

Theory of Planned Behaviour to Predict Responsible Ecotourism: Structural Equation Modelling

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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. This study was conducted to test the relationship between attitude, anticipated emotion, and environmental concern to predict responsible ecotourist behavioural intention to purchase local products and services for wildlife conservation in Penang National Park. Study samples were obtained using the purposive sampling method, and questionnaires were distributed face to face in Penang National Park. Statistical Software Packages, namely SPSS Amos version 26.0, were used to perform data analysis to run Structural Equation Modelling (SEM). Out of the nine hypotheses that have been proposed, 8 of them are supported. The findings of the study found that attitude has a significant relationship with intention, anticipated emotion has a significant relationship to attitude, environmental concern has a significant effect on attitude and anticipated emotion, and environmental concern has no significant effect on intention. Mediation analysis found that attitude is a mediator between anticipated emotion and intention, and attitude is also a mediator between environmental concern and intention. Mediation analysis also found that anticipated emotion is a mediator between the relationship of environmental concern and intention. This study is critical in assisting stakeholders in the ecotourism industry in planning an effective marketing strategy to promote local products and services.

Keywords: Responsible Ecotourism, Wildlife Conservation, Attitude, Anticipated Emotion, Environmental Concern, Theory of Planned Behaviour

Introduction

According to Stronza & Pegas (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 leads to the

environmental problem can be prevented through sustainability. It is crucial to evaluate responsible ecotourist behaviour (REB) towards purchasing local products and services for wildlife conservation in sustainable ecotourism. This money will get back into the local communities (Stronza, 2007). The Theory Of Planned Behaviour (TPB) is a psychological theory often used to study conservation behaviour (Kaiser et al., 2005). Proposed by Ajzen in 1985, this theory tells how an individual's decision to engage in a specific behaviour is predicted by their intention to engage in that behaviour. Intentions are assumed to capture the motivational factors that influence behaviour; they indicate how hard people are willing to try and how much effort they are planning to exert to perform the behaviour. According to TPB, intentions are determined by attitude towards behaviour (Ajzen, 1991). Attitude is a positive and negative evaluation when considering 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 favourable opinion of an object, person, thing, or event will continue to have a favourable 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 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 perception, attention, inference, learning, memory, goal selection, motivational priorities, physiological reactions, motor behaviours, and behavioural 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 & Garling, 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 behaviour (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 behavioural control (PBC) to prove its influence on intention (Lee & Lina Kim, 2018; Xiao & Wong, 2020). Scholars employ attitude constructs to examine the attitudes of customers, students, and workers (Gaiani et al., 2018; Pinto Dos 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; Mbaiwa, 2018; Ziegler et al., 2021). In a meta-analysis of numerous research, Kim & Hunter (1993) found a strong link between attitudes and behavioural intention. Chatzisarantis et al. (2005) also emphasized the extremely stable link between attitude and intention. This is corroborated by many additional researchers (Cheah et al., 2022; Kasilingam, 2020; Trivedi et al., 2018; Um, & Yoon, 2021). A mediator variable, also known as an intervening variable, is a variable that serves as a link between the independent and dependent variables and explains the relationship between the other two variables (MacKinnon, 1994). According to MacKenzie, et al. (1986), attitude is a mediator in the interaction between two other variables. Previous studies indicated that attitude mediates the relationship between emotion and intention (Gilchrist et al., 2019; Ibrahim et al., 2021b; Taylor et al., 2016). According to Bamberg (2003), environmental concern indirectly affects intention through attitude as a mediator and is also supported by several studies (Chen, & Tung, 2014; De Groot & Steg, 2007; Ibrahim et al., 2021a; Kumar et al., 2022; Onurlubaş, 2018; Zhu et al., 2020).

In TPB, scholars also heavily use the model to study environmental behaviour. However, scholars have lacked to integrate into the theory of the role of emotion in the formation of environmental behaviour and decision-making processes (Parkinson et al., 2018). A meta-analysis by Ravis & Sheeran (2003) revealed that environmental scholars always use norms as an additional predictor in their studies (Oteng-Pepurah 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; Kozłowski 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 including emotional responses as antecedents to TPB outcomes as they could shape our behavior. Past studies have found that anticipated emotion has a significant relationship on attitude (Ahn & Kwon, 2020; Bettiga & Lamberti, 2018; Durán et al., 2016; Pérez-Villarreal et al., 2019). Past studies have found that anticipated emotion has a significant relationship to intention (Kim et al., 2013; Londono et al., 2017; Odou & Schill, 2020; Rezvani et al., 2017). A study conducted by Elgaaied (2012) exploring the role of anticipated guilt on pro-environmental behaviour showed that anticipated guilt mediates the relationship between environmental concern and intention to recycle. Guilt is one emotion rather than anticipated emotion.

TPB is also heavily used by researchers in the 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). Past studies have also found that environmental concerns influence environmental attitudes. Several studies evidence this by past researchers (Adam et al., 2021; Emekci, 2019; Shin et al., 2017; Zhang & Luo, 2021). Studies show that environmental concern is related to intention. The more serious the environmental concern, the higher the intention in environmental behavior. This can be explained by several past studies (Li et al., 2019; Shalender, & Sharma, 2021; Weber et al., 2020; Wu et al., 2019; Yue et al., 2020). However, Ajzen and Fishbein

(1980), proposed that environmental concerns do not directly affect a specific behavior. A meta-analysis conducted by Hines et al (1987) also found that the correlation between environmental concern and intention/behavior is weak (0.35) and supported by several studies that found an insignificant relationship between environmental concern and intention (Choi & Johnson, 2019; Khaola et al., 2014; Meng & Choi, 2016). Past studies have found that environmental concerns influence emotions (Kashi, 2019; Wandira, 2020). Based on the discussion above, this research hypothesis proposes that:

- H1: There is a significant direct relationship of attitude toward purchasing local products and services for wildlife conservation on the intention of REB in Penang National Park.
- H2: There is a significant direct relationship between anticipated emotion on attitude toward purchasing local products and services for wildlife conservation of REB in Penang National Park.
- H3: There is a significant direct relationship between anticipated emotion on the intention to purchase local products and services for wildlife conservation of REB in Penang National Park.
- H4: There is a significant direct relationship between environmental concern on attitude toward purchasing local products and services for wildlife conservation of REB in Penang National Park.
- H5: There is a significant direct relationship between environmental concern on the intention to purchase local products and services for wildlife conservation of REB in Penang National Park.
- H6: There is a significant direct relationship between environmental concern on the anticipated emotion of REB toward purchasing local products and services for wildlife conservation in Penang National Park.
- H7: There is a mediating role of attitude toward purchasing local products and services for wildlife conservation between the relationship of anticipated emotion and intention of REB in Penang National Park.
- H8: There is a mediating role of attitude toward purchasing local products and services for wildlife conservation between the relationship of environmental concern and intention of REB in Penang National Park.
- H9: There is a mediating effect of anticipated emotion between the relationship of environmental concern and intention to purchase local products and services for wildlife conservation of REB in Penang National Park.

Methodology

This study employs quantitative research approaches as it enables the researcher to gain a deeper understanding of social science through a survey (Bowling & Ebrahim, 2005). This method is 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 non-experimental research and the researcher knew accurately what and how to measure the variables of interest, a 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 many respondents (individuals who respond to the questions) with minimal researcher intervention.

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 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 protecting turtle eggs from being hunted by local people long 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.

Since the Movement Control Order was abolished in Malaysia in October 2021 due to the Covid-19 deceased, the data collection was face-to-face for four weeks in November 2021. Researchers concentrated their efforts on visits to Penang National Park on Saturdays and Sundays because the number of tourists arriving on those days was more significant than on other days. Purposive sampling was used in this study because its flexibility enables researchers to save time and money during data collecting (Taherdoost, 2016). It provides an adaptable procedure as circumstances change, even if the change is unexpected. After being granted permission by the authorized officer of the national park, the survey is conducted at the entrance gate of Penang National Park. Initially, visitors were asked whether they were checking in or staying overnight during their visit. Only check-in or stay overnight visitors will be chosen as a sample in this study. Second, only tourists who agree to be respondents will receive a set of questionnaires from the researcher's team. They will be given a symbol of appreciation once they have completed the questionnaire.

The questionnaire was designed into two sections in this study, known as Section I and Section II. Section I has two parts, namely Part A and Part B. Part A includes the respondent's profile, such as age, gender, education level, occupation, and salary. Part B included the respondent's trip information. The type of question used in this section was a determinant-choice question in which the respondents were required to choose one response from several possible alternatives. Section II of the questionnaire contains 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. The measurable items were graded on a five-point Likert scale ranging from 5-strongly agree to 1-strongly disagree. According to Joshi et al (2015), the Likert Scale is the most effective 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 levels (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. It keeps respondents engaged and focused while they respond to the questions and stops respondents from 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 and Findings

G*Power analysis found that the sample size of the current study is 119 based on the three predictors used. According to Awang (2012), if the study has seven or fewer latent constructs and each construct has more than three items, the minimum sample size required is 150, as shown in Table 3.1. According to Hair et al (2010), a study with an insufficient sample size may provide inconclusive results. As the present study has four latent constructs and assumes the confidence level of 95%, together with the sampling error of 5%, thus, the sample size of 200 was deemed necessary for the current study.

Respondent's profile analysis shows the largest group in this study is those aged 18-23 years (41.5%), followed by those aged 40 or above (37.6%) and those aged under 20 (21%). Males made up the majority of participants (54%), with females accounting for the remainder. 89.5% of respondents are Malaysian citizens, while the remainder is non-Malaysian citizens. Secondary school graduates are most likely to participate in this study (26.5%), followed by those with a bachelor's degree (23%), a certificate (19%), a diploma (16.5%), a master's (11%), a primary school certificate (2.5%), and a Ph.D. (1.5%). Employed respondents account for the majority (59.5%), followed by students (20%), the jobless (14%), and retirees (6.5%). In this study, non-employed account for the largest proportion of respondents (40.5%), followed by those employed in the public sector (31%), private sector (20.5%), and self-employed (8%). The majority of respondents incomes between RM1,000 to RM5,000 (33.5%), followed by those earning less than RM1,000 (32%), RM5,001 to RM10,000 (29%) and more than RM10,000 (5.5%), as shown in Table 4.1.

The analysis of respondents' trip information revealed that most respondents (58%) were not first-time visitors to Penang National Park, while the remainder were. The number of respondents who came alone was lower than those who came in groups (90%). Many of them were accompanied by family (48%), followed by friends (24%), followed by those who came with a business partner or colleagues (17%), and solo travellers (11%). According to the data, Penang National Park is the main trip destination for respondents (96%), with most of them seeking leisure (85.5%). While the rest came for work (14.5%). Most respondents were self-funding the expense of the trips (58.5%), followed by those sponsored by family and relatives (26%). 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 less than RM500 (48.5%), RM500 to RM1000 (44%), RM1,001 to RM2,000 (20%), followed by those who spent more than RM2000 (5.5%) as shown in Table 4.2.

Table 4.1
Respondent' Profile

Item	Classification	Sample Amount	Percentage %
Age	Under 20	42	21
	20-40	83	41.5
	Above 40	75	37.5
Gender	Male	108	54
	Female	92	46
Malaysia Citizen	Yes	179	89.5
	No	21	10.5
Education Level	Primary School	5	2.5
	Secondary School	53	26.5
	Certificate	38	19
	Diploma	33	16.5
	Degree	46	23
	Master	22	11
	PhD	3	1.5
Occupation	Employed	119	59.5
	Unemployed	28	14
	Pensioner	13	6.5
	Student	40	20
Working Sector	Public	62	31
	Private	41	20.5
	Self-Employed	16	8
	Non-Employed	81	40.5
Monthly Income	less than RM1,000	64	32
	RM1,000-RM5,000	67	33.5
	RM5,001-RM1,0000	58	29
	more than RM1,0000	11	5.5

Table 4.2

Respondent's Trip Information

Item	Classification	Sample Amount	Percentage %
Number of Trip	First Time	84	42
	More Than 1	116	58
Number of People on the Trips	1 Person	20	10
	More Than 2 Persons	180	90
Travel Buddy	Unaccompanied Traveler	22	11
	Family	96	48
	Friend	48	24
	Business	34	17
Main Trip	Partner/Colleagues		
	Yes	192	96
	No	8	4
Objective	Working	29	14.5
	Leisure	171	85.5
Sponsor	Self-Sponsor	117	58.5
	Friend	15	7.5
	Office	16	8
	Family & Relatives	52	26
Vacation Time	Weekends	200	100
Average Expenses	Less Than RM500	97	48.5
	RM500-RM1000	88	44
	RM1001-RM2000	4	20
	More Than RM2000	11	5.5

In quantitative research, scholars frequently utilise Structural Equation Modelling (SEM) to examine the primary data, particularly social science research. SEM is a second-generation multivariate analysis technique developed due to traditional Ordinary Least Squares (OLS) limitations, especially when dealing with latent constructs. It is similar to regression analysis but more sophisticated; it evaluates linear causal links between variables while accounting for measurement error (Kline, 1998). This study analysed SEM using SPSS Amos 26.0 Statistical Software Packages to explore the statistical relationships between constructs. Conducting an SEM in data analysis involves measurement and structural models (Fornell & Larcker, 1981).

Measurement Model

Measurement models refer to the model that demonstrates the relationship between response items and their underlying latent construct. The analysis is carried out using Confirmatory Factor Analysis (CFA), a statistical technique to verify the structure of a set of observed variables. CFA is used to address uni-dimensionality, validity, and reliability issues before conducting structural modelling (Brown, 2015). Uni-dimensionality is achieved when the factor loading of an item is 0.5 or higher. Construct validity is achieved when the Fitness Indexes for a construct achieve the required level, as presented in Table 4.3. Convergent validity is achieved when the value of AVE is 0.5 or higher. Discriminant validity is achieved when the measurement model is free from redundant items. The requirement for discriminant validity is that the correlation between exogenous constructs should be less than

0.85. Composite Reliability is the measurement of reliability and internal consistency for a latent construct. A value of $CR \geq 0.6$ is required to achieve composite reliability for a construct (Awang, 2012). The analysis of a pooled CFA indicates that the constructs have a high degree of validity and reliability, as illustrated in Figure 4.1, Table 4.4, and Table 4.5. The analysis of the RMSEA, CFI, TLI, and Chis-q/df values for the fitness index revealed that the index has reached the required level (RMSEA = 0.065; CFI = 0.901; TLI = 0.9; Chis-q/df = 1.874). The factor loading values between 0.579 and 0.967 indicate that the items are acceptable and have attained the level of uni-dimensionality. The AVE values between 0.541 and 0.849 indicate that the constructs have achieved convergent validity. The CR value between 0.873 and 0.957 indicates that the constructs have attained the composite reliability level. The discriminant validity of all the latent constructs was achieved when the results indicated that all the square root AVE values are larger than the correlation coefficient value.

Table 4.3
Index Category and the Level of Acceptance for Every Index

Name of category	Name of Index	Level of acceptance	Comments
Absolute Fit	Root Mean Square of Error Approximation (RMSEA)	RMSEA < 0.08	Range 0.05 to 0.1 is acceptable
Incremental Fit	Comparative Fit Index (CFI)	CFI > 0.90	CFI = 0.95 is a good fit
	Tucker-Lewis Index (TLI)	TLI > 0.90	TLI = 0.95 is a good fit
Parsimonious Fit	Chi Square/Degree of Freedom (Chis-q/d	Chi square/ df < 5.0	The value should be less than 5.0

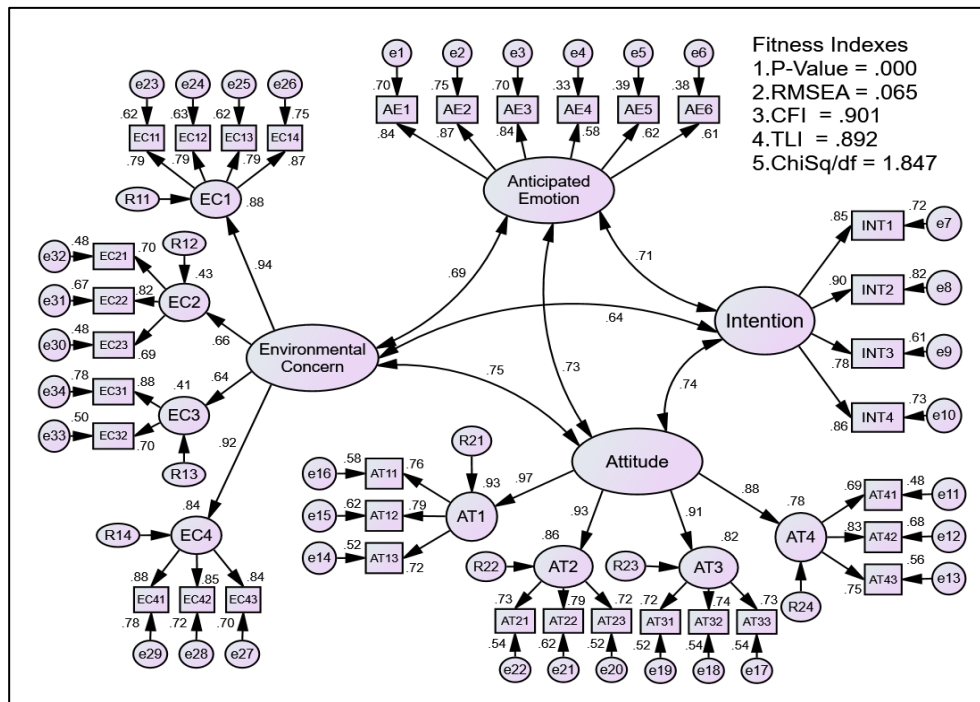


Figure 4.1 Result of Fitness Index Model Pooled CFA

Table 4.4

Summary Values of Factor Loading, CR and AVE

Construct	Item	Factor Loading	CR	AVE
Anticipated Emotion	AE1	0.837	0.873	0.541
	AE2	0.865		
	AE3	0.837		
	AE4	0.579		
	AE5	0.622		
	AE6	0.613		
Attitude	AT1	0.967	0.957	0.849
	AT2	0.927		
	AT3	0.906		
	AT4	0.884		
Intention	INT1	0.851	0.911	0.719
	INT2	0.903		
	INT3	0.778		
	INT4	0.855		
Environment Concern	EC1	0.938	0.874	0.641
	EC2	0.659		
	EC3	0.637		
	EC4	0.919		

Table 4.5

Discriminant Validity Index Summary

Construct	Environmental Concern	Anticipated Emotion	Attitude	Intention
Environmental Concern	0.8			
Anticipated Emotion	0.69	0.74		
Attitude	0.75	0.73	0.92	
Intention	0.64	0.71	0.74	0.85

Structural Model

After conducting a measurement model, the next step is implementing the structural model. The structural model demonstrates the inter-relationships among the constructs. Structural analysis was conducted to obtain findings on the fitness index model, variance explained (R²), path co-efficient, and mediation analysis. In this step, the fitness index model also needs to be run structurally to assess the construct validity (Fornell & Larcker, 1981).

Results in Figure 4.2 indicated the constructs validity has achieved (value of RMSEA = 0.065, CFI = 0.901, TLI = 0.892 and ChiSq/df = 1.847). In statistics, the coefficient of determination, R2, is a measure that assesses the ability of a model to predict or explain an outcome in the linear regression setting (Cohen, 1998). It indicates the percentage of the variance in the dependent variable that the independent variables explain collectively. Generally, a higher R2 indicates a better fit for the model predicted. In this study, the R2 is shown in the Standardized Path Coefficients among the constructs in the model, figure 4.4. The estimation revealed that the predictor of anticipated emotion (environmental concern) could explain nearly half of its variance (48%). Meanwhile, environmental concern and anticipated emotion as a predictor could explain the high variance of attitude (64%). The estimation results revealed that predictors of intention (attitude, anticipated emotion, and environmental concern) could explain 61% of its variance. The main contributors was attitude ($\beta=0.57$, $p<0.001$), followed by anticipated emotion ($\beta=0.35$, $p<0.001$), and environmental concern ($\beta=0.09$, $p>0.424$). Overall, the proposed model explained a 61% variance in intention to purchase for wildlife conservation among the REB.

Analysis of the regression weight was conducted to obtain answers on the path coefficient of the present studies. The regression weights indicate the beta coefficient estimate, which measures the effects of every exogenous construct on the endogenous construct. The regression weight is presented in Figure 4.3. It indicates how much the effects of every exogenous on the respective endogenous construct. In the path analysis, every path coefficient's significance can also be verified. The path coefficient of attitude to intention is 0.57. This value indicates that for every one-unit increase in attitude, its effects would contribute to a 0.57 unit increase in intention. Furthermore, more importantly, attitude's effects on intention are significant ($p<0.001$). Thus the hypothesis that attitude has significant and positive effects on intention is supported. Table 4.6 present the path (arrow) and its coefficients.

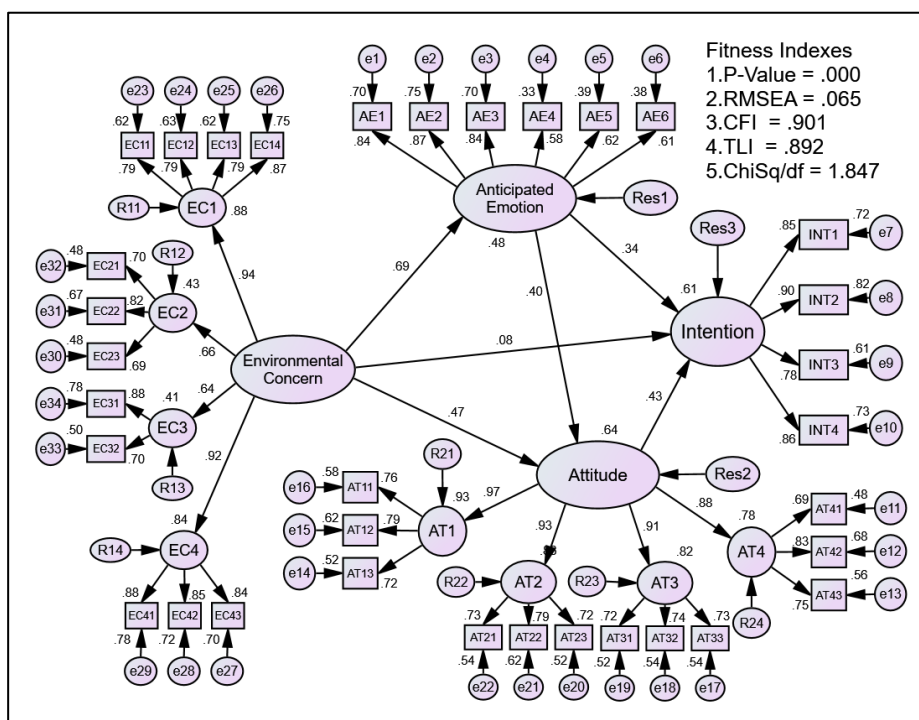


Figure 4.2: The Standardized Path Coefficients

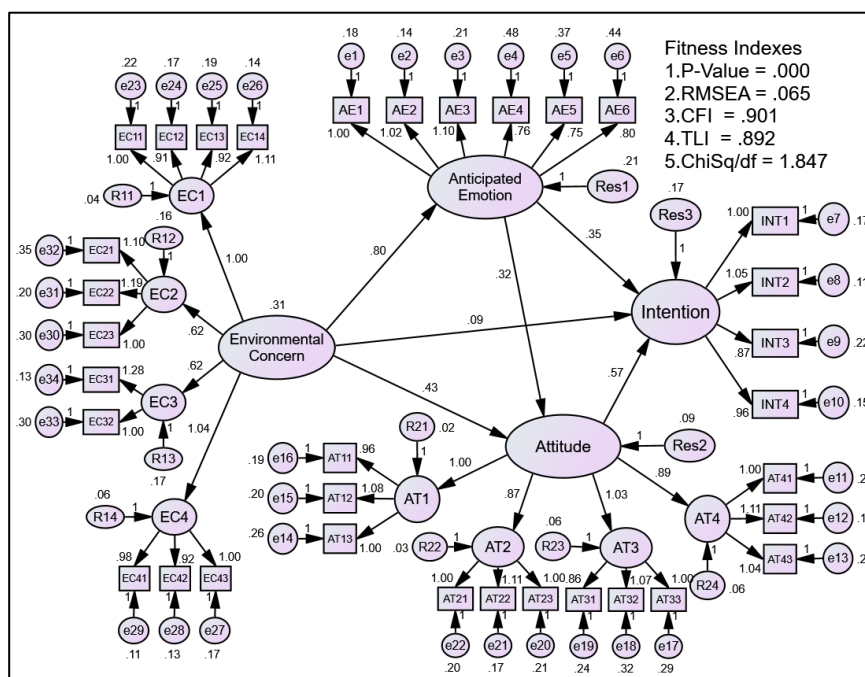


Figure 4.3: The Regression Path Coefficients

Table 4.6

The Regression Path Coefficients and Significance (based on p-value < 0.05).

Construct	Path	Construct	Estimate	p-value	Result
Intention	<---	Attitude	0.57	0.001	Significant
Attitude	<---	Anticipated Emotion	0.32	0.001	Significant
Intention	<---	Anticipated Emotion	0.35	0.001	Significant
Attitude	<---	Environmental Concern	0.43	0.001	Significant
Intention	<---	Environmental Concern	0.09	0.424	Not Significant
Anticipated Emotion	<---	Environmental Concern	0.80	0.001	Significant

Bootstrapping for Mediation Analysis

Mediation analysis is frequently used in social science research to comprehend the relationship between a predictor and an outcome. A mediating variable is a variable that illustrates the relationship between dependent and independent variables (MacKinnon et al., 2007). It is used in statistics to identify and explain the mechanism or process underlying an observed relationship between an independent and a dependent variable by including a third hypothetical variable. Recently, there has been a push for scholars to use bootstrapping analysis to confirm the result of the mediating effect. Bootstrapping is a technique for sampling with replacement in which the algorithm is instructed to extract a sample of size n from the existing dataset. The number of re-samplings may range from 500 to 1000. A 1000-bootstrapping sample was used in this study. For each sample, the algorithm would calculate the mean and standard error. The algorithm generates sampling distributions for the estimates through the resampling process. The significance of the indirect effect indicates the existence of the mediation, while the significance or insignificance of the direct effect

indicates the type of mediation. According to the bootstrapping results in Table 4.7, there is a full mediation of attitude in the relationship between anticipated emotion and intention. The bootstrapping results in Table 4.8 indicate full mediation of attitude in the relationship between environmental concern and intention. The bootstrapping results in Table 4.9 indicate full mediation of anticipated emotion in the relationship between environmental concern and intention. Table 4.10 summarizes the hypotheses and results of the present research.

Table 4.7

Testing Attitude as a Mediator in the Relationship Between Anticipated Emotion and Intention (Bootstrapping Analysis)

	Indirect effect	Direct effect
Bootstrapping result	0.173	0.338
Bootstrapping p value	0.002	0.013
Result	significant	not significant
Type of mediation:	Full mediation since direct effect is not significant	

Table 4.8

Testing Attitude as a Mediator in the Relationship Between Environmental Concern and Intention (Bootstrapping Analysis)

	Indirect effect	Direct effect
Bootstrapping result	0.558	0.078
Bootstrapping p-value	0.002	0.429
Result	significant	not significant
Type of mediation:	Full mediation since direct effect is not significant	

Table 4.9

Testing Anticipated Emotion as a Mediator in the Relationship Between Environmental Concern and Intention (Bootstrapping Analysis)

	Indirect effect	Direct effect
Bootstrapping result	0.558	0.078
Bootstrapping p value	0.002	0.429
Result	significant	not significant
Type of mediation:	Full mediation since direct effect is not significant	

Table 4.10

Summary of Hypothesis Result

Hypothesis	Hypotheses Statement	Result
H ₁	There is a significant direct relationship of attitude toward purchasing local products and services for wildlife conservation on the intention of REB in Penang National Park.	Supported
H ₂	There is a significant direct relationship of anticipated emotion on attitude toward purchasing local products and services for wildlife conservation of REB in Penang National Park.	Supported
H ₃	There is a significant direct relationship of anticipated emotion on the intention to purchase local products and services for wildlife conservation of REB in Penang National Park.	Supported
H ₄	There is a significant direct relationship of environmental concern on attitude toward purchasing local products and services for wildlife conservation of REB in Penang National Park.	Supported
H ₅	There is a significant direct relationship of environmental concern on the intention to purchase local products and services for wildlife conservation of REB in Penang National Park.	Not supported
H ₆	There is a significant direct relationship of environmental concern on the anticipated emotion of REB toward purchasing local products and services for wildlife conservation in Penang National Park.	Supported
H ₇	There is a mediating role of attitude toward purchasing local products and services for wildlife conservation between the relationship of anticipated emotion and intention of REB in Penang National Park.	Supported
H ₈	There is a mediating role of attitude toward purchasing local products and services for wildlife conservation between the relationship of environmental concern and intention of REB in Penang National Park.	Supported
H ₉	There is a mediating role of anticipated emotion between the relationship of environmental concern and intention to purchase local products and services for wildlife conservation of REB in Penang National Park.	Supported

Discussion and Conclusion

This study was specifically designed to test the relationship between attitude, anticipated emotion, and environmental concern based on the TPB. The findings indicate a significant direct relationship of attitude toward purchasing local products and services for wildlife conservation on the intention of REB in Penang National Park. This finding is consistent with previous studies that found attitude has a significant direct relationship to intention (Ajzen, 1991; Chatzisarantis et al., 2005; Cheah et al., 2022; Kasilingam, 2020; Kim & Hunter, 1993;

Trivedi et al., 2018; Um & Yoon, 2021). In other words, the attitude was a factor in determining intention. The findings supported the hypothesis of the present studies (H1). The findings indicate a significant direct relationship between anticipated emotion on attitude toward purchasing local products and services for wildlife conservation of REB in Penang National Park. This finding is consistent with previous studies that found anticipated emotion has a significant direct relationship on attitude (Ahn & Kwon, 2020; Bettiga & Lamberti, 2018; Durán et al., 2016; Pérez-Villarreal et al., 2019). In other words, anticipated emotion was a factor in determining attitude. The findings supported the hypothesis of the present studies (H2). This study also shows a significant direct relationship between anticipated emotion on the intention to purchase local products and services for wildlife conservation of REB in Penang National Park. This result is in line with the previous studies mentioned that anticipated emotion has a significant direct relationship to intention (Kim et al., 2013; Londono et al., 2017; Odou & Schill, 2020; Rezvani et al., 2017). In other words, anticipated emotion was a factor in determining intention. The findings supported the hypothesis of the present studies (H3). The obtained results demonstrated a significant direct relationship between environmental concern on attitude toward purchasing local products and services for wildlife conservation of REB in Penang National Park. This result is in line with the previous studies that mentioned environmental concern has a significant direct relationship to attitude (Adam et al., 2021; Emekci, 2019; Shin et al., 2018; Zhang, & Luo, 2021). It means that environmental concerns influence attitude. These findings successfully supported the hypothesis of this study (H4). However, the obtained results demonstrated no significant direct relationship between environmental concern on the intention to purchase local products and services for wildlife conservation of REB in Penang National Park. It means that environmental concerns did not influence intention. Thus, this finding does not support this study's hypothesis (H5). This finding further strengthens the opinion of Ajzen & Fishbein (1980), who proposed that environmental concerns do not directly affect a specific behaviour. A meta-analysis conducted by Hines et al (1987) also found that the correlation between environmental concern and intention/behaviour is weak (0.35 and 0.26, respectively). The results also align with several studies that mentioned environmental concern has no significant direct effect on intention (Choi & Johnson, 2019; Khaola et al., 2014; Meng & Choi, 2016). This study found a significant direct relationship between environmental concern on anticipated emotion. This result is in line with the previous studies that mentioned that environmental concern has a significant direct relationship to emotion (Kashi, 2019; Wandira, 2020). This finding successfully supported the hypothesis of this study (H6). The obtained results demonstrated a mediating role of attitude toward purchasing local products and services for wildlife conservation between the relationship of anticipated emotion and intention of ecotourist RB in Penang National Park. This result is in line with previous studies that mentioned attitude is a mediator in the relationship between emotion and intention (Gilchrist et al., 2019; Ibrahim et al., 2021b; Taylor et al., 2016). In other words, attitude is a mediator between the relationship of anticipated emotion and intention. These findings supported the study's research hypothesis (H7). The obtained results demonstrated a mediating role of attitude toward purchasing local products and services for wildlife conservation between the relationship of environmental concern and the intention of REB in Penang National Park. This result aligns with the previous studies that mentioned attitude is a mediator in the relationship between environmental concerns and intention (Bamberg, 2003; Chen & Tung, 2014; De Groot & Steg, 2007; Ibrahim et al., 2021a; Kumar et al., 2022; Onurlubaş, 2018; Zhu et al., 2020). In other words, attitude is a mediator between the relationship of environmental

concern and intention. These findings supported the study's research hypothesis (H8). The obtained results demonstrated a mediating role of anticipated emotion between the relationship of environmental concern and intention to purchase local products and services for wildlife conservation of REB in Penang National Park. This result is in line with the previous studies conducted by (Elgaaied, 2012). In other words, anticipated emotion is a mediator between the relationship of environmental concern and intention. These findings supported the study's research hypothesis (H9).

Theoretically, this study adds to the body of knowledge by incorporating the influence of environmental concern and anticipated emotion into The Extended Theory of Planned Behaviour. It is the first study to examine these two constructs in the Extended TPB model and has demonstrated a high level of explained variance in intention (61%). TPB is criticized because it is frequently used in research to demonstrate PBC's influence on intention. This study established a significant relationship between attitude and intention, validating previous research that indicated a strong relationship between the variables (Kim, & Hunter, 1993). This study discovered that the variance explained by REB's intention to purchase locally produced goods and services is exceptionally high (61%), owing to the influence of its predictors, attitude, anticipated emotion, and environmental concern. Attitude is the primary factor that influences intention (57%). It demonstrates that attitude is an excellent predictor of intention.

Theoretically, this study contributed to developing the extended model of TPB by demonstrating the importance of emotion as a predictor of the theory. Previously, TPB relied heavily on personal norms as a predictor of the TPB and lacked theoretical extensions that extended the role of emotion in defining environmental behaviour and decision-making processes (Parkinson et al., 2018). Eng et al (2022) encourage researchers to consider the antecedents of TPB outcomes as emotional responses. According to the study, 48% of anticipated emotion is explained. It has a high predictive value for environmental concerns. Anticipated emotion also successfully demonstrated its role as a variable mediator in this study. Theoretically, this study has aided TPB in determining the impact of environmental concern on environmental behaviour measurement. Scholars frequently use TPB to investigate environmental behaviour (Si et al., 2019). On the other hand, TPB made negligible use of the construct of environmental concern as a predictor. According to Bamberg (2003), it is critical to investigate the influence of environmental concerns because they can affect a broad range of behaviour. The variance explained in attitude by its predictors of environmental concern, and anticipated emotion was found to be a high value of 64% in this study. Environmental concern contributed to TPB's attitude more than the others ($\beta = 0.43$, $p > 0.001$). It demonstrates that environmental concern has successfully influenced attitude, except for intention. That is because the relationship between environmental concern and intention occurs indirectly via the mediator variable, attitude (Bamberg, 2003; De Groot & Steg, 2007; Chen, & Tung, 2014; Ibrahim et al., 2021a; Kumar et al., 2022; Onurlubaş, 2018; Zhu et al., 2020).

Additionally, this study makes a methodological contribution. Compared to previous studies that analysed data using PLS-SEM, this study's CB SEM revealed a high level of variance explained by intention (61%). Using SPSS Amos Version 26.0 to evaluate the measurement and structural models, the variance explained by REB's emotion was very high (48%). The

variance explained by his attitude was found to be 64%. This demonstrates how robust CB-SEM is as a statistical analysis technique. It aids in the comprehension of variables and constructs. The high explained variance indicates that the instrument used to collect the data has high validity. It is the result of developing an accurate instrument that incorporates multiple-scale items, a five-point Likert scale, and the appropriate item scale selection.

Practically, this study contributes to the marketing strategy that concern and emotion are critical in predicting REB in motivating them purchasing local products and services for wildlife conservation in Penang National Park. As a result, advertisements must incorporate concern and emotional elements when promoting local products and services. For instance, marketers in the ecotourism industry can enhance emotional tools to boost the effectiveness of their marketing strategies. It can potentially change REB's attitude toward purchasing local products and services that benefit wildlife conservation. For instance, marketers can use narratives or storytelling strategies to promote local foods, handicrafts, homestays, and tour guides like other large companies (Snickers, Coca Cola, World Wildlife Fund). Due to the scientific evidence that colours are associated with human emotions, the stakeholder could also use this technique as part of their marketing strategy. While the influence of colours varies according to gender, stakeholders may consider the ability of colour to influence others. For example, black and purple are associated with being strong/powerful/masterful, while red and blue are associated with being arousing. The colours of Facebook and Coca-Cola are not coincidental. Word-of-mouth techniques (via testimonials, customer reviews, logos, or actual customer stories) are also critical for fostering trust in the REB emotions. Trust will eventually elicit an excellent emotional response along the lines of 'If other people trust them, I should.' Airbnb is well-known for its straightforward yet effective word-of-mouth strategy. These emotional promotion tools are expected to affect REB purchasing attitudes, as research has shown that a vital emotional component can increase attitude. The greater the intention to purchase local products and services for wildlife conservation, the greater the likelihood of alleviating poverty among the local people of Penang National Park. Ecotourism marketers must also develop marketing strategies that foster REB's concern for wildlife conservation and encourage them to purchase local products and services that support wildlife conservation in Penang National Park. To increase REB's intentions to purchase local products and services that benefit wildlife conservation, marketers should increase their use of promotional tools that foster environmental concern. For example, consider the impact of local community poverty on the decline of wildlife populations and the importance of wildlife in the ecosystem. Marketing tools such as speeches, short films/videos, banners, fishtails, flyers, or posters must be amplified to accomplish the goal.

The researchers encountered some limitations in this study. The TPB claims that intention affects a behaviour (Ajzen, 1991). However, this study did not examine the relationship between these two variables due to time constraints. In TPB, attitude, subjective norms, and perceived behavioural control all serve as predictors of intention. However, the study did not test these subjective norms and perceived behavioural control, although scholars frequently measure both. Because this study collected data using a purposive sampling method, the obtained findings may not generalize to another research setting. Apart from that, this study employs a quantitative research design that relies entirely on survey questionnaires to assess all of the study's constructs. Furthermore, this study's relationship between environmental concern and intention contradicts previous findings. It could be because, as Bamberg (2003)

noted, environmental concern and intention have an indirect relationship via mediator variables.

Given the limitations of the current study, the researcher makes several recommendations. In TPB, the intention is a good predictor of actual behaviour. However, several previous studies have demonstrated that intention does not always influence actual behaviour. Thus, future researchers are encouraged to conduct a study to validate the relationship between these two variables. Future researchers are encouraged to conduct research using TPB's three primary variables, namely attitude, subjective norm, and perceived behavioural control. Given that this study demonstrates that incorporating environmental concern and anticipated emotion can increase the variance explained by intention, it is recommended that future researchers combine these two variables with the original intention predictor in TPB.

This study was conducted to determine a solution to the REB behavioural problem. REB is a traveller who engages in low-impact, non-consumptive, and locally oriented activities to conserve natural resources. They are willing to go to any length to increase the incredible economic benefits to local communities to support nature conservation. However, their refusal to purchase local products and services does not contribute to eradicating poverty in local communities. They do not purchase the products from local food vendors or artisans, do not stay in local homestays, and do not employ local tour guides. The Theory of Planned Behaviour is used as a model to determine whether or not factors such as attitude, emotion, and concern affect their intention to purchase local products and services supporting wildlife conservation. The research discovered that emotional and concern factors influence REB attitude. Thus, marketers or other stakeholders who wish to promote Penang National Park as an ecotourism destination should effectively use promotional tools for advertising local products and services (such as food vendors, handicrafts, homestays, and tour guides). Marketers should incorporate emotion and environmental concern to increase REB attitudes and intentions toward purchasing local wildlife conservation products and services.

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Appendix 1

Source	Items of Attitude
Ibrahim et al (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.
Anti-anthropocentrism Dunlap (2000)	1. I believe we were meant to rule over the rest of nature.
	2. I believe that we have the absolute right to modify the natural environment to suit our needs.
	3. I believe plants and animals have as much right like us to exist.
Exemptionalism Dunlap (2000)	1. I believe we will eventually learn enough about how nature works to be able to control it.
	2. I believe despite our special abilities; we are still subject to the laws of nature.
Eco-crisis Dunlap (2000)	1. I believe the so called "ecological crisis" facing humankind has been greatly exaggerated.
	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 et al. (2021b)	Items of Intentions
	1. I intend to buy local food vendor that contributes to the conservation of wildlife when vising 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.