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Predicting a Responsible Ecotourist Behaviour: Pilot Study

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Abstract
In sustainable ecotourism, responsible ecotourist behaviour towards purchasing local products and services is vital to alleviate poverty in local communities and help wildlife conservation. Using an extended Theory of Planned Behaviour, this study investigates the relationship between attitude, anticipated emotion, and environmental concern. This pilot study was conducted to test the reliability of the questionnaire instrument before conducting the actual research. Data collection was conducted in Penang National Park, and questionnaires were distributed face to face among the ecotourist. Samples were obtained using the purposive sampling method. Statistical Software Packages, namely SPSS version 26.0, were used to perform data analysis. The high internal consistency of items among the constructs shows that the questionnaires are reliable in conducting actual research in predicting responsible ecotourist behaviour (Cronbach Alpha value ranges from 0.883 to 0.604).

Keywords: Responsible Ecotourist Behaviour, Wildlife Conservation, Attitude, Anticipated Emotion, Environmental Concern

Introduction
According to Stronza & Pêgas (2008), sustainable ecotourism is a powerful tool for wildlife conservation. It can generate incredible economic benefits for local people to alleviate poverty. Yadav et al (2021) suggested that humans unsustainable manner that lead to environmental problem can be prevented thru sustainability. In sustainable ecotourism, it is crucial to evaluate responsible ecotourist behaviour (REB) towards purchasing local products and services for wildlife conservation as this money will get back into the local communities (Stronza, 2007). The Theory Of Planned Behavior (TPB) is a psychological theory often used to study conservation behavior (Kaiser et al., 2005). Proposed by Ajzen in 1985, this theory tells how an individual's decision to engage in a specific behavior is predicted by their intention to engage in that behavior. Intentions are assumed to capture the motivational factors that influence behavior; they indicate how hard people are willing to try and how much effort they are planning to exert to perform the behavior. According to TPB, intentions are determined by attitude towards behaviour (Ajzen, 1991). Attitude is a positive and negative evaluation
when we consider particular behaviour (Eagly & Chaiken, 1993). It is critical to evaluate REB attitudes toward purchasing local products and services for wildlife conservation in this study because attitudes are a component of endurance. It means that someone who has a favorable opinion of an object, person, thing, or event will continue to have a favorable opinion (Eagly, & Chaiken, 2007). In psychology, emotion refers to the sentiments of happiness, love, fear, fury, or hatred elicited by a current circumstance and capable of influencing action. It profoundly affects all aspects of life, from our daily interactions with others to our decisions. According to Bagozzi et al (2016), emotions during the decision-making process involve anticipated emotions. Leone et al (2005) mentioned that anticipated emotions are an emotion that is not experienced directly but are the expectations of how the person will feel (gains or losses) regarding the decision making that has been made. For example, a person anticipates feeling regret if she/he decides not to recycle waste. Someone is anticipated to feel proud if she/he decides to recycle waste. When aroused, emotions control elements such as perception, attention, inference, learning, memory, goal selection, motivational priorities, physiological reactions, motor behaviors, and behavioral decision-making (Cosmides & Tooby, 2000; Tooby & Cosmides, 2008). As public awareness of environmental issues grows, researchers frequently employ the construct of environmental concern to assess environmental behaviour. Environmental concern is a general belief in environmental conservation, which motivates individuals to adopt more responsible behaviours (Fransson & Gärling, 1999). According to Bamberg (2003), it is crucial to study the influence of environmental concerns as they may affect a wide range of environmental behaviour. Therefore, this study investigated the relationship between REB’s attitude, environmental concern, and anticipated emotion in purchasing local products and services for wildlife conservation.

Literature Review
TPB is used to predict human behavior (Curtis et al., 2018; Zaremohzzabieh et al., 2019). It has been applied in various human domains such as in the field of purchasing, advertising, entrepreneurship, plagiarism and sustainability (Al-Jubari et al., 2019; Naia et al., 2017; Nandi & Singh, 2021; Qi & Ploeger, 2019; Sanne & Wiese, 2018; Sharma & Foropon, 2019; Si et al., 2020; Uzun & Kilis, 2020). TPB has been criticized for ignoring the functions of attitude to predict intention as it is heavily used perceived behavioral control (PBC) to prove its influence on intention (Lee & Kim, 2018; Xiao & Wong, 2020). Scholars employ attitude constructs to examine the attitudes of customers, students, and workers (Gaiani et al., 2018; Santos et al., 2019; Saqlain et al., 2020). Since the 1970s, tourism academics have begun to pay attention to tourists’ attitudes. Wildlife conservation research is frequently employed in tourism studies to investigate the attitudes of local communities (Black and Cobbinah, 2018; Mbiawa, 2018; Ziegler et al., 2021). In TPB, scholars also heavily use the model to study environmental behaviour. However, scholars has lacked to integrate into the theory of the role of emotion in the formation of environmental behavior and decision-making processes (Parkinson et al., 2018). A meta-analysis by Rivas & Sheeran (2003) revealed that scholars always use norms as an additional predictor in the TPB to environmental behavior studies (Oteng-Peprah et al., 2020; Tan et al., 2017; Clark et al., 2019; Esfandiar et al., 2020; Han & Hyun, 2017). Over the decades, research on emotion has increased in a variety of fields, including medicine (Ferrer, & Mendes, 2018; Kozlowski et al., 2017), education (Frenzel et al., 2018; Morrish et al., 2018) and computer science (Egger et al., 2019; Tarnowski et al., 2017). Eng et al (2022) encourage researchers to consider the inclusion of emotional responses as antecedents to TPB outcomes.
as it could shape our behavior. TPB is also heavily used by researcher in environmental research field to study environmental behaviour. However, the environmental concern construct is scarcely used in TPB to study environmental behaviour as the researchers focus more on environmental consciousness (Ahmad et al., 2020; Jain et al., 2020). Scholars and environmentalists have developed environmental concerns to evaluate pro-environmental behavior (Aprile & Fiorillo, 2017; Chao et al., 2021; Maichum et al., 2017; Malik et al., 2019; Yue et al., 2020).

Methodology
In this study, Penang National Park (PNP) was selected as the study site because it is a popular ecotourism destination that attracts domestic and international visitors. It was rated the seventh best ecotourism destination in Asia by Agoda.com. In Malaysia, PNP is situated in Penang State, the smallest state in Malaysia (measuring 29.6sq km) with a total population of 1.77 million. It is reported that the poverty in Penang State is increasing, which is 11.3% in 2016 and 13.2 % in 2019 (Department of Statistics, Malaysia). PNP is a home to 417 species of flora and 143 species of fauna, including numerous rare and endangered species. It is also a wildlife conservation area (Turtle Conservation Centre) dedicated to protect turtle eggs from being hunted by local people since a long time ago. Turtle eggs are hunted as a source of income due to poverty. The selling price of turtle eggs is RM5 to RM6 each, while these animals only lay eggs once a year, not more than 40 eggs. Turtles are reptiles that contribute significantly to the ecosystem's balance.

This study employs quantitative research approaches as it enables researcher to gain a deeper understanding of social science through survey (Bowling & Ebrahim, 2005). This method effectively communicated using statistics and figures in contribution to the theory (Leedy & Ormrod, 2005). Additionally, this study employed a single cross-sectional design, in which a single sample of respondents was recruited from the population and data from this sample was collected just once (Olsen & St George, 2004). As this study applied a non-experimental research and researcher knew accurately what and how to measure the variables of interest, close-structured questionnaire seemed to be an efficient data collection instrument (Sekaran, 2003). A self-administered questionnaire is a quantitative method that enables the researcher to collect a large number of respondents (individuals who respond to the questions) with minimal researcher intervention.

In this study, the questionnaire was designed into two sections, known as Section I and Section II. Section I has two parts namely Part A and Part B. Part A included the respondent’s profile such as age, gender, education level, occupation, salary. Part B included the respondent’s trip information. The type of question that was used in this section was determinant-choice question in which the respondents were required to choose one response from several possible alternatives. Section II of the questionnaire containing four constructs measurement namely environmental concern (12 items), anticipated emotion (6 items), attitude (12 items) and intention (4 items). All items were adapted from the literature as shown in Appendix 1. All of the measurable items were graded on a five-point Likert scale ranging from 5-strongly agree to 1-strongly disagree. According to Joshi, Kale, Chandel & Pal (2015), Likert Scale is the most effective method for analysing human behaviour. Additionally, a five-point Likert scale is straightforward and requires less time and effort to complete than a more complex scale. This contributes to the survey’s bias reduction. Numerous researches
have indicated that using a five-point scale can improve response rate and quality while decreasing respondents' annoyance level (Devlin et al., 1993; Babakus & Mangold, 1992). Additionally, Krosnick (2018) stated that a five-point scale is easily understood by respondents and enables them to express their thoughts simply. Several of the items in this study were worded negatively rather than all being worded positively. This is to keep respondents engaged and focused while they provide responses to the questions, as well as to stop respondents unconsciously circling the points. According to Sekaran (2003), a "good questionnaire should have both positive and negative items" (p. 240). Seven negatively worded questions were used in this study.

**Analysis of Pilot Study**

A pilot study is the initial phase of the research process and is defined as a smaller-scale study (Van Teijlingen, & Hundley, 2001). Before conducting the primary research, it is essential to conduct a pilot study to improve the precision of the study. In quantitative study, pilot study was conducted to determine the instrument internal consistency (Rattray & Jone, 2007). Instrument reliability is a term that refers to the consistency of an instrument such as questionnaire. In this research, a pilot study was undertaken in January 2021. Purposive sampling was used in this study because its flexibility enables researchers to save time and money during data collecting (Taherdoost, 2016). It provides a procedure that is adaptable as circumstances change, even if the change is unexpected. After being granted permission by the authorised officer of the national park, the data is collected meticulously through a face-to-face survey of visitors at the Penang National Park's entrance gate. Initially, visitors to Penang National Park were asked whether they were checking in or staying overnight during their visit. In this study, only tourists that check in or stay overnight will be chosen as a sample. Second, only tourists who agree to be respondents will receive a set of questionnaires from the researcher's team, and they will be given a symbol of appreciation once they have completed the questionnaire. According to Fink (1995), a minimum of ten respondents is necessary to collect sufficient data for analysis. Seventy respondents' data were evaluated in this study to obtain more accurate results. The more data collected, the more accurate the findings (Fink, 1995). This pilot study analysed data using SPSS 26.0 software to obtain the internal consistency of the variables measured in the questionnaires.

Based on the analysis of respondents' profiles, the majority of respondents were between the ages of 20 and 40 (42.9 %), followed by those under the age of 20 and above the age of 40. The majority of respondents were men (57.1 %). Furthermore, 84.3% of respondents were Malaysian citizens, compared to non-Malaysians, according to the data. Most respondents have a secondary school certificate as the highest educational background (31.4%), followed by those with a degree certificate (27.1%) and foundation's certificate (22.9%). Those with master's and diploma’s respectively are 7.1%. Respondents were largely employed (55.7 %), followed by students (28.6 %), and the fewest were retirees (2% ). The majority of respondents work in the public sector (27.1%), followed by those in the private sector (25.7%) and the self-employed (2.9%). Most respondents' monthly income is below RM1000 (38.6%). It is followed by those with a monthly income of RM5001 to RM10,000 (35.7%) and RM1000 to RM5000 (25.7%). The respondents' profiles was summarised in Table 3.1.
Table 3.1
Profile of the Respondent

| Item            | Classification | Sample Amount | Percentage % |
|-----------------|----------------|---------------|--------------|
| Age             | Under 20       | 22            | 31.4         |
|                 | 20-40          | 30            | 42.9         |
|                 | Above 40       | 18            | 25.7         |
| Gender          | Male           | 40            | 57.1         |
|                 | Female         | 30            | 42.9         |
| Malaysia Citizen| Non-Malaysian  |               |              |
|                 | Primary School | 3             | 4.3          |
|                 | Secondary School | 22         | 31.4         |
|                 | Certificate    | 16            | 22.9         |
|                 | Diploma        | 5             | 7.1          |
|                 | Degree         | 19            | 27.1         |
|                 | Master         | 5             | 7.1          |
| Occupation      | Employed       | 39            | 55.7         |
|                 | Unemployed     | 9             | 12.9         |
|                 | Pensioner      | 2             | 2.9          |
|                 | Student        | 20            | 28.6         |
| Working Sector  | Public         | 19            | 27.1         |
|                 | Private        | 18            | 25.7         |
|                 | Self-Employed  | 2             | 2.9          |
|                 | Non-Employed   | 31            | 44.3         |
| Monthly Income  | Less Than RM1000 | 27       | 38.6         |
|                 | RM1000-RM5000  | 18            | 25.7         |
|                 | RM5001-RM10000 | 25            | 35.7         |

Based on the analysis of respondent’s trip details, most respondents are first-time visitors to Penang National Park (57.1 %), compared to those who visit frequently (42.9%). The number of respondents who came alone was lower than the number who came in groups (85.7%). Many of them were accompanied by family and friends (34.4 % each), followed by solo travellers (20%) and those who came with a business partner or colleagues (11.4%). According to the data, Penang National Park is the main trip’s destination for respondents (88.6%), with most of them seeking leisure (87.1%). While the rest came for work (12.9%). According to the findings, most respondents were self-funding the expense of the trips (52.9%), followed by those sponsored by family and relations (35.7%). 100% of respondents agreed the best time to travel is on weekends. The analysis also discovered that the majority of respondents who came to visit Penang National Park spent money between RM500 and RM1000 (58.6%), followed by those who spent less than RM500 (24.3%). The respondents' trip details was summarised in Table 3.2.
Table 3.2
Information on the Respondent’s Trip

| Item                      | Classification               | Sample Amount | Percentage % |
|---------------------------|------------------------------|---------------|--------------|
| Trips frequent            | First Timer                  | 40            | 57.1         |
|                           | More Than 1 time             | 30            | 42.9         |
| Number of People in the trips | 1 Person                   | 10            | 14.3         |
|                           | More Than 2 Persons          | 60            | 85.7         |
| Travel Buddy              | Unaccompanied Traveler       | 14            | 20           |
|                           | Family                       | 24            | 34.4         |
|                           | Friend                       | 24            | 34.4         |
|                           | Business Partner/Colleagues  | 8             | 11.4         |
| Main Trip                 | Yes                          | 62            | 88.6         |
|                           | No                           | 8             | 11.4         |
| Objective                 | Working                      | 9             | 12.9         |
|                           | Leisure                      | 61            | 87.1         |
| Sponsor                   | Self-Sponsor                 | 37            | 52.9         |
|                           | Friend                       | 3             | 4.3          |
|                           | Office                       | 5             | 7.1          |
|                           | Family & Relatives           | 25            | 35.7         |
| Vacation time             | Weekends                     | 70            | 100          |
| Average Expenses          | Less Than Rm500              | 17            | 24.3         |
|                           | Rm500-Rm1000                 | 41            | 58.6         |
|                           | Rm1001-Rm2000                | 1             | 1.4          |
|                           | More Than Rm2000             | 11            | 15.7         |

The Cronbach Alpha scores can be used to measure the internal consistency of questionnaire items (Gliem & Gliem, 2003). Cronbach Alpha values between 0.91 and 1.00 indicate excellent internal consistency, whereas Cronbach Alpha values between 0.81 and 0.90 indicate good internal consistency. Cronbach Alpha values between 0.71 and 0.80 suggest that items have a good to acceptable degree of internal consistency, whilst values between 0.61 and 0.70 indicate that items have an acceptable degree of internal consistency. However, scores of 0.01-0.60 imply that the items do not have an acceptable level of internal consistency. In the present research, results of pilot study demonstrates that the Cronbach alpha value were ranges from 0.883 to 0.604, respectively. Cronbach Alpha value for Limit to Growth (0.881), Anti-anthropocentrism (0.775), Exemp-tionalism (0.781), Eco-crisis (0.79), anticipated emotion (0.883), attitude towards buying local vendors for wildlife conservation (0.680), attitude towards buying local handicrafts for wildlife conservation (0.788), attitude towards staying in a local homestays for wildlife conservation (0.604), attitude towards using
local tour guides for wildlife conservation (0.760), and intention (0.826) shows that the items in the questionnaire have a high level of internal consistency, which further indicates that the questionnaire has a high level of reliability. The results of the pilot study were described in Table 3.3, which included the reliability coefficients for the constructs and dimensions.

### Table 3.3
Reliability Coefficient for the Constructs and Dimensions

| Construct                        | Dimension                                      | Cronbach’s alpha | Number of items |
|----------------------------------|------------------------------------------------|------------------|-----------------|
| Environmental concern            | Limit to growth                                | 0.881            | 4               |
|                                  | Anti-anthropocentrism                          | 0.775            | 3               |
|                                  | Exempl- tionalism                              | 0.781            | 2               |
|                                  | Eco-crisis                                     | 0.79             | 3               |
| Anticipated emotion              |                                                | 0.883            | 6               |
| Attitude                         | Attitude towards buying local vendors for wildlife conservation | 0.680            | 3               |
|                                  | Attitude towards buying local handicrafts for wildlife conservation | 0.788            | 3               |
|                                  | Attitude towards staying in a local homestays for wildlife conservation | 0.604            | 3               |
|                                  | Attitude towards using local tour guides for wildlife conservation | 0.760            | 3               |
| Intention                        |                                                | 0.826            | 4               |

### Discussion and Conclusion
This study is crucial for predicting responsible ecotourism behaviour (REB) regarding purchasing local products and services for wildlife conservation. Before conducting the actual research, it is crucial to conduct a pilot study to determine the instrument’s reliability (questionnaire). The pilot study's purpose was to determine the internal consistency of the construct's items. The results show that items in environmental concern have a high level of internal consistency (Limit To Growth = 0.881; Anti-anthropocentrism = 0.775; Exempl- tionalism = 0.781; and Eco-crisis = 0.79). Findings show that the internal consistency among the six items in anticipated emotion is also very high (Cronbach Alpha = 0.883). The results show that there is a high level of internal consistency among attitude items (Attitude towards buying local vendors for wildlife conservation = 0.680; Attitude towards buying local handicrafts for wildlife conservation = 0.788; Attitude towards staying in local homestays for
wildlife conservation = 0.604; and Attitude towards using local tour guides for wildlife conservation = 0.760). Findings show that the intention's internal consistency among the four items is very high (Cronbach Alpha = 0.826). Finally, the findings show that the items have a high degree of internal consistency among the constructs (Cronbach's alpha values range from 0.88 to 0.604), indicating that the questionnaire is highly reliable. Therefore, it is suggested that future researchers utilize the instrument to predict REB. Additionally, this instrument is recommended to be reliable for conducting actual research.

Appendix 1

| Source | Items of Attitude |
|--------|-------------------|
| Ibrahim, Mariapan, Lin, and Bidin (2021b) | 1. I like to buy local food vendor very much if it contributes to the conservation of wildlife in Penang National Park. |
| | 2. I think, buying local food vendor that contributes to the conservation of wildlife in Penang National Park is very good. |
| | 3. I always buy local food vendor that contributes to the conservation of wildlife in Penang National Park. |
| | 4. I like to buy local handicraft products very much if it contribute to the conservation of wildlife in Penang National Park. |
| | 5. I think, buying local handicraft products that contribute to the conservation of wildlife in Penang National Park is very good. |
| | 6. I always buy local handicraft products that contributes to the conservation of wildlife in Penang National Park. |
| | 7. I like to stay in a local homestay very much if it contributes to the conservation of wildlife in Penang National Park. |
| | 8. I think, staying in a local homestay that contributes to the conservation of wildlife in Penang National Park is very good. |
| | 9. I always stay in a local homestays that contributes to the conservation of wildlife in Penang National Park. |
| | 10. I like to use local tourist guide services if it contributes to the conservation of wildlife in Penang National Park. |
| | 11. I think, using local tourist guide services that contributes to the conservation of wildlife in Penang National Park is very good. |
| | 12. I always use local tourist guide services that contributes to the conservation of wildlife in Penang National Park. |

| Dimension and Source | Items of Environmental Concern |
|----------------------|--------------------------------|
| Limit to growth Dunlap (2000) | 1. I believe we are approaching a limit on the number of people the earth can support. |
| | 2. I believe the earth has plenty of natural resources if we just learn how to develop them. |
| | 3. I believe the earth is like a spaceship with very limited room and resources. |
| | 4. I believe the balance of nature is strong enough to cope with the impacts of our modern industrial. |
| | 1. I believe we were meant to rule over the rest of nature. |
| Anti-anthropocentrism | 2. I believe that we have the absolute right to modify the natural environment to suit our needs. |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Dunlap (2000)        | 3. I believe plants and animals have as much right like us to exist.                                                              |
| Exempt-ionaism       | 1. I believe we will eventually learn enough about how nature works to be able to control it.                                      |
| Dunlap (2000)        | 2. I believe despite our special abilities; we are still subject to the laws of nature.                                          |
| Eco-crisis           | 1. I believe the so called “ecological crisis” facing humankind has been greatly exaggerated.                                   |
| Dunlap (2000)        | 2. I believe human are severely abusing the environment.                                                                        |
|                      | 3. I believe if things continue their present course, we will soon experience a major ecological catastrophe.                   |
| Ibrahim, Mariapan, Lin, and Bidin (2021b) | **Items of Intentions**                                                                                                           |
|                      | 1. I intend to buy local food vendor that contributes to the conservation of wildlife when visiting Penang National Park next year. |
|                      | 2. I intend to buy local handicraft products that contributes to the conservation of wildlife when visiting Penang National Park next year. |
|                      | 3. I intend to stay in local homestay that contributes to the conservation of wildlife when visiting Penang National Park next year. |
|                      | 4. I intend to use local tourist guide service that contributes to the conservation of wildlife when visiting Penang National Park next year. |
| Perugini & Bagozzi (2001) | **Items of Anticipated Emotions**                                                                                                 |
|                      | 1. When visiting Penang National Park in the future, I will feel very proud if I can buy local products and services that contributes to wildlife conservation. |
|                      | 2. When visiting Penang National Park in the future, I will feel very happy if I can buy local products and services that contributes to wildlife conservation. |
|                      | 3. When visiting Penang National Park in the future, I will feel very satisfied if I can buy local products and services that contributes to wildlife conservation. |
|                      | 4. When visiting Penang National Park in the future, I will feel ashamed if I don’t buy local products and services that contributes to wildlife conservation. |
|                      | 5. When visiting Penang National Park in the future, I will feel guilty if I don’t buy local products and services that contributes to wildlife conservation. |
|                      | 6. When visiting Penang National Park in the future, I will feel uncomfortable if I don’t buy local products and services that contributes to wildlife conservation. |
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