

Exploring Factors Affecting Gen Y Tourists' Pro-environmental Behavior in China

Xiao Yue * and Yee Choy Leong

Abstract—This research explores factors that affect Gen Y tourists' pro-environmental behavior (TPEB) in China. The research has employed an exploratory case study method and conducted in-depth interviews with 30 Gen Y tourists from China. The interviews were carried out through an online platform (i.e., QQ) to keep appropriate social distancing to avoid spreading the virus due to the recent Covid-19 pandemic. The unit of analysis of this research is the individual Gen Y tourist. The study has discovered that several factors have affected Gen Y TPEB. Among all are personal factors (demographic, psychological, emotional) and environmental factors (direct contextual, indirect contextual, background). In addition, tourist-to-tourist interaction has the most significant effect on TPEB. The research contributes significantly to the theoretical and empirical developments that enrich the pro-environmental behavior and tourism literature.

Index Terms—China, Gen Y, tourism, tourist pro-environmental behavior, tourist-to-tourist interaction

I. INTRODUCTION

This research explores and understands factors affecting Gen Y tourists' pro-environmental behavior (TPEB). Recently, research in pro-environmental behavior has attracted significant attention from many researchers. This is mainly due to two main reasons. This first reason is that the tourism industry is expanding fast in recent years, especially in many developing countries. The tourism industry has become one of the world's largest economic sectors. It has created millions of jobs, increased exports, and enhanced prosperity in many countries, especially in developing nations like China. Due to the importance of the tourism industry to a nation's economy, many researchers have paid additional attention to this sector. The second reason is the increase in environment awareness due to serious pollution problems caused by the development of the tourism industry. This reason has resulted in a great research interest towards issues regarding sustainable development in tourism. Sustainable development in tourism is a key challenge in developing quality tourism products without negatively affecting the natural environment [1].

With the fast development of the tourism industry, the impact of tourists' behavior on the environment of tourist destinations is becoming increasingly apparent. As a result,

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TPEB has become the main focus of many research works. TPEB refers to the behavior of tourists actively reducing negative environmental impact or promoting the sustainable use of resources during the tourism process [2]. The level of tourists' pro-environmental behavior is directly related to the quality of the tourist destinations' environmental quality, affecting its sustainable development. Because of that, sustainability principles and indicators have long been the center of tourism research. In a world of population expansion and biodiversity degradation, determining whether tourism can make a meaningful contribution to ecosystem conservation is an issue that needs urgent attention. This research thus focuses on Gen Y tourists' pro-environmental behavior and explores the factors that contribute to this behavior. This research focuses on Gen Y tourists because they are the largest market segment in the tourism industry, and the pro-environmental behavior of Gen Y is less well understood. The remaining paper has been structured as follows: a review of the relevant literature is presented in the next section. The following section describes the research methodology. The next section presents the findings. Finally, the paper discusses the implications of this research both in academia and industry.

II. LITERATURE REVIEW

A. Tourists' pro-environmental behavior

The term "tourists' pro-environmental behavior" or "TPEB" was initially proposed by Borden and Schettino [3] as the concept of "environmentally responsible behavior." some scholars have used terms such as "environmentally friendly behavior" [4], "tourist ecological (friendly, civilized) behavior" [5], and "sustainable behavior" [6], to indicate pro-environmental behaviors. The factors affecting TPEB can largely be categorized into personal and environmental factors. Personal factors involve internal factors, such as attitudes, norms, motivations, and values [7]. Environmental factors involve external influences, such as interpersonal influence, government regulations, the availability of recycling facilities, the convenience of public transportation, the market supply of goods and the pricing system [8].

Personal factors can be divided into demographic, psychosocial and emotional factors. Many researchers have investigated the relationships between various demographic factors such as gender, age, income level, education background and TPEB. However, there are inconsistencies in their conclusions. For example, in the study of the impact of gender on TPEB, some researchers have discovered that men are more likely to implement environmental behaviors in daily life than women [9]. However, some researchers found

that the opposite was true [10]. And yet, some other researchers found that gender has no relationship with TPEB [11]. In studying the effect of age on pro-environmental behavior, Wiernikhas discovered a significant positive correlation [12]. In addition, when compared with other personal factors, demographic factors have the lowest correlations with TPEB [13].

The second personal factor is psychosocial factors such as attitudes, values and personal norms. Many researchers have explored the driving forces of individual participation in environmental protection actions from a psychosocial perspective. Examining the influencing factors of individual implementation from more stable and general socio-psychological variables is an important research tradition in the existing literature [14]. Many empirical studies have confirmed a positive impact of attitudes on TPEB [10, 15]. Zhang *et al.* believe that recycling is determined by the individual's general attitude towards the environment and the pressure exerted by society on recycling regulations [16]. Personal norms are interpreted as a moral obligation to adhere to an individual's internal value system [17]. Individuals perceive a moral responsibility when making certain behavioral decisions [18]. Studies have shown that personal norms significantly impact individuals' intentions to implement pro-environmental behaviors [15, 19]. Values are the guiding principles for individuals to evaluate the surrounding objective things. They are the most stable internal factors affecting the formation of attitudes, norms, beliefs and behaviors [20].

Many studies have pointed out that many environmental factors also have an important impact on promoting or hindering individuals' pro-environmental behavior [21]. For example, due to the lack of appropriate public transport services, individuals can only travel by car, which inevitably increases CO₂ emissions [22]. Second, contextual factors can indirectly promote or hinder individual environmental behavior decisions through the influence of social, psychological and other factors such as attitudes, emotions, and personal norms. Third, the background factor can moderate the relationship between social and psychological factors and environmental protection behaviors [23]. Fourth, background factors can determine the most substantial effects of psychosocial factors [24, 25]. However, despite the extensive research in TPEB in the past, limited research focused on China's developing nation. China is experiencing a rapid expansion in the tourism industry, and pollution problems are pretty severe, especially in tourists' destinations [26]. In addition, many Chinese tourists are perceived to have low environmental awareness and thus lack pro-environmental behavior. The next section discusses tourism sector development and environmental pollution problems in China.

B. Tourism Sector and Environmental Pollution in China

China has made gratifying achievements in the tourism industry in recent years. However, this poses challenges to environmental protection and socio-economic development, hindering the achievement of China's sustainable tourism development goals. Three scenic spots of China were ordered by UNESCO to rectify their tourism development for violating the principles of environmental protection and

ecological education. According to a survey by the Chinese National Committee on People and Biosphere (MAB), 22% of nature in China currently suffer from the damage caused by the development of the tourism industry, and 61% of the landscape environment is uncoordinated.

The above data shows that the vigorous development of China's tourism industry, on the one hand, has brought considerable economic benefits to the country, but on the other hand, it has also brought many resources and environmental damage problems. The continued deterioration of the environmental quality of tourist destinations would greatly reduce the attractiveness and competitiveness of tourist destinations and further hinder sustainable development of local tourism. Therefore, how China can effectively protect and improve the ecological environment while maintaining the development of the tourism economy is an important topic urgently awaiting research in the current tourism academic and industrial circles.

The uncivilized behavior of Chinese tourists is a big headache for people in many countries. Chinese tourists have a terrible reputation abroad because of their uncivilized behaviors, among which environmentally unfriendly behavior is the most prominent. According to the survey, which covered 23 countries and regions, Chinese tourists were found to have committed nine uncivilized including littering, running red lights, and children defecating in public. According to a report in *The Guardian*, Chinese travelers have replaced the Americans become the world's new "ugly" tourists.

Although some foreign media exaggerate the uncivilized behavior of Chinese tourists, it is indisputable that Chinese tourists have poor awareness of environmental protection and civilization. This situation is especially true in the young generation, i.e., Gen Y. Gen Y, also known as The Millennial, was born between 1981 and 1999. They form the most prominent consumer group today and dominate the entire global marketplace [27]. Gen Y tourists have poor environmental protection awareness. The uncivilized behavior of Chinese Gen Y tourists is an exciting topic to explore. Not only abroad, in recent years in China, Chinese tourists in the negative news have also been frequent. The bad behavior and arrogance of attitudes need to attract the active attention of government departments and scholars. Experts believe that most Chinese tourists have no awareness of protecting national cultural relics and protecting the scenic area environment, leading to a systematic destruction of tourism resources.

The research findings above prompt tourism researchers to re-examine the role tourists play and their actions in the ecological protection of tourist destinations. They have led to the exploration and research on TPEB. TPEB is regarded as tourists taking preventative measures to protect their environment by empathizing with nature and addressing environmental issues [28, 29]. The next section discusses the design of a research methodology that can be used to facilitate data collection from Chinese Gen Y tourists about their pro-environmental behavior.

III. RESEARCH METHODOLOGY

This study explores factors affecting Gen Y tourists' pro-environmental behavior (TPEB) in China. This exploration serves as a preliminary study of more extensive research work. As a result, exploratory research is adopted. An in-depth interview methodology is used to explore the factors affecting TPEB in China. Due to the exploratory nature of the research, a small sample size of 50 is used. The unit of analysis is the individuals from the Gen Y age group and have had various traveling experiences in the past. Each interview is regarded as a case study. Exploratory case study procedure allows us to approach the research more systematically and scientifically [30].

Due to the recent Covid-19 pandemic outbreak, the 30 samples were conveniently taken from among the friends and colleagues of the researchers. The samples were contacted through online messages. All samples were agreed to participate in the interview to understand that their identity would be disguised and their personal information would be treated confidentially. The interviews were conducted online with the use of QQ to avoid the spread of the Covid-19 virus. The duration of the online interview generally lasts for 2 to 6 hours. The 6-hour long interview was conducted in two-to-two separate sessions of 2-3 hours each. In addition, some samples were revisited from time to time for further clarification when required. Although an interview guide based on open questions was developed, the interviews were mostly based on unstructured or semi-structured interview approaches. The interview sessions were recorded for further analysis.

Analyzing qualitative data from the interview can never be easy or straightforward. Given a large amount of data was collected from the interview, it was necessary to make sense of messy and unstructured qualitative data. The first step was to produce a transcript. The second step was to develop tentative ideas about categories and their inter-relationships or the mechanism of the causal relationship among them. This step was done based on an interpretation approach to understand and examine the presence or absence of a particular factor that affects Gen Y TPEB. Categorization of data was achieved via a coding system derived from the literature. A cross-case analysis was used to compare the findings across several individual cases to identify common themes or similar patterns of occurrences [30]. The results of the interview were presented in the next section.

IV. FINDINGS

In this research, many factors that affect TPEB are discovered. These factors can primarily be categorized into two broad categories: personal factors (demographic, psychosocial, and emotional) and environmental factors (direct contextual, indirect contextual, background).

A. Personal Factors

Personal factors can be divided into demographic, psychosocial and emotional factors. Demographic factors that are found in this research are gender, age, income level and education. Psychosocial factors that are found in this research are attitudes, value and personal norms. Emotional factors that are found in this research are feeling and

motivation.

Demographic factors. Based on opinions given by the interviewees, many interviewees believe that genders, age, income and education levels affect TPEB. Older people are generally less concerned about the environment than youngsters or kids. Females are more concerned about the environment than males. People with higher education levels and income are generally more worried about the environment than lower income and education levels. When one of the interviewees visited the Beijing Botanical Garden, she saw two young teenage girls visiting the garden with their parents. The young teenage girls were so excited when they saw a beautiful plant with colorful flowers and stayed there for a long time. Their mother asked whether they wanted to pick some flowers and bring them home. One of the children refused and said if we picked the flowers, other people would not have the opportunities to see them and this behavior is very uncivilized. "We were so impressed by what the child said," said the interviewee. She continued, "sometimes youngsters are more concern about the environment than adults."

Psychosocial factors. Psychosocial factors, attitudes, values and personal norms are among the common factors that affect TPEB. Pro-environmental personal view refers to the individual's overall belief in the fundamental relationship between humans and the natural environment. It represents the essential attitude of the individual towards the environment. For example, TPEB depends on individual tourists' acceptance of energy conservation and environmental protection. Those who highly accept energy conservation and environmental protection would prefer to travel by bicycle or foot, especially when visiting the natural scenery. Recycling activities are more intense in one area when individuals living there have positive attitudes towards the environment. Personal norms are interpreted as a moral obligation to adhere to an individual's internal value system. It is a moral obligation that individuals perceive when making certain behavioral decisions. This research has discovered that personal norms significantly impact individuals' intentions to implement pro-environmental behaviors. For example, personal norm positively influences employee electricity-saving behavior. Some tourists would turn off the light and air-conditioning system when leaving the hotels. Personal norms are also found to affect organic food purchases. Most interviewees believe that personal norms are one of the most critical factors influencing tourists to adopt TPEB. Values are the guiding principles for individuals to evaluate the surrounding objective things. They are the most stable internal factors affecting TPEB. Value can affect the formation of attitudes, norms, beliefs and behaviors of tourists.

Emotional factors. Emotional factors that are found in this research are feeling and motivation. Some interviewees believe that the physical environment of a tourist destination has a positive impact on tourists' emotions and satisfaction and then affects TPEB. Local identity and attachment in the scenic area are the significant factors affecting TPEB. It was also discovered that environmental protection emotions could contribute to carbon emission reduction behaviors. According to one of the interviewees, if the environment is dirty, it may not desire to preserve the environment. If the

scenic environment is clean, tourists would feel obligated to mess it up and tend to like this place and have a strong feeling of maintaining its natural eco-system.

B. Environmental Factors

Environmental factors that are discovered from this research can be categorized into direct contextual, indirect contextual and background factors.

Direct contextual factors. Lack of public transport, government regulations and infrastructure such as recycling facilities are direct contextual factors. For example, due to the inconvenience of the public transport services, tourists would choose to travel by private car, which inevitably increases CO₂ emissions.

Indirect contextual factors. The eco-friendly reputation or perceived quality of the scenic is an example of indirect contextual factors. The destination's eco-friendly reputation could influence tourists' environmental protection behaviors by inspiring the tourists' emotional experience. In addition, the perceived quality of scenic area employees indirectly affects TPEB by affecting their values and environmental commitments.

Background factors. The background factors discovered from this research are time, price, long distance driving intention, availability in market supply of goods, and convenient purchase. These background factors could affect social and psychological factors and thus influence TPEB. For example, one of the interviewees said that authority plays a vital role for improving TPEB. If the scenic management is efficient, such as the number of guards and patrol frequency are high, it can enhance TPEB. In addition, the local government's regulation and punishment for violation significantly affect TPEB. A maximum fine of S\$2000 for littering is an effective measure in Singapore, said one interviewee often traveling to Singapore.

C. Tourist-to-tourist Interaction

In this research, tourist-to-tourist interaction is the most significant factor that affects TPEB. The interactions among tourists traveling in the same group can influence tourists' satisfaction. These interactions could change the tourists' feelings, emotions, attitudes, consumption preferences, and purchasing behavior.

There are two main types of interactions between tourists: intra-group interaction and inter-group interaction. The intra-group interaction refers to the interaction between partners or teammates, such as friends or family members traveling with you together. The inter-group interaction refers to the interaction between you and other tourists that are visiting the same scenic. In other words, it is like those strangers met on the road when traveling. When one of the interviewees visited The Black Bamboo Park in Beijing last year, he saw many people carving their names on the bamboo. Suddenly, one of his traveling mates tried to stop them by explaining that their behavior is uncivilized and would prevent the bamboo from thriving. He commented, "This advice was so influential and touching, not only to the people who were carving their name but also to the whole group of traveling mates, including me."

According to one of the interviewees, when a group of women tourists was buying organic food in the tourism scene, the information exchange process between them played a

significant role in the purchase decision. Tourists seek help, suggestions and opinions from other tourists on the price, taste and ingredients. The buying decision for organic food is significantly affected by tourist-to-tourist interaction, especially among women tourists.

Nowadays, tourist-to-tourist interaction can also happen either on-site or off-site. On-site interaction refers to those traveling with you within the same group or those not traveling with you but joining other travel groups. Off-site interaction means between you and other people who are not visiting the scenic but viewing your posting on social media and giving comments and likes. These tourists may or may not have seen the scenery before. However, their opinions and statements would greatly impact your TPEB. These influences are possible today due to the specific change in society and technologies. It can be done through the use of social media such as Facebook, Instagram, WeChat, WhatsApp, Twitter, etc.

In addition to the above, tourist-to-tourist interaction also has multiple effects on tourists' attitudes, emotions, and behavior. These multiple causal relationships and mechanisms of how it happens are not well understood. As an exploratory nature of this research, we do not intend to investigate this scenario further. As a result, tourist-to-tourist interaction has become an emerging topic for further study.

V. CONCLUSION

This research explores factors that affect Gen Y tourists' pro-environmental behavior (TPEB) in China. The study has discovered that both personal factors (demographic, psychosocial, emotional) and environmental factors (direct contextual, indirect contextual, background) significantly affect TPEB. These findings are consistent with the existing literature. In addition to these factors, it was also discovered that tourist-to-tourist interaction was the most significant factor affecting TPEB.

Although more and more researchers have begun emphasizing tourists' role in TPEB, the existing literature on TPEB does not explicitly focus on tourist-to-tourist interaction as a single most crucial factor affecting TPEB. In addition, there is a lack of research that further conceptualizes the tourist-to-tourist interaction and empirically tests how tourists influence each other's environmental behavior. As a result of insufficient relevant discussion within the research community and lack of in-depth theoretical explanation and deduction, further research is needed to expand and deepen our understanding of the effect of tourist-to-tourist interaction on TPEB.

The current research has also discovered that tourist-to-tourist interaction also affects tourists' attitudes, emotions and behavior. However, there is a lack of understanding from a more micro perspective such as the mechanism of how it happens, the cause-and-effect direction and the longitudinal change of inter-relationship among variables. In other words, the multiple interactions among individual tourists have been ignored and tended to overlook how individuals interact with one another in the long run when traveling. This issue would surely be an exciting topic for future work.

The findings of this research are critical for both academics

and tourism industrialists. Therefore, future research should explore the influence of tourist-to-tourist interaction on TPEB and the multiple causal relationships among the factors discovered in this study. This study has thus laid a valuable theoretical foundation for further work.

CONFLICT OF INTEREST

The author declares no conflict of interest.

AUTHOR CONTRIBUTIONS

Xiao Yue conducted the research and analyzed the data; Yee Choy Leong wrote the paper; all authors had approved the final version.

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