1   **The effect of national culture on pro-environmental behavioural intentions of tourists in**

2   **the UK and China**

3

4   **Abstract**

5   National culture can affect consumer behaviour, but there is limited empirical evidence to

6   establish the exact magnitude of this effect in particular consumption contexts and in specific

7   consumption markets. This paper contributes to knowledge by exploring and comparing the

8   extent to which national culture may contribute to pro-environmental behaviour of tourists in

9   the UK and China. By drawing upon the five dimensions or values of national culture

10   proposed by Hofstede, Schwartz and Trompenaars and Hampden-Turner (Individualism,

11   Power distance, Long-term Orientation, Harmony and Indulgence) and by applying the

12   Partial Least Squares Structural Equation Modeling, the study establishes the causal

13   relationships between the cultural backgrounds of tourists, their environmental knowledge,

14   pro-environmental attitudes and pro-environmental behavioural intentions. The implications

15   for policy-making, management and future research are discussed.

16

17 **Keywords**

18 National culture, pro-environmental attitudes, pro-environmental behavioural intentions,

19 China, UK

20

21 **Highlights**

22 • Explores the effect of national culture on pro-environmental attitudes of tourists

23 • Compares the consumption markets of the UK and China

24 • Reveals the negative effect of individualism on pro-environmental attitudes

25 • Finds the positive effect of high power distance on pro-environmental attitudes

26 • These relationships can predict pro-environmental behavioural intentions of tourists

27

1. Introduction

The rapid development of global tourism brings about substantial environmental impacts, such as carbon emissions (Peeters and Dubois 2010), water consumption (Gössling 2015) and waste generation (Filimonau and De Coteau 2019). Urgent mitigation of these impacts is necessary for transition to a truly 'green' tourism economy (Reddy and Wilkes 2015). Mitigation can be achieved via economic incentives, regulatory interventions and technological advancements (Filimonau and Högström 2017). Further, voluntary changes in consumer behaviour can drive more environmentally-benign tourism (UNWTO 2007) and facilitating these changes provides a crucial mitigation opportunity for policy-makers and the industry to embrace (Budeanu 2007; Gössling *et al.* 2012; Juvan and Dolnicar 2017).

Pro-environmental tourist behaviour as a driver of the 'green' tourism economy represents a well-established research object (Lee and Jan 2015; Han *et al.* 2016; Su and Swanson 2017). Previous studies on this topic have shown that while tourists may have a good understanding of the environmental impacts of tourism, this understanding does not always translate into pro-environmental attitudes, let alone pro-environmental behavioural intentions (Kim and Filimonau 2017). This has prompted a call for research to understand the factors that can enhance pro-environmental attitudes of tourists (Leonidou *et al.* 2014). Such research is important as capitalizing upon the determinants of pro-environmental tourist attitudes can trigger more environmentally-benign behavioural intentions with subsequent more responsible tourist behaviour, thus ultimately benefiting the sustainable tourism development nationally, as well as internationally (Chiu *et al.* 2014).

49   National culture can drive consumer attitudes and subsequent behaviour (Craig and

50   Douglas 2006). The role of national culture in shaping behavioural patterns of tourists has

51   long been recognised (Moscardo 2004), but the issue remains under-studied (Kang and

52   Moscardo 2006). In particular, merging national culture and pro-environmental tourist

53   attitudes in an attempt to understand the impact of the former on the latter has rarely been

54   empirically examined while there is growing evidence suggesting it can be significant (Nejati

55   *et al.* 2015; Kim and Filimonau 2017; Filimonau *et al.* 2018).

56   This study contributes to a better understanding of the role of national culture in

57   shaping pro-environmental attitudes and behavioural intentions in tourism. To this end, it

58   evaluates how certain, environment-related, dimensions of major national cultural theories

59   influence pro-environmental attitudes of tourists. Further, it analyses how these

60   pro-environmental attitudes drive pro-environmental behavioural intentions and establishes

61   the cross-cultural differences by comparing tourists in the UK and China. The focus on these

62   two countries is deliberate given the substantial share they occupy in the global tourism

63   market (UNWTO 2018).

64   By comparing the national cultures of the UK and China, the study established the

65   negative effect of individualism and the positive effect of high power distance on

66   pro-environmental attitudes of tourists from these two countries. It further revealed the

67   positive, yet statistically insignificant, effect of long-term orientation and harmony on

68   pro-environmental attitudes of tourists. Lastly, the effect of indulgence was found

69   insignificant. It is argued that the above relationships can aid policy-makers, industry

70 practitioners and academics in predicting pro-environmental behavioural intentions of tourists

71 in the UK and China.

72

73 2. **Literature review and the development of hypotheses**

74 *2.1. Environmental knowledge, pro-environmental attitudes, pro-environmental*

75 *behavioural intentions and pro-environmental behaviour in tourism*

76 Consumption leads to environmental degradation (Vlek and Steg 2007) and substantial

77 efforts have been applied to understand consumer behaviour in order to mitigate the growing

78 environmental footprint of irresponsible consumption (Ryan and Deci 2000; Gintis *et al.*

79 2003; Reis *et al.* 2000). The outcome of past research offers a rather limited comprehension

80 of consumer behaviour given its complexity (Galalae and Voicu 2013) and significant

81 variations in the patterns of consumer behaviour have been established across the different

82 consumption contexts and in the different consumption markets (Wells 2014). In the tourism

83 context, tourist behaviour is more complicated than the generic consumer behaviour (Van

84 Vuuren and Slabbert 2011). The intangible and experiential nature of travel makes tourists

85 more engaged in leisure activities and prompts them to showcase certain behavioural patterns

86 at different stages of travel consumption, i.e. before, during and after traveling (Yoo and

87 Chon 2008). March and Woodside (2005) define consumer behaviour in tourism as the way

88 tourists behave according to their attitudes towards a certain product, and how they convey

89 their response by using that product (or refusing its use). Tourist behaviour is a result of

90 complex decision-making which involves complicated psychological (internal) and

91 environmental (external) variables (Sirakaya and Woodside 2005). An in-depth understanding

92 of the complexities and interrelationships between these variables represents an important

93 research challenge (Castro *et al.* 2007).

94   A number of conceptual models and theories have attempted to predict tourist

95 behaviour, with the theory of planned behaviour (TPB) and the theory of reasoned action

96 (TRA) being the most popular (Moutinho 1987). TPB contends that a behavioural intention is

97 formed by the attitude, subjective norm, and perception of behavioural control among tourists

98 (Ajzen 2002). It extends TRA by incorporating the perception of behavioural control into a

99 set of variables under review. TRA overlooks the behavioural control of TPB under the

100 assumption that people have volitional control over the behaviour of interest (Kollmuss and

101 Agyeman 2002). Although the validity of the TPB model has been acknowledged through its

102 application in various consumption contexts (Venkatesh *et al.* 2003; Baker *et al.* 2007;

103 Liobikienė *et al.* 2016), it is deemed too simplistic to study tourist behaviour in the context of

104 climate change (Anable *et al.* 2006). The latter is characterised by larger complexity which is

105 best exemplified by the attitude-behaviour gap (Hares *et al.* 2010). The attitude-behaviour

106 gap is recognised as a major obstacle towards environmentally-benign consumer behaviour in

107 the context of sustainable tourism calling for a better understanding of the means for its

108 reduction (Juvan and Dolnicar 2014; Higham *et al.* 2016; Kiatkawsin and Han 2017).

109   It is acknowledged that tourist attitudes influence tourist behavioural intentions, which

110 may subsequently affect tourist behaviour; hence, tourist attitudes represent an important

111 predictor of tourist behaviour although they cannot directly determine it (Leonidou *et al.*

112 2015). For example, negative tourist attitudes towards a particular brand may result in

113   negative purchasing intentions, thus stopping tourists from purchasing products associated

114   with this brand (Gössling and Hall 2006; Chan 2008; Cohen *et al.* 2014). This suggests that

115   pro-environmental attitudes of tourists can activate their pro-environmental behavioural

116   intentions, thus underlining the need to establish the drivers of pro-environmental consumer

117   attitudes in tourism first (Jeong *et al.* 2014).

118   There is emerging evidence of pro-environmental consumer behaviour in tourism

119   (Halpenny 2010; Han 2015; Kim and Filimonau 2017) which is understood as the tourist

120   behaviour which seeks to mitigate its negative impact on the environment by, for example,

121   minimising the use of natural resources, conserving energy and reducing wastage when on

122   holiday (Kollmuss and Agyeman 2002). Such behaviour is also referred to in the literature as

123   the responsible behaviour (Mobley *et al.* 2010), green behaviour (Bergin-Seers and Mair

124   2009) and environmentally-friendly behaviour (Dolnicar *et al.* 2008). The formation of the

125   pro-environmental tourist behaviour is deemed to be similar to the (more) generic tourist

126   behaviour in a way that behavioural intentions are seen as a precursor to actual behaviour and

127   the attitudes influence behavioural intentions of tourists (Lee and Moscardo 2005; Doran *et al.*

128   2015; Leonidou *et al.* 2015). However, previous environmental knowledge of tourists

129   represents an important extra variable in the formation of pro-environmental tourist

130   behaviour (Laroche *et al.* 2002). Environmental knowledge is the degree of personal concern

131   regarding the purity of the natural environment (Huang and Shih 2009) which, in the context

132   of tourism, is understood as the level of consumer familiarity with the environmental impacts

133   of tourism (Powell and Ham 2008).

Environmental knowledge has long been established as a driver of pro-environmental tourist attitudes (McDougall 1993; Chen and Peng 2012; Cheng and Wu 2015). For example, Perterson (1982) recognised the improved ability of tourists with better environmental knowledge to appreciate, care for, and show empathy towards the environment while Wurzinger and Johansson (2006) describe such tourists as being more concerned with the environmental footprint of their holiday travel, exemplifying positive pro-environmental attitudes that may strengthen their intention to reduce this environmental footprint. Likewise, Bergin-Seers and Mair (2009) identify that environmental knowledge of tourists translates into their pro-environmental behavioural intentions when on holiday. Puhakka (2011) finds that tourists with better knowledge of the environmental impacts from tourism are more willing to reduce the negative impacts of their holiday travel and behave in a more environmentally-responsible way. Higham and Cohen (2011) demonstrate how tourists' knowledge of climate change can affect their attitudes towards flying. Lastly, Kollmuss and Agyeman (2002) pinpoint that the different levels of environmental knowledge influence pro-environmental attitudes of tourists with a subsequent, positive or negative, impact on their pro-environmental behavioural intentions.

Pro-environmental attitudes are defined as a psychological tendency expressed by consumers when evaluating the natural environment with some degree of favour or disfavour which brings about consequent action (Milfont and Duckitt 2010). For example, pro-environmental attitudes of tourists have a significant positive effect on their willingness to pay for 'green' hotels (Choi *et al.* 2009; Dodds *et al.* 2010; Han *et al.* 2010). The positive correlation between pro-environmental consumer attitudes and their pro-environmental

behavioural intentions, such as consumer support of 'green' practices, has been established in restaurants (Namkung and Jang 2013) and beach clubs (Merli *et al.* 2019). Similarly, it has been pointed out that negative behavioural intentions and patterns of actual tourist behaviour, such as boycotting specific tourism products or particular travel service providers, may stem from negative pro-environmental attitudes of tourists towards them (Cohen *et al.* 2014).

Based on the above literature review, Figure 1 illustrates the linkage between environmental knowledge of tourists, their pro-environmental attitudes and pro-environmental behavioural intentions. This will inform this study's research design by highlighting the main variables to be considered. Next to the variables of environmental knowledge, pro-environmental attitudes and pro-environmental behavioural intentions, Figure 1 pinpoints national culture as another important variable to research due to its possible effect on decision-making of tourists in the context of sustainable tourism development as previously shown in the literature. National culture will therefore be introduced next.

[Insert Figure 1 here]

2.2. National culture, pro-environmental attitudes and pro-environmental behavioural intentions in tourism

2.2.1. National culture

Elgin (1994) pioneered the idea that effective interventions to make consumer behaviour more environmentally-benign could only succeed if scholars were to confront this challenge

at a much deeper, psychological, level of understanding, such as at the level of people's national culture and consciousness. This was probably the first time when the recognition was given to the national cultural background of consumers as one of the possible drivers of pro-environmental behavioural changes. The research into this issue has however remained scarce ever since which is, in part, due to the complexity of the integral elements of national culture that make this concept difficult to define (Groseschl and Doherty 2000). Isolating purely cultural effects from other, more macro-level related, socio-economic factors is not always easy or feasible because culturally normed behaviour and patterns of socialization often stem from a mix of religious beliefs, economic influences and political exigencies (Sekaran 1983).

Although the concept of national culture can be considered abstract, the influence of national culture on consumer behaviour cannot be ignored (Pizam and Fleischer 2005). National culture includes such elements as shared values, beliefs and norms that collectively distinguish a particular group of people from others (Dawar and Parker 1994; Hofstede 2001; Pizam *et al.* 1997). These widely shared values are programmed into individuals in subtle ways from an early age (Otaki *et al.* 1986), they are highly resistant to change (Hofstede 1991) and remain evident when at home, but also while traveling abroad (Moutinho 1987). National culture consists of ways of perceiving, thinking, and deciding that have worked in the past and become institutionalized within a particular group of people in standard operating procedures that guide consumer behaviour (Triandis 1995).

Several theory-based models (Hofstede 1980, 2005; Schwartz 1999; Trompenaars and Hampden-Turner 1997) have been developed in an attempt to better understand and

199   categorize national cultures. These models are based on specific characteristics (also known

200   as the dimensions or values) of national culture that are deemed to be representative of

201   specific population groups. Theories of national culture suggest that these dimensions or

202   values influence the psychological processes of consumption, including the process

203   underlying why and how people engage in particular social or consumption behaviour

204   (Soares *et al.* 2007).

205   The Hofstede (1980)'s model was the first to propose the major dimensions of national

206   culture described as: Power distance (describes the acceptance of unequal distribution of

207   power in society); Individualism (describes the extent to which the individual is emphasized

208   over the group in society); Masculinity (describes the extent of emphasis put on

209   competitiveness, assertiveness and sense of achievement in society); Uncertainty Avoidance

210   (describes how well people can cope with uncertainty in society); Indulgence (describes the

211   extent to which people try to control their internal desires and impulses in society); and

212   Long-term orientation (describes the degree to which society focuses on the future). Despite

213   the critique of the Hofstede's work for the implicit assumptions it employs when considering

214   the residents of specific countries being the representatives of single national cultures

215   (Maznevski *et al.* 2002), this model offers a strong conceptual base and roadmap towards a

216   better understanding of specific national cultures (Kolman *et al.* 2003). Importantly,

217   subsequent works on national culture by Schwartz (1999) and Trompenaars and

218   Hampden-Turner (1997) had a similar conceptual view with Hofstede in that they considered

219   each national culture, which is being represented by a specific country, to have a common set

220   of core values and norms guiding consumer behaviour of its members. Schwartz (1999) and

221 Trompenaars and Hampden-Turner (1997) developed alternative models to aid in an

222 understanding of national culture but these shared a number of commonalities with the

223 pioneering model developed by Hofstede (1980). Figure 2 highlights the inter-linkages

224 between the specific dimensions or values of major national culture theories and the

225 conceptual overlaps these theories have. For example, the Hierarchy value from the

226 Schwartz's model (1999), the Achievement dimension from the Trompenaars and

227 Hampden-Turner's model (1997), as well as the Power distance dimension from the

228 Hofstede's model, are all closely related as they describe the societal (un)acceptance of

229 unequal distribution of power. Likewise, the Mastery and Harmony value from the

230 Schwartz's model is related to the Internal and Outer direction of the Trompenaars and

231 Hampden-Turner's model in a way that they both explain how people relate to the

232 environment in which they reside. It is important to note that, although the models by

233 Hofstede (1980), Schwartz (1999) and Trompenaars and Hampden-Turner (1997) have been

234 acknowledged as being contemporary and theoretically sound (Drogendijk and Slangen 2006),

235 it is argued that countries cannot be used as proxies of national cultures as many countries

236 have historically featured multicultural communities due to migration. A better idea might

237 therefore be to measure the dimensions or values of national culture of importance and then

238 use these in explaining why the differences across national cultures occur (Mattila 2019).

239 This idea is however beyond the scope of this study.

240   [Insert Figure 2 here]

241

242   *2.2.2. Role of national culture in shaping pro-environmental attitudes of tourists*

243   Within the complexity of psychological variables affecting tourist attitudes, national culture

244   may play an important role (Woodside *et al.* 2011) which has been confirmed empirically

245   (Dimanche 1994; Pizam and Jeong 1996; Kozak 2002). Table 1 reviews the literature which

246   offers evidence for national culture to impact tourist consumption. It indicates that the

247   Hofstede's model of national culture has been most extensively used in extant research on the

248   topic in question.

249   [Insert Table 1 here]

250   Despite growing academic interest in national culture as an influencer of consumer

251   choice in tourism, the role of national culture in shaping pro-environmental attitudes of

252   tourists remains scholarly overlooked and there is a need for a more systematic investigation,

253   especially with a view of generating empirical evidence (Ahn and McKercher 2015). The

254   keywords 'national culture' OR AND 'tourism' AND 'pro-environmental' were employed to

255   search the subject-specific literature on this topic via Google Scholar. Table 2 reviews past

256   research on the effect of national culture on pro-environmental attitudes of tourists and shows

257   a limited scope of existing studies. While these provide some useful insights, more research is

258   necessary to better understand how the effect of national culture can be capitalized upon

259   when designing interventions for the mitigation of growing environmental impacts of tourism

260   via changing tourist attitudes and, subsequently, affecting their behavioural intentions.

261   [Insert Table 2 here]

262   This study contributes to knowledge by exploring the role of national culture in shaping

263   pro-environmental attitudes and subsequent behavioural intentions of tourists in the UK and

264 China. These countries are chosen for analysis because of s steady growth in their tourism

265 markets. They are further selected due to the substantial cross-cultural differences that enable

266 a better comparison and a more robust, critical evaluation of the role of national culture in

267 pro-environmental tourist consumption. The main dimensions / values of national culture

268 attributed to the UK and China as proposed by Hofstede (1980, 2005); Schwartz (1999); and

269 Trompenaars and Hampden-Turner (1997) are established next as these will be employed to

270 build the study's conceptual model and derive the research hypotheses that will be introduced

271 herewith.

272

273 *2.2.3. Characteristics of national cultures of the UK and China*

274 China has rapidly emerged as a key player in the global tourism market in terms of both

275 outbound and inbound tourism (Filimonau *et al.* 2020). In turn, the UK represents a mature

276 tourism market and remains one of the most visited destinations worldwide (WTTC 2017).

277 Although it has never been studied in detail, national culture has long been acknowledged to

278 affect tourism in these consumption markets. For example, the Chinese tend to travel in

279 groups (Wong and Lau 2001), which is believed to root in their cultural traditions. Indeed, the

280 Chinese go about their affairs in an orderly, respectful manner as the feeling of collectivism

281 dominates in China (Chan 2001). This collectivism originated in the early agrarian economies

282 and was further enhanced in the teachings of Confucius (Lewis 2006). This contrasts the

283 national culture of the UK, where individual opinions are more respected (Lewis 2006). This

284 finds reflection in the travel patterns of British tourists who have often been found to prefer

285 travelling alone (Filimonau and Perez 2019).

286   Figure 3 provides an overview of the major dimensions / values of national culture of

287   China and the UK as proposed by Hofstede. It shows that China is a highly collectivistic

288   society (score 20) that emphasizes the group goals over the personal gains. This implies that

289   the Chinese prefer defining themselves in relation to the group and overlooking personal

290   goals to keep in-group harmony (Chen 2008). In contrast, the British are highly

291   individualistic (score 89) and refer to themselves as the personal value driven, autonomous

292   and distinct individuals (Hu *et al.* 2001). Further, China is a high power distance society

293   (score 80), whose members observe and respect unequal relationships (Yan 2006). The less

294   powerful people in China are prepared to obey the more powerful people (Di 2003) which is

295   almost diametrically opposite to the British (score 35) whose society has a much flatter and,

296   thus, a more democratic structure where everyone can voice their opinions (Lewis 2006).

297   Next, China is a typical long-term oriented society (score 87) which attaches more

298   importance to the future, including persistence, saving and adapting to changing

299   circumstances (Hofstede 2005). The long-term score is moderate in the UK (score 51)

300   suggesting that the British value the spur of the moment (Filimonau and Perez 2019).

301   Moreover, the UK is an indulgent society (score 69) which seeks gratification of basic and

302   natural human desires to fulfil the need of enjoying life and having fun. In contrast, the

303   Chinese have a strong perception of life control (score 24) and tend to suppress gratification

304   of immediate needs for the sake of sustained, long-term benefits (Hofstede 2017).

305   [Insert Figure 3 here]

306   Importantly, the Harmony/Mastery cultural value by Schwartz (1999) or the similar

307   Outer/Internal direction cultural dimension by Trompenaars and Hampden-Turner (1997)

17

308   represent another important feature of national culture which has direct reference to the

309   environment. Although this value / dimension is included into this study, it is not however

310   depicted in Figure 3 which is due to the Hofstede (2017)'s model operating no similar

311   dimensions. According to Schwartz (1999), China is an outer-direction (or Harmony-driven)

312   national culture which prioritizes the preservation of the environment rather than

313   environmental change. The UK is an internal-direction (or Mastery-driven) national culture

314   with the British seeking to change the environment to attain the goals of personal or

315   socio-economic well-being (Schwartz 2006).

316

317   *2.2.4. The study's conceptual model and research hypotheses*

318   This study will test the role of national culture in shaping pro-environmental attitudes of

319   tourists by examining the five traits of national culture identified above. The choice of these

320   specific traits is justified as follows. Individualism and collectivism are the most established

321   dimensions of national culture (Cho *et al.* 2013). In the individualistic national cultures,

322   people are independent of one another and driven by personal goals and achievements, thus it

323   is assumed that such national cultures exemplify negative pro-environmental attitudes

324   because they perceive their individual efforts as being irrelevant to making a difference when

325   combating the environmental impacts of tourism (Kim and Choi 2005). In contrast, the

326   collectivistic societies, such as those of indigenous South Americans (Oyserman *et al.* 2002),

327   are tightly integrated and prone to prioritize the well-being of the group over individualistic

328   achievement. Such cultures promote a willingness to share scarce resources; they support

329   what is best for the society as a whole, thus being more consistent with the protection of the

330   environment and societal development (McCarty and Shrum 2001). It is therefore assumed

331   that the collectivistic cultures, such as China, exert positive pro-environmental attitudes. This

332   has been confirmed empirically, although not in the tourism context. For instance, Chan

333   (2001) finds that the Chinese consumers are more likely to demonstrate 'greener' purchasing

334   attitudes due to a strong trait of collectivism in their national culture. Likewise, Eom *et al.*

335   (2016) claim that a trait of individualism does not correlate significantly with the nation's

336   high environmental concern. Filimonau *et al.* (2018) find that collectivism is significantly

337   related to some aspects of tourist pro-environmental attitudes in Poland. It can therefore be

338   hypothesized that the dimension of individualism and collectivism has effect on

339   pro-environmental attitudes of tourists (H1).

340   The members of high power distance national cultures believe that power in the society

341   should be concentrated in the hands of leaders whose authority should not be questioned

342   (Magnusson *et al.* 2008). It is argued that societies with high power distance scores exert low

343   environmental attitudes since high power distance leads to a weaker capacity for a debate and

344   undermines the private sector and public responsiveness to major societal challenges, such as

345   environmental change (Husted 2005) which is proven empirically in Cox *et al.* (2011) and

346   Park *et al.* (2007). Likewise, Tata and Prasad (2015) qualitatively synthesized previous

347   research on this topic and concluded that the national cultures with low scores of power

348   distance hold stronger attitudes towards sustainability. It is therefore hypothesized that power

349   distance exerts effect on pro-environmental attitudes in tourism (H2).

350   The long-term oriented national cultures foster virtues oriented towards future rewards,

351   in particular, saving, persistence, and adapting to changing circumstances. In contrast,

352   short-term orientation implies that people foster virtues related to the past and the present,

353   including respect for traditions, national pride and fulfillment of social obligations. It is

354   argued that this dimension is closely related to pro-environmental attitudes of tourists as the

355   main environmental impacts of tourism, such as climate change, will occur in the future

356   (Rosselló-Nadal 2014). This implies that societies with higher scores in long-term orientation

357   should foster greater pro-environmental attitudes. Long-term orientation is positively related

358   to tourist perceptions of environmental impacts of tourism but is not a significant predictor of

359   public and private environmental responsibility (Filimonau *et al.* 2018). The theory

360   describing the relationship between this cultural dimension and pro-environmental attitudes is

361   under-developed but Joireman *et al.* (2001) suggest that high considerations of future

362   (environmental) consequences build stronger pro-environmental attitudes and subsequent

363   behavioural intentions. The work by Joireman *et al.* (2001) does not, however, directly

364   measure the effect of long-term orientation, thus implying that its conclusions require

365   validation through empirical research. Here, it is assumed that long-term orientation has

366   effect on pro-environmental attitudes in tourism (H3).

367   The harmony-aligned national cultures execute content to accept and fit into the natural

368   and social world as they find it. They further seek to understand, preserve and protect this

369   world rather than to change, direct or exploit it (Schwartz 1999). In contrast, the mastery

370   oriented national cultures are self-focused and perceive the environment as a functional tool

371   to achieve their personal interests (Magnusson *et al.* 2008). This implies that this value is

372   closely related to pro-environmental tourist attitudes, which is confirmed empirically.

373   Filimonau *et al.* (2018) explored the harmony value in the context of pro-environmental

attitudes of Polish tourists finding that the harmony-aligned societies have stronger

pro-environmental attitudes and are therefore more likely to protect the environment. It is

suggested that the value of harmony exerts effect on pro-environmental attitudes in tourism

(H4).

The dimension of indulgence-restraint reflects the degree to which societies have strong

norms regulating and suppressing the instant gratification of human desires (McCarty and

Shrum 2001). Indulgence allows for gratification of basic and natural human desires related

to enjoying life and having fun, and tourism represents an intrinsically indulgent consumption

context which is distant from community norms (Alcock *et al.* 2017). Holidaying is regarded

as an opportunity to escape from pressures of day-to-day life and behave freely in pursuit of

unrestrained hedonic experiences (Koc 2013). In research on tourist attitudes towards air

travel and climate change, indulgence was identified as one of the reasons for why tourists fly

as this allows them reaching destinations quicker, thus enabling more time to be spent on

enjoyable tourist activities at a destination (Kroesen 2013). Gallego-Álvarez and Ortas (2017)

posit that the restraint societies are more engaged in environmental sustainability. However,

McCarty and Shrum (1994) claim that the fun/enjoyment value is positively correlated with

consumer attitudes towards recycling and suggest that recycling can be viewed as a facilitator

of fulfilling the emotions of fun and excitement. Graafland and Noorderhaven (2018) state

that indulgence is positively related to employees' engagement in environmental

sustainability but no significant effect has been found when testing this idea empirically. It is

therefore hypothesized that indulgence affects pro-environmental attitudes in tourism (H5).

395   Based on the above, the following conceptual model has been developed to explain the

396   research problem under scrutiny (Figure 4). Environmental knowledge has been added to the

397   model as an extra variable because testing the relationship between environmental knowledge

398   and pro-environmental attitudes of tourists can support the reliability of conceptual model as

399   highlighted previously in the literature review. The purpose of the model is not to dictate, but

400   to guide this research, including the collection, analysis and interpretation of primary data.

401   [Insert Figure 4 here.]

402

403   *2.2.5. Contribution to knowledge*

404   The study contributes to theory and knowledge by testing the five cultural dimensions or

405   values proposed by Hofstede (2005), Schwartz (1999) and Trompenaars and

406   Hampden-Turner (1997) in driving pro-environmental attitudes of tourists since the effect of

407   national culture on pro-environmental consumer behaviour in tourism has only marginally

408   been tested empirically to date. By offering empirical evidence on the above phenomenon,

409   this study can aid in the design of tourism policies underpinned by a better understanding of

410   the main drivers of pro-environmental consumer behaviour. Further, the study offers a unique

411   opportunity to test the validity of major cultural theories by comparing the two countries with

412   distantly different national cultures in an important consumption context, i.e. tourism.

413

414   **3. Research design**

The study employed the quantitative research paradigm for primary data collection and analysis. An extensive review of the relevant studies on national culture and pro-environmental attitudes and behavioural intentions enabled the extraction of measures that were used to design a self-completion survey questionnaire. The questionnaire was developed in English and then translated into Mandarin. To ensure the clarity of translation, the back-translation technique (Werner and Campbell 1973) was adapted.

The questionnaire (Appendices 1 and 2) contained 8 sections with the 34 items extracted from the literature that were designed to measure eight variables in the conceptual model (Table 3). These 34 items were operationalised using the 5-point Likert rating scale, ranging from strongly agree (1) to strongly disagree (5). The remaining two sections captured basic socio-demographic information and recent travel experiences of the sample. The main criteria to partake in the survey were that the prospective respondents would be at least 16 year old of age; defined themselves as the British (in the UK) or Chinese (in China) citizens who were born and raised in their respective countries; and had the experience of travel abroad with holidaying purpose at least once in the last 3 years.

[Insert Table 3 here]

Prior to survey administration, a pilot test was conducted with a sample of university students (8 British and 8 Chinese) to clarify the wording and optimise the survey procedure, such as to define the approximate timing and refine the questionnaire layout. Following pilot feedback, a few statements were slightly revised to improve the clarity of expression. The survey was administered in October-December 2018 in public areas in the UK (Bournemouth) and China (Chengdu), where 431 and 394 useable questionnaires were collected, respectively.

According to Yamane (1967)'s sample size formula, the size of the achieved British and Chinese samples was sufficient for an in-depth quantitative analysis.

Table 4 reports on the sample profiles. Both samples demonstrate similar distributions in respect of gender, occupation, level of education, personal salary, family status and travel frequency, but differ in age. In terms of the UK sample, the Office for National Statistics (2018) reported the following features of overseas trips undertaken by UK residents in 2017: an almost equal gender split and age distribution of 16-24 (10.2%), 25-34 (21.5%), 45-54 (19.3%), 35-44 (19.0%), 55-64(13.8%), 65 and over (11.0%). The achieved UK sample had more female respondents compared to national travel statistics which can be attributed to higher probability of female participation in research compared to males (Curtin *et al.* 2000). Although the achieved UK sample had more respondents aging 16-24, many of these were full-time employees. Comprehensively, the profile of the UK sample was well-structured and mostly representative of the outbound tourism market of the UK. As for the Chinese sample, the China Tourism Academy-CTA (2018) reported that there were 130 million overseas trips undertaken by Chinese residents in 2017. 59% of these were made by females and 41% by males who were mostly born in the 1980s. In the achieved Chinese sample, the profile of respondents was well-structured and broadly representative of the China Outbound Tourism Statistics (CTA 2018).

[Insert Table 4 here]

The data were screened and digitized for analysis in SPSS Statistics 25.0 and SmartPLS (v.3.2.8) software (Ringle *et al.* 2015). The Partial Least Squares Structural Equation Model (PLS-SEM) was chosen to predict the causal relationships between the variables as it

24

provides an alternative approach to covariance-based analysis (CB-SEM) for the situations in which theory is less developed (Roldán and Sanchez-Franco 2012). PLS-SEM was used in this study because it aimed to extend an existing theory towards a new consumption market of tourism rather than to validate a mature theory within the conventional consumption market (Hair *et al.* 2011). Further, the measurement instruments of this study are not yet properly formed and the causal relationships are relatively new while the PLS-SEM technique is best suited for the use in such contexts (Rigdon 2012). The PLS-SEM technique was previously employed to effectively analyse the structural research models in the field of hospitality and tourism (Do Valle and Assaker 2016; Ali *et al.* 2018; Filimonau *et al.* 2018) which provides further justification for its use in this study.

4. Data analysis

4.1. Data examination

The data were first examined to eliminate the occurrence of missing entries, detect suspicious response patterns and identify outliers. Although PLS-SEM is a nonparametric statistical method which makes no assumptions about the data distribution, it may influence the result if the data are far from normal distribution. Hence, it was important to verify that the data were distributed sufficiently well for analysis (Hair *et al.* 2011). The descriptive statistics for the variables including skewness and kurtosis are represented in Appendix 3 and 4; these values were found to be good. The items were re-coded to direct the variables in order to operationalise these constructs as follows. High scores of the Individualism-Collectivism

480   construct indicated a stronger trait of Individualism, reflecting tourist's concern of the

481   negative environmental impacts from tourism. Higher scores of the Power Distance construct

482   meant a high degree of societal rules, indicating tourist's preference for environmental

483   responsibility. Higher scores of the Long-term/ Short-term Orientation construct indicated

484   longer-term orientation, gauging tourist's concern of the importance of future state of the

485   environment. Higher scores of the Harmony-Mastery construct stood for a harmony-aligned

486   culture, investigating tourist's preparedness to protect the environment. Higher scores of the

487   Indulgence-Restraint construct captured a hedonic culture, looking into tourist's choice

488   between individual happiness and environmental conservation. Higher scores of

489   Environmental Knowledge indicated better tourist awareness of the environmental impacts

490   from tourism. Higher scores of Pro-environmental Attitudes indicated stronger tourist

491   attitudes towards the negative environmental impacts. Higher scores of Tourist Behavioural

492   Intentions indicated stronger tourist willingness to change behaviour to make it more

493   environmentally-benign.

494

495   *4.2.   Assessment of the measurement model*

496   There were two stages of analysis. The first stage was the assessment of the measurement

497   model which tested if the theoretical constructs under investigation were correctly captured.

498   The second stage was the design of the structural model to evaluate how the latent variables

499   were related to each other. Prior to that, it was important to decide whether the constructs

500   were measured in a formative or reflective manner, otherwise the incorrect assessments of the

501   relationships could be made (Diamantopoulos *et al.* 2008). Previous studies have analysed

502   and validated the reflective measurement of cultural dimensions (Magnusson *et al.* 2008;

503   Reisinger and Crotts 2009; Soares *et al.* 2007), pro-environmental knowledge (Haron *et al.*

504   2005), pro-environmental attitudes and pro-environmental behavioural intentions (Filimonau

505   *et al.* 2018) suggesting that dropping an indicator would not alter the conceptual domain of

506   the construct. Hence, the corresponding criteria used to assess validity and reliability were

507   internal consistency reliability as well as convergent and discriminant validity (Duarte and

508   Amaro 2018).

509   In this initial assessment, convergent validity were not met as the average variance

510   extracted (AVE) value of Harmony-Mastery, Individualism-Collectivism and

511   Pro-environmental attitudes variables fell below the critical thresholds (0.7). Generally,

512   indicators with the outer loadings between 0.4 and 0.7 should be considered for removal only

513   when deleting the indicator leads to meeting the suggested threshold value (Hair *et al.* 2017).

514   Considering their contribution to content validity, only item IND2 (l=0.565), HARM3

515   (l=0.372), HARM4 (l=0.402) and EN3 (l=0.459) were removed from the model. The

516   re-assessment was held (Table 5). Composite reliability (CR) of each construct was above the

517   suggested threshold of 0.7 indicating a satisfactory level of internal consistency reliability.

518   AVE met the requirements for exploratory study indicating that the communality of the

519   construct was satisfactory. Next, discriminant validity was assessed through the Fornell and

520   Larcker (1981) criterion. As presented in Table 6, the constructs sharing more common

521   variance with the assigned indicators were truly distinct from the other indicators, thus

522   accepting discriminant validity.

523   [Insert Table 5 here]

524   [Insert Table 6 here]

525

4.3. Assessment of the structural model

527 A bootstrapping procedure with 5000 iterations was performed to assess the hypothesized

528 relationships among the constructs in the conceptual model. Table 7 reports on the explained

529 variance of the endogenous constructs (R^2) to evaluate the predictive power of the research

530 model. According to Chin and Dibbern (2010), the proposed model achieved a moderate

531 explanation of Pro-environmental attitudes and Pro-environmental behavioural intentions

532 variances. The Q^2 developed by Stone (1974) and Geisser (1974) verified the existence of

533 predictive relevance since Q^2 values were positive.

534   [Insert Table 7 here]

535

4.4. Interpretation of results

537 Table 8 presents the results of modeling. It shows that individualism had significant effect on

538 tourist pro-environmental attitudes of the British and the Chinese; therefore H1 was accepted

539 and confirmed for both study groups. Through the path coefficients (β) it was established that

540 individualism was negatively related to tourist pro-environmental attitudes and that the

541 negative effect was greater in the British (β =-0.202; t=3.857) than in the Chinese (β=-0.168;

542 t=3.525) sample. The higher scores of individualism therefore indicated lower tourist concern

543 of the environmental impacts of tourism. Power distance exerted significant effect on

544 pro-environmental attitudes of tourists; thus, H2 was confirmed for both study groups. Power

distance was positively correlated with tourist pro-environmental attitudes and the positive effect was greater in the Chinese (β =0.300; t=6.041) than in the British (β=0.262; t=6.360) sample. This suggested that higher scores of power distance were well related to stronger tourist concern of the environmental impacts from tourism. The effect of long-term orientation was found to be quasi-significant in the British (p=0.091) and the Chinese (p=0.110) samples, thus suggesting that long-term orientation did not impose a significant influence on pro-environmental attitudes of tourists (H3). Concurrently, long-term orientation was found to be positively related to pro-environmental attitudes in the British (β=0.098) and the Chinese (β=0.093) samples, implying that H3 was not confirmed. Higher scores of harmony were positively related to higher pro-environmental attitudes but the effect was of near-marginal significance in the British (β=0.062; p=0.191) and the Chinese (β=0.060; p=0.286) samples. H4 was therefore not supported. Lastly, H5 was not confirmed as the indulgence scores were not statistically significant in either British (β=-0.056; p=0.254) or Chinese (β=0.044; p=0.364) samples.

[Insert Table 8 here]

The model revealed that environmental knowledge exerted a positive and significant impact on pro-environmental attitudes in tourism with this effect being more pronounced for the British (β=0.345; t=7.682) rather than Chinese (β=0.337; p=7.253) sample. In other words, tourists with the higher levels of knowledge about the environmental impacts of tourism would be more inclined to develop positive attitudes towards the need to mitigate these impacts. Finally, the model revealed that pro-environmental attitudes were positively and significantly related to pro-environmental behavioural intentions of tourists with a stronger

567   relationship found in the Chinese (β=0.642; t=14.680) rather than British (β=0.615; p=17.222)

568   sample. Figure 5 summarizes the model's findings graphically.

569   [Insert Figure 5 here]

570

571   **5. Discussion**

572   Although national culture is considered a well-established factor which has the potential to

573   shape tourist attitudes in the context of more environmentally sustainable tourism

574   (Bohdanowicz 2006; Packer *et al.* 2014; Xu and Fox 2014), the related research agenda is

575   under-developed. In addition to only a handful of studies that have dealt with this topic to

576   date (Table 2), extant research has largely failed to establish how/if pro-environmental

577   attitudes and subsequent pro-environmental behavioural intentions of tourists can be

578   explained by the established models of national culture (Weeden 2011). In an attempt to

579   rectify this knowledge gap, Filimonau *et al.* (2018) tested the effect of the certain dimensions

580   or values of national culture on pro-environmental attitudes of Polish tourists. While being

581   pioneering, this study's drawback was in that it dealt with a country whose population was

582   very homogeneous in terms of its cultural background. Another limitation of the study by

583   Filimonau *et al.* (2018) was in the lack of a cross-country, comparative outlook which

584   prevented a larger-scale validation of its results. The study reported in this paper advanced

585   the field with a comparative, multi-cultural review of the linkages between the national

586   cultural backgrounds of tourists and their pro-environmental attitudes. It further examined the

587   mediating role of environmental knowledge in shaping pro-environmental attitudes and

pro-environmental behavioural intentions of tourists in the UK and China, thus reinforcing empirically the emerging academic discourse on the determinants of more environmentally-benign patterns of consumer behaviour in tourism.

The study's results indicated that individualism as a specific trait of national culture played a significant role in shaping pro-environmental attitudes of tourists in the UK and China. The highly individualistic societies exert the lower levels of public concern of the environmental impacts of tourism, which can consequently inhibit their behavioural intentions to reduce these impacts. These findings are consistent with previous research on the topic in question which established collectivism as an important driver of 'greener' consumer choices in tourism and beyond (Kim and Choi 2005; Filimonau *et al.* 2018; Chan 2001) and highlighted the negative effect of individualism on consumer willingness to take responsibility in mitigating the environmental impacts from tourism (Filimonau *et al.* 2018; Higham *et al.* 2016; Reis and Higham 2017). In this comparative study, the IND1 (*Nature is our common home and it is my personal responsibility to look well after it (reverse item)*) indicator demonstrated the highest outer weight among the five indicators of the Individualism construct, suggesting that tourists in both the UK and China failed to assign the task of environmental conservation to their personal consumption choices. This is in line with Dickinson *et al.* (2013) and Filimonau *et al.* (2018) who reported similar findings in the context of Poland, thus highlighting a major obstacle in the mitigation of environmental impacts of tourism. This suggests that the *personal responsibility for the environment* trait should be reinforced among tourists in the UK and China in order to improve their pro-environmental attitudes. To this end, demonstrating how changes to personal

consumption choices can lead to environmental conservation in tourism should constitute an important policy-making and management task in building personal responsibility of tourists to protect the environment when on holiday.

The study established the significant effect of power distance on pro-environmental attitudes of tourists in the UK and China, finding that the higher power distance societies exhibit stronger pro-environmental attitudes. This contrasts previous research which showcased how the lower power distance societies exerted stronger attitudes towards environmental conservation in the more generic, rather than tourism specific, consumption contexts (Park *et al.* 2007; Cox *et al.* 2011; Tata and Prasad 2015). In this comparative study, among the four indictors of power distance, the PD3 (*Tourism providers have the responsibility to teach tourists how to behave in a more environmentally friendly manner*) indicator shown the highest outer weight, thus suggesting that tourists in the UK and China tend to assign the task of environmental mitigation to the tourism industry. This further implies that tourists trust the industry representatives to provide clear guidelines on how to engage holidaymakers in the fulfillment of this task. The assumed industry's leadership in the mitigation of the environmental impacts from tourism was reported in Dickinson *et al.* (2013) in the context of Polish tourism. This suggests that the industry representatives should engage in the mitigation effectively and pro-actively in order to meet consumer expectations. This also proposes that the industry representatives should involve consumers in the mitigation by appealing to their personal responsibility in saving the environment, as established in the previous paragraph.

The study's results demonstrated that the long-term orientation trait of national culture was positively related to pro-environmental attitudes of tourists in the UK and China but did not exert a statistically significant effect. This finding is in partial agreement with Filimonau *et al.* (2018) who established that long-term orientation had a significantly positive effect on pro-environmental attitudes of Polish tourists but was found insignificant in shaping personal responsibility of tourists to conserve the environment when on holiday. The discrepancy in the results may be partially attributed to the different scales used to measure pro-environmental attitudes of tourists, but also because the UK and China are much more culturally heterogeneous than Poland. To strengthen the positive effect of long-term orientation on pro-environmental attitudes of tourists in the UK and China, it is important to emphasize the lasting negative effect of the key environmental impacts of tourism, such as climate change, on the future generations of consumers and outline the scope for personal action, such as voluntary behavioural change, in the effective mitigation of these impacts (Landauer *et al.* 2014; Gössling *et al.* 2012; Higham *et al.* 2016).

Likewise, the harmony trait of national culture was found to positively correlate with pro-environmental attitudes of tourists in the UK and China but this correlation was not identified as being statistically significant. This finding is partially consistent with Filimonau *et al.* (2018) who established that consumers in the harmony-aligned societies had stronger pro-environmental attitudes. The harmony trait can be reinforced among the UK and Chinese tourists by demonstrating the fragility of the natural environment and by highlighting the destructive role of tourism within, thus prompting stronger public environmental concern

652   with higher probability of pro-environmental behavioural intentions to occur among

653   consumers (Dolnicar 2006; Curtin 2010; Zhang *et al.* 2014).

654   The effect of indulgence on pro-environmental attitudes of tourists in the UK and China

655   was found insignificant. As this is the first time when this specific trait of national culture

656   was examined empirically in the context of environmentally-benign tourism, future research

657   should aim to test it in other consumption markets to better understand if it holds any effect

658   on pro-environmental attitudes of tourists.

659   Lastly, next to national culture, the level of public knowledge of the environmental

660   impacts from tourism was found to have significant and positive effect on pro-environmental

661   attitudes of tourists in the UK and China. This is in line with the previous work on

662   environmental knowledge as a precursor of pro-environmental consumer attitudes (Wurzinger

663   and Johansson 2006; Chen and Peng 2012; Cheng and Wu 2015). In this comparative study,

664   the positive effect of environmental knowledge was more pronounced for British rather than

665   Chinese tourists. This may potentially indicate that, to date, the UK policy-makers have been

666   more successful in raising consumer awareness of the detrimental environmental impacts of

667   tourism. In China, it is necessary to design effective public awareness campaigns to enhance

668   environmental knowledge of domestic tourists in an attempt to drive their pro-environmental

669   attitudes and then pro-environmental behavioural intentions as the latter two variables

670   correlate well in the Chinese, as well as British, samples.

671

672   **6. Conclusions**

673 This study applied a PLS-SEM model to explore the effect of national culture on

674 pro-environmental consumer behaviour in tourism. It tested the relationship between the

675 specific, environment-related, dimensions or values of national culture, pro-environmental

676 attitudes and pro-environmental behavioural intentions of tourists. It has further examined the

677 mediating role of environmental knowledge of tourists in their pro-environmental attitudes

678 and subsequent pro-environmental behavioural intentions. The contribution of this study to

679 knowledge is thus in that it provided empirical evidence to how the certain traits of national

680 culture could aid in predicting pro-environmental attitudes of consumers in a 'mature'

681 tourism market of the UK and in a rapidly 'emerging' tourism market of China.

682 The study's results have multiple implications for policy-making and management. It

683 was demonstrated that environmental knowledge determined pro-environmental attitudes of

684 tourists in both the UK and China, thus highlighting the crucial role of environmental

685 education in raising consumer awareness of the detrimental environmental impacts of tourism

686 in both markets. Importantly, this environmental education can aid in achieving a dual goal.

687 Firstly, it will strengthen pro-environmental attitudes of tourists in the UK and China given

688 that environmental knowledge correlates directly with pro-environmental attitudes. Secondly,

689 it will trigger such traits of national culture as long-term orientation and harmony to exert

690 stronger effect on pro-environmental attitudes of tourists in both markets given that this effect

691 was detected in this study but not classed as statistically significant. Further, educating

692 tourists of the negative repercussions of their consumption choices for the environment

693 should represent a cornerstone task of national governments which is supported by the strong

694 effect of the power distance trait of national culture as established in this study. This task is,

arguably, of particular importance for policy-makers in China where the national government tends to exert more control on the society compared to the UK. The tourism industry in the UK and China should closely support these public awareness building campaigns run by the national governments as this is what the consumers in both markets expect, which is in part due to the strong effect of power distance. This can be achieved by pro-active tourism industry's engagement in consumer environmental education in order to 'nudge' tourist behaviour to make it more environmentally-benign. Such joint, public and private, efforts are likely to have a stronger effect on strengthening public environmental knowledge and pro-environmental attitudes with a consequent positive impact on pro-environmental behavioural intentions of tourists in both countries.

The study outlined a number of promising research directions. First, future research should aim to provide further empirical evidence on the important role of national culture in the (ir)responsible consumption patterns of tourists from different tourism markets. This research stream should focus in particular on the developing and transitional economies, where tourism grows rapidly and accelerates the related environmental impacts. Second, future research should aim to test the effect of specific cultural traits on pro-environmental tourist attitudes. In particular, the relationship between indulgence and pro-environmental attitudes in tourism should be examined through dedicated research given that no correlation was found in this study despite some anecdotal evidence of its potential presence reported in the literature. Lastly, the feasibility of testing the effect of other, i.e. different from those examined in this study, dimensions or values of national culture on pro-environmental attitudes of tourists should be considered in future research.

717 **Acknowledgment**

720

References

Ahn, M.J., and B., McKercher (2015). The Effect of Cultural Distance on Tourism: A Study of International Visitors to Hong Kong. *Asia Pacific Journal of Tourism Research,* 20(1), 94-113.

Ajzen, I. (2002). Perceived Behavioral Control, Self-efficacy, Locus of Control, and the Theory of Planned Behavior. *Journal of Applied Social Psychology,* 32(4), 665-683.

Alcántara-Pilar, J.M., and D.S. Barrio-García. (2015). Antecedents of Attitudes toward the Website: the Moderating Role of Long-term Orientation and Individualism. *Cross Cultural Management,* 22(3), 379-404.

Alcock, I., M.P. White, T. Taylor, D.F. Coldwell, M.O. Gribble, K.L. Evans, and L.E. Fleming (2017). 'Green'on the Ground but not in the Air: Pro-environmental Attitudes are related to Household Behaviours but not Discretionary Air Travel. *Global Environmental Change,* 42, 136-147.

Ali, F., S.M. Rasoolimanesh, M. Sarstedt, C.M. Ringle, and K. Ryu (2018). An Assessment of the Use of Partial Least Squares Structural Equation Modeling (PLS-SEM) in Hospitality Research. *International Journal of Contemporary Hospitality Management,* 30(1), 514-538.

Anable, J., B. Lane, and T. Kelay (2006). An Evidence Base Review of Public Attitudes to Climate Change and Transport Behaviour. Available from: https://www.fcrn.org.uk/sites/default/files/Evidence_of_public_attitudes_and_behaviour.pdf (Accessed January 1, 2019).

Baker, E., S.S. Al-Gahtani, and G.S. Hubona (2007). The Effects of Gender and Age on

New Technology Implementation in a Developing Country: Testing the Theory of Planned Behavior (TPB). *Information Technology & People,* 20(4), 352-375.

Ballantyne, R., J. Packer, and L.A. Sutherland (2011). Visitors' Memories of Wildlife Tourism: Implications for the Design of Powerful Interpretive Experiences. *Tourism Management,* 32(4), 770-779.

Bergin-Seers, S., and J. Mair (2009). Emerging Green Tourists in Australia: Their Behaviours and Attitudes. *Tourism and Hospitality Research,* 9(2), 109-119.

Bohdanowicz, P. (2006). Environmental Awareness and Initiatives in the Swedish and Polish Hotel Industries-survey Results. *International Journal of Hospitality Management,* 25(4), 662-682.

Budeanu, A. (2007). Sustainable Tourist Behaviour -a Discussion of Opportunities for Change. *International Journal of Consumer Studies,* 31(5), 499-508.

Cannon, J.P., P.M. Doney, M.R. Mullen, and K.J. Petersen (2010). Building Long-term Orientation in Buyer–supplier Relationships: The Moderating Role of Culture. *Journal of Operations Management,* 28(6), 506-521.

Castro, B.C., E.M. Armario, and D.M. Ruiz (2007). The Influence of Market Heterogeneity on the Relationship Between a Destination's Image and Tourists' future behaviour. *Tourism Management,* 28(1),175-187.

Chan, E.S. (2008). Barriers to EMS in the Hotel Industry. *International Journal of Hospitality Management,* 27(2), 187-196.

Chan, R.Y. (2001). Determinants of Chinese Consumers' Green Purchase Behavior.

Psychology & Marketing, 18(4), 389-413.

Chen D.P. (2008). Research on Hofstede's Cross-cultural Study from the Perspective of Chinese Culture. *Jianghuai Forum,* 227(1),123-127. (In Chinese)

Chen, A., and N. Peng (2012). Green Hotel Knowledge and Tourists' Staying Behavior. *Annals of Tourism Research,* 39(4), 2211-2219.

Cheng, T.M., and H.C. Wu (2015). How do Environmental Knowledge, Environmental Sensitivity, and Place Attachment Affect Environmentally Responsible Behavior? An Integrated Approach for Sustainable Island Tourism. *Journal of Sustainable Tourism,* 23(4), 557-576.

Cheng, T.M., H.C. Wu, and L.M. Huang (2013). The Influence of Place Attachment on the Relationship between Destination Attractiveness and Environmentally Responsible Behavior for Island Tourism in Penghu, Taiwan. *Journal of Sustainable Tourism,* 21(8),1166-1187.

Chiang, C.F., and S.S. Jang (2008). An Expectancy Theory Model for Hotel Employee Motivation. *International Journal of Hospitality Management*, 27(2), 313-322.

Chin, W.W., and J. Dibbern (2010). A Permutation based Procedure for Multigroup PLS Analysis: Results of Tests of Differences on Simulated Data and a Cross Cultural Analysis of the Sourcing of Information System Services between Germany and the USA. In: *Handbook of Partial Least Squares: Concepts, Methods and Applications in Marketing and Related Fields*, Vinzi V.E., W.W. Chin, J. Henseler, and H. Wang (Eds), pp.171-193. Berlin: Springer.

China Tourism Academy-CTA (2018). 2017 Outbound Tourism Big Data Report. Available from: http://www.ctaweb.org/html/2018-2/2018-2-26-11-57-78366.html (Accessed January 1,

784   2019).

785   Chiu, Y.T.H., W.I. Lee, and T.H. Chen (2014). Environmentally responsible behavior in

786   ecotourism: Antecedents and implications. *Tourism Management,* 40, 321-329.

787   Cho, Y. N., A. Thyroff, M.I. Rapert, S.Y. Park, and H.J. Lee (2013). To be or not to be Green:

788   Exploring Individualism and Collectivism as Antecedents of Environmental Behavior.

789   *Journal of Business Research,* 66(8), 1052-1059.

790   Choi, G., H.G. Parsa, M. Sigala, and S. Putrevu (2009). Consumers' Environmental Concerns

791   and Behaviors in the Lodging Industry: A Comparison between Greece and the United States.

792   *Journal of Quality Assurance in Hospitality & Tourism,* 10(2), 93-112.

793   Cohen, S.A., G. Prayag, and M. Moital (2014). Consumer Behaviour in Tourism: Concepts,

794   Influences and Opportunities. *Current issues in Tourism,* 17(10), 872-909.

795   Cox, P.L., B.A. Friedman, and T. Tribunella (2011). Relationships among Cultural

796   Dimensions, National Gross Domestic Product, and Environmental Sustainability. *Journal of*

797   *Applied Business and Economics,* 12(6), 46-56.

798   Craig, C.S., and S.P. Douglas (2006). Beyond National Culture: Implications of Cultural

799   Dynamics for Consumer Research. *International Marketing Review,* 23(3), 322-342.

800   Crotts, J.C., and R. Erdmann (2000). Does National Culture Influence Consumers' Evaluation

801   of Travel Services? A Test of Hofstede's Model of Cross-cultural Differences. *Managing*

802   *Service Quality: An International Journal,* 10(6), 410-419.

803   Crotts, J., and A. Pizam (2003). The Effect of National Culture on Consumers' Evaluation of

804   Travel Services. *Tourism Culture & Communication,* 4(1), 17-28.

805   Curtin, S. (2010). Managing the Wildlife Tourism Experience: The Importance of Tour

806   Leaders. *International Journal of Tourism Research,* 12(3), 219-36.

807   Curtin, R., S. Presser, and E. Singer (2000). The Effects of Response Rate Changes on the

808   Index of Consumer Sentiment. *Public Opinion Quarterly,* 64, 413–428.

809   Dawar, N., and P. Parker (1994). Marketing Universals: Consumers' Use of Brand Name,

810   Price, Physical Appearance, and Retailer Reputation as Signals of Product Quality. *The*

811   *Journal of Marketing,* 58, 81-95.

812   Di X.W. (2003). Social Mobility and Relationship Trust. *Sociological Research,* 1, 10. (In

813   Chinese)

814   Diamantopoulos, A., P. Riefler, and K.P. Roth (2008). Advancing Formative Measurement

815   Models. *Journal of Business Research, 61,* 1203-1218.

816   Dickinson, J.E., D. Robbins, V. Filimonau, A. Hares, and M. Mika (2013). Awareness of

817   Tourism Impacts on Climate Change and the Implications for Travel Practice: A Polish

818   Perspective. *Journal of Travel Research, 52*(4), 506-519.

819   Dimanche, F. (1994). Cross-cultural Tourism Marketing Research: An Assessment and

820   Recommendations for Future Studies. *Journal of International Consumer Marketing,* 6(3-4),

821   123-160.

822   Do Valle, P.O., and G. Assaker (2016). Using Partial Least Squares Structural Equation

823   Modeling in Tourism Research: A Review of Past Research and Recommendations for Future

824   Applications. *Journal of Travel Research,* 55(6), 695-708.

825   Dodds, R., S.R. Graci, and M. Holmes (2010). Does the Tourist Care? A Comparison of

826   Tourists in Koh Phi Phi, Thailand and Gili Trawangan, Indonesia. *Journal of Sustainable*

827   *Tourism,* 18(2), 207-222.

828   Dolnicar, S. (2006). Nature-Conserving Tourists: The Need for a Broader Perspective.

829   *Anatolia,* 17(2),235-55.

830   Dolnicar, S., G.I. Crouch, and P. Long (2008). Environment-friendly Tourists: What do We

831   Really Know about them? *Journal of Sustainable Tourism,* 16(2), 197-210.

832   Doran, R., D. Hanss, and S. Larsen (2015). Attitudes, Efficacy Beliefs, and Willingness to

833   Pay for Environmental Protection When Travelling. *Tourism and Hospitality Research,* 15(4),

834   281-292.

835   Dorfman, P.W., and J.P. Howell (1988). Dimensions of National Culture and Effective

836   Leadership Patterns: Hofstede Revisited. *Advances in International Comparative*

837   *Management,* 3(1), 127-150.

838   Drogendijk, R., and A. Slangen (2006). Hofstede, Schwartz, or Managerial Perceptions? The

839   Effects of Different Cultural Distance Measures on Establishment Mode Choices by

840   Multinational Enterprises. *International Business Review*, 15(4), 361-380.

841   Duarte, P., and S. Amaro (2018). Methods for modelling reflective-formative second order

842   constructs in PLS: An application to online travel shopping. *Journal of Hospitality and*

843   *Tourism Technology,* 9(3), 295-313.

844   Elgin, D. (1994). Building a Sustainable Species-civilization: A Challenge of Culture and

845   Consciousness. *Futures,* 26(2), 234-245.

846   Eom, K., H.S. Kim, D.K. Sherman, and K. Ishii (2016). Cultural Variability in the Link

847   between Environmental Concern and Support for Environmental Action. *Psychological*

848   *Science,* 27(10), 1331-1339.

849   Filimonau, V., and M. Högström (2017). The Attitudes of UK Tourists to the Use of Biofuels

850   in Civil Aviation: An Exploratory Study. *Journal of Air Transport Management,* 63, 84-94.

851   Filimonau, V., and L. Perez (2019). National Culture and Tourist Destination Choice in the

852   UK and Venezuela: An Exploratory and Preliminary Study. *Tourism Geographies*, 21(2),

853   235-260.

854   Filimonau, V., and De Coteau, D. (2019). Food Waste Management in Hospitality Operations:

855   A Critical Review. *Tourism Management*, 71, 234-245.

856   Filimonau, V., J. Matute, M. Mika, and R. Faracik (2018). National Culture as a Driver of

857   Pro-environmental Attitudes and Behavioural Intentions in Tourism. *Journal of Sustainable*

858   *Tourism*, 26(10), 1804-1825.

859   Filimonau, V., Zhang, H., and Wang, L. (2020). Food waste management in Shanghai

860   full-service restaurants: a senior managers' perspective. *Journal of Cleaner Production,* 258,

861   120975.

862   Fornell, C.G., and D.F. Larcker (1981). Evaluating Structural Equation Models with

863   Unobservable Variables and Measurement Error. *Journal of Marketing Research, 18*(1),

864   39-50.

865   Funk, D.C., and T.J. Bruun (2007). The Role of Socio-psychological and Culture-education

866   Motives in Marketing International Sport Tourism: A Cross-cultural Perspective. *Tourism*

867   *Management,* 28(3), 806-819.

868   Galalae, C., and A. Voicu (2013). Consumer Behaviour Research: Jacquard Weaving in the

869   Social Sciences. *Management Dynamics in the Knowledge Economy Journal,* 2, 277-292.

870   Gallego-Álvarez, I., and E. Ortas (2017). Corporate Environmental Sustainability Reporting

871   in the Context of National Cultures: A Quantile Regression Approach. *International Business*

872   *Review,* 26(2), 337-353.

873   Geisser, S. (1974). A Predictive Approach to the Random Effects Model. *Biometrika,* 61,

874   101-107.

875   Gintis, H., S. Bowles, R. Boyd, and E. Fehr (2003). Explaining Altruistic Behavior in

876   Humans. *Evolution & Human Behavior,* 24(3),153-172.

877   Gössling, S. (2015). New Performance Indicators for Water Management in Tourism. *Tourism*

878   *Management,* 46, 233-244.

879   Gössling, S., and C.M. Hall (2006). Uncertainties in Predicting Tourist Travel Flows Under

880   Scenarios of Climate Change. *Climatic Change,* 79(3-4), 163-173.

881   Gössling, S., D. Scott, C.M. Hall, J.P. Ceron, and G. Dubois (2012). Consumer Behaviour

882   and Demand Response of Tourists to Climate Change. *Annals of Tourism Research,* 39(1),

883   36-58.

884   Graafland, J., and N. Noorderhaven (2018). National Culture and Environmental

885   Responsibility Research Revisited. *International Business Review,* 27(5), 958-968.

886   Groseschl, S., and L. Doherty (2000). Conceptualising Culture. *Cross Cultural Management:*

887   *an International Journal,* 7(4), 12-17.

888   Hair, J.F., C.M. Ringle, and M. Sarstedt (2011). PLS-SEM: Indeed a Silver Bullet. *Journal of*

889   *Marketing Theory and Practice*, 19, 139-151.

890   Hair, J.F., G.T.M. Hult, C.M. Ringle, M. Sarstedt (2017). *A Primer on Partial Least Squares*

891   *Structural Equation Modeling (PLS-SEM)*. 2nd ed. London: Sage.

892   Halpenny, E.A. (2010. Pro-environmental Behaviours and Park Visitors: The Effect of Place

893   Attachment. *Journal of Environmental Psychology,* 30(4), 409-421.

894   Han, H. (2015). Travelers' Pro-environmental Behavior in a Green Lodging Context:

895   Converging Value-belief-norm Theory and the Theory of Planned Behavior. *Tourism*

896   *Management,* 47, 164-177.

897   Han, H., L.T.J. Hsu, and C. Sheu (2010). Application of the Theory of Planned Behavior to

898   Green Hotel Choice: Testing the Effect of Environmental Friendly Activities. *Tourism*

899   *Management,* 31(3), 325-334.

900   Han, H., M. Jae, and J. Hwang (2016). Cruise Travelers' Environmentally Responsible

901   Decision-making: An Integrative Framework of Goal-directed Behavior and Norm Activation

902   Process. *International Journal of Hospitality Management,* 53, 94-105.

903   Hares, A., J. Dickinson, and K. Wilkes (2010). Climate Change and the Air Travel Decisions

904   of UK Tourists. *Journal of Transport Geography*, 18(3), 466-473.

905   Haron S.A, L. Paim and N. Yahaya (2005). Towards Sustainable Consumption: An

906   Examination of Environmental Knowledge among Malaysians. *International Journal of*

907   *Consumer Studies,* 29(5), 426-436.

908   Harth, N.S., C.W. Leach, and T. Kessler (2013). Guilt, Anger, and Pride about In-group

Environmental Behaviour: Different Emotions Predict Distinct Intentions. *Journal of Environmental Psychology,* 34, 18-26.

Higham, J.E., and S.A. Cohen (2011). Canary in the Coalmine: Norwegian Attitudes towards Climate Change and Extreme Long-haul Air Travel to Aotearoa/New Zealand. *Tourism Management,* 32(1), 98-105.

Higham, J., A. Reis, and S.A. Cohen (2016). Australian Climate Concern and the 'Attitude– behaviour Gap'. *Current Issues in Tourism,* 19(4), 338-354.

Higham, J., S.A. Cohen, C.T. Cavaliere, A. Reis, and W. Finkler (2016). Climate Change, Tourist Air Travel and Radical Emissions Reduction. *Journal of Cleaner Production, 111,* 336-347.

Hofstede Centre. (2017). *Compare Country.* Available from: https://www.hofstede-insights.com/product/compare-countries/ (Accessed January 1, 2019).

Hofstede, G. (1980). *Culture's Consequences: International Differences in Work-related Values.* CA: Sage.

Hofstede, G. (1991). *Cultures and Organizations. Intercultural Cooperation and its Importance for Survival. Software of the Mind*. London: Mc Iraw-Hill.

Hofstede, G. (2001). *Culture's Consequences: Comparing Values, Behaviors Institutions, and Organizations across Nations*. CA: Sage.

Hofstede, G. (2005). *Cultures and Organizations: Software of the Mind*, 2nd ed. New York: McGraw-Hill.

929　Hsieh, A.T., and C.W. Tsai (2009). Does National Culture really Matter? Hotel Service

930　Perceptions by Taiwan and American Tourists. *International Journal of Culture, Tourism and*

931　*Hospitality Research,* 3(1), 54-69.

932　Hu, B., L.A. Cai, and R.R. Kavanaugh (2001). Chinese and British Hotels: Cultural

933　Differences and Management. *Hospitality Review,* 19(1), 4.

934　Huang, P.S., and L.H. Shih (2009). Effective Environmental Management through

935　Environmental Knowledge Management. *International Journal of Environmental Science &*

936　*Technology,* 6(1), 35-50.

937　Huang, S.S., and J. Crotts (2019). Relationships between Hofstede's Cultural Dimensions and

938　Tourist Satisfaction: A Cross-country Cross-sample Examination. *Tourism Management,* 72,

939　232-241.

940　Hudson, S., and J.B. Ritchie (2001). Cross-cultural Tourist Behavior: An Analysis of Tourist

941　Attitudes towards the Environment. *Journal of Travel & Tourism Marketing,* 10(2-3), 1-22.

942　Husted, B.W. (2005). Culture and Ecology: A Cross-national Study of the Determinants of

943　Environmental Sustainability. *Management International Review*, 45(3), 349-371.

944　Jeong, E., S.S. Jang, J. Day, and S. Ha (2014). The Impact of Eco-friendly Practices on Green

945　Image and Customer Attitudes: An Investigation in a Café Setting. *International Journal of*

946　*Hospitality Management,* 41, 10-20.

947　Joireman, J.A., T.P. Lasane, J. Bennett, D. Richards, and S. Solaimani (2001). Integrating

948　Social Value Orientation and the Consideration of Future Consequences within the Extended

949　Norm Activation Model of Pro-environmental Behaviour. *British Journal of Social*

Psychology, 40(1), 133-155.

Juvan, E., and S. Dolnicar (2014). The Attitude-behaviour Gap in Sustainable Tourism. *Annals of Tourism Research,* 48,76-95.

Juvan, E., and S. Dolnicar (2017). Drivers of Pro-environmental Tourist Behaviours are not Universal. *Journal of Cleaner Production,* 166, 879-890.

Kang, M., and G. Moscardo (2006). Exploring Cross-cultural Differences in Attitudes Towards Responsible Tourist Behaviour: A Comparison of Korean, British and Australian Tourists. *Asia Pacific Journal of Tourism Research,* 11(4),303-320.

Kiatkawsin, K., and H. Han (2017). Young Travelers' Intention to Behave Pro-environmentally: Merging the Value-belief-norm Theory and the Expectancy Theory. *Tourism Management,* 59, 76-88.

Kim, A.K., D. Airey, and E. Szivas (2011). The Multiple Assessment of Interpretation Effectiveness: Promoting Visitors' Environmental Attitudes and Behavior. *Journal of Travel Research,* 50(3), 321-334.

Kim, C., and S. Lee (2000). Understanding the Cultural Differences in Tourist Motivation Between Anglo-American and Japanese Tourists. *Journal of Travel & Tourism Marketing,* 9(1-2),153-170.

Kim, S., and V. Filimonau (2017). On Linguistic Relativity and Pro-environmental Attitudes in Tourism. *Tourism Management,* 63,158-169.

Kim, S.S., and B. McKercher (2011). The Collective Effect of National Culture and Tourist Culture on Tourist Behavior. *Journal of Travel & Tourism Marketing,* 28(2), 145-164.

971 Kim, Y., and S.M. Choi (2005). Antecedents of Green Purchase Behavior: An Examination of

972 Collectivism, Environmental Concern, and PCE. *ACR North American Advances,* 32,

973 592-599.

974 Koc, E. (2013). Inversionary and Liminoidal Consumption: Gluttony on Holidays and

975 Obesity. *Journal of Travel & Tourism Marketing,* 30(8), 825-838.

976 Kollmuss, A., and J. Agyeman (2002). Mind the Gap: Why do People Act Environmentally

977 and What are the Barriers to Pro-environmental Behavior? *Environmental Education*

978 *Research,* 8(3), 239-260.

979 Kolman, L., N.G. Noorderhaven, G. Hofstede, and E. Dienes (2003). Cross-cultural

980 Differences in Central Europe. *Journal of Managerial Psychology,* 18(1), 76-88.

981 Kozak, M. (2002). "Comparative Analysis of Tourist Motivations by Nationality and

982 Destinations. *Tourism Management,* 23(1), 221-232.

983 Kroesen, M. (2013). Exploring People's Viewpoints on Air Travel and Climate Change:

984 Understanding Inconsistencies. *Journal of Sustainable Tourism*, 21(2), 271-290.

985 Landauer, M., W. Haider, and U. Pröbstl-Haider (2014). The Influence of Culture on Climate

986 Change Adaptation Strategies: Preferences of Cross-country Skiers in Austria and Finland.

987 *Journal of Travel Research,* 53(1), 96-110.

988 Laroche, M., M.A. Tomiuk, J. Bergeron, and G. Barbaro-Forleo (2002). Cultural Differences

989 in Environmental Knowledge, Attitudes, and Behaviours of Canadian Consumers. *Canadian*

990 *Journal of Administrative Sciences,* 19(3), 267-282.

991 Lee, T.H., and F.H. Jan (2015). The Influence of Recreation Experience and Environmental

992   Attitude on the Environmentally Responsible Behavior of Community-based Tourists in

993   Taiwan. *Journal of Sustainable Tourism,* 23(7), 1063-1094.

994   Lee, T.H., F.H. Jan, and C.C. Yang (2013). Conceptualizing and Measuring Environmentally

995   Responsible Behaviors from the Perspective of Community-based Tourists. *Tourism*

996   *Management,* 36, 454-468.

997   Lee, W.H., and G. Moscardo (2005). Understanding the Impact of Ecotourism Resort

998   Experiences on Tourists' Environmental Attitudes and Behavioural Intentions. *Journal of*

999   *Sustainable Tourism,* 13(6), 546-565.

1000   Leonidou, L.C., D.N. Coudounaris, O. Kvasova, and P. Christodoulides (2014). Tourist

1001   Environmental Attitude and Behavior: Antecedents, Moderators, and Outcomes. Available

1002   from: http://ktisis.cut.ac.cy/bitstream/10488/3987/2/Chritodoulides.pdf (Accessed January 1,

1003   2019).

1004   Leonidou, L.C., D.N. Coudounaris, O. Kvasova, P. Christodoulides (2015). Drivers and

1005   Outcomes of Green Tourist Attitudes and Behaviour: Socio-demographic Moderating Effects.

1006   *Psychology & Marketing,* 32(6),635-650.

1007   Lewis, R.D. (2006). *When Cultures Collide: Leading Across Cultures*. 3rd ed. Boston:

1008   Nicholas Brealey.

1009   Liobikienė, G., J. Mandravickaitė, and J. Bernatonienė (2016). Theory of Planned Behavior

1010   Approach to Understand the Green Purchasing Behavior in the EU: A Cross-cultural Study.

1011   *Ecological Economics,* 125, 38-46.

1012   Lord, K.R., S. Putrevu, and Y.Z. Shi (2008). Cultural Influences on Cross-border Vacationing.

Journal of Business Research, 61(3),183-190.

Magnusson, P., R.T. Wilson, S. Zdravkovic, J.X. Zhou, and S.A. Westjohn (2008). Breaking through the Cultural Clutter: a Comparative Assessment of Multiple Cultural and Institutional Frameworks. *International Marketing Review,* 25(2), 183-201.

Mak, A.H., K.K. Wong, and R.C. Chang (2009). Health or Self-indulgence? The Motivations and Characteristics of Spa-goers. *International Journal of Tourism Research*, 11(2), 185-199.

March, R., and A.G. Woodside (2005). Testing Theory of Planned Versus Realized Tourism Behavior. *Annals of Tourism Research*, 32(4), 905-924.

Mattila, A.S. (2019). A Commentary on Cross-cultural Research in Hospitality & Tourism Inquiry. *International Journal of Hospitality Management,* 76, 10-12.

Maznevski, M.L., C.B. Gomez, J.J. DiStefano, N.G. Noorderhaven, and P.C. Wu (2002). Cultural Dimensions at the Individual Level of Analysis: The Cultural Orientations Framework. *International Journal of Cross-cultural Management,* 2(3), 275-295.

McCarty, J.A., and L.J. Shrum (1994). The Recycling of Solid wastes: Personal Values, Value Orientations, and Attitudes about Recycling as Antecedents of Recycling Behavior. *Journal of Business Research*, 30(1), 53-62.

McCarty, J.A., and L.J. Shrum (2001). The Influence of Individualism, Collectivism, and Locus of Control on Environmental Beliefs and Behavior. *Journal of Public Policy & Marketing,* 20(1), 93-104.

McDougall, G.H. (1993). The Green Movement in Canada: Implications for Marketing Strategy. *Journal of International Consumer Marketing,* 5(3), 69-87.

1034   Merli, R., M. Preziosi, A. Acampora, M.C. Lucchetti, and F. Ali (2019). The Impact of Green

1035   Practices in Coastal Tourism: An Empirical Investigation on an Eco-labelled Beach Club.

1036   *International Journal of Hospitality Management,* 77, 471-482.

1037   Milfont, T.L., and J. Duckitt (2010). The Environmental Attitudes Inventory: A Valid and

1038   Reliable Measure to Assess the Structure of Environmental Attitudes. *Journal of*

1039   *Environmental Psychology,* 30(1), 80-94.

1040   Mobley, C., W.M. Vagias, and S.L. DeWard (2010). Exploring Additional Determinants of

1041   Environmentally Responsible Behavior: The Influence of Environmental Literature and

1042   Environmental Attitudes. *Environment and Behavior,* 42(4), 420-447.

1043   Money, R.B., and J.C. Crotts (2003). The Effect of Uncertainty Avoidance on Information

1044   Search, Planning, and Purchases of International Travel Vacations. *Tourism Management,*

1045   24(2),191-202.

1046   Moscardo, G. (2004). East Versus West: A Useful Distinction or Misleading Myth. *Tourism*

1047   *Management*, 52(1), 7-20.

1048   Moutinho, L. (1987). Consumer Behaviour in Tourism. *European Journal of Marketing,*

1049   21(10), 5-44.

1050   Namkung, Y., and S.S. Jang (2013). Effects of Restaurant Green Practices on Brand Equity

1051   Formation: Do Green Practices Really Matter? *International Journal of Hospitality*

1052   *Management,* 33, 85-95.

1053   Nejati, M., B. Mohamed, and S.I. Omar (2015). The Influence of Perceived Environmental

1054   Impacts of Tourism on the Perceived Importance of Sustainable Tourism. *E-Review of*

Tourism Research, 12(1-2), 99-114.

Office for National Statistics (2018). *Travel Trends: 2017*. Available from: https://www.ons.gov.uk/peoplepopulationandcommunity/leisureandtourism/articles/traveltrends/2017 (Accessed January 1, 2019)

Otaki, M., M.E. Durreit, P. Richards, L. Nyquist, and J.W. Pennebaker (1986). Maternal and Infant Behavior in Japan and America: A Partial Replication. *Journal of Cross-Cultural Psychology,* 17(3), 251-268.

Oyserman, D., Coon, H.M., and Kemmelmeier, M. (2002). Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta-analysis. *Psychological Bulletin*, 128, 3-72.

Packer, J., R. Ballantyne, and K. Hughes (2014). Chinese and Australian Tourists' Attitudes to Nature, Animals and Environmental Issues: Implications for the Design of Nature-based Tourism Experiences. *Tourism Management,* 44, 101-107.

Park, H., C. Russell, and J. Lee (2007). National Culture and Environmental Sustainability: A Cross-national Analysis. *Journal of Economics and Finance,* 31(1), 104-121.

Pavluković, V., T. Armenski, and J.M. Alcántara-Pilar (2017). Social Impacts of Music Festivals: Does Culture Impact Locals' Attitude toward Events in Serbia and Hungary? *Tourism Management,* 63, 42-53.

Peeters, P., and G. Dubois (2010). Tourism Travel Under Climate Change Mitigation Constraints. *Journal of Transport Geography,* 18(3), 447-457.

Perterson, N. (1982). Developmental Variables Affecting Environmental Sensitivity in

1076   Professional Environmental Educators. *Master's thesis, Southern Illinois University*,

1077   Carbondale.

1078   Pizam, A., and A. Fleischer (2005). The Relationship between Cultural Characteristics and

1079   Preference for Active vs. Passive Tourist Activities. *Journal of Hospitality & Leisure*

1080   *Marketing,* 1*2*(4), 5-25.

1081   Pizam, A., and G.H. Jeong (1996). Cross-cultural Tourist Behavior: Perceptions of Korean

1082   Tour-guides. *Tourism Management,* 17(4), 277-286.

1083   Pizam, A., R. Pine, C. Mok, and J.Y. Shin (1997). Nationality vs Industry Cultures: Which

1084   has a Greater Effect on Managerial Behavior? *International Journal of Hospitality*

1085   *Management, 16*(2), 127-145.

1086   Powell, R.B., and S.H. Ham (2008). Can Ecotourism Interpretation Really Lead to

1087   Pro-Conservation Knowledge, Attitudes and Behaviour? Evidence from the Galapagos

1088   Islands. *Journal of Sustainable Tourism,* 16(4), 467-489.

1089   Puhakka, R. (2011). Environmental Concern and Responsibility among Nature Tourists in

1090   Oulanka PAN Park, Finland. *Scandinavian Journal of Hospitality and Tourism,* 11(1), 76-96.

1091   Ramkissoon, H., L.D.G. Smith, and B. Weiler (2013). Relationships between Place

1092   Attachment, Place Satisfaction and Pro-environmental Behaviour in an Australian National

1093   Park. *Journal of Sustainable Tourism,* 21(3), 434-457.

1094   Reddy, M.V., and K. Wilkes (2015). *Tourism in the Green Economy*. London: Routledge.

1095   Reis, A.C., and J.E. Higham (2017). Climate Change Perceptions among Australian

1096   Non-frequent Flyers. *Tourism Recreation Research, 42*(1), 59-71.

1097 Reis, H. T., W.A. Collins, and E. Berscheid (2000). The Relationship Context of Human

1098 Behavior and Development. *Psychological Bulletin,* 126(6), 844-72.

1099 Reisinger, Y., and J. C. Crotts (2010). Applying Hofstede's National Culture Measures in

1100 Tourism Research: Illuminating Issues of Divergence and Convergence. *Journal of Travel*

1101 *Research,* 49(2), 153-164.

1102 Rigdon, E.E. (2012). Rethinking Partial Least Squares Path Modeling: In Praise of Simple

1103 Methods. *Long Range Planning,* 45, 341-358.

1104 Ringle, C.M., S. Wende, and J.M. Becker (2015). SmartPLS 3 [Computer software].

1105 Available from: http://www.smartpls.com (Accessed January 1, 2019).

1106 Roldán, J.L., and M.J. Sánchez-Franco (2012). Variance-based Structural Equation Modeling:

1107 Guidelines for Using Partial Least Squares in Information Systems Research. In: *Research*

1108 *Methodologies, Innovations and Philosophies in Software Systems Engineering and*

1109 *Information Systems*, M. Mora, O. Gelman, A. L. Steenkamp, and M. Raisinghani (eds),

1110 pp.193-221. PA: IGI Global.

1111 Rosselló-Nadal, J. (2014). How to Evaluate the Effects of Climate Change on Tourism?

1112 *Tourism Management,* 42, 334-340.

1113 Ryan, R.M., and E.L. Deci (2000). Self-determination Theory and the Facilitation of Intrinsic

1114 Motivation, Social Development, and Well-being. *American Psychologist,* 55(1), 68.

1115 Schwartz, S.H. (1999). A Theory of Cultural Values and Some Implications for Work. *Applied*

1116 *Psychology: An International Review,* 48(1), 23-47.

1117 Sekaran, U. (1983). Methodological and Theoretical Issues and Advancements in

Cross-cultural Research. *Journal of International Business Studies,* 14(2), 61-73.

Sirakaya, E., and A.G. Woodside (2005). Building and Testing Theories of Decision Making by Travellers. *Tourism Management,* 26(6), 815-832.

Soares, A.M., M. Farhangmehr, and A. Shoham (2007). Hofstede's Dimensions of Culture in International Marketing Studies. *Journal of Business Research,* 60(3), 277-284.

Stone, M. (1974). Cross-validatory Choice and Assessment of Statistical Predictions. *Journal of the Royal Statistical Society,* 36, 111-147.

Su, L., and S.R. Swanson (2017). The Effect of Destination Social Responsibility on Tourist Environmentally Responsible Behavior: Compared Analysis of First-time and Repeat Tourists. *Tourism Management,* 60, 308-321.

Tata, J., and S. Prasad (2015). National Cultural Values, Sustainability Beliefs, and Organizational Initiatives. *Cross Cultural Management,* 22(2), 278-296.

Triandis, H. (1995). *Individualism and Collectivism*. CO: Westview Press.

Trompenaars, F., and C. Hampden-Turner (1997)*. Riding the Waves of Culture: Understanding Cultural Diversity in Business*. London: Nicholas Brealey.

United Nations World Tourism Organisation-UNWTO (2007). *Climate Change and Tourism Responding to Global Challenges.* Available from: http://sdt.unwto.org/sites/all/files/docpdf/decladavose.pdf (Accessed January 1, 2019).

UNWTO (2018). "UNWTO *Annual Report 2017*. Available from: https://www.e-unwto.org/doi/book/10.18111/9789284419807 (Accessed January 1, 2019).

1138 Van Vuuren, C., and E. Slabbert (2011). Travel Behaviour of Tourists to a South African

1139 Holiday Resort: Tourism. *African Journal for Physical Health Education Recreation &*

1140 *Dance,* 17(4), 694-707.

1141 Venkatesh, V., M.G. Morris, G.B. Davis, and F.D. Davis (2003). User Acceptance of

1142 Information Technology: Toward a Unified View. *MIS Quarterly,* 27(3), 425-478.

1143 Vlek, C., and L. Steg (2007). Human Behavior and Environmental Sustainability: Problems,

1144 Driving Forces, and Research Topics. *Journal of Social Issues,* 63(1), 1-19.

1145 Wang, T., and P. Bansal (2012). Social Responsibility in New Ventures: Profiting from a

1146 Long-term Orientation. *Strategic Management Journal,* 33(10), 1135-1153.

1147 Weeden, C. (2011). Responsible Tourist Motivation: How Valuable is the Schwartz Value

1148 Survey? *Journal of Ecotourism, 10*(3), 214-234.

1149 Wells, V.K. (2014). Behavioural Psychology, Marketing and Consumer Behaviour: A

1150 Literature Review and Future Research Agenda. *Journal of Marketing Management,* 30

1151 (11-12), 1119-1158.

1152 Werner, O., and D.T. Campbell (1973). Translating, Working through Interpreters, the

1153 Problem of Decentering. In: *A Handbook of Method in Cultural Anthropology*, R. Naroll and

1154 R. Cohen (eds), pp.398-410. New York: Columbia University Press.

1155 Wong, J., J.D. Newton, and F.J. Newton (2014). Effects of Power and Individual-level

1156 Cultural Orientation on Preferences for Volunteer Tourism. *Tourism Management,* 42,

1157 132-140.

1158 Wong, S., and E. Lau (2001). Understanding the Behavior of Hong Kong Chinese Tourists on

1159   Group Tour Packages. *Journal of Travel Research,* 40(1), 57-67.

1160   Woodside, A.G., S.Y. Hsu, and R. Marshall (2011). General Theory of Cultures'

1161   Consequences on International Tourism Behavior. *Journal of Business Research,* 64(8),

1162   785-799.

1163   World Travel & Tourism Council-WTTC (2017). *Travel & Tourism Economic Impact 2017*

1164   *World.*   Available   from:

1165   https://www.wttc.org/-/media/files/reports/economic-impact-research/regions-2017/world201

1166   7.pdf (Accessed January 1, 2019).

1167   World Values Survey Association-WVSA (2009). *World Values Survey 1981-2008 Official*

1168   *Aggregate v.20090901.* Madrid: ASEP/JDS.

1169   Wurzinger, S., and M. Johansson (2006). Environmental Concern and Knowledge of

1170   Ecotourism among Three Groups of Swedish Tourists. *Journal of Travel Research,* 45(2),

1171   217-226.

1172   Xu, F., and D. Fox (2014). Modelling Attitudes to Nature, Tourism and Sustainable

1173   Development in National Parks: A Survey of Visitors in China and the UK. *Tourism*

1174   *Management, 45,* 142-158.

1175   Xu, F., M. Morgan, and P. Song (2008). Students' Travel Behaviour: A Cross-cultural

1176   Comparison of UK and China. *International Journal of Tourism Research,* 11(3), 255-268.

1177   Yamane T. (1967). *Statistics: An Introductory Analysis*. 2nd ed. New York: Harper and Row.

1178   Yan Y. X. (2006). The Difference Pattern and the Hierarchical View of Chinese Culture.

1179   *Sociological Research,* 4, 201-213. (In Chinese)

1180   Ye, B.H., H.Q. Zhang, and P.P. Yuen (2013). Cultural Conflicts or Cultural Cushion? *Annals*

1181   *of Tourism Research,* 43, 321-349.

1182   Yoo, J.J.E., and K. Chon (2008). Factors Affecting Convention Participation

1183   Decision-Making: Developing a Measurement Scale. *Journal of Travel Research,* 47(1),

1184   113-122.

1185   Zhang, Y.L., H.L. Zhang, J. Zhang, and S.W. Cheng (2014). Predicting Residents'

1186   Pro-Environmental Behaviors at Tourist Sites: The role of Awareness of Disaster's

1187   Consequences, Values, and Place Attachment. *Journal of Environmental Psychology,* 40,

1188   131-46.

1189

Table 1. Previous research on the role of national culture in tourist consumption

Source	The model of national culture used	The dimension or value of the model in use, if applicable	Consumption market	Key findings
Crotts and Erdmann (2000)	Hofstede	-	Overseas visitors to USA	National culture influences how customers evaluate travel services
Kim and Lee (2000)	Hofstede	Individualism and collectivism	USA and Japan	The traits of individualism and collectivism influence travel motivation
Money and Crotts (2003)	Hofstede	Uncertainty avoidance	Germany and Japan	The level of uncertainty avoidance affects travel decision-making process
Crotts and Pizam (2003)	Hofstede	Power distance, Masculinity and femininity	USA	National culture affects how travel services are evaluated; it further affects tourist willingness to repeat the trip and to recommend it to other tourists
Funk and Bruun (2006)	Hofstede	-	Australia	National culture should be integrated into the marketing strategies of international sport tourism
Lord et al. (2008)	Hofstede	-	USA and China	National culture influences tourist satisfaction
Xu et al. (2008)	Hofstede	-	UK and China	National culture determines the differences in tourist attitudes and behaviour
Hsieh and Tsai (2009)	Hofstede	-	China and USA	National culture influences consumer evaluation of hotel service quality
Reisinger and Crotts (2010)	Hofstede	-	Australia	National culture affects consumer preferences of hotel services
Woodside et al. (2011)	Hofstede	-	Australia	National culture influences purchasing and consumption patterns of tourism products
Kim and Mckercher (2011)	Hofstede	-	Australia and South Korea	National culture contributes to tourist behaviour

Ye *et al.* (2013)	Hofstede	Power distance	China	Power distance affects the perceived level of tourist discrimination
Wong *et al.* (2014)	Hofstede	Individualism and collectivism	USA	The traits of individualism and collectivism influence consumer preference to engage in volunteer or self-indulgent holidays
Ahn and Mckercher (2015)	Hofstede	-	China	National cultural distance has an impact on tourist trip profile
Alcántara-Pilar and Barrio-García (2015)	Hofstede	Individualism and collectivism; Long-term and short-term orientation	Spain and UK	Long-term orientation trait moderates user attitudes toward tourist destination website
Pavluković *et al.* (2017)	Hofstede	-	Serbia and Hungary	National culture influences perception of festival impacts on local communities
Filimonau and Perez (2018)	Hofstede	-	UK and Venezuela	National culture influences how tourists perceive travel risks and destination choice
Huang and Crotts (2019)	Hofstede	Individualism and collectivism; Power Distance; and Long Term Orientation	Australia and China	National culture affects visitor satisfaction

Table 2. Previous research on the role of national culture in pro-environmental tourist attitudes. NB: The search scope is limited to the first 1000

entries identified on Google Scholar.

Source	The model of national culture used and/or its specific dimensions or values	Consumption market	Key findings
Hudson and Ritchie (2001)	No specific cultural model employed	UK, Canada and USA	National cultures affects skiers' attitudes towards the environmental impacts of skiing
Bohdanowicz (2006)	No specific cultural model employed	Sweden and Poland	National culture influences pro-environmental attitudes of hotel operators
Kang and Moscardo (2006)	No specific cultural model employed	South Korea, UK and Australia	National culture influences consumer attitudes towards responsible tourist behaviour
Weeden (2011)	Schwartz	UK	The Schwartz's value theory contributes to better understanding of travel motivations of responsible tourists
Landauer *et al.* (2014)	No specific cultural model employed	Australia and Finland	National culture influences skiers' preferences of climate change adaptation strategies at a skiing destination
Xu and Fox (2014)	No specific cultural model employed	UK and China	National culture aids in understanding sustainable management practices in the national parks
Packer *et al.* (2014)	No specific cultural model employed	China and Australia	National culture aids in understanding tourist attitudes to nature, animals and environmental issues
Kim and Filimonau (2017)	No specific cultural model employed	South Korea and China	Language, as a cognitive attribute of national culture, can shape the attitudes of tourists towards environmental impacts
Filimonau *et al.* (2019)	Hofstede - Individualism and collectivism, Long-term and short-term orientation dimensions; Trompenaars & Hampden-Turner - Individualism and communitarianism, Internal and	Poland	The national cultural dimensions / values of Individualism, long-term orientation and harmony significantly influence pro-environmental tourist attitudes

	external dimension; Schwartz - Harmony and mastery		

Table 3. Questionnaire design

Specific section and its code	Purpose	Item	Source of original measures
Section 2. Knowledge of environmental impact **KNW**	Investigate the level of public understanding of the relationships between tourism and its environmental impacts	**KNW1**	Haron *et al.* (2005); Cheng *et al.* (2013); Cheng and Wu (2015)
		KNW2	
		KNW3	
		KNW4	
		KNW5	Chiang and Jang (2008); Cheng *et al.* (2013); Cheng and Wu (2015)
Section 3. Pro-environmental attitudes EN	Examine the attitudes of tourists toward the reduction of environmental impacts from tourism	**EN1**	Filimonau *et al.* (2019)
		EN2	
		EN3	
		EN4	
		EN5	
Section 4. Pro-environmental behavioural intentions **EBI**	Measure tourists' willingness to change their holidaying behaviour to make it more environmentally-benign	**EBI1**	Kim *et al.* (2011); Ballantyne *et al.* (2011); Harth *et al.* (2013)
		EBI2	Filimonau *et al.* (2019)
		EBI3	Lee *et al.* (2013); Ramkissoon *et al.* (2013)
		EBI4	Filimonau *et al.* (2019)
Section 5. Individualism/Collectivism **IND**	Capture the role of national culture in shaping pro-environmental attitudes of tourists	**IND1**	Filimonau *et al.* (2019)
		IND2	
		IND3	
		IND4	
Section 6. Power distance **PD**		**PD1**	Dorfman and Howell (1988); Hofstede (2001)
		PD2	
		PD3	
		PD4	
Section 7. Long-term/Short-term orientation **LTOR**		**LTOR1**	Filimonau *et al.* (2019)
		LTOR2	
		LTOR3	Cannon *et al.* (2010)
		LTOR4	Wang and Bansal (2012)
Section 8. Harmony/Mastery **HARM**		**HARM1**	Filimonau *et al.* (2019)
		HARM2	
		HARM3	
		HARM4	
Section 9. Indulgence/Restraint **IDG**		**IDG1**	Mak *et al.* (2009)
		IDG2	WVSA (2009)
		IDG3	
		IDG4	

Table 4. The sample profile

	Variables	UK (n=431)	China (n=394)
Gender	Male	36.7%	38.6%
	Female	62.6%	61.4%
	Other	0.7%	0
Age	16-24	31.3%	15.5%
	25-34	28.5%	31.2%
	35-44	12.1%	35.0%
	45-54	13.2%	15.5%
	55-64	7.0%	2.5%
	65-74	5.3%	0.3%
	75+	2.6%	15.5%
Occupation	Retired	8.4%	3.0%
	Student	28.3%	13.7%
	Not in active employment	4.2%	2.5%
	Full-time employment	42.5%	72.3%
	Part-time employment	15.1%	5.6%
	Other	1.6%	2.8%
Level of education	Primary / Secondary school	13.0%	2.5%
	College / Professional degree	31.3%	11.7%
	Higher education and above	54.3%	66.0%
	Other	1.4%	19.8%
Personal salary	Below nation's average	59.6%	68.3%
	Above nation's average	27.8%	31.7%
	Prefer not to say	12.5%	0
Family status	Single	39.2%	31.2%
	Divorced	2.6%	3.6%
	In a relationship / Married with children	33.4%	42.9%
	In a relationship / Married without children	23.4%	18.5%
	Widow(er)	1.4%	3.8%
Frequency of travelling abroad (in the past 12 months)	once or twice or less	69.8%	73.4%
	3-5 times	25.8%	24.6%
	6-10 times	3.7%	1.3%
	Over 10 times	0.7%	0.8%

Table 5. The internal consistency reliability and validity of the eight constructs

Constructs	Indicators	Loading	Composite Reliability (CR)	Average Variance Extracted (AVE)
Individualism **IND**	IND1	0.703	0.711	0.454
	IND3	0.74		
	IND4	0.566		
Power distance **PD**	PD1	0.705	0.814	0.528
	PD2	0.791		
	PD3	0.825		
	PD4	0.554		
Long-term orientation **LTOR**	LTOR1	0.664	0.784	0.478
	LTOR2	0.716		
	LTOR3	0.595		
	LTOR4	0.778		
Harmony **HARM**	HARM1	0.644	0.772	0.636
	HARM2	0.926		
Indulgence **IDG**	IDG1	0.772	0.921	0.745
	IDG2	0.893		
	IDG3	0.908		
	IDG4	0.872		
Knowledge of environmental impact **KNW**	KNW1	0.748	0.804	0.456
	KNW2	0.788		
	KNW3	0.55		
	KNW4	0.649		
	KNW5	0.612		
Pro-environmental attitudes **EN**	EN1	0.625	0.795	0.495
	EN2	0.645		
	EN4	0.788		
	EN5	0.743		
Pro-environmental behavioural intentions **EBI**	EBI1	0.794	0.824	0.546
	EBI2	0.837		
	EBI3	0.768		
	EBI4	0.513		

Table 6. Discriminant validity of the final measurement model

Construct	1	2	3	4	5	6	7	8
1 Environmental knowledge	0.675							
2 Harmony	0.329	0.798						
3 Power distance	0.381	0.493	0.726					
4 Individualism	-0.266	-0.461	-0.305	0.674				
5 Indulgence	-0.266	-0.479	-0.318	0.538	0.863			
6 Long-term orientation	0.393	0.602	0.494	-0.54	-0.632	0.692		
7 Pro-environmental attitudes	0.574	0.466	0.557	-0.445	-0.389	0.522	0.704	
8 Pro-environmental behavioural intentions	0.426	0.465	0.584	-0.441	-0.496	0.585	0.636	0.739

Table 7. Endogenous constructs assessment

	R^2		Adjust R^2		Q^2	
	UK	China	UK	China	UK	China
Pro-environmental attitudes	0.59	0.445	0.584	0.436	0.301	0.173
Pro-environmental behavioural intentions	0.378	0.412	0.377	0.411	0.201	0.195

Table 8. Results of the structural model

Relationships	Path coefficients		t-value		p-value	
	UK	China	UK	China	UK	China
Individualism -> Pro-environmental attitudes	-0.202	-0.168	3.857	3.525	0.000***	0.000***
Power distance -> Pro-environmental attitudes	0.262	0.300	6.360	6.041	0.000***	0.000***
Long-term orientation -> Pro-environmental Attitudes	0.098	0.093	1.689	1.600	0.091	0.110
Harmony -> Pro-environmental attitudes	0.062	0.060	1.307	1.067	0.191	0.286
Indulgence -> Pro-environmental attitudes	-0.056	0.044	1.140	0.908	0.254	0.364
Environmental knowledge -> Pro-environmental attitudes	0.345	0.337	7.682	7.253	0.000***	0.000***
Pro-environmental attitudes -> Pro-environmental behavioural intentions	0.615	0.642	17.222	14.680	0.000***	0.000***

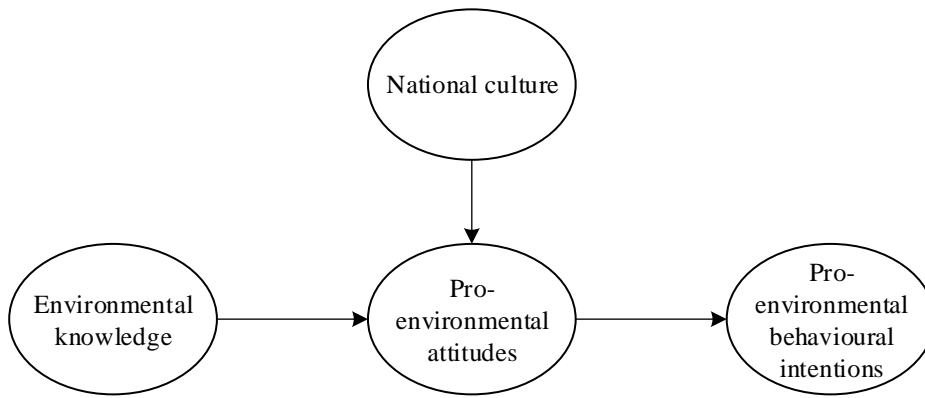***$p<0.001$; **$p<0.01$;*$p<0.05$

Figure 1. The fundamental linkages between environmental knowledge, pro-environmental attitudes and pro-environmental behavioural intentions of tourists

Mastery vs. Harmony/Internal Direction vs. Outer Direction

Trompenaars and Hampden -Turner's model 1997

Specific vs. Diffuse
Neutral vs. Emotional
Sequential time vs. Synchronous time

Communitarianism vs./Individualism/vs. Collectivism

Universalism vs. Particularism/Uncertainty Avoidance

Schwartz's model 1999

Conservatism vs. Intellectual and Affective Autonomy

Hofstede's model 1980，2005

Hierarchy vs. Egalitarianism/ Power Distance/Achievement vs. Ascription

Masculinity vs. Femininity
Indulgence vs. Restraint
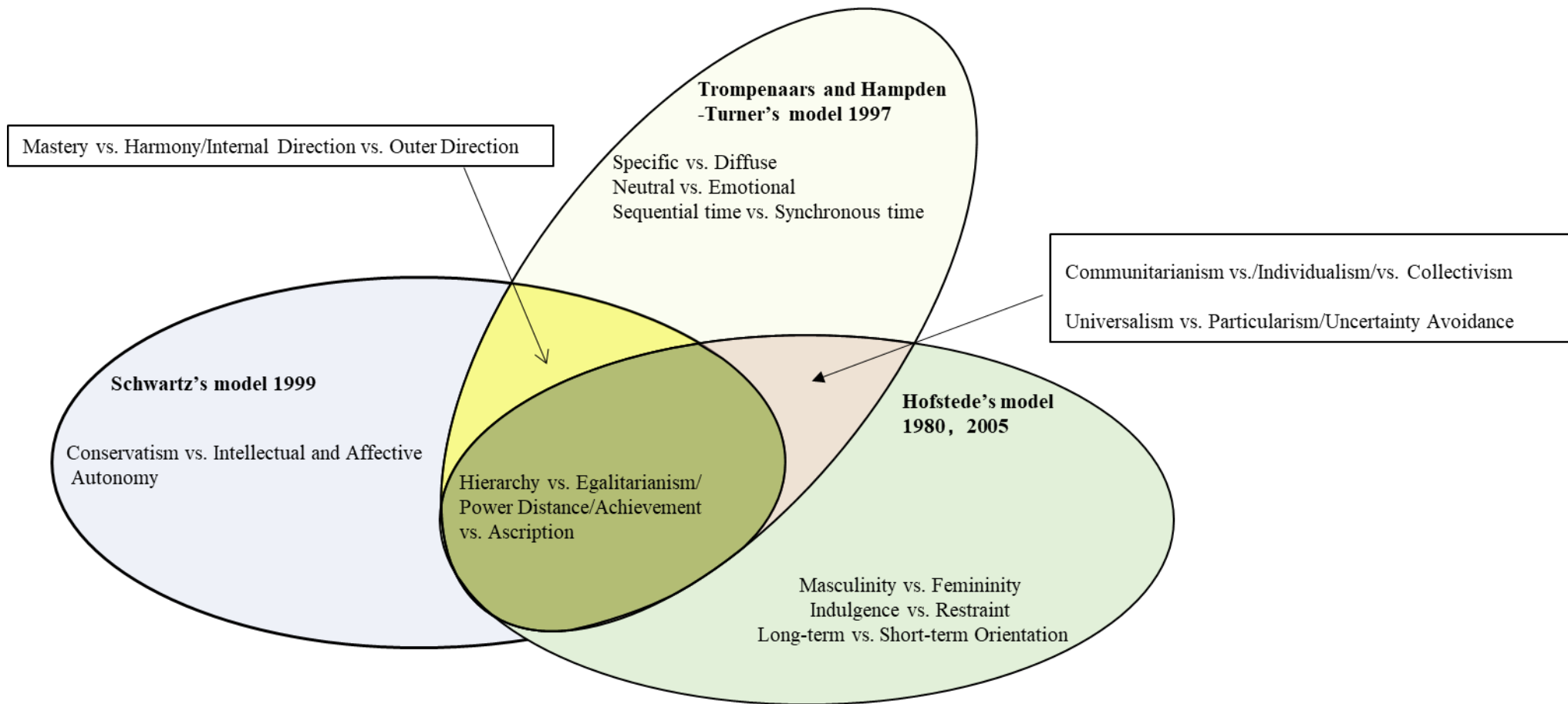Long-term vs. Short-term Orientation

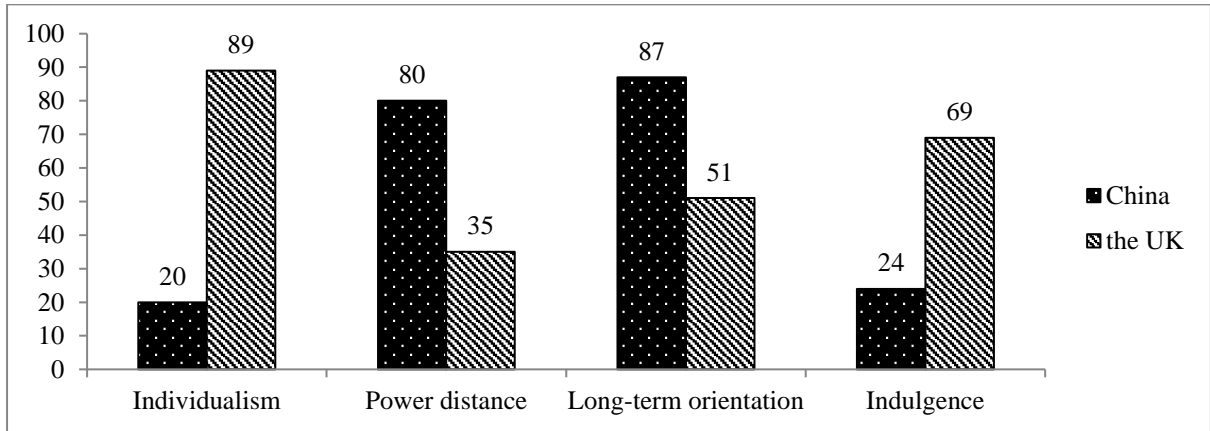Figure 2. The overlaps of major theories of national culture

Figure 3. The selected characteristics of national cultures in the UK and China (adopted from

Hofstede center 2017)
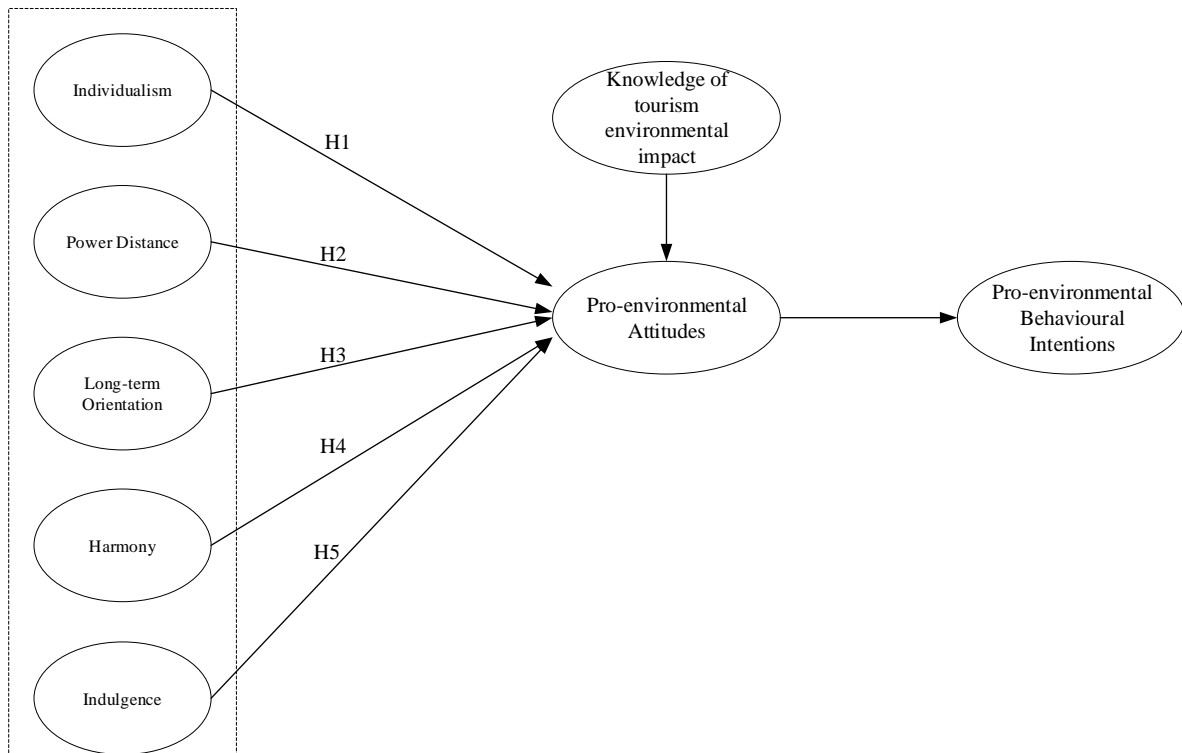
National Culture Dimensions
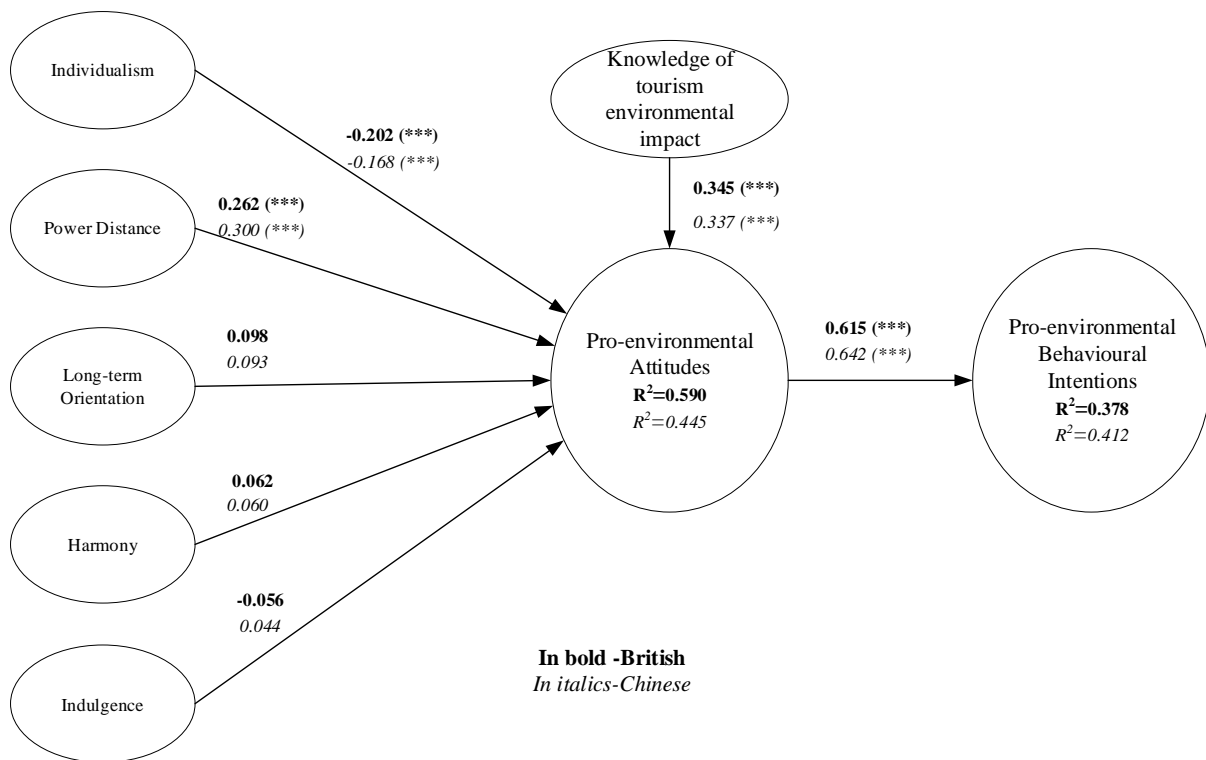

Figure 4. Conceptual model

Figure 5. The results of the final standardized structural model for both national cultures

In the figure:
- Individualism → Pro-environmental Attitudes: **-0.202 (***)** / *-0.168 (***)*
- Power Distance → Pro-environmental Attitudes: **0.262 (***)** / *0.300 (***)*
- Long-term Orientation → Pro-environmental Attitudes: **0.098** / *0.093*
- Harmony → Pro-environmental Attitudes: **0.062** / *0.060*
- Indulgence → Pro-environmental Attitudes: **-0.056** / *0.044*
- Knowledge of tourism environmental impact → Pro-environmental Attitudes: **0.345 (***)** / *0.337 (***)*
- Pro-environmental Attitudes: **R²=0.590** / *R²=0.445*
- Pro-environmental Attitudes → Pro-environmental Behavioural Intentions: **0.615 (***)** / *0.642 (***)*
- Pro-environmental Behavioural Intentions: **R²=0.378** / *R²=0.412*

In bold -British
In italics-Chinese