive predictor of sustainable tourist behaviour	**Partially Supported With Negative Impact**
Hypothesis 1e	Long- term orientation is a significant positive predictor of sustainable tourist behaviour	**Supported**
Attitude		
Hypothesis 2	Attitudes positively mediate the relationship between cultural characteristics and sustainable tourist behaviour.	
Hypothesis 2.1	Environmental knowledge positively mediates the relationship between cultural characteristics and sustainable tourist behaviour.	
Hypothesis 2.1a	Environmental knowledge positively mediates the relationship between power distance and sustainable tourist behaviour.	**Supported**

Table 5.23 Summary of Hypothesis Results (Cont.)

Attitude (Cont.)		Result
Hypothesis 2.1b	Environmental knowledge positively mediates the relationship between uncertainty avoidance and sustainable tourist behaviour.	**NOT Supported**
Hypothesis 2.1c	Environmental knowledge positively mediates the relationship between individualism /collectivism and sustainable tourist behaviour.	**NOT Supported**
Hypothesis 2.1d	Environmental knowledge positively mediates the relationship between masculinity / femininity and sustainable tourist behaviour.	**Supported**
Hypothesis 2.1e	Environmental knowledge positively mediates the relationship between long- term orientation and sustainable tourist behaviour.	**Supported**
Hypothesis 2.2	New Ecological Paradigm positively mediates the relationship between cultural characteristics and sustainable tourist behaviour.	
Hypothesis 2.2a	New Ecological Paradigm positively mediates the relationship between power distance and sustainable tourist behaviour.	**Supported**
Hypothesis 2.2b	New Ecological Paradigm positively mediates the relationship between uncertainty avoidance and sustainable tourist behaviour.	**NOT Supported**
Hypothesis 2.2c	New Ecological Paradigm positively mediates the relationship between individualism /collectivism and sustainable tourist behaviour.	**Supported**

Table 5.23 Summary of Hypothesis Results (Cont.)

Attitude (Cont.)		Result
Hypothesis 2.2d	New Ecological Paradigm positively mediates the relationship between masculinity / femininity and sustainable tourist behaviour.	**Supported**
Hypothesis 2.2e	New Ecological Paradigm positively mediates the relationship between long- term orientation and sustainable tourist behaviour.	**Supported**
Hypothesis 2.3	Past behaviour positively mediates the relationship between cultural characteristics and sustainable tourist behaviour.	
Hypothesis 2.3a	Past behaviour positively mediates the relationship between power distance and sustainable tourist behaviour.	**NOT Supported**
Hypothesis 2.3b	Past behaviour positively mediates the relationship between uncertainty avoidance and sustainable tourist behaviour.	**NOT Supported**
Hypothesis 2.3c	Past behaviour positively mediates the relationship between individualism / collectivism and sustainable tourist behaviour.	**NOT Supported**
Hypothesis 2.3d	Past behaviour positively mediates the relationship between masculinity / femininity and sustainable tourist behaviour.	**NOT Supported**
Hypothesis 2.3e	Past behaviour positively mediates the relationship between long/short term orientation and sustainable tourist behaviour.	**NOT Supported**

Table 5.23 Summary of Hypothesis Results (Cont.)

Subjective norms		Result
Hypothesis 3	The relationship between cultural characteristics and attitudes is moderated by subjective norms.	
Hypothesis 3.1	The relationship between cultural characteristics and environmental knowledge is moderated by subjective norms.	
Hypothesis 3.1a	The relationship between power distance and environmental knowledge is moderated by subjective norms.	**NOT Supported**
Hypothesis 3.1b	The relationship between uncertainty avoidance and environmental knowledge is moderated by subjective norms.	-
Hypothesis 3.1c	The relationship between individualism /collectivism and environmental knowledge is moderated by subjective norms.	-
Hypothesis 3.1d	The relationship between masculinity /femininity and environmental knowledge is moderated by subjective norms.	**Supported**
Hypothesis 3.1e	The relationship between long-term orientation and environmental knowledge is moderated by subjective norms.	**Supported**
Hypothesis 3.2	The relationship between cultural characteristics and New Ecological Paradigm is moderated by subjective norms.	
Hypothesis 3.2a	The relationship between power distance and New Ecological Paradigm is moderated by subjective norms.	**NOT Supported**

Table 5.23 Summary of Hypothesis Results (Cont.)

Subjective norms (Cont.)		Result
Hypothesis 3.2b	The relationship between uncertainty avoidance and New Ecological Paradigm is moderated by subjective norms.	-
Hypothesis 3.2c	The relationship between individualism /collectivism and New Ecological Paradigm is moderated by subjective norms.	**Supported**
Hypothesis 3.2d	The relationship between masculinity /femininity and New Ecological Paradigm is moderated by subjective norms.	**NOT Supported**
Hypothesis 3.2e	The relationship between long-term orientation and New Ecological Paradigm is moderated by subjective norms.	**Supported**
Hypothesis 3.3	The relationship between cultural characteristics and past behaviour is moderated by subjective norms.	
Hypothesis 3.3a	The relationship between power distance and past behaviour is moderated by subjective norms.	-
Hypothesis 3.3b	The relationship between uncertainty avoidance and past behaviour is moderated by subjective norms.	-
Hypothesis 3.3c	The relationship between individualism /collectivism and past behaviour is moderated by subjective norms.	-
Hypothesis 3.3d	The relationship between masculinity /femininity and past behaviour is moderated by subjective norms.	-

Table 5.23 Summary of Hypothesis Results (Cont.)

Subjective norms (Cont.)		Result
Hypothesis 3.3e	The relationship between long-term orientation and past behaviour is moderated by subjective norms.	-
Hypothesis 4	The relationship between cultural characteristics and sustainable tourist behaviour is moderated by subjective norms.	
Hypothesis 4a	The relationship between power distance and sustainable tourist behaviour is moderated by subjective norms.	**NOT Supported**
Hypothesis 4b	The relationship between uncertainty avoidance and sustainable tourist behaviour is moderated by subjective norms.	**NOT Supported**
Hypothesis 4c	The relationship between individualism /collectivism and sustainable tourist behaviour is moderated by subjective norms.	-
Hypothesis 4d	The relationship between masculinity /femininity and sustainable tourist behaviour is moderated by subjective norms.	**NOT Supported**
Hypothesis 4e	The relationship between long-term orientation and sustainable tourist behaviour is moderated by subjective norms.	**NOT Supported**
Hypothesis 5	The relationship between attitude and sustainable tourist behaviour is moderated by subjective norms.	
Hypothesis 5a	The relationship between environmental knowledge and sustainable tourist behaviour is moderated by subjective norms.	**NOT Supported**

Table 5.23 Summary of Hypothesis Results (Cont.)

Subjective norms (Cont.)		Result
Hypothesis 5b	The relationship between New Ecological Paradigm and sustainable tourist behaviour is moderated by subjective norms.	**NOT Supported**
Hypothesis 5c	The relationship between past behaviour and sustainable tourist behaviour is moderated by subjective norms.	**NOT Supported**
Perceived behavioural control		**Result**
Hypothesis 6	The relationship between cultural characteristics and attitudes is moderated by perceived behavioural control.	
Hypothesis 6.1	The relationship between cultural characteristics and environmental knowledge is moderated by perceived behavioural control.	
Hypothesis 6.1a	The relationship between power distance and environmental knowledge is moderated by perceived behavioural control.	**NOT Supported**
Hypothesis 6.1b	The relationship between uncertainty avoidance and environmental knowledge is moderated by perceived behavioural control.	-
Hypothesis 6.1c	The relationship between individualism /collectivism and environmental knowledge is moderated by perceived behavioural control.	-
Hypothesis 6.1d	The relationship between masculinity /femininity and environmental knowledge is moderated by perceived behavioural control.	**NOT Supported**

Table 5.23 Summary of Hypothesis Results (Cont.)

Perceived behavioural control (Cont.)		Result
Hypothesis 6.1e	The relationship between long-term orientation and environmental knowledge is moderated by perceived behavioural control.	**NOT Supported**
Hypothesis 6.2	The relationship between cultural characteristics and New Ecological Paradigm is moderated by perceived behavioural control.	
Hypothesis 6.2a	The relationship between power distance and New Ecological Paradigm is moderated by perceived behavioural control.	**NOT Supported**
Hypothesis 6.2b	The relationship between uncertainty avoidance and New Ecological Paradigm is moderated by perceived behavioural control.	-
Hypothesis 6.2c	The relationship between individualism /collectivism and New Ecological Paradigm is moderated by perceived behavioural control.	**Supported**
Hypothesis 6.2d	The relationship between masculinity /femininity and New Ecological Paradigm is moderated by perceived behavioural control.	**NOT Supported**
Hypothesis 6.2e	The relationship between long-term orientation and New Ecological Paradigm is moderated by perceived behavioural control.	**Supported**

Table 5.23 Summary of Hypothesis Results (Cont.)

Perceived behavioural control (Cont.)		Result
Hypothesis 6.3	The relationship between cultural characteristics and past behaviour is moderated by perceived behavioural control.	
Hypothesis 6.3a	The relationship between power distance and past behaviour is moderated by perceived behavioural control.	-
Hypothesis 6.3b	The relationship between uncertainty avoidance and past behaviour is moderated by perceived behavioural control.	-
Hypothesis 6.3c	The relationship between individualism /collectivism and past behaviour is moderated by perceived behavioural control.	-
Hypothesis 6.3d	The relationship between masculinity /femininity and past behaviour is moderated by perceived behavioural control.	-
Hypothesis 6.3e	The relationship between long-term orientation and past behaviour is moderated by perceived behavioural control.	-
Hypothesis 7	The relationship between cultural characteristics and sustainable tourist behaviour is moderated by perceived behavioural control.	
Hypothesis 7a	The relationship between power distance and sustainable tourist behaviour is moderated by perceived behavioural control.	**Supported**

Table 5.23 Summary of Hypothesis Results (Cont.)

Perceived behavioural control (Cont.)		Result
Hypothesis 7b	The relationship between uncertainty avoidance and sustainable tourist behaviour is moderated by perceived behavioural control.	**Supported**
Hypothesis 7c	The relationship between individualism /collectivism and sustainable tourist behaviour is moderated by perceived behavioural control.	-
Hypothesis 7d	The relationship between masculinity /femininity and sustainable tourist behaviour is moderated by perceived behavioural control.	**NOT Supported**
Hypothesis 7e	The relationship between long- term orientation and sustainable tourist behaviour is moderated by perceived behavioural control.	**NOT Supported**
Hypothesis 8	The relationship between attitude and sustainable tourist behaviour is moderated by perceived behavioural control.	
Hypothesis 8a	The relationship between environmental knowledge and sustainable tourist behaviour is moderated by perceived behavioural control.	**NOT Supported**
Hypothesis 8b	The relationship between New Ecological Paradigm and sustainable tourist behaviour is moderated by perceived behavioural control.	**NOT Supported**
Hypothesis 8c	The relationship between past behaviour and sustainable tourist behaviour is moderated by perceived behavioural control.	**Supported**

Table 5.23 Summary of Hypothesis Results (Cont.)

Thailand's destination image		Result
Hypothesis 9	The relationship between attitudes and sustainable tourist behaviour is moderated by Thailand's destination image.	
Hypothesis 9a	The relationship between environmental knowledge and sustainable tourist behaviour is moderated by Thailand's destination image.	**NOT Supported**
Hypothesis 9b	The relationship between New Ecological Paradigm and sustainable tourist behaviour is moderated by Thailand's destination image.	**NOT Supported**
Hypothesis 9c	The relationship between past behaviour and sustainable tourist behaviour is moderated by Thailand's destination image.	**Supported**
Hypothesis 10	The relationship between cultural characteristics and sustainable tourist behaviour is moderated by Thailand's destination image.	
Hypothesis 10a	The relationship between power distance and sustainable tourist behaviour is moderated by Thailand's destination image.	**NOT Supported**
Hypothesis 10b	The relationship between uncertainty avoidance and sustainable tourist behaviour is moderated by Thailand's destination image.	**NOT Supported**
Hypothesis 10c	The relationship between individualism /collectivism and sustainable tourist behaviour is moderated by Thailand's destination image.	-

Table 5.23 Summary of Hypothesis Results (Cont.)

Thailand's destination image (Cont.)		Result
Hypothesis 10d	The relationship between masculinity /femininity and sustainable tourist behaviour is moderated by Thailand's destination image.	**NOT Supported**
Hypothesis 10e	The relationship between long-term orientation and sustainable tourist behaviour is moderated by Thailand's destination image.	**Supported**

5.5. Conclusion

This chapter provided the results from the analysis of the data and the assessment of the significance of the hypotheses proposed in Chapter Three. The data were collected from both international and domestic tourists who had experience in the national parks in Chiang Mai, Thailand. There were 485 useable surveys collected to test the hypotheses. The preliminary analysis consisted of factor analysis and tests for convergent and discriminant validity as part of data preparation. Then the hypotheses were investigated, including direct relationships, and the mediating and moderating effects of the intervening constructs. Chapter Six which follows provides a discussion of results, contributions of the research, limitations and directions for future research.

CHAPTER SIX

Discussion and Conclusions

6.1 Introduction

As discussed in Chapter One, there is a lack of empirical research in sustainable tourism in the context of Thailand, with many studies being conducted in more developed countries such as those in the West, China, and Korea. Moreover, studies focusing specifically on both domestic and international tourists to understand the effect of different cultural characteristics are limited in the context of tourist behaviour and sustainable tourism, especially when considering Thailand as a tourist destination. The purpose of this study was to advance understanding of the effect of five distinct cultural characteristics on sustainable tourist behaviour, as impacted by attitudes to environmental issues, subjective norms, perceived behavioural control and destination image. Specifically, a deeper understanding of different cultural characteristics was posited to facilitate tourist decision-making to engage in pro-environmental behaviour and to gauge awareness of environmental issues. The study draws on specific theories and ideas that in the context of sustainable tourism can assist in understanding a tourist's consumption psychology and behaviour. This study sought to integrate theories that were embedded in the conceptual model including the Theory of Planned Behaviour (TPB) as well as destination image.

The purpose of Chapter Six is to explain the results of the study, followed by a discussion of the theoretical contributions and managerial implications. This chapter is organised into five sections. Section 6.2 discusses the findings of the study including the revised conceptual model, while Section 6.3 illustrates the theoretical contributions and managerial implications. The limitations and directions for future research are described in Section 6.4, and Section 6.5 provides the conclusion of the chapter.

6.2 Discussion

6.2.1 Discussion of the research questions and hypotheses

As presented in Chapter One, there has been increased interest from both scholars and tourism organisations in environmental concerns related to tourism destinations, especially in eco- and nature-based tourism areas (e.g., Cho et al. 2013; Lee & Jan 2015; Ramkissoon, Weiler & Smith 2011; Zaman et al. 2016). Tourists are fundamental constituents for the success of protecting tourism destinations. Understanding tourists with different cultural orientations and their attitudes toward environmental issues may foster sustainable tourist behaviour. As such, it is critical to determine if tourists' different cultural characteristics may help identify their views related to environmental issues and awareness, as well as commitment (Cho et al. 2013). Five specific research questions were described in an attempt to explore the way in which differences in tourists' culture characteristics predict specific environmental behaviours as mediated and moderated by various intervening variables:

RQ1: What is the relationship between different cultural characteristics and sustainable tourist behaviour?

RQ2: Does a tourist's attitudes mediate the relationship between different cultural characteristics and sustainable tourist behaviour?

RQ3: Do subjective norms and perceived behavioural control moderate the relationship between different cultural characteristics and a tourist's attitudes?

RQ4: Do subjective norms, perceived behavioural control, and Thailand's destination image moderate the relationship between a tourist's attitudes and sustainable tourist behaviour?

RQ5: Do subjective norms, perceived behavioural control, and Thailand's destination image moderate the relationship between different cultural characteristics and sustainable tourist behaviour?

These research questions were based on a review of literature provided in Chapter Two. Chapter Three then synthesised and integrated the key constructs into the theoretical framework underpinning this study as outlined originally in Figure 3.1. Chapter Four then discussed the research method and the justifications outlining the research process including

data analysis. The data preparation and the testing of the hypotheses was presented in Chapter Five. The current chapter discusses the results and the theoretical and managerial implications, followed by the discussion of the limitations of the study and directions for future research.

To assist in the discussion, the conceptual framework is presented again in Figure 6.1. It involves three key areas highlighted in the Figure by different line types relating to the five research questions. The solid line relates to Research Question 1 (Hypothesis 1) and shows the direct effect of different cultural characteristics on sustainable tourist behaviour. The dashed line relates to Research Question 2 (Hypothesis 2) and shows the mediating role of a tourist's attitudes (in the form of environmental knowledge, the New Ecological Paradigm and past environmental behaviour) on the relationship between the different cultural characteristics and sustainable tourist behaviour. The round-dotted line relates to Research Question 3 to Research Question 5 (Hypotheses 3 to 10) and concerns the moderating effects among the constructs of interest. Research Question 3 shows the moderating role of subjective norms and perceived behavioural control in explaining the relationship between different cultural characteristics and a tourist's attitudes. Research Question 4 presents the moderating role of subjective norms, perceived behavioural control, and Thailand's destination image in influencing the relationship between a tourist's attitudes and sustainable tourist behaviour. Finally, Research Question 5 shows the moderating role of subjective norms, perceived behavioural control, and Thailand's destination image on the relationship between different cultural characteristics and sustainable tourist behaviour.

Figure 6.1: Proposed Conceptual Model

Cultural Characteristics
1. Power distance (PDI)
2. Uncertainty avoidance (UAI)
3. Individualism /Collectivism (IDV)
4. Masculinity /Femininity (MAS)
5. Long- term orientation (LTO)
(H1)

Subjective Norms (SN) (H3-5)

Environmental Knowledge (EK)(Cognitive)

New Ecological Paradigm (NEP)(Affective)

Past Behaviour (PB) (Behaviour)

Thailand,s Destination Image (TDI) (H9-10)

Sustainable Tourist Behaviour (STB)

Perceived Behavioural Control (PBC)(H6-8)

→ Direct effect
- - → Mediating effect
........→ Moderating effect

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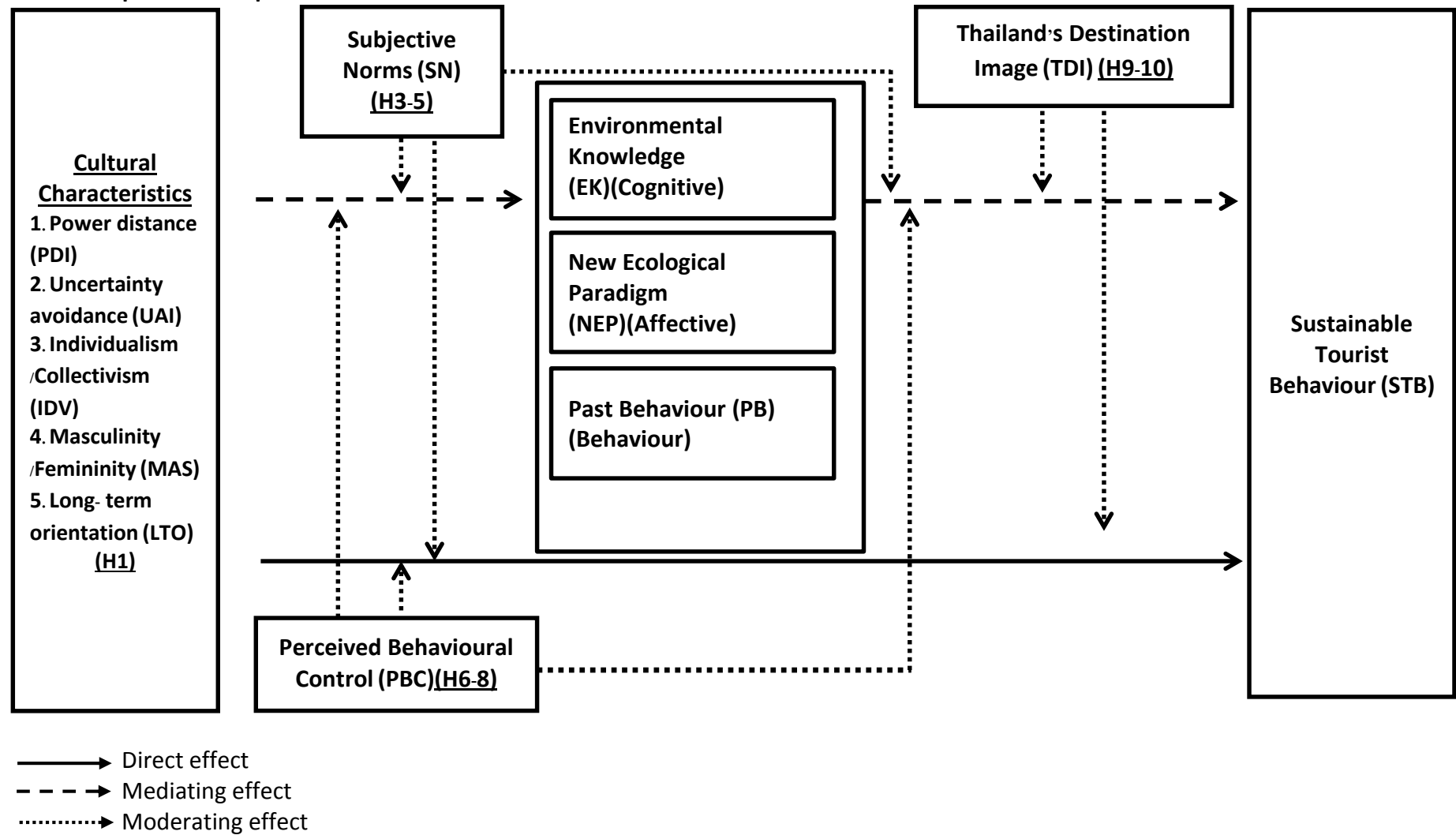**6.2.2 Discussion of the finding for research question 1 (Hypothesis 1)**

Research Question 1 (RQ1) What is the relationship between different cultural characteristics and sustainable tourist behaviour? RQ1 is answered through Hypotheses 1a to 1e. The following discussion is based upon these hypotheses, as presented in the conceptual model in Figure 6.1 (solid line).

Due to the deficit of study of culture at an individual level in a sustainable tourism context, this study used Hofstede's cultural dimensions as adapted in the CVSCALE which focuses on individual characteristics versus national characteristics (Yoo, Donthu & Lenartowicz 2011). As shown in Section 5.3.1., following the approach of Finoti et al. (2017) and Kim (2017) in testing a direct effect, the findings showed that four out of the five cultural characteristics, namely, power distance, uncertainty avoidance, masculinity/ femininity, and long-term orientation, were significant predictors of sustainable tourist behaviour. However, individualism/ collectivism was not found to be a predictor of sustainable tourist behaviour. Power distance and masculinity/femininity were found to have a negative relationship with sustainable tourist behaviour, which means that tourists with a high power distance or masculine characteristics tend to have lower levels of sustainable behaviour. These findings are in the line with those of other scholars who have looked at the relationship between culture and related sustainable behaviour (e.g., Hofstede 2001; Husted 2005; Nagy & Konyha 2018; Park, Russell & Lee 2007). The results indicated that uncertainty avoidance and long-term orientation, on the other hand, had positive relationships with sustainable tourist behaviour. These findings mean that those tourists with high uncertainty avoidance and a long-term orientation had higher levels of sustainable behaviour (e.g., Park, Russell & Lee 2007).

The approach taken in this study goes beyond previous research in that many tourism studies considered only two or three cultural dimensions to examine tourist behaviour (Han et al. 2017; Jung et al. 2018; Matzler et al. 2016). Moreover, most research has taken an indirect measurement approach, taking nationality as a proxy variable in national culture studies (Crotts & Pizam 2003; Matzler et al. 2016; Tascioglu, Eastman & Iyer 2017). These prior studies have not addressed the role of the five cultural dimensions as a driver or predictor of tourist behaviour in the context of sustainable tourism. This study advances earlier lines of inquiry

and demonstrates the effect of the cultural characteristics on tourist behaviours. In answering Research Question 1, it is posited that looking at different cultural characteristics of tourists is useful in predicting sustainable tourist behaviour.

6.2.3 Discussion of the finding for research question 2 (Hypothesis 2)

Research Question 2 (RQ2) How does a tourist's attitudes mediate the relationship between different cultural characteristics and sustainable tourist behaviour? RQ2 is answered through Hypotheses 2.1 to 2.3. The following discussion is based upon these hypotheses, as presented in the conceptual model in Figure 6.1 (dashed line).

As indicated in Section 3.2.2 of Chapter Three, tourist attitudes toward environmental issues include three main components: cognition (environmental knowledge), affect (New Ecological Paradigm), and behaviour (past behaviour). Drawing on the Theory of Planned Behaviour (TPB), the findings presented in Section 5.3.2 show that environmental knowledge mediated the relationship between three cultural characteristics and sustainable tourist behaviour. The results of this study show that tourist attitudes in terms of environmental knowledge mediated the relationships of power distance, masculinity/femininity and long-term orientation with sustainable tourist behaviour. There was no mediating effect for environmental knowledge on the relationships between uncertainty avoidance and individualism/collectivism and sustainable tourist behaviour (see Table 5.10). These findings suggest that power distance, masculinity/femininity and long-term orientation have the potential to drive sustainable tourist behaviour as facilitated by higher levels of knowledge about environmental issues, an appreciation of whole systems, and collective responsibilities to critical issues for sustainable development. Fostering sustainable tourist behaviour simultaneously requires a specific mechanism that can encourage tourists to be involved with environmental issues related to the tourism destination they are visiting, but also to be happy to engage in positive environmental behaviour to enhance that particular tourism destination. The three characteristics of power distance, masculinity/femininity and long-term orientation may in this regard align more closely with environmental knowledge. Another potential explanation behind the findings is that tourists who are high in power distance, masculinity/femininity and long-term orientation may feel that they can personally

benefit from practicing sustainable tourist behaviour, such as environment-friendly behaviour (e.g., Mostafa 2007).

Prior studies have indicated that positive attitudes toward environmental issues improves individual environmental behaviour (e.g., Cho et al. 2013). A tourist's attitude toward environmental issues can be considered from an affective or psychological perspective, that is, expressed by assessing the natural environment with some degree of favour or disfavour (Milfont & Duckitt 2010). The findings of this study show that tourists with different cultural characteristics have different perceptions of the natural environment and ecological issues, which leads to sustainable tourist behaviour. Given that long-term orientation concentrates on the preference for stability, frugality, respect for tradition, and future-oriented (Hofstede & Hofstede 2005), it may thus act on sustainable tourist behaviour.

The findings also show that the relationships between power distance, individualism/ collectivism, masculinity/ femininity and long-term orientation and sustainable tourist behaviour were significantly mediated by the NEP. These findings further demonstrate that tourists with different cultural characteristics may have different attitudes towards the natural environment and ecological issues, which affects their engagement in environmentally friendly behaviour (e.g., sustainable tourist behaviour).

Past research on attitudes toward environmental issues has mainly focused on cognitive and affective tendencies (Liobikienė, Mandravickaitė & Bernatonienė 2016; Mostafa 2007; Paul, Modi & Patel 2016), versus the implications of past behaviour on individual attitudes, especially in the context of sustainability. Even when this link has been considered, emphasis has been on the importance of past behaviour which may provide individuals with information that shapes their beliefs, which in turn determines the behavioural outcomes (e.g., an environmental conscious response) (Ajzen 2002; Norman & Conner 2006). However, in the current research, there was no support for the mediating role of tourists' past environmental behaviour on the relationship between cultural characteristics and sustainable tourist behaviour. In this regard, only the cognitive and affective components of tourists' attitudes acted as mediators, and not past behaviour. It may be that the measure of past behaviour (number of times a tourist had visited an environmental attraction) did not collect

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enough variation for there to be an effect or was not as predictive of future sustainable behaviour. Conversely, it may be that knowledge and affect are more effected by cultural characteristics and in turn are better predictors of sustainable tourist behaviour.

6.2.4 Discussion of the finding for research question 3 (Hypothesis 3 and 6)

Research Question 3 (RQ3) When do subjective norms and perceived behavioural control moderate the relationship between different cultural characteristics and a tourist's attitudes? RQ3 is answered through Hypotheses 3 and 6. The following discussion is based upon this hypothesis, as presented in the conceptual model in Figure 6.1 (round dotted line).

As outlined in Chapter Five, the approach of Preacher, Rucker and Hayes (2007) was followed in testing the moderating factors. As displayed in Table 5.13 of Chapter Five, the findings show that tourists' subjective norms regarding environmental matters moderated the impact of masculinity/ femininity and long-term orientation on environmental knowledge. The findings demonstrated that masculinity/ femininity and long-term orientation are better determinants of tourist attitudes regarding environmental knowledge when the social environment is more conducive and supportive of environmental issues. The possible explanation can be that when social forces (e.g., subjective norms) are high, tourists who have higher levels of masculinity and a long-term orientation show a weaker effect on environmental knowledge. In contrast the effect for masculinity/femininity and for long term orientation on environmental knowledge is stronger when subjective norms are lower. This suggests that subjective norms operate to supersede the effect of these cultural characteristic when they are high. The results show that subjective norms had no moderating role on the relationship between power distance and environmental knowledge. As can be seen in Table 5.13, the role of uncertainty avoidance and individualism/collectivism were not examined in these relationships, because these two cultural characteristics had no direct correlated impact on environmental knowledge (see Table 5.10). Therefore, uncertainty avoidance and individualism/collectivism were not considered to test in the proposed hypothesis. These insights contribute to a better understanding of the important role of behavioural aspects related to subjective norms in facilitating the effect of tourists in different cultural characteristics.

The literature has alluded to the fact that in the context of tourism, subjective norms regarding perceived social pressure are important in implanting environmental responsiveness (Biswas & Roy 2015; Lorek & Fuchs 2013; Wang, Liu & Qi 2014). As shown in Table 5. 14 of Chapter Five, the relationship between two cultural characteristics – individualism/collectivism and long-term orientation – and the affective attitude component (i.e., the New Ecological Paradigm) were moderated by subjective norms. An examination of the moderating role of subjective norms in the context of the NEP has rarely been considered. The findings presented in this study further show that tourists with higher perceived social influences, that perhaps are more morally responsible for others and are concerned about the natural environment, are more likely to be maximally affected their individualism/ collectivism and long- term orientation characteristics. These results indicate that when tourists who have individualism/collectivism and long-term orientation characteristics which are reinforced by subjective norms, they are more likely to engage in environmentally responsible behaviour in the tourism destination. Moreover, the influence of subjective norms is more likely to drive such tourists to enhance their own affective attitude (e.g., the NEP). The relationship between power distance and masculinity/femininity dimensions and the NEP was not found to be moderated by subjective norms (see Table 5.14). As shown in Table 5.14, the relationship between uncertainty avoidance and the NEP was not investigated because this cultural characteristic had no direct impact on the NEP (see Table 5.11). With regard to the moderating role of subjective norms, this factor had the biggest influence on the relationship between tourists with long-term orientations and attitudes (cognitive and affective). Therefore, in the case of cultural convergence, long- term- oriented tourists evaluate environmental issues and are influenced by social forces that can contribute to an increase of their attitudes towards environmental issues.

In addition, past research has recognised evidence of the effects of perceived behavioural control, as well as their influence on attitudes toward environmental issues, on increasing tourist behaviour concerned with sustainability (e.g., Grob 1995; Milfont & Duckitt 2010). Research about the role of perceived behavioural control in fostering the effect of cultural characteristics on tourists' attitudes is scarce. It was expected that perceived behavioural control would moderate the relationship between cultural characteristics and tourist's attitudes. As demonstrated in Table 5. 17, however, the findings of this study show no

moderation role of perceived behavioural control on the relationship between tourists' cultural characteristics and tourists' environmental knowledge. These findings suggest that perceived behavioural control produces no beneficial effect on the path from cultural characteristics to environmental knowledge.

As demonstrated in Table 5.18, it was expected that perceived behavioural control would moderate the relationship between cultural characteristics and the NEP. The results of this study show that perceived behavioural control strengthened connections between individualism/ collectivism and the NEP when it was high. In contrast, perceived behavioural control strengthened connections between long-term orientation and the NEP when it was low. One explanation for the inconsistency among these two cultural characteristics might be due to the difference in their nature. The tourists from an individualistic culture possess higher levels of autonomy and self-confidence and so this effect is facilitated when perceived behavioural control is also high. In contrast, the effect of long term orientation occurs when perceived behavioural control is low, and thus when individuals perhaps don't see how their behaviour can have an immediate effect. These findings provide insight into potential strategies for tourism organisations to manage and improve the cognitive and affective perspectives of tourist with different cultural characteristics about environmental issues.

6.2.5 Discussion of the finding for research question 4 (Hypothesis 5, 8 and 9)

Research Question 4 (RQ4) When do subjective norms, perceived behavioural control, and Thailand's destination image moderate the relationship between a tourist's attitudes and sustainable tourist behaviour? RQ4 is answered through Hypotheses 5, 8 and 9. The following discussion is based upon these hypotheses, as presented in the conceptual model in Figure 6.1 (round dotted line).

As indicated in Chapter Three, although prior research has investigated the role of the Theory of Planned Behaviour (TPB), incorporating subjective norms and perceived behavioural control, most studies considered these two components as the antecedents of intention and environmental behaviour (e.g., Liobikienė, Mandravickaitė & Bernatonienė 2016; Paul, Modi & Patel 2016). However, the role that subjective norms and perceived behavioural control might play in *fostering* tourist's attitudes on sustainable tourist behaviour is less explored. In

doing so, Hypothesis 5 proposed that subjective norms would moderate the relationship between tourist's attitudes and sustainable tourist behaviour. The findings shown in Table 5.16 demonstrate that subjective norms are insufficient in moderating the effect of attitudes on sustainable tourist behaviour. One explanation for the non-significance of this relationship may be that social influence/ pressure cannot enhance the consideration of the tourist preferring to engage in sustainable tourist behaviour. This finding contrasts with previous research which stated that subjective norms significantly moderate the influence of attitudes on environmental behaviour (Al-Swidi et al. 2014).

Hypothesis 8 investigated the role perceived behavioural control might play in moderating the effect of tourist attitudes on sustainable tourist behaviour. The results show that tourists who had more past experience in visiting national parks and who possessed a higher level of perceived behavioural control were more likely to engage in sustainable tourist behaviour. Given this result, perceived behavioural control produces a beneficial effect on the path from past behaviour to sustainable tourist behaviour. On the contrary, perceived behavioural control did not moderate the effect of environmental knowledge and the NEP on sustainable tourist behaviour. This unexpected result shows that perceived behavioural control produces no beneficial effect on the path from the NEP to sustainable tourist behaviour.

To increase sustainable tourist behaviour, prior research suggested that destination image plays a crucial role in enhancing tourist behaviour (Baloglu & McCleary 1999; Qu, Kim & Im 2011; Zhang, Fu, et al. 2014). Prayag and Ryan (2012) also found that destination image had an indirect impact on behaviour across tourism contexts. However, limited research to date appears to have examined the moderating role of destination image in the context of sustainable tourism. Based on this logic, the current study uncovered the relationship between attitudes (environmental knowledge, New Ecological Paradigm and past behaviour) and sustainable tourist behaviour as moderated by Thailand's destination image, postulated in Hypothesis 9. The results of this study found that while the relationship between environmental knowledge and the NEP and sustainable tourist behaviour was not moderated by Thailand's destination image, the past behaviour of tourists had stronger effects on their sustainable behaviour when the perception of Thailand's destination image was high. These findings demonstrate that tourists with high levels of past behaviour or experience with

national parks (in this case) that know the destination well and have a positive image are more likely to maximise their sustainable behaviour. These insights contribute to a better understanding of the important role of past behaviour and destination image in facilitating the effect of sustainable tourist behaviour.

6.2.6 Discussion of the finding for research question 5 (Hypothesis 4, 7 and 10)

Research Question 5 (RQ5) When do subjective norms, perceived behavioural control, and Thailand's destination image moderate the relationship between different cultural characteristics and sustainable tourist behaviour? RQ5 is answered through Hypotheses 4, 7 and 10. The following discussion is based upon these hypotheses, as presented in the conceptual model in Figure 6.1 (round dotted line).

Cultural characteristics (namely, power distance, uncertainty avoidance, masculinity/ femininity and long-term orientation) had a direct and significant contribution to sustainable tourist behaviour (Hypothesis 1) as illustrated in Table 5.9. As stated in Chapter Three, Hypothesis 4 proposed a role for subjective norms in enhancing the relationship between cultural characteristics and sustainable tourist behaviour. The results show that subjective norms do not reinforce the effect of cultural characteristics on sustainable tourist behaviour. The potential reasons for this non-significant result may be that tourists just need to travel and explore the destination versus acting and performing according to some subjective norm.

Furthermore, this study considered perceived behavioural control as a moderator of the relationship between cultural characteristics and sustainable tourist behaviour. As shown in Table 5.19 of Chapter Five, the findings show that power distance and uncertainty avoidance had a stronger effect on sustainable behaviour when perceived behavioural control was high versus when it was low. For this reason, tourists with these two cultural characteristics will be more likely to carry out sustainable behaviour when they have a belief in their capability. In advancing the literature, the findings show that an examination of the moderating effects of a tourist's perceived behavioural control varies with regard to sustainable behaviour and cultural characteristics.

As has been discussed previously, destination image was considered as a condition that might affect the motivation of tourists with different cultural characteristics to engage in environmentally responsible behaviour at a given destination. Although this conclusion has received attention in the literature, limited research has looked at the ways perceived destination image may influence cultural characteristics. The current study advances the state of knowledge and theory relating to perceptions of Thailand's destination image. Hypothesis 10 was developed proposing that Thailand's destination image would moderate the relationship between different cultural characteristics and sustainable tourist behaviour. As shown in Table 5.22 in Chapter Five, the findings show that only the effect of long-term orientation on sustainable tourist behaviour was moderated by Thailand's destination image. A long-term orientation had a stronger effect on sustainable behaviour when perception of Thailand's destination image was high. These findings demonstrate that tourists with long-term orientations who perceive the image of the destination as favourable are more likely to engage in sustainable behaviour. These insights contribute to a better understanding of the important role of destination image related to cultural characteristics and the effect on sustainable tourist behaviour.

Lastly, Figures 6.2 - 6.6 present the revised conceptual models describing the relationships between the different cultural characteristics and sustainable tourist behaviour as mediated and moderated by tourist's attitudes, subjective norms, and perceived behavioural control along with destination image.

Figure 6.2 Power Distance Model
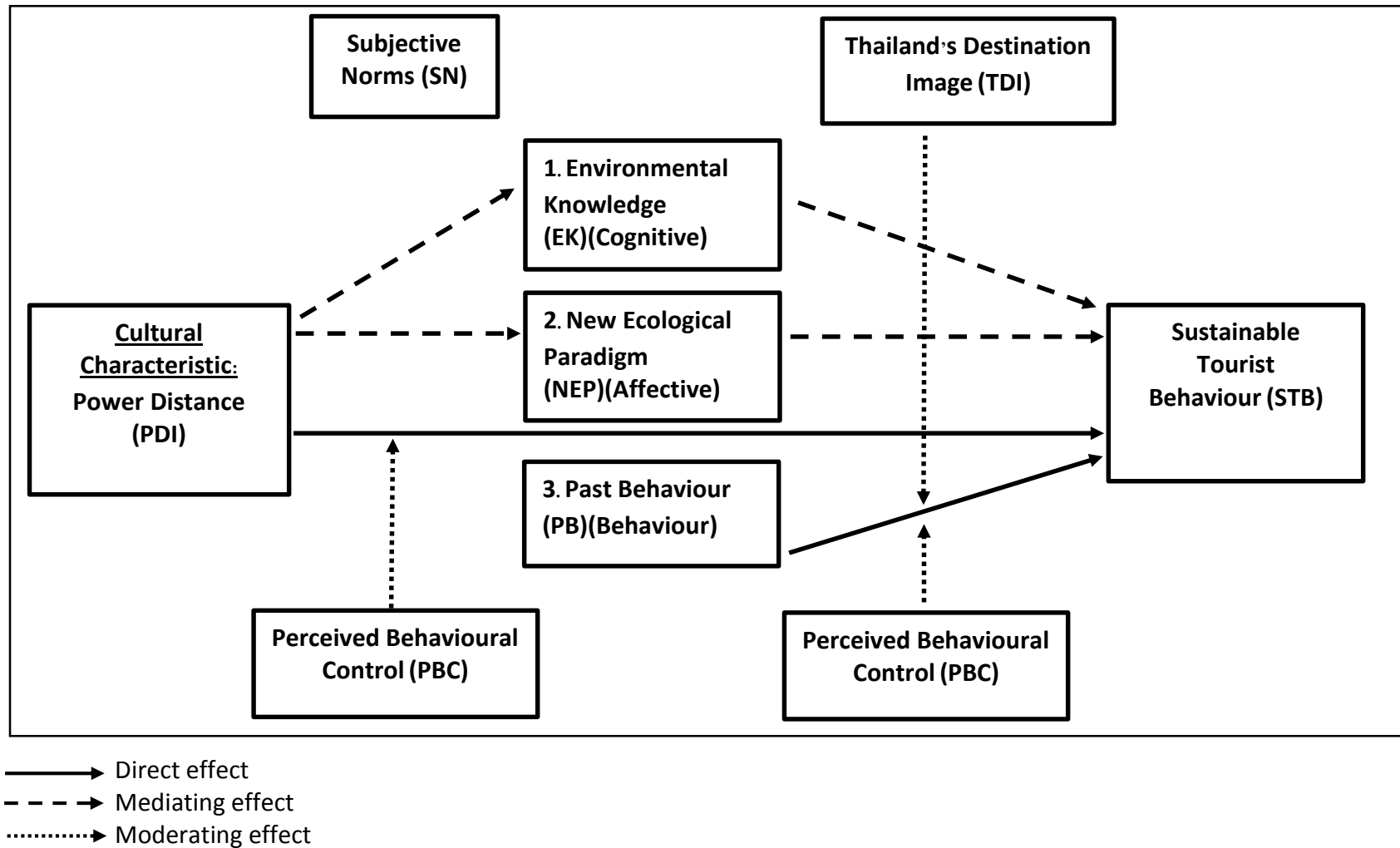
Legend:
- ——▶ Direct effect
- – – ▶ Mediating effect
- ·······▶ Moderating effect

Figure 6.3 Uncertainty Avoidance Model

Figure 6.3 Uncertainty Avoidance Model

Subjective Norms (SN)	Thailand's Destination Image (TDI)

1. Environmental Knowledge (EK)(Cognitive)

Cultural Characteristic: Uncertainty avoidance (UAI)

2. New Ecological Paradigm (NEP)(Affective)

Sustainable Tourist Behaviour (STB)

3. Past Behaviour (PB)(Behaviour)

Perceived Behavioural Control (PBC)

Perceived Behavioural Control (PBC)
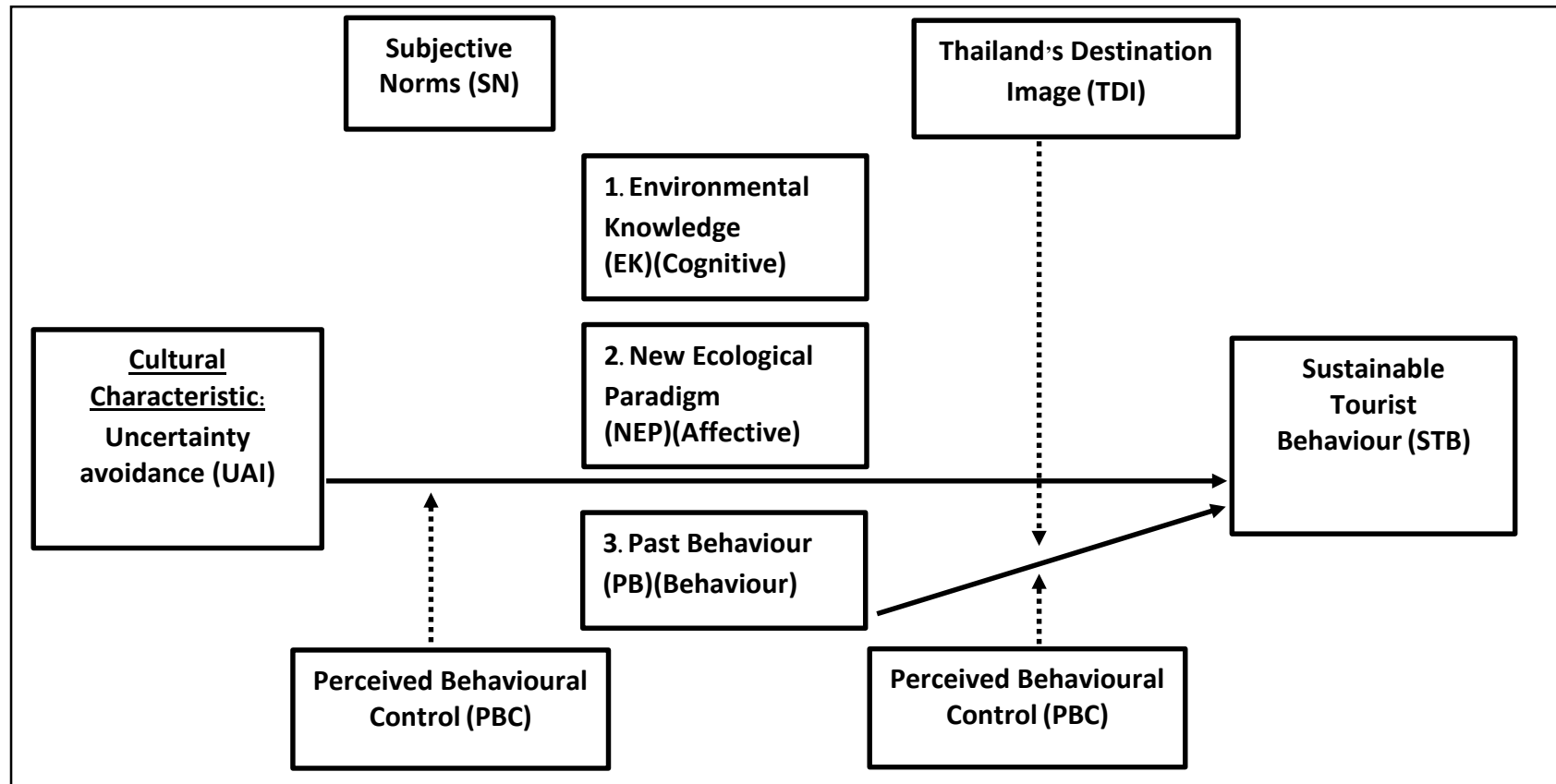
→ Direct effect
- - → Mediating effect
········► Moderating effect

Figure 6.4 Individualism/Collectivism Model

Figure 6.4 Individualism/Collectivism Model

Boxes and relationships:
- Subjective Norms (SN)
- Thailand's Destination Image (TDI)
- Cultural Characteristic: Individualism/Collectivism (IDV)
- 1. Environmental Knowledge (EK)(Cognitive)
- 2. New Ecological Paradigm (NEP)(Affective)
- 3. Past Behaviour (PB)(Behaviour)
- Sustainable Tourist Behaviour (STB)
- Perceived Behavioural Control (PBC)
- Perceived Behavioural Control (PBC)
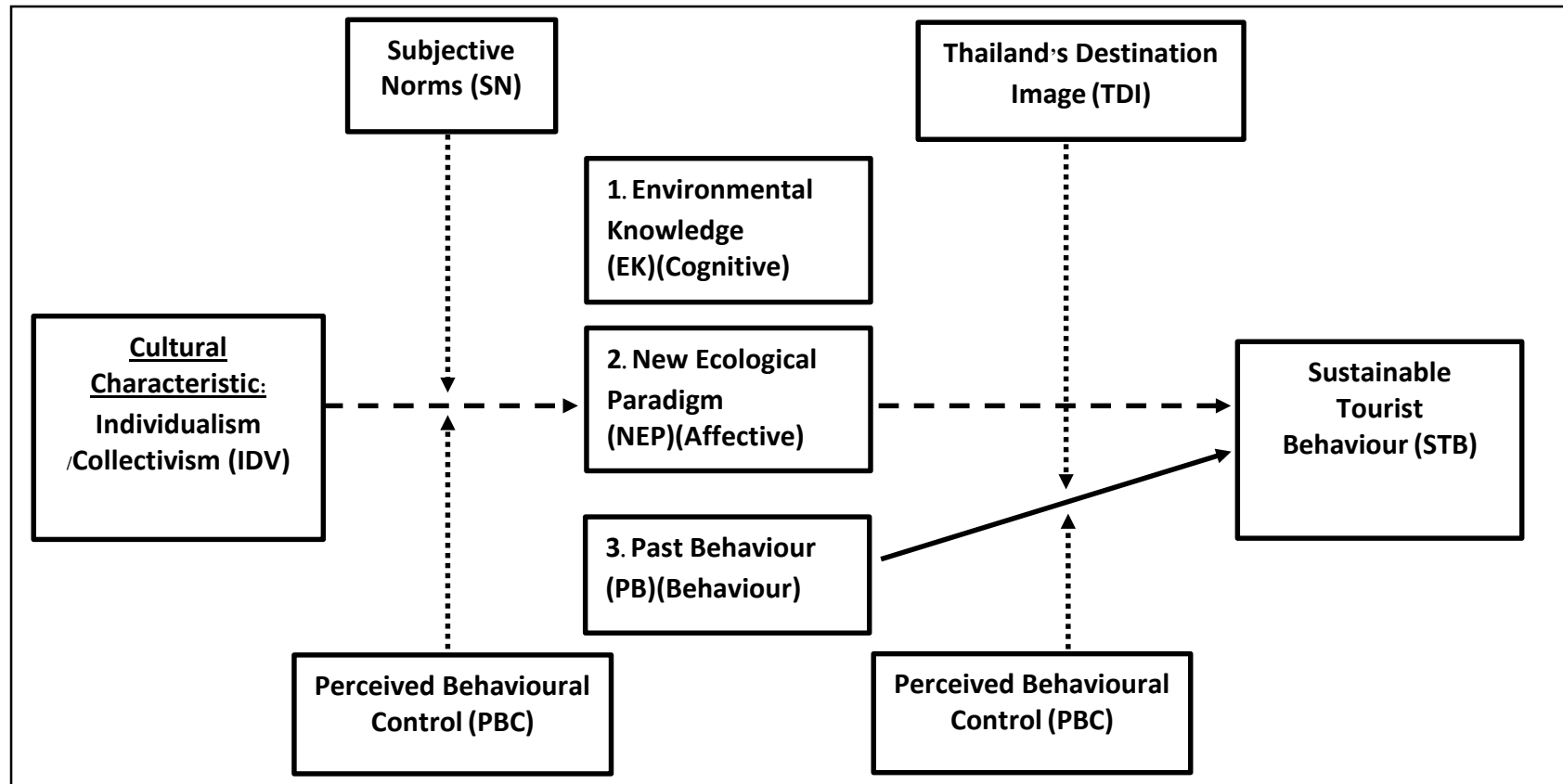
Legend:
- ——→ Direct effect
- – – → Mediating effect
- ·········→ Moderating effect

Figure 6.5 Masculinity/Femininity Model
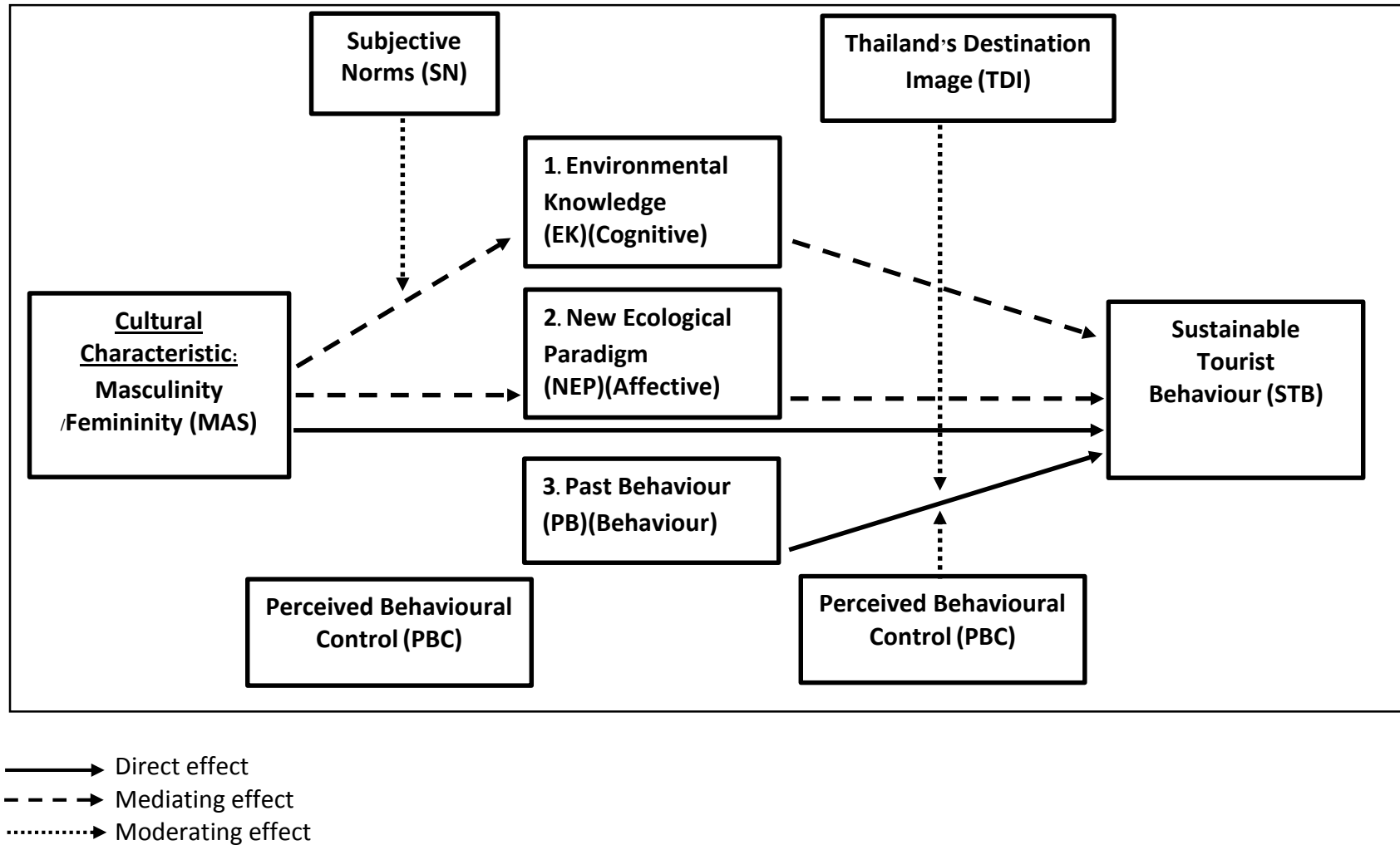
Figure 6.6 Long-term Orientation Model
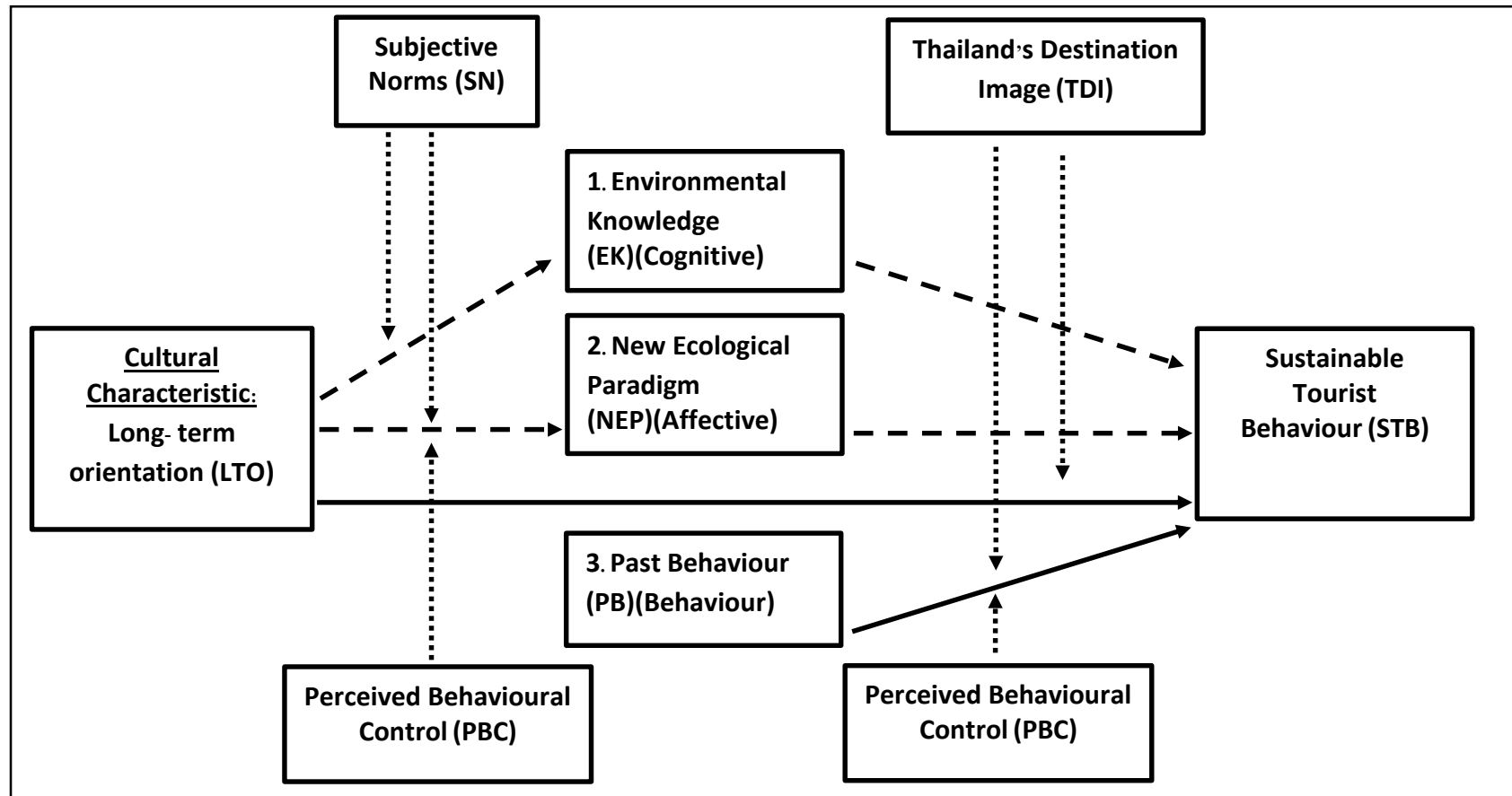
Direct effect
Mediating effect
Moderating effect

6.3 Implications

The findings of this research provide insights in the context of sustainable tourism in Thailand, which has implications from both theoretical and managerial perspectives. From these perspectives, the key issue elicited by the results of the study is the role of tourist's cultural characteristics in predicting environmental behaviour and the mediating role of tourist attitudes in engaging in environmental issues. The findings further underscore the need to unpack these mechanisms by examining subjective norms, perceived behavioural control, and destination image as moderators of the various relationships with sustainable tourist behaviour. As such, a number of theoretical and managerial implications deserve acknowledgement and discussion.

6.3.1 Theoretical contributions

The findings of this study provide critical contributions to the literature on marketing and tourism in several ways. First, the CVSCALE scale, which was employed to measure the cultural characteristics based on Hofstede and Hofstede's framework (2005), would be quite suitable for international market segmentation given this study collected data from tourists from different countries. The CVSCALE proved to be a valid and reliable means of using Hofstede's cultural dimensions, based on convergent and discriminant validity tests, at an individual level. The current study was undertaken to evaluate the cultural characteristics of international and domestic tourists (those from Thai-speaking regions of Thailand), and the CVSCALE was an effective tool to measure these characteristics at the individual level, thus allowing an extension of Hofstede's framework (Crotts, 2004; Crotts & McKercher 2006). Thus, this study contributed to the validity of this scale.

Second, this study is unique in examining understudied areas of cultural differences within the context of sustainable tourism in emerging countries, such as Thailand. The research on cultural differences in the tourism context, especially sustainable tourism, has been limited as pertaining to sustainable tourist behaviour (Jung et al. 2018; Tom Dieck & Jung 2017). As a result, there is less understanding of how different cultural characteristics impact sustainable tourist behaviour. This study responded to a gap in the literature by exploring the different cultural characteristics of both international and domestic tourists who visited national parks

in Chiang Mai, Thailand. This research verified the effect of certain cultural characteristics on sustainable tourist behaviour. The results showed no relationship between the individualism/collectivism culture types and sustainable tourist behaviour. Previous studies have shown that individualism is the sole cultural characteristic that supports the practice of environment-friendly behaviour (Cho et al. 2013). In the current research, the uncertainty avoidance culture type was demonstrated to be the strongest cultural characteristic in predicting sustainable tourist behaviour, followed by power distance, masculinity/femininity and long-term orientation. The finding for uncertainty avoidance as a factor in this area is a major addition to the existing pool of knowledge and is consistent with Thanetsunthorn (2015) who suggested that a high uncertainty avoidance culture can generate a stricter enforcement of environmental laws. This indicates perhaps a realignment of the cultural characteristics that are important for predicting sustainable behaviour.

Third, the study extends the focus and applicability of the Theory of Planned Behaviour (TPB) and pro-environmental aspects of the sustainable tourism setting. Prior research has shed light on the critical importance of tourist attitudes about the environment to lessen consumption and improve environmental behaviour (e.g., Cho et al. 2013; Lee & Jan 2015). However, many empirical studies have mainly considered only one component of attitudes, typically either cognitive or affective, to determine environmental behaviour (Chekima et al. 2016; Paul, Modi & Patel 2016). The current research goes further by examining tourist attitudes as a collection of cognitive (environmental knowledge), affective (the New Ecological Paradigm), and behavioural (past behaviour) components a person holds regarding environmentally related activities. This study advances the literature by investigating the extent to which tourists' favourable attitudes play a role in the relationship between different cultural characteristics and sustainable tourist behaviour. A finding in this study was that environmental knowledge and the NEP mediate the relationship between different cultural characteristics and sustainable tourist behaviour, specifically power distance, masculinity/femininity and long-term orientation. A direct effect towards sustainable tourist behaviour was found only from uncertainty avoidance. It is interesting that no effect was found from individual/collectivism. This underscores the need to understand culturally different perspectives more complexly. It appears that past behaviour is not sufficient to mediate the relationship between different cultural characteristics and sustainable tourist behaviour. As

such, this study extends the boundaries of current theory on sustainable tourism and suggests tourists who are concerned and aware about environmental issues at destinations can further become engaged in sustainable behaviour.

Fourth, the study advances the literature on the Theory of Planned Behaviour (TPB) and sustainable tourism by examining the role of subjective norms and perceived behavioural control in amplifying various effects on tourist attitudes and on sustainable tourist behaviour. Tourism scholars have paid less attention to the role of social pressure and locus of control in strengthening environmental behavioural outcomes. Surprisingly, the TPB literature has to date largely focused on the direct effects of subjective norms and perceived behavioural control to predict intention and tourist behaviour (e.g., Chekima et al. 2016; Liobikienė, Mandravickaitė & Bernatonienė 2016; Mostafa 2007). There is a less research exploring if subjective norms and perceived behavioural control can increase the effect of culturally different characteristics in building tourist attitudes and then creating sustainable tourist behaviour. This study showed that subjective norms facilitate social pressure that along with a certain cultural orientation can encourage a tourist to engage with environmental issues. Tourists with different cultural characteristics were found to differ in their engagement with knowledge and the ecological paradigm, based on their social empowerment and perceived behavioural control, which then impacted sustainable tourist behaviour. These findings add to previous research that notes close relationships with social pressure and perceived behavioural control in assisting tourists to improve their behavioural outcomes related to environmental issues – especially focusing on a unique cultural characteristic for adopting environmental activities. This study offers a step forward to elucidate how tourist behaviour is affected by cultural characteristics in a complex model of mediators and moderators.

6.3.2 Managerial implications

First, the findings provide guidance to tourism organisations in Thailand regarding the extent to which different cultural dimensions as manifested at an individual level contribute to sustainable tourist behaviour. Tourism organisations are advised to develop an approach of running businesses which will enhance the social benefits while at the same time decreasing environmental impacts. An increasing number of organisations are becoming aware of merging sustainability into their tourism products. Based on tourist differences in cultural

characteristics, organisations should identity tourist target markets for environmental activity campaigns and promoting sustainability-linked tourism activities. Using market segmentation based on tourist cultural characteristics, marketing planners can assist in indicating the most viable tourist bases for their tourism destination products and services. The results of this study provide tourism organisations with evidence for explaining and identifying the cultural orientations of a target market that they are pursuing for environmentally friendly destinations prior to visiting, to market with either tourist sites or tourism packages. Tourism managers should pay particular attention to interests of the tourists based on power distance, uncertainty avoidance, masculinity/femininity, and long-term orientation, as documented in this study. These material implications indicate the critical issue of understanding the cultural characteristics that a tourist has prior to developing specific tourism strategies.

Second, advertising and promotion can be geared towards tourist's subjective norms and level of perceived behavioural control about positive environmental outcomes that are possible only with tourists' efforts and involvement, thus increasing the level of sustainable tourist behaviour. Subjective norms and perceived behavioural control might be more or less effective depending on cultural differences. While more studies are required to explore these influences, the findings show that organisations need to be aware that high social pressure and perceived behavioural control have an influence on how tourists with different cultural orientations behave. Tourism organisations must be aware that creating marketing strategies for tourists with different cultural orientations for destinations might not be effective to the same extent in every nation. Therefore, clustering tourist segments along with cultural dimensions when developing tourism strategies should be a fertile and viable strategy for destination managers.

Third, the results are useful for improving tourist destination-building endeavours. Tourism organisations are suggested to develop tourism marketing strategies that continuously monitor tourists' perceptions of destination image. The results of this study suggest that Thailand's perceived destination image should be carefully considered because tourists of diverse cultural types may think that the tourist's image and a tourism destination's image are matched. Building and managing an adequate destination image has become vital for effective market positioning (Boo, Busser & Baloglu 2009). This study suggests that tourism

managers should create promotional campaigns to promote Thailand's destination image that recognises the unique attributes and attractive components of tourism destinations, specifically environmental destinations, and focuses on multi- cultural perspectives. Moreover, the destination image should mirror the distinctive characteristics that differentiate an operation from its competitors. It is useful for tourism organisations to analyse the different components that create destination competitiveness. More specifically, the critical significance of the destination's elements allows tourism organisations to increase their saliency for a targeted market based on different cultural characteristics. In terms of promotional planning, it offers tourism managers the information for tailoring destinations to market segments in different cultures by communicating the benefits that tourists within a segment seek.

6.4 Strengths, limitations and future research

In addition to its theoretical extensions and implications, this study has several strengths. One of the strengths in terms of the research method is that sustainable tourist behaviour was collected from both international and domestic tourists. The constructs of interest were evaluated at an individual level with a self- administrative survey. Data were analysed using SPSS Version 23 with the PROCESS macro devised by Hayes (2013a) for mediation and moderation analysis. The use of the PROCESS macro is efficient in identifying the areas of significance (or non-significance) for conditional effects (Hayes & Matthes 2009; Miller et al. 2013). By evaluating sustainable tourist behaviour, this research offers a contribution to the literature in sustainable tourism and marketing areas. Previous empirical studies in sustainable tourist behaviour have used qualitative approaches to capture tourist attitudes on environmental behaviour (e.g., pro- environment behaviours and/ or environmentally responsible behaviours) in the context of sustainable tourism (Hall 2016; Imran, Alam & Beaumont 2014; Juvan & Dolnicar 2014). In contrast, this study employed a quantitative method to examine the relationships among constructs of interest to understand sustainable tourist behaviour.

To date a number of studies have focused on the antecedents of environmental behaviour, such as destination image, motivation and attitudes. They can be used to predict future

behavioural intentions and differences in tourist environmental attitudes (Chiu, Lee & Chen 2014; Lee & Jan 2015; Lee 2009; Luo & Deng 2008). Tourists of different cultural backgrounds have different views of environmental concerns. They go to ecological areas, such as national parks, because they may be motivated by the natural environment, but not all of them engage in positive environmental behaviour. Eco-based tourism destinations recognise sustainable development of the environment and environmentally responsible behaviour need to go hand in hand for there to be a positive environmental outcome. Sustainable tourist behaviour, such as environmentally responsible behaviour, helps limit or avoid damage to the ecological environment. Therefore, this study and its findings explain how tourists with different cultural dimensions behave in environmentally responsible ways and what increases sustainable tourist behaviour in national parks.

In the literature, exploration of the link between the differences in the cultural dimensions proposed by Hofstede alongside perceptions of a tourism destination and sustainable tourist behaviour (e.g., tourists' environmentally responsible behaviour) is limited. This study, by addressing sustainable tourist behaviour, takes the theory and empirical research beyond the current domain and focuses on drivers (e.g., motivation, place attachment, and attitude) of sustainable tourist behaviour. The study also empirically addressed tourism behaviour *in situ* in national parks in Chiang Mai, Thailand, adding to the strength and validity of the findings.

As with all research, the findings should be considered in light of several limitations. First, the sample was set within the context of national parks. This may limit the generalisability of the results. They may not be as applicable to tourists in other contexts, such as marine tourism, special events and festivals. Second, this study examined both international and domestic tourists in the sampling. It may be worthwhile, therefore, for future study to compare different nationalities in more depth to understand their attitudes toward environmental issues and their sustainable tourist behaviour. Such investigation may also enhance the generalisability of the model beyond the sample of tourists investigated in this study. Using analytical approaches, such as structural equation modelling (SEM), may allow the future studies to postulate cause-and-effect relationships.

Third, this study focused on differences in the cultural characteristics based on Hofstede's model. Further research may consider different approaches to culture or value orientation, such as Rokeach (1983), to examine individual influence on sustainable tourist behaviour. The interplay between dimensions of cultural orientation can contribute to understanding different levels of tourist behaviour intensity. This study found that the contingency roles of perceived behavioural control, subjective norms, and destination image significantly moderate the direct relationships in the research model drawn in Figure 6.1. Future research could consider these moderating roles as the antecedents of sustainable tourist behaviour in order to predict it. Also, this study considered only the cognitive dimension of the destination image construct. Future research could investigate the perception of all destination image components (e.g., affective image, cognitive image, and conative/intention image) that could impact constructs of interest such as tourist attitudes and cultural dimensions. Since differences in cultural characteristics at an individual level based on Hofstede's conceptualisation were used in this research, future research also could conduct multi-group analysis (different nationalities of tourist) in order to identify which group of cultural characteristics has a greater impact on sustainable tourist behaviour.

Fourth, this study adopted convenience sampling as a non-probability sampling approach to collect the data from tourists who had visited national parks in Chiang Mai, Thailand. This method also could affect the generalisability of the results of the study. To ensure representativeness of the tourists of national parks, future research could determine the sample population by interviewing the respondents to ensure that they have fully experienced the national parks and if they have been involved in environmental issues and responsibilities in relation to environmentally responsible behaviours.

Fifth, the theoretical framework was drawn from Theory of Planned Behaviour and the pro-environmental behaviour literature, which focuses on the mediating mechanism of tourist attitudes in terms of environmental issues. However, there could be other important mediators that the study did not capture. For example, the value-belief-norm theory could provide further insights on sustainable behaviour.

Sixth, this study did not consider the data collected at different national park sites in Chiang Mai and the sub-samples of the study before merging the data. Future studies could consider this issue to break down the respondents from each national park or tourism collection site and compare the statistical differences in their characteristics before merging the data. Schneider, White and Paul (1998) suggest that data aggregation requires statistical (e.g., intraclass correlation coefficients) and theoretical justification.

6.5 Conclusion

The conceptual model proposed and tested in this study demonstrates how tourists' cultural characteristics facilitate outcomes of sustainable tourist behaviour. The moderating role of various factors including subjective norms, perceived behavioural control, and Thailand's destination image, and the mediating role of tourists' attitudes, on the culture and sustainable tourist behaviour relationship is also evaluated. This study advances the existing literature and extends knowledge and theory by highlighting the mechanisms by which tourists' cultural characteristics affect their behaviour in a sustainable tourism context. The integration of the Theory of Planned Behaviour and pro-environmental literature allows a comprehensive understanding of how tourists with different cultural characteristics engage in environmental issues and act themselves in order to achieve sustainable tourist behaviour. The results of this research offer a view of how to develop a tourism destination that is appealing to tourists from different markets and that is managed in a sustainable way for future generations.

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Factors affecting the influence of culture on sustainable tourist behaviour

Information Sheet for Research Participants

Invitation

We would like to invite you to be a participant in our study into "factors affecting the influence of culture on sustainable tourist behaviour". This research is being conducted in partial fulfillment of a PhD at the University of Tasmania, Australia for Mr. Porramate Jaratmetakul under the supervision of Associate Professor Martin Grimmer, Dr. Stuart Crispin and Dr. Mark Wickham from the Tasmanian School Business and Economics.

What is the purpose of this study?

This study aims to develop a new model to understand the factors affecting the influence of culture on sustainable tourist behaviour.

Why have I been invited to participate?

You have been invited to participate in this research because you are an international or local tourist in Thailand. We are keen to have you involved in the study because we believe your opinion and views on this research issue could help our understanding of sustainable tourist behaviour and Thailand's destination image.

What will I be asked to do?

You will be invited to spend 10-15 minutes to complete the questionnaire survey. There is no video or audio recording, and no photographs involved in this research. Completion of the questionnaire survey implies your consent to participate in this research.

Are there any possible benefits from participation in this study?

This research will assist in understanding sustainable tourist behaviour and Thailand's destination image. It is expected that from the research there will be recommendations for improvements in Thailand's destination management, to increase the competitiveness of the sustainable tourism sector.

Are there any possible risks from participation in this study?

There is no potential risk associated with participating in this research. Participation in this research is voluntary and anonymous. You can choose not to answer any survey questions that you are uncomfortable with, and you may elect not to continue with the survey at any stage, without providing prior notice. No individual will be identified in the research reporting.

What if I change my mind during or after the study?

You are free to withdraw from the study at any time. Your participation will not be included in the research analysis. Please note that, after you submit the questionnaire, as it is completed anonymously, you will not be able to withdraw from the research. However, anonymity also means that no individual can be identified in the survey results.

What will happen to the information when this study is over?

The raw data will be stored and kept locked in a filing cabinet at the office of the chief investigator for a period of at least five years from the date of the first publication. An electronic copy of the data will be collected by the researcher and held by the chief investigator. This data will be stored on a password-protected UTAS computer. In addition, only team members of this research have permission to enter questionnaire data into the files. After five years from the date of publication, all data including raw data and electronic data will be shredded and erased.

How will the results of the study be published?

The results of this research will be published by thesis, journal article, and conference presentation. A summary will be placed on the primary supervisor's UTAS webpage once data collection and analysis is finalised, approximately October 2016.

What if I have questions about this study?

If you have any question about the project please contact Mr. Porramate Jaratmetakul: Mobile in Australia 61-42-5818893 or Mobile in Thailand 66-89-283-2844) or Chief investigator Associate Professor Martin Grimmer, Email: <u>martin.grimmer@utas.edu.au</u>.

This study has been approved by the Tasmanian Social Sciences Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study, please contact the Executive Officer of the HREC (Tasmania) Network on +61 3 6226 6254 or email <u>human.ethics@utas.edu.au</u>. The Executive Officer is the person nominated to receive complaints from research participants. Please quote ethics reference number [H001538].

This information sheet is for your information.

We look forward to your participation.

APPENDIX B
(The size is not actual size used for data collection)

Questionnaire (Version 1)

Thank you very much for your participation in this survey. Your decision to participate is completely voluntary. Your answers will be totally anonymous. Survey responses will be kept strictly confidential and only members of the research team will have access to the information you provide.

Part 1:

Part 1.1 Please circle the number that best describes the extent to which you disagree or agree with the following statements: 1= Strongly disagree to 5= Strongly agree

Concepts	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
1. People in higher positions should make most decisions without consulting people in lower positions.	1	2	3	4	5
2. People in higher positions should not ask the opinions of people in lower positions too frequently.	1	2	3	4	5
3. People in higher positions should avoid social interaction with people in lower positions.	1	2	3	4	5
4. People in lower positions should not disagree with decisions by people in higher positions.	1	2	3	4	5
5. People in higher positions should not delegate important tasks to people in lower positions.	1	2	3	4	5
6. It is important to have instructions spelled out in detail so that I always know what I'm expected to do.	1	2	3	4	5
7. It is important to closely follow instructions and procedures.	1	2	3	4	5
8. Rules and regulations are important because they inform me of what is expected of me.	1	2	3	4	5
9. Standardized work procedures are helpful.	1	2	3	4	5
10. Instructions for operations are important.	1	2	3	4	5
11. Individuals should sacrifice self-interest for the group.	1	2	3	4	5
12. Individuals should stick with the group even through difficulties.	1	2	3	4	5
13. Group welfare is more important than individual rewards.	1	2	3	4	5
14. Group success is more important than individual success.	1	2	3	4	5
15. Individuals should only pursue their goals after considering the welfare of the group.	1	2	3	4	5
16. Group loyalty should be encouraged even if individual goals suffer.	1	2	3	4	5
17. It is more important for men to have a professional career than it is for women.	1	2	3	4	5

	1	2	3	4	5
18. Men usually solve problems with logical analysis; women usually solve problems with intuition.	1	2	3	4	5
19. Solving difficult problems usually requires an active, forcible approach, which is typical of men.	1	2	3	4	5
20. There are some jobs that a man can always do better than a woman.	1	2	3	4	5

Part 1.2 Please circle the number that best describes how important you feel the following attributes are: 1= Very unimportant to 5= Very important

Concepts	1 Very unimportant	2 Unimportant	3 Neutral	4 Important	5 Very Important
1. Being careful with the management of money.	1	2	3	4	5
2. Going on resolutely in spite of opposition.	1	2	3	4	5
3. Personal steadiness and stability.	1	2	3	4	5
4. Long-term planning.	1	2	3	4	5
5. Giving up today's fun for success in the future.	1	2	3	4	5
6. Working hard for success in the future.	1	2	3	4	5

Part 2:

Part2.1 Please rate your knowledge of environmental issues (please circle one number, where the higher the score the more knowledge you feel you have: 1= No knowledge at all to 5= A lot of Knowledge).

Concepts	1 No knowledge at all	2 Only a little	3 Some	4 A fair amount	5 A lot of Knowledge
1. In general, how much do you think you know about environmental issues in tourism?	1	2	3	4	5
2. Compared with 10 years ago, how much do you think you know about environmental issues in tourism?	1	2	3	4	5

Part 2.2 Please rate your attitudes toward the environment (Please circle the number that best describes the extent to which you disagree or agree with the following statements: 1= Strongly disagree to 5=Strongly agree).

Concepts	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
1. We are approaching the limit of the number of people that the earth can support.	1	2	3	4	5
2. Humans have the right to modify the natural environment to suit their needs.	1	2	3	4	5
3. When humans interfere with nature it often produces disastrous consequences.	1	2	3	4	5
4. Human ingenuity will ensure that we do not make the earth unliveable.	1	2	3	4	5
5. Humans are severely abusing the environment.	1	2	3	4	5
6. The earth has plenty of natural resources if we just learn how to develop them.	1	2	3	4	5
7. Plants and animals have as much right as humans to exist.	1	2	3	4	5
8. The balance of nature is strong enough to cope with the impacts of modern industrial nations.	1	2	3	4	5
9. Despite our special abilities, humans are still subject to the laws of nature.	1	2	3	4	5
10. The so-called 'ecological crisis' facing humankind has been greatly exaggerated.	1	2	3	4	5
11. The earth is like a spaceship with very limited room and resources.	1	2	3	4	5
12. Humans were meant to rule over the rest of nature.	1	2	3	4	5
13. The balance of nature is very delicate and easily upset.	1	2	3	4	5
14. Humans will eventually learn enough about how nature works to be able to control it.	1	2	3	4	5
15. If things continue on their present course, we will soon experience a major ecological catastrophe.	1	2	3	4	5

Part 2.3 Please rate your past experience with environmental attractions

1. How many times in the past would you estimate you have travelled to an environmental attraction (e.g. national park)?

❏ 1). Never   ❏ 2). 1 – 2 times per year   ❏ 3). 3 – 4 times per year
❏ 4). 5 - 6 times per year   ❏ 5). More than 6 times per year

Part 3: Please circle the number that best describes the extent to which you disagree or agree with the following statements: 1= Strongly disagree to 5= Strongly agree

Concepts	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
1. Most people I know would choose environmentally sustainable tourism attractions as a travel destination.	1	2	3	4	5
2. People who are important to me would think that I should visit environmentally sustainable tourism attractions.	1	2	3	4	5
3. People who are important to me would approve of me visiting environmentally sustainable tourism attractions.	1	2	3	4	5

Part 4: Please circle the number that best describes the extent to which you disagree or agree with the following statements: 1= Strongly disagree to 5= Strongly agree

Concepts	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
1. The sooner consumers start travelling to environmentally sustainable tourism attractions, the sooner the destination will transform to respond to their demands.	1	2	3	4	5
2. The more I travel to environmentally sustainable tourism attractions, the more I help persuade destinations to become friendlier to the environment.	1	2	3	4	5
3. By travelling to environmentally sustainable tourism attractions, I can make a difference in helping the environment.	1	2	3	4	5

Part 5 Please rate these statements about Thailand (Please circle the number that best describes the extent to which you disagree or agree with the following statements: 1= Strongly disagree to 5= Strongly agree)

Thailand's destination image	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
1. Thailand has interesting customs and cultural activities, and attractions.	1	2	3	4	5
2. Thailand has a unique culture.	1	2	3	4	5
3. Thailand has interesting historical attractions.	1	2	3	4	5
4. Thailand has scenic and natural beauty.	1	2	3	4	5
5. Thailand has a pleasant climate.	1	2	3	4	5
6. Thailand has a unique climate.	1	2	3	4	5
7. Thailand has friendly people.	1	2	3	4	5

Part 6: Please circle the number that best describes the extent to which you disagree or agree with the following statements: 1= Strongly disagree to 5= Strongly agree

Concepts	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
1. I understand local residents' culture.	1	2	3	4	5
2. I respect the history and culture heritage of the places I visit.	1	2	3	4	5
3. I respect the nature and wildlife of the places I visit.	1	2	3	4	5
4. I pick up litter left by other people.	1	2	3	4	5
5. I buy (or use) local products and services during my travel/trips.	1	2	3	4	5
6. I voluntarily visit a favourite location less often if it needs to recover from environmental damage.	1	2	3	4	5
7. I voluntarily stop visiting a favourite location if it needs to recover from environmental damage.	1	2	3	4	5
8. I prefer to choose products or services with eco-labels during my travel /trips.	1	2	3	4	5
9. I do not intend to disturb any creature or vegetation during my travel /trips.	1	2	3	4	5
10. I tell my companions not to feed the animals during my travel /trips.	1	2	3	4	5
11. After travelling, I leave where I have visited as clean as it was originally.	1	2	3	4	5
12. I do not overturn rocks and dried wood arbitrarily during my travel /trips.	1	2	3	4	5

Part 7: Please provide the following information:

1. What is your gender?
☐ 1). Male   ☐ 2). Female

2. What is your current age?..years old

3. Which of these categories best describe how much education you have completed?
☐ 1). Primary school   ☐ 2). Junior High school   ☐ 3). Senior High school
☐ 4). Vocational education   ☐ 5). Bachelor's degree   ☐ 6). Master's degree and above

4. What is your marital status?

☐ 1). Single; never married   ☐ 2). Married   ☐ 3). In a de-facto relationship

☐ 4). Separated, but not divorced   ☐ 5). Divorced   ☐ 6). Widowed

5. What is your occupation?

❒ 1). Student ❒ 2). Government employee ❒ 3). Employee ❒ 4). Business owner

❒ 5). Retired ❒ 6). Agriculturist ❒ 7). Unemployed ❒ 8). Home duties

❒ 9). Other (Please specify: _____)

6. What is your nationality?

❒ 1. American ❒ 2. Australian ❒ 3. Chinese ❒ 4. Thai

❒ 5. United Kingdom ❒ 6. Other (Please specify: _____)

Thank You for Your Cooperation

APPENDIX C

21 December 2015

Assoc Prof Martin Grimmer
Faculty of Business
University of Tasmania

Student Researcher: Porramate Jaratmetakul

Sent via email

Dear Assoc Prof Grimmer

Re: FULL ETHICS APPLICATION APPROVAL
Ethics Ref: H0015318 - Factors affecting the influence of culture on sustainable tourist behavior

We are pleased to advise that the Tasmania Social Sciences Human Research Ethics Committee approved the above project on 16 December 2015.

This approval constitutes ethical clearance by the Tasmania Social Sciences Human Research Ethics Committee. The decision and authority to commence the associated research may be dependent on factors beyond the remit of the ethics review process. For example, your research may need ethics clearance from other organisations or review by your research governance coordinator or Head of Department. It is your responsibility to find out if the approval of other bodies or authorities is required. It is recommended that the proposed research should not commence until you have satisfied these requirements.

Please note that this approval is for four years and is conditional upon receipt of an annual Progress Report. Ethics approval for this project will lapse if a Progress Report is not submitted.

The following conditions apply to this approval. Failure to abide by these conditions may result in suspension or discontinuation of approval.

1. It is the responsibility of the Chief Investigator to ensure that all investigators are aware of the terms of approval, to ensure the project is conducted as approved by the Ethics Committee, and to notify the Committee if any investigators are added to, or cease involvement with, the project.

2. Complaints: If any complaints are received or ethical issues arise during the course of the project, investigators should advise the Executive Officer of the Ethics Committee on 03 6226 7479 or human.ethics@utas.edu.au.

3. Incidents or adverse effects: Investigators should notify the Ethics Committee immediately of any serious or unexpected adverse effects on participants or unforeseen events affecting the ethical acceptability of the project.

4. Amendments to Project: Modifications to the project must not proceed until approval is obtained from the Ethics Committee. Please submit an Amendment Form (available on our website) to notify the Ethics Committee of the proposed modifications.

5. Annual Report: Continued approval for this project is dependent on the submission of a Progress Report by the anniversary date of your approval. You will be sent a courtesy reminder closer to this date. Failure to submit a Progress Report will mean that ethics approval for this project will lapse.

6. Final Report: A Final Report and a copy of any published material arising from the project, either in full or abstract, must be provided at the end of the project.

Yours sincerely

Katherine Shaw
Executive Officer
Tasmania Social Sciences HREC