

Ecotourism intention: The roles of environmental concern, time perspective, and destination image

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**Ecotourism intention: The roles of environmental concern,
time perspective, and destination image**

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Ecotourism intention: The roles of environmental concern, time perspective, and destination image

Abstract

Purpose - This study seeks to understand the factors that affect travellers' intention to visit ecotourism destinations.

Methodology - Convenience sampling method was employed to develop a research sample. The research sample includes visitors at eight ecotourism destinations in Vietnam who were randomly contacted and agreed to engage in a structured questionnaire survey. The dataset consists of 431 valid responses. A multivariate analysis method was employed to analyse the data.

Finding - This study finds strong correlations between three factors that are important in determining the Vietnamese travellers' intention to visit ecotourism locations. These are environmental concern, future time perspective (defined as individual views toward the importance of future time) and eco-destinations image (understood as individual perceptions of an ecotourism place). The study also reports robust associations between eco-destination image, future time perspective and environmental concern.

Original Value - This study highlights the influential role of travellers' future time perspective and eco-destination image in their travel intention. The existing literature does not pay sufficient attention to the impacts that these two considerations have on travellers' environmental concerns and consequently stimulate their intention to visit ecotourism destinations. The study suggests relevant management strategies for the development of ecotourism in emerging economies.

Practical implications: This study suggests policymakers in an emerging economy like Vietnam employ efficient regulations on protecting the natural environment in tourism locations while tourism providers and marketers should invest in building eco-image of travel locations. This study also recommends public organisations to encourage greater awareness of the importance of environmental protection through education, propaganda and media as this will foster the demand for ecotourism. Last but not least, this study advises tourism marketers to develop marketing materials emphasising future time perspective and eco-destination images if they wish to promote ecotourism.

Keywords: *Time perspective, environmental concern, destination image, ecotourism intention.*

Paper type: Research paper

Introduction

As a result of climate change and growth in environmental concern, ecotourism has steered growing interest from both practitioners and academics. Academically, despite the existence of many studies on the antecedents of ecotourism behaviours, the knowledge about factors driving ecotourism demand remains limited. Therefore, there is a need for further research to

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3 explore factors that may drive travellers' intention to visit ecotourism destinations but are yet
4 to be developed in the extant literature. Such research would lead to a better understanding of
5 ecotourism intention and as a result more effective strategies to foster the development of
6 ecotourism.
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11 Drawing on the existing literature, this study anticipates that individuals' time perspective and
12 perceptions of destination image are important factors that may determine their choices of
13 tourism destinations. In particular, conceptualising time perspective as individuals' view of
14 the importance of past, present and future time, Milfont, Wilson and Diniz (2012) find the
15 strong influence of time perspective on environmentally responsible attitudes. Since their
16 study, there has been no further study on how the influence of time perspective on pro-
17 environmental attitudes may trigger travellers' environmental concerns and their intention to
18 visit ecotourism destinations. Similarly, after the discovery by Chiu et al. (2014b) that the
19 eco-destination image, understood as individual's perception of an ecotourism place, can
20 induce travellers' environmentally responsible behaviours, there is no further advancement on
21 how the influence of eco-destination image on travellers' environmentally responsible
22 behaviours can stimulate their intention to visit ecotourism destinations.
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33 Indeed, the empirical research on the relationships among time perspective, destination
34 image, and environmental concern in conjunction with ecotourism intention is scarce. To
35 bridge these gaps within the ecotourism literature, this research investigates the impacts of
36 travellers' time perspective and eco-destinations image on the travellers' intention to visit
37 ecotourism destinations, taking into account the mediating role of environmental concern.
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43 Vietnam was selected as an empirical context to test the proposed theoretical model. Vietnam
44 is home to eight UNESCO World Heritage sites, attracting many travellers to its natural
45 locations. It has also experienced a boom in both inbound and domestic tourism over the past
46 decade and is ranked as one of the top 10 growing destinations for travel in 2016 (World
47 Economic Forum, 2017). However, Vietnam is an emerging market economy where
48 regulations, especially in relation to environmental protection, have not been well enforced;
49 thereby the environmental sustainability of the destination is declining (World Bank, 2019). It
50 is recognised that destinations, where natural assets represent the main tourist attraction, are
51 at risk of being over-exploited, poorly managed, and polluted. A study using the Vietnam
52 context provides a relevant setting for the development of effective strategies for promoting
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3 ecotourism in Vietnam and other developing countries where the ecotourism sector has been
4 under-developed.

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6 This paper contributes to ecotourism literature by highlighting two decisive factors driving
7 travellers' intention to visit ecotourism destinations that have been overlooked in the current
8 literature. These are individuals' future time perspective and eco-destination image.
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10 Moreover, this paper offers an improved understanding of the role of travellers'
11 environmental concern in ecotourism literature by showing that travellers' environmental
12 concern partially transfers the effects of their future time perspective and eco-destination
13 image on their intention to visit ecotourism sites. Although previous research suggests that
14 environmental concern is one of the key antecedents of ecotourism intention, its mediating
15 role is not explored in the extant literature. Finally, this study adds to ecotourism literature
16 the knowledge about the factors influencing ecotourism behaviours in Vietnam, a context is
17 less known in the literature as can be seen from a literature review by Hadinejad *et al.* (2019).
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27 **Literature review and hypotheses**

28 ***Ecotourism intention***

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31 Ecotourism, also referred to as eco-travel or nature-based tourism, has been variously
32 defined. In a comprehensive literature review paper, Bjork based on a series of concepts
33 developed within the extant literature defined ecotourism as "an activity where the
34 authorities, the tourism industry, tourists and local people make it possible for tourists to
35 travel to genuine areas in order to admire, study and enjoy nature and culture in a way that
36 does not exploit the resource, but contributes to sustainable development" (Bjork, 2000: 196).
37
38 This concept provides a holistic view of ecotourism, specifying the different types of
39 stakeholders involved in ecotourism, but it is over-complicated for the purpose of this study.
40
41 In simpler words, this study refers ecotourism to a form of tourism that focuses on
42 experiencing and conserving natural areas. Accordingly, this study defines ecotourism
43 intention as a tourists' intention to visit an ecotourism location in the near future.
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50 Ecotourism literature has made significant progress in examining the demand side of
51 ecotourism, especially in relation to the determinants of ecotourism behaviours, of which,
52 environmental concern is widely evidenced as an antecedent. Notably, the empirical literature
53 on the demand side of ecotourism has paid less attention to ecotourism intention while more
54 focus has been placed on understanding ecotourism consumer preferences, satisfaction and
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3 demographic characteristics as evidence in the reviews by Weaver and Lawton (2007) and
4 Das and Chatterjee (2015).

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6 More specifically, the extant literature on ecotourism intention have mainly paid attention to
7 the effects of such factors as motivation (Luo and Deng, 2008; Hultman *et al.*, 2015),
8 attitudes towards ecotourism (Zhang and Lei, 2012; Teeroovengadum, 2019), environmental
9 concern (Lee and Moscardo, 2005; Huang and Liu, 2017), environmental knowledge (Zhang
10 and Lei, 2012; Schaffer and Tham, 2019), ecotourism experience (Lee and Moscardo, 2005;
11 Huang and Liu, 2017; Brochado, 2019), and environmental identity (Teeroovengadum, 2019)
12 on ecotourism intention. Note that all of them failed to consider the role of time perspective
13 and destination image in the relationship between environmental concern and ecotourism
14 intention. Moreover, the review of literature on residents' attitudes toward tourism by
15 Hadinejad *et al.* (2019) reveals the knowledge gaps in understanding how time perspective,
16 destination image, environmental concern influence ecotourism intention and what factors
17 drive Vietnamese travellers' ecotourism intention. The following sections will shed more light
18 on these aspects.
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31 ***Environmental concern and ecotourism intention***

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33 Environmental concern, also known as a pro-environment attitude or environmental belief,
34 refers to the awareness of an individual about the importance of conserving the environment.
35 Motivational paradigms offer a useful framework for the exploration of behaviour,
36 particularly environmentally responsible behaviour (Chiu *et al.*, 2014a). Kang and Moscardo
37 (2006) regard environmentally responsible behaviours as outcomes of environmental
38 attitudes. People with an awareness of the importance of conservation of natural assets tend
39 to behave responsibly toward the environment. When it comes to travel intentions, such
40 people would likely choose ecotourism instead of other tourism types. This is because
41 ecotourism facilitates sustainable development by eliminating the negative impacts of tourism
42 on the environment. In a review of literature on ethics for tourism, Holden (2019) points out
43 the role of environmental ethics in the development of sustainable tourism. Similarly, Bertella
44 (2019), through the perspective of animal ethics, advocates the importance of environmental
45 ethics in the development of sustainable wildlife tourism.

46 Empirically, environmental concern has been evidenced by the extant literature as a
47 significant factor driving tourists' involvement in ecotourism. For example, Lee and
48 Moscardo (2005) find the strong influence of tourists' environmental attitudes on their
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3 intentions to go to ecotourism resorts. Han *et al.* (2010) report the positive relationship
4 between environmental awareness and intention to visit a green hotel. Chiu *et al.* (2014b)
5 suggest travellers' environmental awareness and corresponding environmentally responsible
6 behaviour are crucial conditions for ecotourism. Hultman *et al.* (2015) show that
7 environmental belief significantly influences tourists' intention to visit an ecotourism
8 destination. In line with the extant literature, this study anticipates that individuals with
9 environment concern are likely to opt for ecotourism. Thus, it is proposed:

15 *H1. Environmental concern is positively related to ecotourism intention.*

17 ***Future time perspective, environmental concern, and ecotourism intention***

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20 Time perspective refers to the degree of emphasis that a person places on the past, the
21 present, or the future time (Gibson *et al.*, 2007). Following Milfont *et al.* (2012), this study
22 defines time perspective as an individual's view about the importance of past, present and
23 future time. Past-oriented people tend to highly regard and to be proactive in the reflection of
24 past experiences (Milfont *et al.*, 2012). Those with present time-oriented perspective tend to
25 emphasise the present and to form goals and apply behavioural needs immediately, whereas
26 those with future-oriented perspective tend to focus on planning and achieve long-term goals
27 (Lu *et al.*, 2016). Drawing on Lewin's (1951) seminal work, some research has examined the
28 influence of time perspective on pro-environmental attitudes and behaviours (e.g., Strathman
29 *et al.*, 1994; Doran *et al.*, 2017); showing that future-oriented people tend to care more about
30 the environment and act to address environmental issues than present-oriented individuals.

31
32 Indeed, environmental issues entail a trade-off between one's self-interest in the present and
33 the interests of other people in the future (Milfont *et al.*, 2012). When people care about the
34 future, the likelihood of them thinking about the future generation increases and accordingly
35 would not want to see the future generations suffer from the overexploited environment.
36 Consequently, future-oriented people are more likely to concern about environmental issues.
37 Milfont and Gouveia (2006) provide empirical evidence that environmental preservation is
38 positively correlated with future orientations. In a meta-analysis of the effect of time
39 perspective on pro-environmental attitudes and behaviours, Milfont *et al.* (2012) report that
40 future time perspective plays a significant role in shaping individuals' attitudes and
41 behaviours towards the environment. Doran *et al.* (2017) also find that future time
42 perspective is positively linked to environmental activism. Hence, it is reasonable to expect
43 that an individual with a future time perspective would have a higher awareness of
44 environment protection. Accordingly, this study hypothesises that:

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3 *H2. Future time perspective is positively correlated to environmental concern.*
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6 Time perspective has rarely been investigated in ecotourism literature. However, previous
7 literature on environmental behaviours (e.g Milfont and Gouveia, 2006) suggests the link
8 between an individual's future time orientation and pro-environmental behaviours. Recent
9 tourism literature also indicates the role of time perspective in travel intention. For instance,
10 Lu *et al.* (2016), a study examining the effect of time perspective on the travel intention of
11 Chinese senior travellers; and Doran *et al.* (2017), research evaluating the impact of time
12 perspective on sustainable travel intention of tourists from 51 countries in the UK; both signal
13 the importance of time perspective within tourism literature. As argued earlier, people with
14 future time perspectives probably care more about the environment and accordingly behave
15 responsibly toward the environment. Therefore, future-oriented people are likely to consume
16 in a way that preserves the natural environment and avoid environmental unfriendly
17 products/services. When it comes to a travel decision, the likelihood of them selecting a
18 tourism product that has less negative impacts on the environment increases. Ecotourism
19 provides such a product. Thus, when considering a tourism product, future-oriented people
20 tend to choose ecotourism. Accordingly, this study proposes:
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31 *H3. Future time perspective is positively associated with ecotourism intention.*
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34 ***Eco-destination image, environment concern and ecotourism intention***
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36 Destination image can be understood as the overall awareness or the total impressions of
37 individual of a place (Phelps, 1986). Destination image plays a key role in travel decisions. It
38 influences the decision-making process relating to choices of destinations and also conditions
39 the after-decision-making behaviours including participation, evaluation and future
40 behavioural intentions (Chen and Tsai, 2007). When a traveller has a positive image of a
41 location, the possibility they visit that location increases. Extant empirical studies (e.g Chen
42 and Tsai, 2007; Chiu *et al.*, 2014b; and Huang and Liu, 2017) report the positive effect of
43 destination image on travel intention. In sum, if an eco-destination looks appealing to a
44 tourist, the chance of them travelling to the eco-destination becomes greater. Hence, this
45 study posits that:
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54 *H4. Eco-destination image is positively associated with ecotourism intention.*
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56 Although individuals' environmental attitudes are original inclinations, they can be affected
57 by other factors. Hines, Hungerford and Tomera (1987), in their literature review, report that
58 environmentally responsible behaviours are associated with knowledge of issues which can
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3 arise from such factors as education and experiences. For instance, positive feelings obtained
4 through experiences in the natural environment can stimulate pro-environmental orientation
5 (Orams, 1995). Likewise, the condition of the physical surroundings can influence customer
6 cognitions and emotions toward the environment. Puhakka (2011) suggests that
7 environmentally responsible behaviour results when tourists recognize the impact of their
8 actions on the environment. The image of the eco-destination can create more respect for the
9 environment and finally be reflected in tourists' environmentally responsible behaviour (Chiu
10 *et al.*, 2014b). The image of environmentally overexploited destination may also engender the
11 demand for conserving the environment. To sum up, the eco-destination image can induce
12 travellers' environmental concern. Therefore, this study proposes:

20 *H5. Eco-destination image is positively associated with environment concern*

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23 The conceptual model is presented in Figure 1.

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25 *(Insert Figure 1 here)*

26 27 **Methodology**

28 29 ***Measures***

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31 The measurement scales were developed based on previous research. In particular, to proxy
32 the environmental concern, this study adopts four items all used in Han *et al.* (2010) and Chiu
33 *et al.* (2014a). Future time perspective construct was measured by five items all used in Lu *et al.*
34 (2016) and Doran *et al.* (2017). Eco- destination image was measured by 05 items all
35 employed by Chiu *et al.* (2014b) and Sharma and Nayak (2018). Ecotourism intention was
36 measured by four items all utilized in Hultman *et al.* (2015), Huang and Liu (2017) and
37 Teeroovengadum (2019). All items are measured by five-point Likert scales, ranging from 1-
38 totally disagree and 5 – totally agree to represent the level of agreement to each measurement.
39 The questionnaire was translated from English into Vietnamese by two researchers who were
40 fluent in both English and Vietnamese. The details of measurement items are shown in the
41 Appendix.
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50 51 52 ***Sample and data collection***

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54 Participants are identified as visitors at ecotourism sites. They are certainly people who had
55 intentions to visit ecotourism sites. This study used convenience sampling method to develop
56 a research sample due to its feasibility to approach visitors at ecotourism sites. The sample
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3 size was determined at least 350 observations as per the rule of thumb in multivariate analysis
4 literature.
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7 Before launching the large scale survey, a pilot study was conducted with 25 tourists at Ba Vi
8 National Park in Vietnam to ensure the clarity of the questions. After that, the questionnaire
9 was revised and pretested to 76 people in Hanoi. The result showed that all items of research
10 constructs were adequately reliable and valid (Cronbach's Alpha coefficient of each construct
11 was from 0.75 to 0.85).
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13
14 Then, the large scale survey was launched from February to May 2019 at eight unique
15 ecotourism destinations in the North (Bavi national park, Lao Cai, Ninh Binh, Quang Ninh),
16 West (Can Tho, Long An provinces) and South (Soc Trang, Phu Quoc provinces) of
17 Vietnam. The authors randomly approached tourists in the eight ecotourism sites and invited
18 them to participate in the survey. 550 people were approached and 447 responses were
19 obtained, yielding a response rate of 86.73%. Among the responses, 16 responses have
20 missing information and were excluded from the study. The final sample consists of 431
21 valid observations. Table 1 presents the demographics of respondents.
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(Table 1)

Data analysis method

Following Hair *et al.* (2005), this study used multivariate analysis method. Since the variables are latent, Confirmatory Factor Analysis (CFA) was employed to validate the measurement scales. Structural Equation Modelling (SEM) was used to test the hypotheses because SEM is a powerful technique for examining relationships among latent variables. AMOS/SPSS 18 was employed for data analysis.

Results

Measurement model

To examine the common methods bias problem, the authors employed Harman's one-factor test together with confirmatory factor analysis as per Podsakoff *et al.'s* (2003) guidance. First, exploratory factor analysis was implemented on all the measurement items. There was no single factor neither emerging nor accounting for the majority of the variance. This indicates that no general factor is evident. Next, the authors performed CFA in which all the measurement items were loaded to one construct. The single-factor model had unacceptable fitness indices. All of these results suggest that common method bias is not evident in this research.

To evaluate the reliability and validity of the measurement scales, the authors run the CFA model whereby each measurement item was allowed to load only on its specified construct and be correlated with one another. Following Hair et al. (2005, p.777), the authors rectified the measurement model by removing the items that have factor loadings below 0.6 and performed CFA again. Table 2 presents a summary of the final measurement model. The overall fitness indices indicate a good fit for the measurement model ($Chi-square/df = 2.065$; $CFI = 0.929$; $TLI = 0.922$; $IFI = 0.930$; $RMSEA = 0.050$). All items significantly load on their respective factor ($p < .001$) with ranges from 0.617 to 0.886. All factors have high composite reliability (from 0.786 to 0.884), higher than the 0.70 benchmarks (Hair et al., 2005). Convergent validity is also evident because standardized loading for each of the items and the average variance extracted (AVE) both exceed the 0.5 thresholds suggested by Hair et al. (2005). The internal consistency of the measurement scales is considered satisfactory since all the Cronbach's alpha coefficients are greater than the 0.7 benchmarks suggested by Hair et al. (2005).

(Table 2)

Discriminant validity matrix presented in Table 3 indicates discriminant validity.

(Table 3)

Hypothesis testing results

Table 4 reports the path analysis results using SEM on the whole sample. As can be seen from Table 4, the baseline model has a good fit and the hypothesized relationships are all statically significant and positive. Therefore, all of the hypotheses proposed in this study are accepted.

(Table 4)

The direct and indirect effects of all variables on ecotourism intention are shown in Table 5. Both future time perspective and eco-destination image have significant direct effects on ecotourism intention and their indirect impacts on ecotourism intention transferred via environmental concern are also significant. The total effect of future time perspective on ecotourism intention (sum of direct and indirect effect through environment concern) is 0.41. Similarly, the total effect of eco-destination image on ecotourism intention is 0.305. Meanwhile, the total effect of environment concern on ecotourism is 0.187 which is lowest among the three predictors.

(Table 5)

Robustness check

For robustness check, the authors used SEM with a sub-sample of 308 observations randomly picked up from the whole sample and reported the results in Table 6. The SEM results presented in Table 6 are consistent with the results reported in Table 4, suggesting that our findings are robust.

(Table 6)

Discussion and Conclusion

The finding into the significant impact of environmental concern on ecotourism intention is consistent with previous research which investigates the relationship between pro-environment attitude and intention to visit an eco-destination. Regardless which aspect of pro-environment attitude under examination, either environment belief in Han *et al.* (2010), environment attitude in Hultman *et al.* (2015), environment identity in Teeroovengadum (2019) or environment concern in this study; all find positive associations between these factors and ecotourism intention. This finding contributes to the current movement in the tourism literature which calls for a shift to environmental ethics as a critical driving factor for sustainable tourism. Specifically, by providing an improved understanding about the role of individuals' environmental concern in their ecotourism travel decision, our finding advocates the view put forward by Bertella (2019) about the importance of environmental ethics in the development of sustainable wildlife tourism. Indeed, individuals' environmental ethics is an abstract concept which is reflected by their environmental concern for which this study confirms as a critical factor contributing to ecotourism intention. Similarly, it can be said that this finding supports the view by Holden (2019) presented in his systematic review that advocates the role of environmental ethics and the need for environmental ethics education in tourism.

It is also found in this work that future time perspective has a significant impact on ecotourism intention. This finding is novel and unique since the role of time perspective has yet been developed in the extant literature. This finding highlights new thinking to consider time perspective theory in ecotourism research. It is worth noting that the finding of significant effect of future time perspective on environmental concern which in turn significantly influences ecotourism intention supports the view put forward by studies on

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3 environmental issues (i.e. Strathman *et al.*, 1994, Milfont *et al.*, 2012) that future-oriented
4 people tend to concern more about the environment and act to address environmental issues.
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7 Regarding the evidence about the significant effect of eco-destination image on eco-tourism
8 intention, this finding is in line with Chen and Tsai (2007), Chiu *et al.* (2014b), and Huang
9 and Liu (2017). Although these studies do not specifically examine the link between eco-
10 destination image and ecotourism intention, this study's finding, similar to theirs, confirms
11 that destination image plays a significant role in travel decision making. However, different
12 from the previous studies; this study's finding provides more insight into the role of eco-
13 destination image. In particular, the path of "eco-destination image-environment concern-
14 ecotourism intention" appears evident in this study. Eco-destination image influences the
15 travel decision-making process and also contributes to the development of tourists' positive
16 attitude toward the environment which in turn strengthens their choice of eco-tourism. Hence,
17 endeavours to build or improve the eco-image of a destination facilitate the development of
18 sustainable tourism.
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28 This study provides useful managerial implications, contributing to the development of
29 ecotourism in emerging economies. Due to the economic growth, an emerging country like
30 Vietnam has experienced a boom in tourism which, without appropriate management policy,
31 could lead to over-exploitation of nature and a bad influence on the environment. For the
32 development of ecotourism in such a country, maintaining and improving the environmental
33 friendly images of tourism locations are of great importance. To do this, this study suggests
34 policymakers in an emerging economy like Vietnam employ efficient regulations on
35 protecting the natural environment in tourism locations while tourism providers and
36 marketers should invest in building eco-image of travel locations. This study also
37 recommends public organisations to encourage greater awareness of the importance of
38 environmental protection through education, propaganda and media as this will foster the
39 demand for ecotourism. As an example, primary schools can incorporate in their training
40 programmes the content about the importance of environment protection. Finally, this study
41 advises tourism marketers to develop marketing materials emphasising future time
42 perspective and eco-destination images if they wish to promote ecotourism. For instance,
43 marketers can develop travel blogs to discuss their eco-trips, experience and advice to their
44 followers. Such blogs can comprise of the content including things to see with nice images of
45 the natural beauty of ecotourism destinations, things to eat with discussion on the long-term
46 benefit of having organic food offered in the ecotourism locations and the reason to visit eco-
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3 destinations, for instance, showing the long-term benefit of protecting the natural
4 environment of tourism destinations.
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7 This study may be limited by the adopted data collection method. This study uses a cross-
8 sectional dataset that limits the work for causal inference. Also, this research is limited to the
9 context of Vietnamese travellers. This study encourages additional studies using data
10 collected in other countries.
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14 **Acknowledgement**

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Figure 1: Conceptual Framework

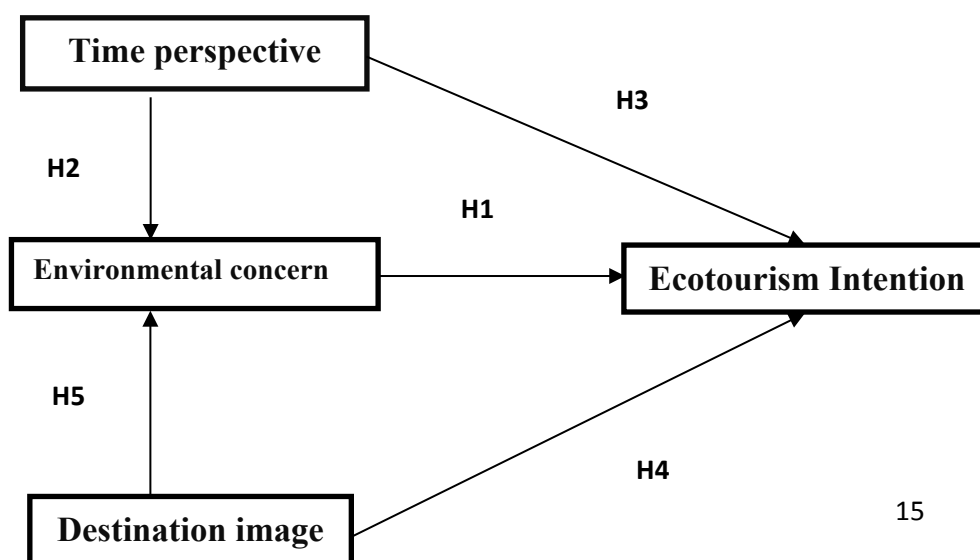


Table I

Sample profile

Demographic		Percent of sample
Gender	Male	39.0
	Female	61.0
Age	Below 20	16.4
	21-30	29.2
	31-40	29.4
	41-50	15.9
	Above 50	9.10
Frequency of travelling per year	Below 2 times	42.2
	2-4 times	44.7
	4-6 times	10.2
	Above 6 times	2.90
Job	Student	27.0
	Staff	20.6
	Government staff	25.6
	Business	12.1
	Freelance	7.90
	Homemaker/retired	3.40
	Other	3.40
Average spending per year (USD)	Below 100	23.1
	100-250	24.5
	250-500	23.8
	500-1000	12.6
	Above 1000	16.0

Table II

The reliability and convergent validity of the measurement scales

Constructs	Items	Factor Loading	Cronbach's Alpha	Average variance extracted	Composite Reliability
Environmental concern (ENV)	ENV2	.617	.808	.55	.786
	ENV3	.765			
	ENV4	.835			
Future time perspective (TIP)	TIP1	.640	.852	.54	.854
	TIP2	.784			
	TIP3	.772			
	TIP4	.740			
	TIP5	.734			
Eco-destination image (DIM)	DIM1	.886	.813	.54	.819
	DIM2	.666			
	DIM3	.627			
	DIM5	.722			
Ecotourism intention (INT)	INT1	.781	.883	.66	.884
	INT2	.780			
	INT3	.858			
	INT4	.820			

(*Chi-square/df* = 2.584; *CFI* = .952; *TLI* = .941; *IFI* = .952, and *RMSEA* = .061)

Table III

Discriminant validity

Constructs	DIM	ENV	TIP	INT
Eco-destination image (DIM)	0.735			
Environmental concern (ENV)	0.547	0.742		
Future time perspective (TIP)	0.452	0.488	0.735	
Ecotourism intention (INT)	0.440	0.446	0.507	0.812

Table IV

Path analysis results of the baseline model

Relationships			Path Coefficient	P
Future time perspective	→	Environmental concern	.306	***
Eco-destination image	→	Environmental concern	.451	***
Future time perspective	→	Ecotourism intention	.353	***
Eco-destination image	→	Ecotourism intention	.221	***
Environmental concern	→	Ecotourism intention	.187	.005

Chi-square/df = 3.073; *CFI* = 0.937; *TLI* = 0.923; *IFI* = 0.937; *GFI* = 0.920; *RMSEA* = 0.069

Table V

Direct, indirect and total effect coefficients

Path	Direct effect	Indirect effect	Total effect
Future time perspective → Environmental concern	.306	.000	.306
Eco-destination image → Environmental concern	.451	.000	.451
Future time perspective → Ecotourism intention	.353	.057	.410
Eco-destination image → Ecotourism intention	.221	.084	.305
Environmental concern → Ecotourism intention	.187	.000	.187

Chi-square/df = 3.073; *CFI* = 0.937; *TLI* = 0.923; *IFI* = 0.937; *GFI* = 0.920; *RMSEA* = 0.069

Table VI

Path analysis results of the robustness check model

Relationships			Path Coefficient	P
Future time perspective	→	Environmental concern	.350	***
Eco-destination image	→	Environmental concern	.469	***

	Relationships	Path Coefficient	P
Future time perspective	→ Ecotourism intention	.356	***
Eco-destination image	→ Ecotourism intention	.235	***
Environmental concern	→ Ecotourism intention	.163	.025

Chi-square/df=2.869; CFI = .938; TLI = .924; IFI = .938; GFI= 0.919, RMSEA = .069

Table VII

Summary of research findings and implications

Findings	Contribution to the literature	Implications to practices
Environmental concern is significantly and positively associated with ecotourism intention.	This finding contributes to the current movement in the tourism literature which calls for a shift to environmental ethics as a critical driving factor for sustainable tourism (Bertella, 2019; Holden, 2019)	Public organisations should encourage greater awareness of the importance of environmental protection through education, propaganda and media.
Future time perspective is significantly and positively associated with environmental concern.	This finding supports the view put forward by studies on environmental issues that future-oriented individuals tend to care about the environment and act to address environmental issues	Tourism marketers to develop marketing materials emphasising future time perspective.
Future time perspective is significantly and positively associated with ecotourism intention.	This finding highlights new thinking to consider time perspective theory in ecotourism research.	
Eco-destination image is significantly and positively associated with ecotourism intention.	This finding provides more insight into the role of eco-destination image. The path of "eco-destination image-environment concern-ecotourism intention" appears evident in this study.	Tourism marketers should develop marketing materials emphasising eco-destination images.
Eco-destination image is significantly and positively associated with environment concern	This finding suggests that eco-destination image contributes to the development of tourist's positive attitude toward the environment	Policymakers in emerging economies should employ efficient regulations on protecting the natural environment in tourism locations while tourism providers and marketers should invest in building eco-image of travel locations.

Appendix: Survey questions

Age

Gender

Frequency of travelling per year

Job

Average spending per year (USD)

Please rate the level of agreement to each statement below with 1- totally disagree and 5 – totally agree.

Environmental concern	ENV1	When humans interfere with nature, it often produces disastrous consequences
	ENV2	Humans are severely abusing the environment
	ENV3	Plants and animals have as much right as humans to exist
	ENV4	The balance of nature is very delicate and easily upset
Future Time perspective	TIP1	I believe that a person's day should be planned ahead each morning
	TIP2	When I want to achieve something, I set goals and consider specific means of reaching those goals
	TIP3	It seems to me that my future plans are pretty well laid out
	TIP4	I make lists of things to do
	TIP5	I complete projects on time by making steady progress
Eco-destination image	DIM1	Good climate
	DIM2	Political stability
	DIM3	Beautiful landscape
	DIM4	A good reputation of a destination
	DIM5	Unpolluted/unspoiled natural environment
Ecotourism intention	INT1	I will choose ecotourism in my travelling
	INT2	I intend to visit an ecotourism destination within a foreseeable future
	INT3	I properly choose ecotourism tour
	INT4	I think the ecotourism is right

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