

科技部補助專題研究計畫成果報告 期末報告

探討環境永續遊客行為以及其決定因素

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中文摘要：儘管最近許多研究開始關注於環境永續遊客行為(ESTB)，然大部份的研究缺乏對於遊客實際表現的環境永續行為之相關研究。為彌補此文獻缺口。爰此，本研究目的為；以台灣遊客觀點調查各種不同之環境永續遊客行為；發展環境永續遊客行為之類型；以及探討環境永續遊客行為之主要決定因素。本研究以理論抽樣方式，進行參與觀察與半結構式訪談兩種質性資料收集方法。根據研究結果，本研究共歸納出12種關鍵類型的ESTB，並將它們分為一般ESTB和目的地特性之ESTB。一般ESTB有三種類型：攜帶行為，說服行為，教育行為；目的地特性ESTB有九種類型：避免使用行為，重複使用行為，減少使用行為，主動使用行為，廢物管理行為，環境友好型消費行為，一般環境友好行為，說服行為，教育行為。本研究更提出環境可持續的旅遊行為模型，描述了一般的ESTB和目的地特性的ESTB以及它們的五個關鍵決定因素（即內在激勵，外在激勵，內部促進因素，外部促進因素和旅遊行程特徵）。本研究結果將有助於對ESTB的深入理解，並為研究綠色旅遊行為奠定基礎並補足文獻缺口。此外，研究結果也可協助瞭解對於環境永續遊客行為以及其決定因素，提供政府相關單位與業者許多具參考價值之建議。

中文關鍵詞：環境永續遊客行為、紮根理論、參與觀察、社會需求偏差

英文摘要：Considering that tourism is expected to continue its growth and the fact that the tourism industry is one of the largest components of the service sector, and thus, has considerable ability to influence environmental quality, there is an urgent need to expand our current understanding of tourists' environmentally sustainable behaviour. In this light, this study has attempted to elicit different ESTBs from Taiwanese tourists' perspective, to develop a typology of ESTB, and to explore their key determinants. A series of semi-structured interviews and participant observations were conducted. Based on the data, a total of twelve key types of ESTBs were identified and they were further distinguished into general ESTBs and site-specific ESTBs. There are three types of general ESTBs: (1) bringing behaviour, (2) persuasive action, and (3) education action; and nine types of site-specific ESTBs: (1) avoid behaviour, (2) reuse behaviour, (3) reduce behaviour, (4) active usage behaviour, (5) waste management behaviour, (6) environmentally friendly consumption behaviour, (7) general environmentally friendly behaviour, (8) persuasive action, and (9) education action. A model of environmentally sustainable tourist behaviour is also proposed, depicting general ESTBs and site-specific ESTBs as well as their five key determinants (i.e., intrinsic incentives, extrinsic incentives, internal facilitators, external facilitators, and trip characteristics). The findings of this study are believed to contribute to an "emic" in-depth understanding of ESTB, and pave the way for further studies

of this important aspect of tourist behaviour. Moreover, the findings provide useful insights for policymakers and managers in devising appropriate campaigns and interventions on stimulating ESTBs.

英文關鍵詞：environmentally sustainable tourist behaviour; grounded theory, participant observation, social desirability bias.

Exploring Environmentally Sustainable Tourist Behaviour and Its Determinants

1. INTRODUCTION

Tourism-related activities and behaviours have long been recognised to bring about not just positive, but also negative impacts on the social, economic and ecological environments of a destination (Dolnicar, Laesser, & Matus, 2010; Saarinen, 2006). These negative impacts can damage the destination environment, the very resource that the tourism and hospitality industry is depending on. Therefore, to encourage “environmentally sustainable tourist behaviour” (ESTB) has become one of the major concerns of the policymakers and managers in the tourism and hospitality industry.

Although there is a general increase in customers’ environmental awareness and interest in engaging in more environmentally sustainable behaviour, such predilection may not be readily transferred to consumption behaviour in the tourism context. One of the major reasons is that tourism is predominantly “hedonistic” (Mak et al., 2012), and many tourists may not be keen in enduring “inconvenience” or “hardship” when they travel. In fact, there is a common conception that ESTB may often entail austerity and certain degree of inconvenience, which are in stark contrast with the “hedonistic” nature of tourism. As a result, many managers in tourism and hospitality businesses are wary that “environmentally-friendly” practices carried out to the extreme extent may lead to degradation of perceived service quality from the tourists’ perspective.

Despite the consensus that effort should be invested in promoting ESTB, research into understanding the ESTB construct is fraught with many difficulties. First, environmentally sustainable behaviour (ESB) in everyday situations is not only challenging to cultivate, such behaviour may not be readily translated into ESTB when an individual takes on the role of tourist. For example, an individual who exhibits a high level of ESB at home may not equally exhibit a high level of ESTB when holidaying in a foreign destination. This is especially true when tourism is viewed as a hedonic product for which fun, pleasure or enjoyment is the primary pursuit (Mak et al., 2012), leaving ESTB at the end of the priority list. Accordingly, ESTB should not be equated with ESB in everyday situations and need to be examined as a separate construct.

Second, notwithstanding the recent research attention paid on ESTB, little is known on the actual ESTB displayed by tourists (Juvan & Dolnicar, 2016). Most of the existing studies used researcher-defined *a priori* items to measure ESTB, leaving a gap in understanding ESTB from the tourists' perspective. This calls for an “emic” in-depth understanding of what constitutes ESTB, for it would provide valuable insights for policymakers and managers in devising appropriate campaigns and interventions on stimulating ESTB.

Third, the majority of the existing studies have adopted a positivist approach to explore ESTB (e.g., Chiu, Lee, & Chen, 2014; Lee, Jan, & Yang, 2013; Poudel & Nyaupane, 2016). Positivism has the propensity to interpret human behaviours as goal-directed, predictable and can be measured systematically. The goal is to search for general laws which are assumed to hold independent of context. While the positivist approach is valuable in understanding objective reality, it has been criticized for not providing the means to examine human behaviours in an in-depth manner (Saunders, Lewis, & Thornhill, 2009). Moreover, the positivist approach would often lead to “reductionism”, the practice of dividing the whole into its parts and then studying them separately, thereby preventing a holistic understanding of ESTB. This inadequacy emphasises the need for a “thick description” of the rich varieties and in-depth meanings of the actual ESTB.

In order to address the above research gaps, this study aims to contribute to a broader understanding of ESTB by using Taiwanese tourists as an example. The specific objectives of this study are:

1. To elicit different environmentally sustainable tourist behaviours from Taiwanese tourists' perspective.
2. To develop a typology of the main categories of environmentally sustainable tourist behaviours.
3. To explore the key determinants of environmentally sustainable tourist behaviours.

2. LITERATURE REVIEW

2.1 Definition of Environmentally Sustainable Tourist Behaviour (ESTB)

Different terminologies have been used to describe tourist behaviour that is supportive of the environment, for example, environmentally sustainably tourist behaviour (Juvan & Dolnicar, 2016), sustainable tourist behaviour (Budeanu, 2007), environmentally responsible tourist behaviour (Poudel

& Nyaupane, 2016), responsible tourist behaviour (Weeden, 2013), eco-friendly tourist behaviour (Kvasova, 2015), and green tourist behaviour (Bergin-Seers & Mair, 2009), to name just a few.

Lee et al. (2013) defined environmentally responsible tourists behaviour as those “who strive to reduce environmental impacts, contribute to environmental preservation and/or conservation efforts, and not disturb the ecosystem and biosphere of a destination during recreation/tourism activities” (p.455). They contend that tourists’ environmentally responsible behaviour should be understood from a more holistic perspective, which should include both general and site-specific responsible behaviours.

Juvan and Dolnicar (2016) defined environmentally sustainable tourist behaviour as “tourist behaviour which does not negatively impact the natural environment (or may even benefit the environment) both globally and at the destination” (p.31). This definition of ESTB focuses on the natural or ecological environment of the destination, and at the same time suggests that ESTB can be exhibited at a destination level and a global level.

Poudel and Nyaupane (2016) defined environmentally responsible tourist behaviour as the “behaviour that consciously seeks to minimize the negative impacts and maximize the positive impacts on the socio-cultural, economic, and ecological environment” (p.3). Their definition places emphasis on the fact that ESTB should be conscious, and ESTB should not be limited to the ecological environment, but should also encompass socio-cultural and economic environments.

In the present study, the term “environmentally sustainable tourist behaviour” (ESTB) is used instead of “environmental responsible tourist behaviour” for two main reasons. First, environmentally “sustainable” tourist behaviour is recognised as an important component in sustainable tourism (Budeanu, 2007). The term “sustainable”, therefore, does not just denote the ecological environment but also encompasses the socio-cultural and economic environments of the destination. Second, the term “responsible” places more emphasis on tourists’ “responsibility” for alleviating environmental problems in the destinations they visit. However, tourists might not perceive themselves as having a high level responsibility as compared with the local residents. For example, Page, Essex, and Causevic (2014) found that tourists tend to have greater commitment to water sustainability at home rather than as tourists. This could be due to the fact that “tourists want to ‘treat themselves’ whilst on holiday and so environmental issues are not considered as important whilst enjoying a holiday” (Page et al., 2014, p. 60). In this light, the term “sustainable” is preferred to the term “responsible” in the context of this study.

Accordingly, the term ESTB in this study is defined as: *tourist's conscious and intended behaviour that seeks to minimise the negative impacts and maximise the positive impacts on the social, economic, and ecological environments of the destinations they visit.* This definition expands upon Juvan and Dolnicar's (2016) definition by taking into consideration of ESTB that impacts upon the social and economic environments of the destination. In addition, this definition indicates that the focus of this study is on the "intended" ESTB, in which both intent and behaviour are present.

2.2 Classification of Environmentally Sustainable Tourist Behaviour

A number of studies have attempted to classify ESTB. For example, Juvan and Dolnicar (2016) contend that ESRB can theoretically be classified into: (1) good intentions (presence of intent, absence of behaviour), (2) pro-environmental beliefs and values (absence of intent, absence of behaviour), (3) intended environmentally sustainable behaviour (presence of intent, presence of behaviour), and (4) unintended environmentally sustainable behaviour (absence of intent, presence of behaviour) (Figure 1).

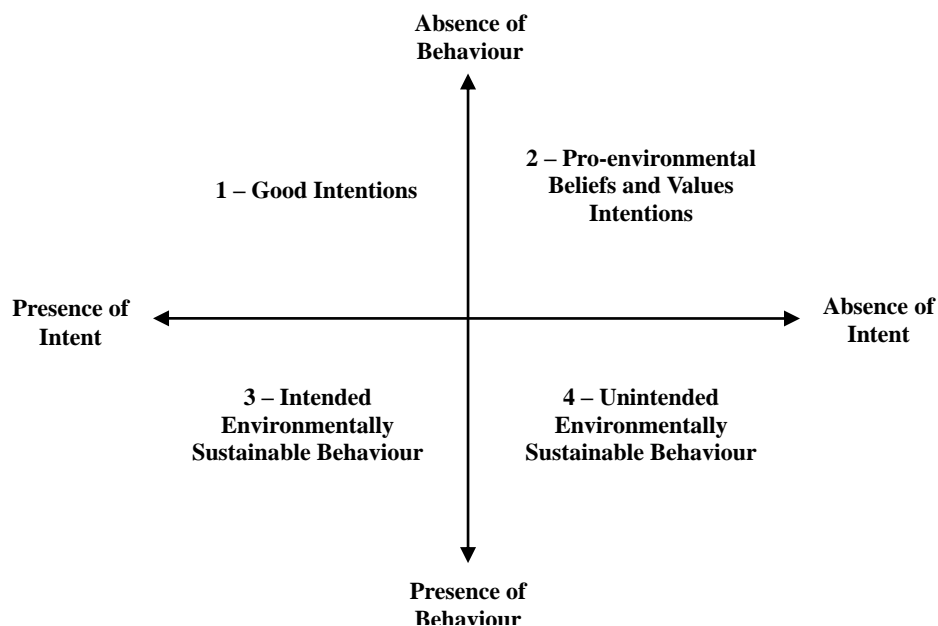


Figure 1. Environmentally Sustainable Tourist Behaviour
(Source: Juvan & Dolnicar, 2016)

As explained in the previous section, the focus of the present study is on the third type of ESTB described by Juvan and Dolnicar (2016) – “intended environmentally sustainable tourist behaviour” in which both intent and behaviour are present. As Juvan and Dolnicar (2016) point out, intended ESTB occurs when a person makes a vacation-related decision or displays behaviour at the destination that is different from how he or she would have otherwise decided or behaved for reasons of environmental sustainability.

More recently, Lee et al. (2013) suggest that community-based tourists’ environmentally responsible behaviour (ERB) can be distinguished into general ERB and site-specific ERB. They have identified five main types of general ERB: educational action, civil action, financial action, physical action, and persuasive action; and three main types of site-specific ERB: sustainable behaviour, pro-environmental behaviour, and environmentally friendly behaviour. The definitions and example items of these categories are summarised in Table 1.

Table 1. General and Site-specific Environmentally Responsible Behaviour

ERB Category	Definition	Example Items
<i>General ERB</i>		
1. Educational action	A person (or a group) helps to acquire knowledge and/or information about environmental issues and problems, such as reading articles or books, watching television programs, and taking academic course-works.	<ol style="list-style-type: none"> 1. I learn about the recycling facilities in my area. 2. I watch TV programs about environmental issues.
2. Civil action	A person (or a group) takes actions to promote preservation of the environment through political avenue without any donation or persuasive strategies, such as protest, voting, and participating public hearings.	<ol style="list-style-type: none"> 3. I donate money or give time to support an environmental organization (include specific destinations). 4. I would be willing to pay much higher taxes in order to protect the environment. 5. I do volunteer work for a group that helps the environment (more involve environment issue). 6. I join in community cleanup efforts.
3. Financial action	Any action to express promoting or protesting of the natural environment through financial measures, such as purchasing or boycotting commodities because of the degree of their environmental friendliness, donating to environmental organization, companies, and campaigns.	<ol style="list-style-type: none"> 7. I buy resource conservation devices, such as low-flow faucet aerators for my sinks and low-flow shower heads. 8. I buy products packaged in containers that either can be reused or recycled or are made of recycled materials. 9. I buy products in refillable packages. 10. I make a special effort to buy fruits and vegetables grown without pesticides or chemicals; also known as organic fruits and vegetables. 11. I make a special effort to buy fruits and vegetables from local. 12. I buy environmentally friendly products

Table 1. General and Site-specific Environmentally Responsible Behaviour (Cont'd)

ERB Category	Definition	Example Items
<i>General ERB</i>		
4. Physical action	A person (or a group) takes any action for environment without involving monetary, such as picking up litter, participating in community clean-up programs, classifying garbage, and installing resource-conserving devices.	<p>13. I set my home appliances, such as the refrigerator, dishwasher, water heater, etc. to “energy-saver” levels (e.g., efficient bulbs, reduce energy consumption).</p> <p>14. I reuse my shopping bags.</p> <p>15. I use biologically degradable laundry detergent.</p> <p>16. I conserve water by turning off the tap while washing dishes (brushing teeth).</p> <p>17. I turn off lights if I am leaving a room for more than 10 minutes.</p> <p>18. I reduce the amount of my household trash by reusing or recycling items to the fullest extent possible.</p> <p>19. I open windows for ventilation rather than using a fan or air conditioner.</p>
5. Persuasive action	A person (or a group) motivates others to promote preservation of the natural environment with non-monetary action, such as writing letters, making speech, discoursing information, and lobbying.	<p>20. I convince someone to buy fruits and vegetables loose rather than in plastic bags.</p> <p>21. I convince someone to buy products packaged in containers that either can be reused or recycled or are made of recycled materials.</p> <p>22. I convince someone to conserve water by not running the water while brushing his/her teeth or shaving and/or installing a water saving device in the tank of his/her toilet(s).</p>
<i>Site-specific ERB</i>		
6. Sustainable behaviour	A person (or a group) respects to local culture, conserves natural environment, and reduces interference of local environment.	<p>23. I understand residents’ life-styles.</p> <p>24. I observe the history and culture heritage detailed.</p> <p>25. I observe the nature and wildlife detailed.</p> <p>26. I pick up (encourage others) litter left by other people.</p> <p>27. I buy (or use) local products and services in this tour.</p>
7. Pro-environmental behaviour	A person (or a group) voluntarily visits a destination less or none while the spot needs to recover because of environmental damage.	<p>28. I voluntarily visit a favorite spot less if it needed to recover from environmental damage</p> <p>29. I voluntarily stop visiting a favorite spot if it needed to recover from environmental damage</p> <p>30. I choose products or services with eco-labels first in this tour</p>
8. Environmentally friendly behaviour	A person (or a group) takes action to reduce the damage of a specific destination.	<p>31. I do not intend to disturb any creature and vegetation.</p> <p>32. I tell my companions not to feed the animals.</p> <p>33. After a picnic, I leave the place as clean as it was originally.</p> <p>34. I don’t overturn rock and dried wood arbitrarily.</p>

(Source: Lee et al., 2013)

The above discussed attempts to classify ESTB into distinguishable categories have laid the important groundwork for understanding different aspects of ESTB. Nevertheless, so far no effort has been devoted to a systematic classification of ESTB based on its impact on the social, economic and ecological environments of a destination. Hence, one of the main goals of this study is to develop a typology of the main categories of ESTB that will facilitate future comparison of results from different studies.

2.3 Measuring Environmentally Sustainable Tourist Behaviour

In the majority of the existing ESTB studies, the self-report method was most frequently employed to measure tourists' environmentally sustainable behaviour. Although the self-report method is generally accepted as a reliable and valid measure of ESTB (e.g., Kil, Holland, & Stein, 2014), it has an inherent limitation that researchers should be aware of – social desirability bias (SDB). Fisher (1993) describes SDB as the systematic error in self-report measures resulting from respondents' desire to project a favourable image to others and to avoid embarrassment. SDB has the tendency to occur in self-reported studies when the respondent admits to socially desirable and acceptable behaviours and denies engaging in socially undesirable ones (Dunn & Shome, 2009). Consequently, researchers should account for the effect of SDB when interpreting the ESTB results. Furthermore, researchers may incorporate appropriate methodological options to mitigate SDB, for example, by using unprompted open-ended questions or participant observations to elicit ESTB (Juvan & Dolnicar, 2016) or by checking for SDB with a social desirability scale (e.g., Crowne & Marlowe, 1960; Paulhus, 1988; Reynolds, 1982).

Another major problem besetting the advance of ESTB research is the difficulty in measuring tourists' actual environmentally sustainable behaviour. Although there are a few attempts to observe actual behaviour (e.g., Chao & Lam, 2011; Corral-Verdugo, 1997; Hornik et al., 1995), these efforts have focused only on general environmentally sustainable behaviour (e.g., customer reuse and recycling behaviour). Juvan and Dolnicar (2016) cogently point out that so far there is little reliable knowledge about actual ESTB. Yet, they also acknowledge while actual behaviour is the optimal measure, it is not always possible to measure actual ESTB. As a result, there is a need for future research to adopt innovative approaches to overcome measurement challenges in assessing actual ESTB.

2.4 Determinants of Environmentally Sustainable Tourist Behaviour

Kollmuss and Agyeman (2002) note that general environmentally sustainable behaviour is shaped by a complex myriad of factors and it is difficult to present all factors in one single framework or model. Yet, researchers have devoted a great deal of effort towards identifying the key determinants of general environmentally sustainable behaviour as well as ESTB.

One of the most valuable efforts to untangle the complex myriad of factors affecting general environmentally sustainable behaviour was the Model of Consumer Recycling Behaviour proposed by Hornik et al. (1995). The model distinguishes the factors affecting recycling behaviour into five main categories: (1) intrinsic incentives, (2) extrinsic incentives, (3) internal facilitators, and (4) external facilitators, (5) demographic variables (Figure 2).

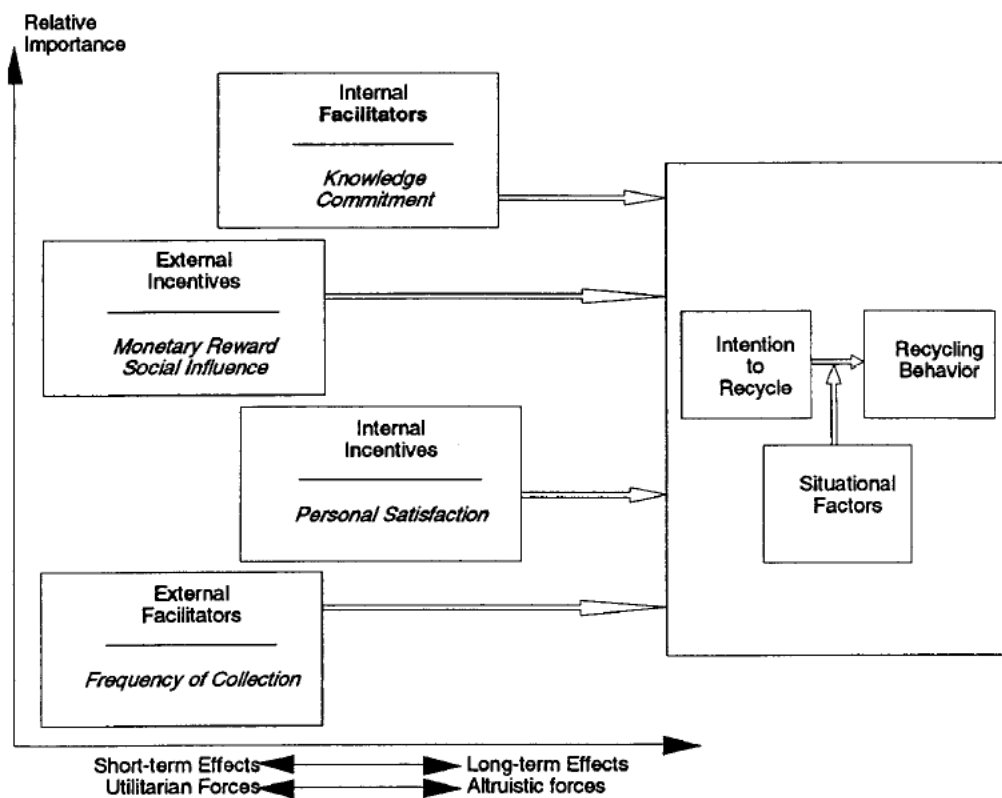


Figure 2. A Model of Consumer Recycling Behaviour
(Source: Hornik et al., 1995)

Although Hornik et al.'s (1995) model are related to customer recycling behaviour, it provides a useful framework that considers both the internal and external “incentives” and “facilitators”, and relate them to “relative importance”, “short-term vs. long-term effects, and “utilitarian vs. altruistic forces” in affecting environmentally sustainable behaviour. The following sections explain the five main categories proposed by Hornik et al. (1995).

As explained by Hornik et al. (1995), extrinsic (or external) incentives can further be divided into economic incentives and non-economic incentives. Economic incentives, such as monetary rewards, are generally successful at activating a desired behaviour. However, research evidence suggests that desired behaviour usually lasts only as long as the incentive lasts. Non-economic incentives, such as social influence, refer to the level of social support or commitment for recycling behaviour within an individual's household or community. Research evidence indicates that non-economic incentives, such as actual and perceived social influence, strongly stimulate recycling behaviour.

Intrinsic (or internal) incentives refer to an individual's intrinsic motivations to perform environmentally sustainable behaviour. In this sense, intrinsic incentives thus include psychological factors such as locus of control, ecological concern, and personal satisfaction derived from the behaviour.

External facilitators refer to the external factors that are essential to facilitate environmentally sustainable behaviour, for example, frequency of collection and proximity of containers. Hornik et al. (1995) contend that an individual who has internal and/or external incentives to recycle may not do so if the perceived costs or efforts of overcoming the external barriers overpower the incentives. Accordingly, external facilitators (or barriers) must be regarded vis-à-vis the incentives they happen to operate against.

Internal facilitators refer to cognitive variables which enable an individual to perform environmentally sustainable behaviour, which include awareness, knowledge, and commitment. Hornik et al. (1995) found that internal facilitators are important in predicting propensity to recycle and have relatively enduring effect on recycling behaviour. The results suggest that recyclers tend to have more internal facilitators because they are more knowledgeable about the general need for recycling and the specific recycling programs available.

Hornik et al. (1995) note that socio-demographic variables are the most commonly investigated predictors in the recycling literatures. Some of the most frequently examined socio-demographic variables include gender, age, and education. Research evidence suggests that gender and education level could have an effect on ESTB. For example, Galley and Clifton (2004) found that older females with a higher education level are more likely to engage in pro-environmental tourist behaviour. On the other hand, Hornik et al. (1995) point out that socio-demographic variables may explain only modest amounts of recycling behaviour variance.

Although trip characteristics is not included in Hornik et al.'s (1995) model, a few studies suggest that it may have a significant effect on various types of ESTB. Trip characteristics include variables such as trip duration, travel distance, travel mode, purpose of travel, and other trip-related factors. For example, Uysal et al. (1994) found that trip behaviour, including site-specific preferences, rather than demographic characteristics accounts for most of the variance in environmental concerns for tourists visiting US Virgin Islands National Park.

2.5 Theoretical Framework

By synthesising the literature reviewed, a conceptual framework has been developed to guide this study (Figure 3).

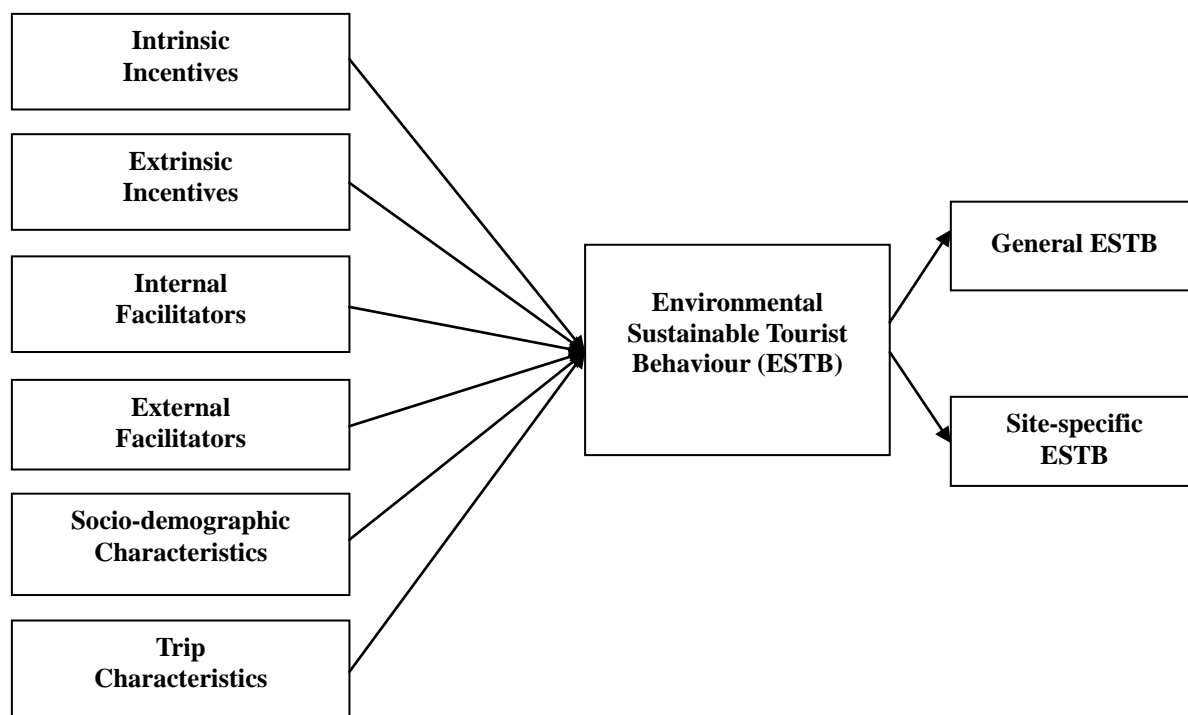


Figure 3. Conceptual Framework of the Study

Based on the contention of Lee et al. (2013), ESTB can be distinguished into general ESB and site-specific ESB. The present study attempts to elicit different ESTB from Taiwanese tourists' perspective, and to develop a typology of the main categories of ESTB. Moreover, by using Hornik et al.'s (1995) Model of Consumer Recycling Behaviour as a framework, the potential determinants of ESTB are initially classified into six main categories, namely, intrinsic incentives, extrinsic incentives, internal facilitators, external facilitators, socio-demographic characteristics and trip characteristics. By

adopting the grounded theory approach, the present study aims to identify the key determinants of ESTB and to generate a deeper understanding of their influence on various ESTB under different contexts.

3. METHODOLOGY

3.1 Grounded Theory Approach

This study adopted the grounded theory approach to elicit different ESTB from Taiwanese tourists' perspective. Grounded theory is one of the five main approaches in qualitative enquiries (the others being ethnography, phenomenology, case study and narrative study) (Creswell, 2013). Grounded theory is a methodology that aims to produce new theory that is grounded in the qualitative data systematically gathered and analysed during the research (Strauss & Corbin, 1994). It attempts to generate or discover an abstract analytical schema of a process or action (Strauss & Corbin, 1994).

Glaser and Strauss (1967) developed grounded theory as both a research methodology derived from the assumptions and theoretical underpinnings of symbolic interactionism and a method for systematically deriving empirically based theories of human behaviour and the social world through an ongoing process of comparative analysis. There are three basic elements in grounded theory, namely, concepts, categories and propositions. Concepts are the basic units of analysis since it is from conceptualisation of data that theory is developed (Strauss & Corbin, 1998). Categories are higher in level and more abstract than the concepts they represent. They are generated through the same analytic process of making comparisons to highlight similarities and differences that is used to produce lower level concepts (Corbin & Strauss, 1990). Pandit (1996) describes categories as the “cornerstones” of theory development, for they provide the means by which the theory can be integrated. Propositions indicate generalised relationships between a category and its concepts and between discrete categories.

3.2 Research Design

This study adopted a multi-method design. Multi-method design refers to the use of more than one data collection technique or research strategy but restricted within the same world view (Saunders et al., 2009). Such design allows a “within-method” triangulation, which is most useful when the phenomenon under study is complex and multi-dimensional (Denzin & Lincoln, 2000). The two qualitative methods to be employed in this study were semi-structured interview and participant observation.

3.2.1 Semi-structured Interview

Semi-structured interview was used to elicit ESTBs from the participants. Semi-structured interview has advantage over other qualitative approaches because of its flexibility in allowing questions to be probed throughout the interview in response to the reactions and tones of the participants (Bryman & Bell, 2007; Patton, 2002). As a result, while the interviewer has a list of questions on specific topics to be covered, the participants are still provided with ample leeway to express their views on topics that capture their interests. This will permit a more thorough understanding of ESTB from tourists' perspective. A semi-structured interview guide was developed. The questions were reviewed by two tourism experts. The questions were further refined based on their comments before conducting the actual interviews (see Appendix 1).

3.2.2 Participant Observation

Participant observation was used to supplement the semi-structured interview findings. Participant observation is a frequently used data collection method in grounded theory research (Strauss & Corbin, 1994). One of the major merits of participant observation is its ability to provide rich data, and thus, is particularly suitable for revealing and understanding various facets of human behaviour. Besides, the data collection process occurs in natural settings in which the participants are located. Furthermore, this method does not rely on the words of the participants, and thus, is not dependent on the participants' ability to verbalise.

Based on the nature of the relationship between the observer and the observed, participant observation can be distinguished into four main types: (1) complete observer (also known as “fly on the wall”, the researcher does not take part in action, and does not reveal role as researcher), (2) complete participant (the researcher fully participates in action, yet does not reveal his or her role as a researcher), (3) observer-as-participant (the researcher is an observer who is not a member of the group and is interested in participating as a means of conducting better observation and, hence, generating more complete understanding of the group's activities), and (4) participant-as-observer (the researcher is a member of the group who becomes trained in observational techniques and uses his or her own group as a subject of study (Merriam, 1998). In order to fulfil the objectives of this study, there is a need for the researcher to become a member of the tour groups to observe and understand ESTBs from an emic perspective. Hence, the fourth type, participant-as-observer, was adopted in this study.

3.3 Sampling and Data Collection

Theoretical sampling was used as the main sampling strategy in this study. Theoretical sampling refers to sampling decisions made throughout the entire research process in which participants are selected based on their knowledge or experience of the topic of investigation, as well as based on emerging study findings (Ploeg, 1999). To this end, Taiwanese tourists who had both domestic and international travel experiences in the past 12 months were invited to semi-structured interviews. Researchers in the project had also joined group tours to carry out participant observations in various tourist destinations, including Vietnam, and Pingtan County in China. Other than carrying out participant observation, eligible tour group members were also invited to join on-site semi-structured interviews. The role “participant-as-observer” (Merriam, 1998) was adopted, which means the researchers took parts in tour activities and revealed the identity as researchers to other tour group members. The travel agencies involved were also informed and approval was obtained in advance before the interviews were conducted.

3.4 Data Analysis

When analysing both the semi-structured interview and participant observation data, the four key steps proposed by the grounded theory methodology were adopted: (1) open coding, (2) axial coding (development of concepts), (3) selective coding (grouping concepts into categories), and (4) theory formation (Corbin & Strauss, 1990).

In the open coding stage, the researcher attempted to “break down” each transcript or document, and tried to apply codes to phenomena. Codes came from existing theoretical frameworks and through the researcher’s own interpretations. In the axial coding stage, the researcher looked at the connections and relationships between the emerging codes, for example, by examining whether there was any causal relationship between the codes, or by identifying the antecedents that gave rise to a code. In particular, the researcher followed the coding paradigm proposed by Corbin and Strauss (1990), which involves six pre-determined subcategories: (1) conditions, (2) phenomena, (3) context, (4) intervening conditions, (5) action/strategies, and (6) consequences

Subsequently, in the selective coding stage, the focus was on identifying which code emerged as a core (central category). The researcher laid out all the categories and sub-categories and considered questions such as: What is the story behind these categories and sub-categories? What is most interesting or surprising? And what are the new contributions to the existing body of knowledge?

Finally, in the theory formation stage, the researcher attempted to create inferential and predictive statements about the phenomenon that was being investigated. The data analysis process was carried out with the aid of the NVivo (version 9) computer programme.

3.5 Trustworthiness of Data

Contrary to quantitative methods which focus on reliability and validity, qualitative research methods are concerned with “trustworthiness” of data (Franklin, Cody, & Ballan, 2010). Lincoln and Guba (1985) distinguish four criteria of trustworthiness: (1) credibility, (2) dependability, (3) transferability and (4) confirmability, which correspond roughly to the positivist concepts of internal validity, reliability, external validity and objectivity. In order to ensure the trustworthiness of the analysis of ESTB and its determinants, a number of measures were adopted, including audit trail, member checking, peer debriefing (independent coding), and method triangulation.

An audit trail is a key strategy to enhance dependability of qualitative findings. It involves the systematic record keeping of the procedures and data relevant to the study (Lincoln & Guba, 1985). In this study, an audit trail was established by the principal investigator documenting the research process through journaling of research activities and data analysis procedures clearly. Member checking refers to channelling researcher’s interpretations back to the participants to ensure credibility (Lincoln & Guba, 1985). The researcher asked relevant questions during the interview in order to assess whether participants’ meanings were interpreted accurately.

Peer debriefing is the process of engaging professional colleagues in analytic discussions about data interpretation. A tourism/hospitality researcher located in Taiwan was invited to serve as “peer debriefer” to check the accuracy and objectivity of the coding. Following the procedures described by Thomas (2004), the peer debriefer was given the research objectives and some of the interview transcripts. The “peer debriefer” was then be invited to create themes/categories from the transcripts. The themes/categories independently coded by the peer debriefer was subsequently compared with the ones developed by the principal investigator. Where disagreements occurred, the classification was discussed until agreement was reached. In this way, coding consistency was established.

Triangulation refers to the use of different methods to examine the same phenomenon in order to alleviate personal and methodological bias (Denzin, 1978). There are four main types of triangulation: data triangulation (i.e., use of different sources in a study), investigator triangulation (i.e., use of several different researchers), theory triangulation (i.e., use of multiple perspectives and theories to

interpret the results of a study), and methodological triangulation (i.e., use of multiple methods to study a research problem) (Denzin, 1978; Johnson, Onwuegbuzie, & Turner, 2007). As previously discussed in the “Research Design” section, “within-method” triangulation was adopted as the main mode of triangulation in this study (Figure 4).

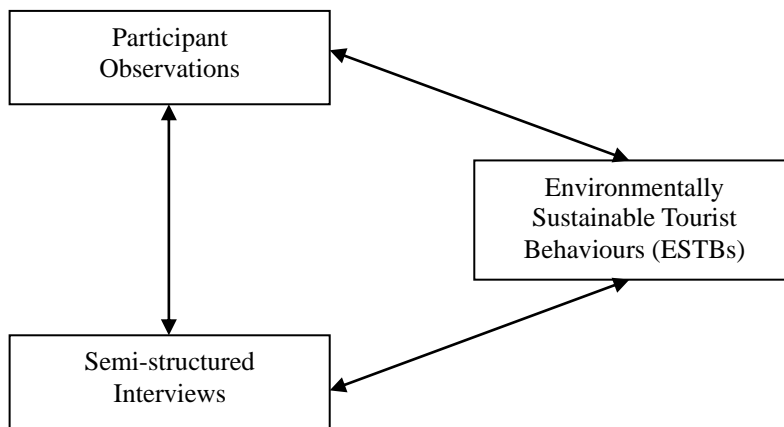


Figure 4. Within-method Triangulation in the Study

3.6 Ethical Considerations

With regard to ethical considerations of the participant observation technique, the researcher took on a “participant-as-observer” role (Merriam, 1998), which means the researcher took part in tour activities and revealed the identity as a researcher to other tour group members.

As for the semi-structured interview, participants were told that their participation was completely voluntary, and they could withdraw from the study at any time. The researcher assured participants that their responses would be kept anonymous, and all information obtained would be kept strictly confidential and be used for academic purposes only. If the participants agreed to accept the interview invitation, they were asked to sign a letter of consent before the interview began. The researcher also sought participants’ consent before digitally recording the interview. A small incentive was provided to the participant as a token of appreciation of his or her time.

4. FINDINGS AND DISCUSSIONS

4.1 Profile of the Participants

A total of 43 semi-structured interviews were conducted between 27 January 2018 and 31 July 2018. The socio-demographic profile of the participants was depicted in Table 2. The detailed socio-demographic characteristics and travel patterns of the participants are presented in Table 3.

Table 2. Summary of Socio-demographics Profile of the Participants

Socio-demographic Characteristics	Frequency	Percentage (%)
Gender		
Female	25	58.1%
Male	18	41.9%
Age		
18-29	17	39.5%
30-39	9	20.9%
40-49	9	20.9%
50-59	7	16.3%
60-65	1	2.3%
Nationality		
Taiwan	43	100.0%
Marital Status		
Single	27	62.8%
Married, with child	13	30.2%
Married, without child	3	7.0%
Educational Level		
High school	4	9.3%
College/Associate degree	3	7.0%
Undergrad degree	23	53.5%
Master's/PhD degree	13	30.2%
Occupation		
Full-time student	12	27.9%
Professional/senior managerial	8	18.6%
Administrative/secretarial/clerical	8	18.6%
Middle to junior managerial	4	9.3%
Teacher	3	7.0%
Technical/skilled worker	2	4.7%
Sales/service worker	2	4.7%
Business owner	2	4.7%
Others	2	4.7%
Travel Behavior		
	Mean	Standard Deviation
Domestic travel/per year	5.91	7.68
Oversea travel/per year	1.47	0.93

Table 3. Detailed Socio-demographic Characteristics and Travel Patterns of the Participants

No.	Gender	Age	Marital Status	Educational Level	Occupation	Domestic Travel Per Year	Int'l Travel Per Year
P1	Male	18-29	Single	Undergrad. degree	Technical/skilled worker	15	6
P2	Female	40-49	Married, with child	High school	Homemaker	2	1
P3	Female	40-49	Married, w/o child	High school	Sales/service worker	6	1
P4	Male	40-49	Single	College/Assoc. degree	Business owner	50	1
P5	Male	50-59	Married, with child	Master's/PhD degree	Professional/senior managerial	2	1
P6	Male	50-59	Married, with child	Master's/PhD degree	Professional/senior managerial	3	3
P7	Female	50-59	Single	Master's/PhD degree	Teacher	5	3
P8	Female	50-59	Married, with child	High school	Business owner	2	3
P9	Female	18-29	Single	Undergrad. degree	Technical/skilled worker	3	1
P10	Male	30-39	Single	Undergrad. degree	Sales/service worker	4	1
P11	Male	30-39	Single	Master's/PhD degree	Middle to junior managerial	4	2
P12	Male	30-39	Married, with child	Master's/PhD degree	Professional/senior managerial	2	1
P13	Male	18-29	Single	High school	Full-time student	3	2
P14	Female	18-29	Single	Undergrad. degree	Full-time student	3	2
P15	Female	40-49	Married, with child	Undergrad. degree	Middle to junior managerial	2	1
P16	Male	40-49	Married, with child	Undergrad. degree	Admin./secretarial/clerical	3	1
P17	Female	30-39	Married, with child	Undergrad. degree	Admin./secretarial/clerical	10	1
P18	Male	50-59	Married, with child	College/Assoc. degree	Professional/senior managerial	5	1
P19	Female	50-59	Married, with child	College/Assoc. degree	Middle to junior managerial	5	1
P20	Female	40-49	Married, w/o child	Undergrad. degree	Admin./secretarial/clerical	4	1
P21	Female	18-29	Single	Undergrad. degree	Middle to junior managerial	12	1
P22	Male	18-29	Single	Undergrad. degree	Soldier	12	1
P23	Female	18-29	Single	Undergrad. degree	Full-time student	6	1
P24	Female	40-49	Married, w/o child	Undergrad. degree	Admin./secretarial/clerical	10	2
P25	Female	18-29	Single	Undergrad. degree	Full-time student	2	1
P26	Female	30-39	Single	Master's/PhD degree	Teacher	12	2
P27	Male	18-29	Single	Undergrad. degree	Full-time student	2	1
P28	Male	18-29	Single	Undergrad. degree	Full-time student	2	1
P29	Female	18-29	Single	Undergrad. degree	Full-time student	4	1
P30	Female	18-29	Single	Undergrad. degree	Full-time student	3	1
P31	Male	18-29	Single	Undergrad. degree	Full-time student	1	1
P32	Male	18-29	Single	Undergrad. degree	Full-time student	3	1
P33	Female	18-29	Single	Undergrad. degree	Full-time student	5	1
P34	Male	30-39	Single	Master's/PhD degree	Admin./secretarial/clerical	5	2
P35	Female	30-39	Single	Master's/PhD degree	Teacher (High School)	10	1
P36	Female	30-39	Single	Master's/PhD degree	Admin./secretarial/clerical	3	1
P37	Male	40-49	Married, with child	Master's/PhD degree	Professional/senior managerial	6	2
P38	Male	30-39	Single	Master's/PhD degree	Professional/senior managerial	5	2
P39	Female	18-29	Single	Master's/PhD degree	Full-time student	4	2
P40	Female	40-49	Single	Master's/PhD degree	Professional/senior managerial	2	1
P41	Female	60-65	Married, with child	Undergrad. degree	Professional/senior managerial	2	1
P42	Female	18-29	Single	Undergrad. degree	Admin./secretarial/clerical	8	1
P43	Female	50-59	Married, with child	Undergrad. degree	Admin./secretarial/clerical	2	1

4.2 Typology of Environmentally Sustainable Tourist Behaviours

As previously stated, this study focused on identifying “intended” ESTBs (with the presence of intent and the presence of behaviour). Appropriate tactics were used to mitigate social desirability bias (SDB), for example, by using unprompted open-ended questions as well as utilising participant observations (participant-as-observer) to elicit and verify ESTBs.

A total of twelve key types of intended ESTBs were derived from the data. The findings corroborate the contention by Lee et al. (2013) that tourists’ environmentally responsible behaviour can be distinguished into general and site-specific ones. Accordingly, the twelve ESTBs were further classified into general ESTBs and site-specific ESTBs. There are three types of general ESTBs: (1) bringing behaviour, (2) persuasive action, and (3) education action; and nine types of site-specific ESTBs: (1) avoid behaviour, (2) reuse behaviour, (3) reduce behaviour, (4) active usage behaviour, (5) waste management behaviour, (6) environmentally friendly consumption behaviour, (7) general environmentally friendly behaviour, (8) persuasive action, and (9) education action. The respective descriptions, sub-categories and examples of each ESTBs are presented in Table 4.

Table 4. General and Site-specific Environmentally Sustainable Tourist Behaviours

ESTB Category	Description	Sub-category	Example
<i>General ESTBs</i>			
1. Bringing Behaviour	A tourist brings certain items from home to use in a destination in order to reduce the negative impact on that destination.	- F&B-related items	- Bring F&B related utensils to use in the destination. - Bring environmentally friendly cutlery & straws to use in the destination. - Bring reusable mugs or cups to use in the destination.
		- Personal care products	- Bring toiletries to use in the destination. - Bring personal care products to use in the destination.
		- Shopping-related items	- Bring reusable bags to use in the destination.
2. Persuasive Action	A tourist encourages and/or motivates his or her travel companions to take action to reduce the negative impact on the destination prior to visiting it.	- Persuasion of bringing behaviour	- Persuade travel companions to bring certain items from home to use in a destination.
3. Educational Action	A tourist voluntarily acquires knowledge and/or information about environmental issues and problems of the destination prior to visiting it.	- Eco-friendly accommodation	- Check out eco-friendly accommodation options in a destination.

Table 4. General and Site-specific Environmentally Sustainable Tourist Behaviours (Cont'd)

ESTB Category	Description	Sub-category	Example
<i>Site-specific ESTBs</i>			
1. Avoid Behaviour	A tourist takes action to avoid using certain items in a destination in order to reduce the negative impact on that destination.	- Avoid using disposable items	- Avoid using disposable cutlery in the destination.
2. Reuse Behaviour	A tourist takes action to reuse certain items in order to reduce the negative impact on that destination.	- Reuse disposable items	- Reuse disposable cutlery in the destination. - Reuse plastic bags in the destination.
3. Reduce Behaviour	A tourist takes action to reduce usage of certain items in order to reduce the negative impact on that destination.	- Reduce usage of disposable items	- Reduce usage of disposable items (e.g., plastic bags) in the destination.
		- Reduce usage of cleaning service at hotels	- Reduce usage of cleaning service at hotels (e.g., cleaning of towels) in the destination.
		- Reduce usage of energy / water	- Reduce usage of energy / water in the destination.
		- Reduce general waste	- Reduce general waste in the destination.
		- Reduce food waste	- Reduce food waste in the destination.
4. Active Usage Behaviour	A tourist voluntarily to actively use of certain items or engage in certain activities in a destination in order to reduce the negative impact on that destination.	- Active use of public transport	- Active use of public transport in the destination.
		- Active use of car pool	- Active use of car pool in the destination.
		- Actively cycle / walk	- Actively cycle / walk in the destination.
5. Waste Management Behaviour	A tourist voluntarily manages the waste created in order to reduce the negative impact on that destination.	- Actively sort garbage	- Actively sort garbage in the destination.
6. Environmentally Friendly Consumption Behaviour	A tourist makes environmentally friendly consumption in an attempt to reduce the negative impact on that destination.	- Actively patron environmentally friendly shops	- Actively patron environmentally friendly shops in the destination.
		- Actively consume local food / environmentally friendly food	- Actively consume local food / environmentally friendly food in the destination.
		- Actively buy locally produced items	- Actively buy locally produced items (e.g., souvenirs) in the destination.
7. General Environmentally Friendly Behaviour	A tourist takes general environmentally friendly actions in order to reduce the negative impact on that destination.	- Actively protect the environment	- Actively protect the environment of the destination. - Do not litter in the destination.
		- Actively clean up the environment	- Actively clean up the environment in the destination.
8. Persuasive Action	A tourist motivates his or her travel companion(s) to promote preservation of the natural environment in the destination.	- Perform environmentally friendly behaviour	- Persuade travel companions to perform environmentally friendly behaviour in a destination.

Table 4. General and Site-specific Environmentally Sustainable Tourist Behaviours (Cont'd)

ESTB Category	Description	Sub-category	Example
<i>Site-specific ESTBs</i>			
9. Educational Action	A tourist voluntarily acquires knowledge and/or information about environmental issues and problems of the destination when visiting it.	- Read environmental information in the accommodation	- Take time to read environmental conservation information in a hotel.
		- Acquire environmental information in tourist attractions	- Take time to read environmental conservation information available at tourist attractions.

4.2.1 General ESTB

General ESTB refers to tourist behaviour taken at tourists' originating countries that attempt to reduce the negative impact on the destination they visit. In other words, this type of ESTB is taken at tourists' originating countries prior to their arrival at the destination. General ESTBs identified from the data include (1) bringing behaviour (2) persuasive action, and (3) education action.

- (1) Bringing behaviour refers to tourists bringing certain items from home to use in a destination in order to reduce the negative impact on that destination. These items included food and beverage-related items (e.g., mugs, cutlery, straws), personal care products (e.g., toiletries), and reusable shopping bags.
- (2) Persuasive action refers to tourists encouraging or motivating their travel companions to take action to reduce the negative impact on the destination prior to visiting it (e.g., persuading travel companions to bring certain items from home to use in a destination).
- (3) Educational action refers to tourists voluntarily acquiring knowledge and/or information about environmental issues and problems of the destination prior to visiting it. For example, checking out eco-friendly accommodation options before arriving at the destination.

4.2.2 Site-specific ESTBs

Site-specific ESTB refers to tourist behaviour performed at the destination that the tourist is visiting. Nine site-specific ESTBs were derived from the data, they include: (1) avoid behaviour, (2) reuse behaviour, (3) reduce behaviour, (4) active usage behaviour, (5) waste management behaviour, (6) general environmentally friendly behaviour, (7) environmentally friendly consumption behaviour (8) persuasive action, and (9) education action.

- (1) Avoid behaviours are concerned with tourists' deliberate actions that avoid using certain items, for example, disposable cutlery, in a destination in order to reduce the negative impact on that destination.
- (2) Reuse behaviour refers to tourists reusing certain items in order to minimise the negative impact on that destination, for example, reusing disposable cutlery and plastic bags.
- (3) Reduce behaviour refers to tourists reducing usage of certain items in the destination, for example, reducing energy usage, water usage, general waste, and food waste in the destination.
- (4) Active usage behaviour refers to tourists' actively usage of certain items or engage in certain activities in a destination with the intention to reduce the negative impact on that destination. Some recurring examples from the data include actively using public transport or car pool, and cycling or walking in the destination.
- (5) Waste management behaviour reflects tourists voluntarily managing the waste they created in a destination. Some examples are active sorting of garbage in the hotel room as well as in tourist attractions in the destination.
- (6) Environmentally friendly consumption behaviour refers to tourists making environmentally friendly consumption in an attempt to reduce the negative impact on a destination. Some recurring themes include patronising environmentally friendly shops, purchasing local food, and locally produced items as souvenirs.
- (7) General environmentally friendly behaviour refers to general environmentally friendly actions in order to reduce the negative impact on that destination. For example, protecting the environment of the destination by not littering and involving in cleaning up activities in the destination.
- (8) Persuasive action is concerned with tourists convincing and motivating their travel companions to promote preservation of the natural environment in the destination. Such action includes persuading their travel companions to take environmentally friendly actions.
- (9) Educational action refers to tourists voluntarily acquiring knowledge and/or information about environmental issues and problems of the destination when visiting it. For example, tourists checking out environmental conservation information inside the hotel room, and tourists taking time to read environmental conservation information available at tourist attractions.

4.3 Determinants of Environmentally Sustainable Tourist Behaviour

As cogently described by Kollmuss and Agyeman (2002), general environmentally sustainable behaviour is shaped by a complex myriad of factors and it is difficult to present all factors in one single framework or model. Nonetheless, the findings of this exploratory study have revealed a total of 17 key determinants of ESTBs. Based on Hornik et al.'s (1995) framework, these key determinants were further classified into (1) intrinsic incentives, (2) extrinsic incentives, (3) internal facilitators, and (4) external facilitators.

- (1) Intrinsic incentives refer to tourists' internal motivations to perform ESTBs. Intrinsic incentives identified from the data include: locus of control (i.e., the perception of controllability), personal satisfaction (e.g., derived from doing the right thing), and social satisfaction (e.g., obtained from peer recognition).
- (2) Extrinsic incentives refer to tourists' external motivations to perform ESTBs. Extrinsic incentives derived from the data are: saving money, economic reward (e.g., monetary reward, green coin reward), perceived social influence (e.g., social norm, social modelling, and social pressure), and social recognition (e.g., praise).
- (3) Internal facilitators refer to cognitive variables which enable tourists to perform ESTBs. Prominent internal facilitators identified from the data include: easiness to perform, habitual behaviour, environmental awareness (e.g., consciousness or awareness), environmental concern (e.g., general attitude and value orientation), environmental knowledge (e.g., knowledge and understanding), and environmental commitment (e.g., involvement and obligation).
- (4) External facilitators refer to external factors that are essential to facilitate tourists' ESTBs. External facilitators derived from the data include: availability of sorting facilities (e.g., containers), convenience (e.g., proximity of containers), initiative taken by the accommodation provider (e.g., providing recycling containers and environmental information), and perceived costs or efforts to perform ESTB.

The findings of this study also indicate that tourists regarded certain type of ESTB (e.g., “bringing behaviour”) rather easy to perform when they were travelling domestically. However, they found such ESTB relatively difficult to perform when travelling internationally. This suggests that trip characteristics, in particular, travel distance, do play a role in explaining variations in ESTBs. Furthermore, trip duration (i.e., the length of stay) also exerted influence on certain ESTBs. For example, some participants expressed that if they were staying at a hotel for a few nights, they tended to be more willing to perform “reduce behaviour” (e.g., reduce usage of cleaning service at hotels).

4.4 A Model of Environmentally Sustainable Tourist Behaviour

Based on the above-discussed findings, a model of environmentally sustainable tourist behaviour is proposed, depicting the five determinants (i.e., intrinsic incentives, extrinsic incentives, internal facilitators, external facilitators, and trip characteristics) and general and site-specific ESTBs (Figure 5).

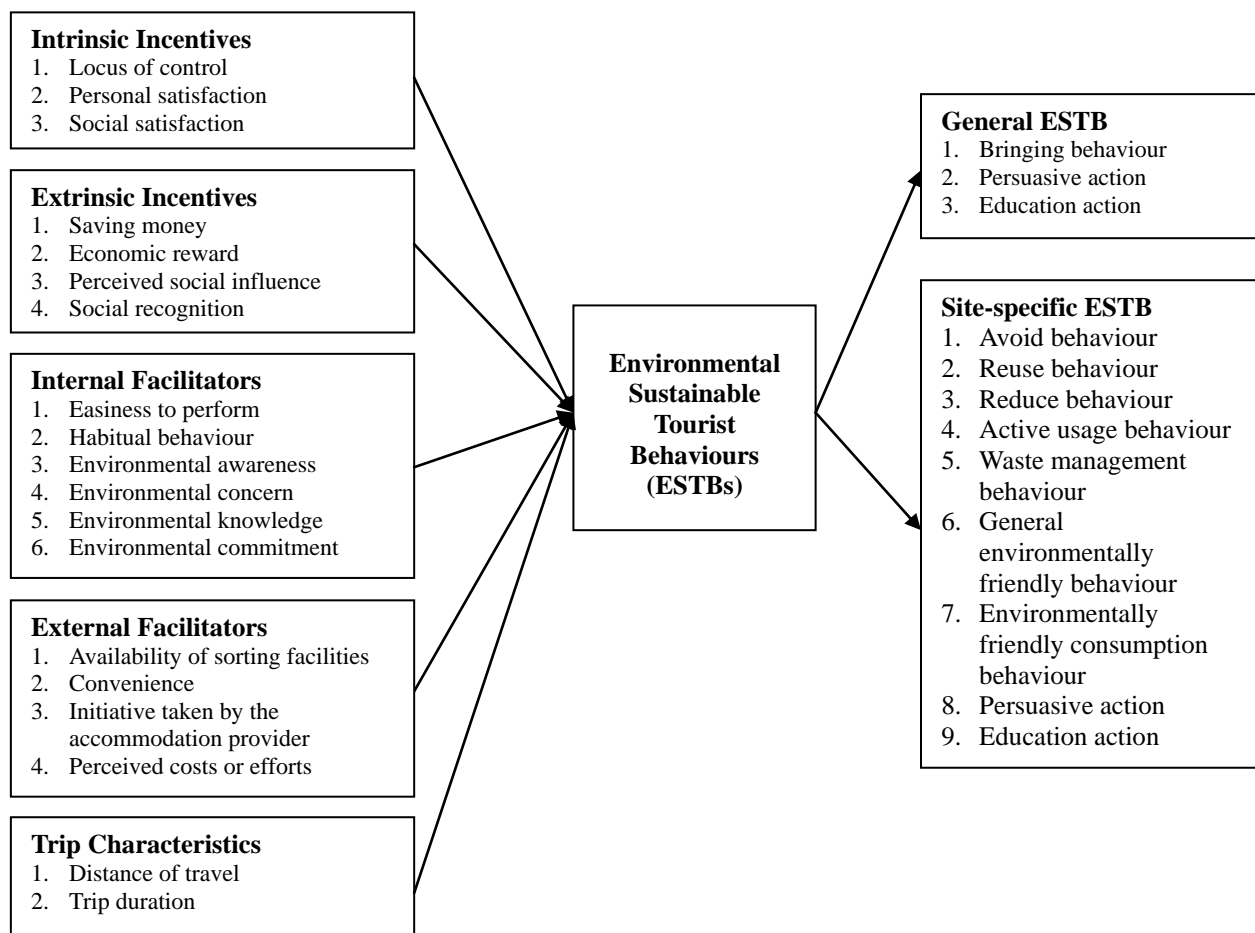


Figure 5. A Model of Environmentally Sustainable Tourist Behaviour

5. CONCLUSION

Considering that tourism is expected to continue its growth (UNWTO, 2018) and the fact that the tourism industry is one of the largest components of the service sector, and thus, has considerable ability to influence environmental quality (Davies & Cahill, 2000), there is an urgent need to expand our current understanding of tourists' environmentally sustainable behaviour.

In this light, this study has attempted to elicit different ESTBs from Taiwanese tourists' perspective, to develop a typology of ESTB, and to explore their key determinants. A total of twelve key types of ESTBs were identified and they were further distinguished into general ESTBs and site-specific ESTBs. A model of environmentally sustainable tourist behaviour is also proposed, depicting general ESTBs and site-specific ESTBs as well as their five key determinants (i.e., intrinsic incentives, extrinsic incentives, internal facilitators, external facilitators, and trip characteristics).

The findings of this study are believed to contribute to an "emic" in-depth understanding of ESTB, and pave the way for further studies of this important aspect of tourist behaviour. Moreover, the findings provide useful insights for policymakers and managers in devising appropriate campaigns and interventions on stimulating ESTBs. For example, the findings indicate that many participants were willing to take time to read environmental conservation information available in hotels and tourist attractions; and many of them would be motivated by economic rewards (as a form of extrinsic incentive). Accordingly, efforts can be focused on making environmental information more accessible to tourists and on offering economic incentives to encourage ESTBs.

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Appendix 1

Exploring Environmentally Sustainable Tourist Behaviour and Its Determinants

探討環境永續遊客行為以及其決定因素

Interview Questions (On-site)

國內/國外: ₁ Domestic 國內 ₂ Overseas 國外: _____ (country)

Behaviour:

1. When you travel, what kind of activities you think can contribute to the sustainability of the environment? 請問您認為出去旅遊時，做哪些行為可以為環境永續作出貢獻?
2. What kinds of “environmentally sustainable tourist behaviours” (ESTBs) have you carried out so far during your trip? 您在旅途中到目前為止做了哪些“環境永續遊客行為”(綠色旅遊行為)?
3. In your opinion, are these ESTBs difficult to carry out?
在您看來，這些“環境永續遊客行為”(綠色旅遊行為) 是否難以實施/執行?

Motivations for Behaviour:

4. What are the key factors that have driven you to carry out these ESTBs?
促使您們執行這些“環境永續遊客行為”(綠色旅遊行為)的主要因素是什麼?

Benefits of Behaviour:

5. In your opinion, in what ways have carrying out these ESTBs been beneficial?
在您看來，這些“環境永續遊客行為”(綠色旅遊行為)對哪些方面是有助益的?

Recommendation of Behaviour:

6. Would you recommend these ESTBs to your travel companion(s)?
您會推薦這些“環境永續遊客行為”(綠色旅遊行為)給您的旅行伴侶嗎? 為什麼會? 為什麼不會?
7. What do you think would persuade your travel companion(s) to adopt these ESTBs?
您認為該如何說服您的旅行伴侶採納這些“環境永續遊客行為”(綠色旅遊行為)?

Demographic Information:

Could you please provide me with your personal particulars? 可否請您提供您的一些個人資料?

Your gender 性別: ₁ Male 男 ₂ Female 女

Your age 年齡: ₁ Below 21 (21 歲以下) ₂ 21-29 ₃ 30-39
₄ 40-49 ₅ 50-59 ₆ 60-65
₇ 65 or above (65 歲以上)

Your nationality 國籍: ₁ Taiwan 台灣 ₂ Others 其他: _____

Your marital status 婚姻狀況: ₁ Single 單身 ₂ Married, without child 已婚, 沒有小孩
₃ Married, with child 已婚, 有小孩

Your education level 教育程度: ₁ High school 高職中(含)以下 ₂ College/Associate degree 專科
₃ Undergrad. degree 大學 ₄ Master's/PhD degree 研究所以上

Your job title 職位: _____

How many times do you travel domestically in an average year? 您平均每年在國內旅行多少次?
_____ times 次

How many times do you travel overseas in an average year? 您平均每年在國外旅行多少次?
_____ times 次

~ End ~

Appendix 2

Exploring Environmentally Sustainable Tourist Behaviour and Its Determinants

探討環境永續遊客行為以及其決定因素

Interview Questions 訪談問題 (Off-site)

請問您是否在過去一年內曾於台灣國內旅遊? ₁ Yes 是 ₂ No 否

請問您是否在過去一年內曾於到國外旅遊? ₁ Yes 是 ₂ No 否

Behaviour:

1. When you travel, what kind of activities you think can contribute to the sustainability of the environment?
請問您認為出去旅遊時，做哪些行為可以為環境永續作出貢獻?
2. What kinds of “environmentally sustainable tourist behaviours” (ESTBs) have you carried out when you travel within Taiwan? 接續上一題，請問您在國內旅遊時，通常會做哪些“環境永續遊客行為”(綠色旅遊行為)? (例如：減少用水量、選擇環保旅館、重覆使用飯店浴巾等)
3. What kinds of “environmentally sustainable tourist behaviours” (ESTBs) have you carried out when you travel abroad? 您在國外旅遊時，通常會做哪些“環境永續遊客行為”(綠色旅遊行為)?
4. In your opinion, are these ESTBs difficult to carry out?
在您看來，這些“環境永續遊客行為”(綠色旅遊行為) 是否難以實施/執行?

Motivations for Behaviour:

5. What are the key factors that have driven you to carry out these ESTBs?
促使您們執行這些“環境永續遊客行為”(綠色旅遊行為)的主要因素是什麼?

Benefits of Behaviour:

6. In your opinion, in what ways have carrying out these ESTBs been beneficial?
在您看來，這些“環境永續遊客行為”(綠色旅遊行為)對哪些方面是有助益的?

Recommendation of Behaviour:

7. Would you recommend these ESTBs to your travel companion(s)?
您會推薦這些“環境永續遊客行為”(綠色旅遊行為)給您的旅行伴侶嗎? 為什麼會? 為什麼不會?
8. What do you think would persuade your travel companion(s) to adopt these ESTBs?
您認為該如何說服您的旅行伴侶採納這些“環境永續遊客行為”(綠色旅遊行為)?

Demographic Information:

Could you please provide me with your personal particulars? 可否請您提供您的一些個人資料?

Your gender 性別: ₁ Male 男 ₂ Female 女

Your age 年齡: ₁ Below 21 (21 歲以下) ₂ 21-29 ₃ 30-39
₄ 40-49 ₅ 50-59 ₆ 60-65
₇ 65 or above (65 歲以上)

Your nationality 國籍: ₁ Taiwan 台灣 ₂ Others 其他: _____

Your marital status 婚姻狀況: ₁ Single 單身 ₂ Married without child 已婚, 沒有小孩
₃ Married with child 已婚, 有小孩

Your education level 教育程度: ₁ High school 高職中(含)以下 ₂ College/Associate degree 專科
₃ Undergrad. degree 大學 ₄ Master's/PhD degree 研究所以上

Your job title 職位: _____

How many times do you travel domestically in an average year? 您平均每年在國內旅行多少次?
_____ times 次

How many times do you travel overseas in an average year? 您平均每年在國外旅行多少次?
_____ times 次

科技部補助專題研究計畫出席國際學術會議心得報告

日期：2019年1月30日

計畫編號	MOST 106-2410-H-259-046 -		
計畫名稱	探討環境永續遊客行為以及其決定因素 Exploring Environmentally Sustainable Tourist Behaviour and Its Determinants		
出國人員 姓名	麥康妮 Dr. Athena H.N. Mak	服務機構 及職稱	國立臺灣師範大學 運動休閒與餐旅管理研究所 副教授
會議時間	2019年1月24日至 2019年1月25日	會議地點	奧克蘭，紐西蘭 Auckland, New Zealand
會議名稱	(中文) 2019 觀光與永續發展目標研討會 (英文) 2019 Tourism and the SDGs Conference		
發表論文 題目	(中文) (英文) The Key Driving Forces and Restraining Forces for Environmental Strategy Adoption in the Hotel Industry in Taiwan		

一、參加會議經過

The 2019 “Tourism and the Sustainable Development Goals (SDGs) Conference” (Tourism4SDGs19) was organized by the Institute of Development Studies at Massey University at their Albany campus, Auckland, New Zealand between from 24 and 25 January 2019. The primary aim of the conference was to provide opportunities for academics from all over the world to exchange research ideas and discuss latest trends and issues.

The Sustainable Development Goals (SDGs) were ratified at the United Nations in 2015 and were set to guide global development through to 2030. The main purpose of SDGs was to urge governments, industry and communities alike to engage in direct efforts to work in more socially, economically and environmentally sustainable manner. The 2019 “Tourism and the SDGs Conference” offers the opportunity for a wide range of scholars and tourism stakeholders to discuss and debate both the challenges to tourism contributing to the SDGs, and the particular ways in which tourism can deliver on its potential to be more inclusive, equitable and sustainable.

An opening ceremony was held in the morning of 24 January 2019 at the Massey University (Albany campus). My presentation “The Key Driving Forces and Restraining Forces for Environmental Strategy Adoption in the Hotel Industry in Taiwan” was scheduled in the afternoon of 25 January 2019. It was well received and was accompanied by a discussion with other conference delegates.

二、 與會心得

My participation at this conference had been very successful and fruitful. In addition to the opportunity of presenting my research ideas with fellow conference delegates, I also had the chance to be exposed to other research ideas and best practices in other keynote speeches.

As a researcher who is particularly interested in sustainability development in the hospitality and tourism industry, I found many of the keynote speeches informative and stimulating. Some prominent examples include: “Tourism and Waste Management” presented by Prof. Chris Ryan, The University of Waikato, New Zealand; “Keep Importing? How More Localised Food Production for Tourism Challenges SDGs in Small Island Development States” presented by Mr. Gabriel Laeis, Tutor of Massey University; “Running a Hotel in a Water-Stressed Destination – the Case of Cape Town” presented by Dr. Willem Coetzee, University of Otago.

My attendance at the conference has enhanced the visibility and international presence of the National Taiwan Normal University. It has also strengthened the network between our university and other universities around the world. This is particularly important in fostering research and educational collaboration in the hospitality and tourism discipline.

三、 發表論文全文或摘要

Abstract

Considering that tourism is expected to continue its growth, and the fact that the hotel industry is one of the most energy-intensive sectors of the tourism industry, it is imperative that the hotel industry strives to become more environmentally responsible and sustainable. It is in this light that this study attempts to explore the specific environmental strategies adopted by hotels in Taiwan, and to identify the driving forces and restraining forces for environmental strategy adoption from the industry perspective. A series of semi-structured interviews were conducted with senior hotel managers in Taiwan. A total of 21 environmental strategies emerged from the data; they were further categorised into 14 key areas, namely, water, energy, transport, waste, amenities, harmful substances, guest rooms, building design and materials, procurement, food services, outdoor environment, corporate social responsibility, guest information, management and staff commitment. Eight main types of perceived “low-cost” environmental strategies were also identified. Furthermore, 26 key driving forces and restraining forces for environmental strategy adoption were obtained from the data. These forces were further categorised into: external driving forces, internal driving forces, external restraining forces and internal restraining forces. Based on these findings, strategies to encourage the driving forces of environmental strategy adoption were derived.

Keywords: Environmental strategy; low-cost environmental strategy; driving force; restraining force.

四、 建議

It is suggested that faculty members and postgraduate students be encouraged to attend relevant international conferences in the hospitality and tourism discipline. Faculty members and postgraduate students will not only be able to disseminate their research ideas to a wider audience, they will also benefit from the exchange and networking with international peers.

五、 攜回資料名稱及內容

Conference Proceedings of the 2019 Tourism and the SDGs Conference (online version).

六、 其他

Nil

106年度專題研究計畫成果彙整表

計畫主持人：麥康妮			計畫編號：106-2410-H-003-146-					
計畫名稱：探討環境永續遊客行為以及其決定因素								
成果項目			量化	單位	質化 (說明：各成果項目請附佐證資料或細項說明，如期刊名稱、年份、卷期、起訖頁數、證號...等)			
國內	學術性論文	期刊論文		0	篇			
		研討會論文		0				
		專書		0	本			
		專書論文		0	章			
		技術報告		0	篇			
		其他		0	篇			
	智慧財產權及成果	專利權	發明專利		申請中	0		
					已獲得	0		
			新型/設計專利			0		
		商標權			0	件		
		營業秘密			0			
		積體電路電路布局權			0			
		著作權			0			
		品種權			0			
		其他			0			
	技術移轉	件數			0		件	
		收入			0	千元		
	國外	學術性論文	期刊論文		0	篇		
			研討會論文				1	"The Key Driving Forces and Restraining Forces for Environmental Strategy Adoption in the Hotel Industry in Taiwan" - at the 2019 "Tourism and the Sustainable Development Goals (SDGs) Conference" (Tourism4SDGs19), organized by the Institute of Development Studies at Massey University at their Albany campus, Auckland, New Zealand, 24-25 January 2019.
			專書				0	本
專書論文				0	章			
技術報告				0	篇			
其他				0	篇			
智慧財產權		專利權	發明專利	申請中	0	件		

	及成果		已獲得	0	
			新型/設計專利	0	
			商標權	0	
			營業秘密	0	
			積體電路電路布局權	0	
			著作權	0	
			品種權	0	
			其他	0	
	技術移轉	件數	0	件	
		收入	0	千元	
參與計畫人力	本國籍	大專生	0	人次	
		碩士生	0		
		博士生	0		
		博士後研究員	0		
		專任助理	0		
	非本國籍	大專生	0		
		碩士生	0		
		博士生	0		
		博士後研究員	0		
		專任助理	0		
其他成果 (無法以量化表達之成果如辦理學術活動、獲得獎項、重要國際合作、研究成果國際影響力及其他協助產業技術發展之具體效益事項等，請以文字敘述填列。)					

科技部補助專題研究計畫成果自評表

請就研究內容與原計畫相符程度、達成預期目標情況、研究成果之學術或應用價值（簡要敘述成果所代表之意義、價值、影響或進一步發展之可能性）、是否適合在學術期刊發表或申請專利、主要發現（簡要敘述成果是否具有政策應用參考價值及具影響公共利益之重大發現）或其他有關價值等，作一綜合評估。

1. 請就研究內容與原計畫相符程度、達成預期目標情況作一綜合評估

達成目標

未達成目標（請說明，以100字為限）

實驗失敗

因故實驗中斷

其他原因

說明：

2. 研究成果在學術期刊發表或申請專利等情形（請於其他欄註明專利及技轉之證號、合約、申請及洽談等詳細資訊）

論文： 已發表 未發表之文稿 撰寫中 無

專利： 已獲得 申請中 無

技轉： 已技轉 洽談中 無

其他：（以200字為限）

3. 請依學術成就、技術創新、社會影響等方面，評估研究成果之學術或應用價值（簡要敘述成果所代表之意義、價值、影響或進一步發展之可能性，以500字為限）

本研究結果將有助於對環境永續遊客行為的深入理解，並為研究綠色旅遊行為奠定基礎並補足文獻缺口。此外，研究結果也可協助瞭解對於環境永續遊客行為以及其決定因素，提供政府相關單位與業者許多具參考價值之建議。

4. 主要發現

本研究具有政策應用參考價值： 否 是，建議提供機關

（勾選「是」者，請列舉建議可提供施政參考之業務主管機關）

本研究具影響公共利益之重大發現： 否 是

說明：（以150字為限）