Chinese ecotourists’ responses to Western Australian ecotourism advertisements

Yunbo Wei (BMgt)

This thesis is presented for the degree of
Master of Philosophy - Research (Economics and Commerce)
The University of Western Australia
UWA Business School
2018
THESIS DECLARATION

I, Yunbo Wei, certify that:

This thesis has been substantially accomplished during enrolment in the degree.

This thesis does not contain material which has been accepted for the award of any other degree or diploma in my name, in any university or other tertiary institution.

No part of this work will, in the future, be used in a submission in my name, for any other degree or diploma in any university or other tertiary institution without the prior approval of The University of Western Australia and where applicable, any partner institution responsible for the joint-award of this degree.

This thesis does not contain any material previously published or written by another person, except where due reference has been made in the text.

The work(s) are not in any way a violation or infringement of any copyright, trademark, patent, or other rights whatsoever of any person.

The research involving human data reported in this thesis was assessed and approved by The University of Western Australia Human Research Ethics Committee. Approval Number: [RA/4/1/7898].

The data collection undertaken for this thesis was funded by UWA Biz Grant PG10302171.

This thesis does not contain work that I have published, nor work under review for publication.

Signature:

Yunbo Wei

Date: 15/3/2018
ABSTRACT

China's strong economic development and huge outbound tourism growth have brought tremendous opportunities for tourism marketers and advertisers. Western Australia has a lot of ecotourism resources, and marketing ecotourism for Chinese ecotourists is currently very valued in Western Australia. However, research on ecotourism marketing in China is limited, and how to effectively predict the effects of ecotourism advertising in China has not been well studied. For example, no empirical research has been conducted to explore the relationship between comprehension of the advertisement and the Chinese ecotourists' attitudes toward the advertisement.

Attitude towards the advertisement is an important variable in the measurement of advertising effectiveness. Understanding the impact of advertising comprehension on ecotourists' attitudes toward the advertisement is especially important for ecotourism advertising in China. Depending on the measurement method, there are several types of advertising comprehension (e.g., subjective comprehension, objective comprehension, manipulated advertisement method, and thought-listing method). Among them, subjective comprehension and objective comprehension are the two most commonly used methods, but there is controversy about which method is more effective in predicting attitude towards the advertisement. Some studies suggest that subjective comprehension is effective in predicting attitude towards the advertisement while objective comprehension is not effective. However, some
researchers believe that objective comprehension can also effectively predict attitude towards the advertisement.

The effectiveness of the prediction of ecotourists’ comprehension on their attitude towards the ecotourism advertisement is an unexamined issue. Given the complicated types of advertising comprehension, the problem is that it’s not clear which type of comprehension is most effective in predicting ecotourists’ attitude towards the advertisement and whether it is dependent on other factors like motivation.

This study was conducted employing both qualitative and quantitative studies. Qualitative research was conducted primarily at the beginning of the study, including a literature review. Quantitative studies were conducted in the middle and late stages of the study, including two pre-tests and one final survey in China. The first pre-test interview involved twenty-nine subjects and the second pre-test interview involved thirty-one subjects. The last survey involved 100 subjects.

The result shows that comprehension has a significant effect on the attitude towards advertisement in advertising to Chinese ecotourists. Specifically, subjective comprehension can predict their attitudes toward the advertisement, whereas objective comprehension cannot predict their attitudes toward the advertisement. In addition, motivation has a significant moderating effect on the relationship between subjective understanding and attitude towards the advertisement. The results are consistent with some of the previous studies, while do not support others.
The study concluded that in advertising to ecotourists in China, the effect of comprehension on attitude towards the advertisement depends on the types of measures of the comprehension (e.g., subjective and objective comprehension). The study also concluded that ecotourists with different levels of motivation process the advertisement differently. More specifically, highly motivated ecotourists are more likely to form a greater relationship between comprehension and attitude towards the advertisement.

The study focuses on a blind spot in the ecotourism literature. It provides a more complete picture of the role of comprehension in ecotourism advertisement processing than previously. It includes both subjective and objective comprehension of the ecotourism advertisement, not just one type of comprehension. The analysis of motivation based on ecotourists’ interest is also of particular interest to ecotourism advertisers. The empirical evidence that this study has produced can help advertisers in deciding which comprehension measurement method to use when examining advertisements’ effectiveness.
ACKNOWLEDGEMENTS

First, I thank all people who provided supervision support, namely Winthrop Professor Geoff Soutar, Dr Michael Azariadis, and Associate Professor Fang Liu. They constantly encouraged me to overcome one difficulty after another during my research journey. They were so patient in helping me in researching and writing the thesis.

My sincere thanks also go to all academic and professional staff at UWA for their assistance in completing the thesis: Professor Sharon Purchase, Professor Kate Wright, Associate Professor Gary Sigley, Assistant Professor Richard Gruner, Dr Krystyna Haq, Dr Joanne Edmondston, Ms Gina Barron, Ms Patrice Mitchell, Ms Lai Le, Ms Robyn Oliver, Mr Adam Hearman, Ms Mei Han and Ms Helen Reidy.

I also want to thank my colleagues and friends - Antoine, Badder, Donnard, Delma, Shasha, Stanley, Lyn, and Yusfi – for their supportive advice and accompany on my research path.

I thank my family, especially my parents and my grandparents (deceased). They are so determined to help me accomplish the journey. My grandfather’s unrealised wish before he passed away is to see this finished, and now this has finally happened.

I also want to thank the following people and organizations for their input in various aspects of the research: Dai Bin, President of the China Tourism Academy, Jim Sharp, Director General at the Department of Parks and Wildlife of Western Australia, and
Rei Seah, Market Manager for China at Tourism Western Australia, and many other people than I can possibly mention.

Lastly, I gratefully acknowledge the support of the UWA Biz Grant PG10302171, which made the data available for the thesis.
# CONTENTS

THESIS DECLARATION................................................................................................... ii

ABSTRACT .................................................................................................................... iii

ACKNOWLEDGEMENTS .............................................................................................. vii

CONTENTS ................................................................................................................... ix

CHAPTER ONE

INTRODUCTION ............................................................................................................ 1

Background of the Research .................................................................................... 1

The Research Problem ............................................................................................. 3

Research Objective and Questions .......................................................................... 4

Contributions ........................................................................................................... 5

  Theoretical Contribution...................................................................................... 5

  Managerial Contribution...................................................................................... 6

An Outline of the Thesis........................................................................................... 6

CHAPTER TWO

A LITERATURE REVIEW ................................................................................................. 7

Introduction ............................................................................................................. 7

Western Australia Ecotourism .................................................................................. 7

Ecotourism ............................................................................................................. 8
Stimuli Selection ................................................................. 44

The Research Design ................................................................. 46

Advertisement Design ................................................................. 46

The Questionnaire ................................................................. 48

The Dependent Measure ........................................................ 49

The Independent Measures ....................................................... 51

The Moderator ................................................................. 55

The Sample ................................................................. 55

Data Collection ................................................................. 56

Conclusions ................................................................. 57

CHAPTER FOUR

DATA ANALYSIS ................................................................. 59

Introduction ................................................................. 59

Testing the Constructs ............................................................. 61

Attitude towards the Advertisement ........................................... 61

Subjective Comprehension ......................................................... 62

Objective Comprehension ......................................................... 62

Tourism Motivation ................................................................. 64

Testing the Hypotheses ............................................................. 66
CHAPTER ONE

INTRODUCTION

Background of the Research

Since China started its economic reform process and opened up to the World in the 1980s, its tourism industry has expanded greatly. The number of tourists in China increased 14 times from 1984 to 2015 and travel frequency has increased as well. In 1984, people took less than one trip a year. However, in 2015, people took three trips a year on average (China Tourism Academy, 2016). China’s overseas travel industry has also developed rapidly. Interestingly, the number of tourists travelling to Australia and New Zealand has increased by about 7% annually in recent years, which is faster than the increase to other destinations (e.g. the growth rate to Europe is 6%) (China Tourism Academy, 2016). Not surprisingly, China is a key target market for tourist destinations and destination marketers need to understand Chinese tourists’ motivations and decision processes.

There is an increasing need for high-end tourism products that appeal to the newly wealthy middle-class tourists who have emerged in China in recent years. Ecotourism products fit within this category. Indeed, Chinese ecotourists accounted for 27% of the overall market (Song, Li, van der Veen, & Chen, 2011), making this a potentially valuable market for Australia, which has many nature-based tourism attractions,
environmental education programs and sustainable resorts that are likely to attract such eco-tourists.

Tourism is a major export industry in many countries and this is certainly true in Australia, where tourism makes up about 10% of the country’s exports (Department of Foreign Affairs and Trade, 2016). As a country with abundant natural resources, a long coastline and a well-protected environment it is not surprising ecotourism is a key segment in Australia’s tourism export sector (Tourism and Transport Forum, 2014). While many areas, such as the Gold Coast and the Great Barrier Reef, are well-recognised ecotourism destinations, Western Australia’s destinations are not as well known. Western Australia accounts for about a third of the country’s area (2.646 million square kilometres out of 7.692 million square kilometres) and has many eco-related attractions due to its varied landscape and climatic conditions, long coastline and unique fauna and flora. Compared to other States, Western Australia is in the same time zone as China and is geographically closest to China, which are unique comparative advantages when trying to attract Chinese tourists.

Not surprisingly given earlier comments, China is Australia’s second largest source of inbound tourists, many of whom are interested in ecotourism options (Tourism Research Australia, 2016). Chinese tourists spend close to $10 billion annually in Australia and have been ranked first in terms of total trip expenditures (Tourism Research Australia, 2016). By 2020, China is expected to become Australia’s largest source country, which led the Australian Government to develop a "Tourism 2020
Strategy Plan" that calls for more research to improve Australia’s understanding of this crucial market (Tourism Australia, 2011).

Tourism is also an important export industry for Western Australia, accounting for around 4% of the State's Gross State Product and 7% of the State's employment (Tourism Western Australia, 2016). However, only 5% of Australia’s Chinese tourists visit Western Australia (Tourism Research Australia, 2016), suggesting the present study, which is discussed in subsequent sections, should be valuable to the State's tourism marketers and planners.

The Research Problem

Despite the size and potential of the Chinese tourism market, surprisingly little is known about Chinese tourism advertising, despite China’s international travel market becoming increasingly competitive. Currently, many destinations offer nature-based tourism to Chinese tourists, including Australia (especially Queensland), New Zealand and the Maldives, to name just a few. Most tourism destinations use advertisements to attract travellers, but their impact is little researched. Although Western Australia is famous for its nature-based tourism attractions, no prior research has examined the effectiveness of Western Australian ecotourism advertisements, which led to the present study being undertaken.

Indeed, it is fair to say the effectiveness of ecotourism advertising in general has rarely been studied. Further, most ecotourism research has been undertaken in
Western contexts (e.g., Fairweather, Maslin, & Simmons, 2005), which may not be relevant, as Chinese tourists may have a different understanding of ecotourism (Wu, Wei, & Chen, 2008), making this study even more useful to ecotourism planners and marketers.

One of the primary challenges for ecotourism marketers is that little is known about ecotourists’ comprehension of ecotourism advertisements. In general, it is believed that, without good comprehension, consumers are unlikely to process an advertisement any further (Jacoby, Hoyer, & Sheluga, 1980). However, as comprehension is hard to measure, several types of measures have been suggested (Mick, 1992). The question becomes even more unclear, as the effects of comprehension may depend on other factors (e.g., motivation). These issues were relevant to the present study, the objectives of which are discussed in subsequent sections.

**Research Objective and Questions**

The overall objective of the study was to see how Chinese ecotourists responded to potential Western Australian ecotourism advertisements. Specifically, the study attempted to find answers to the following research questions:

1) Do Chinese ecotourists’ attitudes towards Western Australian ecotourism advertisements depend on their comprehension of the advertisement and, if so, which type of comprehension has the strongest influence?
2) Do Chinese tourists’ motivations to undertake ecotourism activities moderate the relationship between comprehension and attitude?

3) Are Chinese ecotourists’ comprehension of Western Australian ecotourism advertisements influenced by their age, gender, level of education or prior travel experience?

The study undertaken to answer these questions and the results obtained are discussed in subsequent chapters.

Contributions

This study is the first empirical research to examine Chinese consumers’ response to potential Western Australian ecotourism advertisements. It was hoped the research would make significant theoretical and managerial contributions to our understanding of the issues examined and provide a basis for the development of an appropriate promotion strategy for Western Australian ecotourism operators.

Theoretical Contribution

Previous research has focused on destination image, tourists’ emotions and their effects on travel intention. The ways in which consumers process ecotourism advertising information has not received any real research attention. Thus, this study is a first attempt to examine comprehension and its effect on ecotourists’ attitudes.
in an ecotourism advertising context. It is also a first attempt to examine the moderating role motivation plays in such contexts.

**Managerial Contribution**

This study was also expected to provide useful information about the ways in which people’s comprehension of ecotourism advertisements might be enhanced and their attitude towards such advertisements might be improved. It was also hoped that the study might suggest ways Western Australia could be branded as an ecotourism destination for Chinese tourists.

**An Outline of the Thesis**

The remainder of the thesis is divided into four Chapters. Chapter Two provides a literature review that examines tourism advertising research, information-processing models and the influence of comprehension, while Chapter Three discusses the research method used in this study. Key elements in this Chapter outline the evaluation and the selection of the scales used to measure the constructs of interest and a discussion of the design of the questionnaire, the data collection approach that was used and the data analysis approach that was undertaken.

Chapter Four discusses some initial data analysis and tests the model that had been developed to answer the study’s research questions. Chapter Five discusses and summarises the findings and suggests some limitations and potential future research.
CHAPTER TWO

A LITERATURE REVIEW

Introduction

The review starts with a general introduction to Western Australia ecotourism, after which a closer look at tourism advertising research is provided. This suggests that, other than some well-researched areas of tourism research, few studies have examined consumers' reactions to ecotourism advertising. This meant the review had to look to advertising theories to understand what was known and to find established research frameworks, which led to a review of the information-processing theoretical framework in advertising. The review suggested consumers' comprehension is a very important element in advertising, although rarely researched in tourism studies. Consequently, the review examined prior research into the types of comprehension that have been suggested, comprehension's influence on attitudes and motivation as a potential moderator of this relationship.

Western Australia Ecotourism

Western Australia’s economy is dominated by the mining industry and its major exports are iron-ore, gold and liquefied natural gas. The mining industry produces 27% of Western Australia’s Gross State Product (GSP) (Department of Jobs, Tourism, Science and Innovation, 2017). While mining will continue to be the foundation of WA’s economy, the mining sector’s growth is slowing and the mining industry has
been shedding jobs in recent years (Allan-Petale, 2017). Indeed, the number of iron-ore mining company offices in Perth CBD fell from 45 in 2012 to 18 in 2017 (Young, 2017). Workers are also leaving the mining industry, with mining employment falling to 94,000, the lowest level since 2015 (Wright, 2017). As a result, Western Australia’s unemployment rate has been among the worst in Australia in recent years (Allan-Petale, 2017).

After the recent "mining boom," Western Australia is seeking to diversify its economy through expanding sectors such as tourism, which already provides about five percent of the State’s GSP (Tourism Western Australia, 2017b). Tourism is a vibrant sector that grew by 6.6% in the financial year 2015-2016, with employment increasing by 4.2% (Tourism Western Australia, 2017a). Tourism is a key economic driver that provided over 109,000 jobs and contributed $10 billion to Western Australia’s economy in 2015 (Tourism Western Australia, 2016). Western Australia’s Tourism Council has predicted tourism’s impact on the economy might multiply many times in the next few years.

**Ecotourism**

Traditionally, tourism has been characterised as a mass product with many people visiting a destination at the same time. Recently, however, such traditional mass tourism has been criticised (Fennell, 2014, p. 6). Mass tourism rarely takes account of the destination, local residents or local natural resources. The benefits of mass
tourism to a destination can be limited (Khan, 1997). For example, although tourists stay at a destination, local consumption may be limited. Tourists usually stay at large resort hotels that do not use local products and may only use limited local food. Mass tourism can change the traditional lifestyle of local residents, forcing them into subordinate positions to investors from big cities (Young, 1993). Finally, the focus of mass tourism is on the needs of tourists and not on preserving the local culture or environment.

It is clear mass tourism does not take account of local residents, as is evidenced in a number of tourism studies in the 1980s that called for more socially and environmentally responsible tourism alternatives (e.g., Krippendorf, 1982; Redclift, 1987). Krippendorf (1982) suggested tourism should not only focus on tourists' needs, but also needs to pay attention to the local environment and local residents. He suggested local people should have increased decision-making power, rather than giving such power to outsiders. Redclift (1987) suggested ecological principles should be the basis for sustainable tourism development, especially as an inappropriate tourism activity may degrade the quality of the natural and human environment, which may be the core tourism attraction. Ecotourism is an alternative option to mass tourism because it emphasises the responsibility for the sustainable development of the local environment. Such activities have become a way through which destinations can make up for the disadvantages of mass tourism. Ecotourism has been embraced as the antithesis of mass tourism because of its promise of
achieving sustainability through conservation, community education and learning and the promotion of local culture (Fennel, 2014).

But what is ecotourism? This is not an easy question to answer, as there are various definitions. Weaver & Lawton (2007), for example, suggested ecotourism is nature-based, focuses on learning or education and benefits the environment and local economy. More recently, Buckley (2009) argued ecotourism is also concerned with sustainability, although most government agencies regard ecotourism as nature-based tourism and do not mention sustainability. Fennell (2014) also suggested local culture is a part of the ecotourism experience, defining ecotourism as nature-based tourism that focuses on preserving the environment, benefiting the local economy and educating travellers.

**Chinese Outbound Tourism**

China has experienced economic reform in recent years and the Chinese people have experienced a fast transition from a planned to a market-driven economy, which has changed and diversified socio-cultural values (Li & Cai, 2012). These changes have led to improved income and living standards, a greater emphasis on leisure and tourism and a growing middle class, resulting in a boom in outbound travel (Jin & Wang, 2016). China is now the leading tourism source market in the world, with Chinese travellers spending over US$261 billion annually on international tourism in recent years (UNWTO, 2017), with nearly half of this expenditure directed to shopping (China Tourism Academy, 2016).
There is increasing interest in ecotourism in China, with many domestic ecotourism destinations attracting more than 100,000 tourists each year (Zhong & Wang, 2011). New tourism trends ("Donkey Friends" -backpackers taking ecotours) have also emerged (Luo, Huang, & Brown, 2014). While it is difficult to define ecotourists, in this study they were defined as people who said they were interested in ecotourism (Tao, Eagles, & Smith, 2004). Chinese ecotourists' interests go beyond domestic sites, as they are increasingly interested in taking ecotours in foreign countries, including Australia. As noted earlier, Chinese tourists are the second largest group of inbound tourist who visit Australia and are increasingly interested in ecotourism options (Tourism Research Australia, 2017). Indeed, Chinese tourists' most-preferred places in Australia are "Aussie beaches, the Great Barrier Reef, wildlife and dolphin and whale watching", all of which might be considered ecotourism sites (Upe, 2014).

**Western Australian Opportunities**

As was noted in Chapter One, tourism is one of Australia's largest export industries and ecotourism is a key segment in this market (Department of Foreign Affairs and Trade, 2016; Tourism and Transport Forum, 2014). In 2013, the growth rate of international travellers in Australia who took an eco-related tour was 8%, while the growth rate for other types of tours was 5% (Tourism and Transport Forum, 2014), suggesting ecotourism offerings is becoming increasingly important over time and that this market segment need to be better understood.
Today, every State and Territory is competing for ecotourists. For example, Queensland recently released a strategy to attract ecotourists, especially from emerging markets such as China (Department of National Parks, Recreation, Sport and Racing, 2013), while Victoria has developed a new ecotourism webpage (Tourism Victoria, 2012). Australian tourism operators are aware of the value of Chinese tourists and there have been urgent calls for a better understanding of this market (Tourism Australia, 2011). However, despite its size and potential, surprisingly little is known about the Chinese tourism market.

Tourism WA developed a strategy to increase the value of tourism in Western Australia to $12 billion by 2020. An important part of the strategy is to promote Western Australia as an extraordinary destination in international markets, with China being identified as a top ten key international markets for the State. Tourism WA hopes to grow Chinese visitors to 100,000 and Chinese visitor spending to $500 million by 2020 (Tourism Western Australia, 2017b). As part of this strategy, Tourism WA has established a Tourism WA marketing office in Shanghai. In an email interview, Ms Rei from Tourism Western Australia claimed one of the main marketing methods used to attract Chinese tourists was advertising, adding to the present project’s usefulness.

As noted earlier, this study focuses on advertising, which is “a paid, mediated form of communication from an identifiable source, designed to persuade the receiver to take some action, now or in the future.” (Richards & Curran, 2002, p. 74) Advertising
differentiates itself from other forms of communication, such as public relations, personal selling, word of mouth, and (usually) social media (Shimp & Andrews, 2013) in this way. Advertising is also a campaign. Advertising’s key activity is creating advertisements and making sure people see and process them. Advertisements are the notices and messages that are used to persuade consumers to think about an advertised product or service (Moriarty, Mitchell, & Wells, 2015)

**Ecotourism Advertising**

In order to understand the current status of ecotourism advertising research, a systematic quantitative literature review (SQLR) of prior research in tourism and ecotourism advertising was undertaken. The SQLR is a new method to systematically analyse a stream of literature to produce a structured review by limiting author biases and being as conclusive as possible (Pickering & Byrne, 2014). The SQLR has been adopted and recognised in tourism marketing research (Wolf, Ainsworth, & Crowley, 2017; Yang, Khoo-Lattimore, & Arcodia, 2017). Research papers were acquired by searching multiple search engines and databases (such as Google Scholar, ABI/INFORM (Proquest), PsycINFO (OvidSP), ScienceDirect, Taylor&Francis, Springer, Wiley, and the China National Knowledge Infrastructure website (CNKI)) to ensure the widest coverage. This review included publications in academic journals published prior to 2017.
Multiple keywords were used to locate articles that discussed tourism, ecotourism, destination, advertising, elaboration likelihood, comprehension, understanding, information-processing and consumer knowledge. Some search engines were only able to search the titles and abstracts of articles but not their full texts. A total of 42,547 articles and digital documents were also found by searching several top advertising journals (e.g., Journal of Advertising, Journal of Advertising Research and Journal of Consumer Research) and tourism journals (e.g., Annals of Tourism Research, Tourism Management and Journal of Travel Research). Full-text searches were undertaken on these documents to find contents that (1) conducted empirical research, (2) examined tourism advertisements (including tourism brochures, magazine ads, and website ads), (3) focused on the effectiveness of these advertisements, and (4) identify any theories in both advertising and tourism literature to explain the effectiveness.

The findings suggested various types of advertising effectiveness studies have been undertaken. For example, many researchers have compared the effectiveness of different types of tourism advertising media (e.g., tourism brochures, magazine, online and mobile) (e.g., Buck, 1977; Choe, Kim, & Fesenmaier, 2017; Evans & Ilbery, 1992; McLemore & Mitchell, 2001; Stienmetz, Maxcy, & Fesenmaier, 2015; Woodside, 1990). A number of studies have examined tourism advertising message’s effects on:
1) Consumers’ cognitive responses (e.g., perception of the destination, destination image, comprehension and memory) (Decrop, 2007; Glover, 2009; MacKay & Smith, 2006; Pan, Tsai, & Lee, 2011; Tang, Jang, & Morrison, 2012; Tussyadiah, Park, & Fesenmaier, 2011).

2) Consumers’ emotional responses (e.g., liking and attitude) (Bigné & Andreu, 2004; Kim & Fesenmaier, 2015; Lee & Koo, 2012; Li, Scott, & Walters, 2014; Scott, Green, & Fairley, 2016; Walters, Sparks, & Herington, 2012).

3) Consumers’ behavioural responses (e.g., travel intention, and information search behaviour) (Gursoy & McCleary, 2004; Kardes, Kim, & Lim, 1994; Laskey, 1994; Wang, Hsieh, & Chen, 2002).

One of the primary challenges for ecotourism marketers is that little is known about ecotourists’ comprehension of advertisements. In general, it is believed that, without good comprehension, consumers are unlikely to process an advertisement (Jacoby et al., 1980). However, some studies seem to suggest an accurate understanding of an advertisers’ intention is not important and that consumers’ perceived comprehension is more important (Mick, 1987, 1992).

In particular, it is not known whether the comprehension of an ecotourism advertisement has an effect on ecotourists’ attitude towards an advertisement. As noted earlier, as comprehension is hard to measure, several types of comprehension measures have been suggested (Mick, 1992). The question becomes even less clear
as the effects of comprehension may depend on other factors (e.g., motivation), as no empirical research has addressed these hypotheses based on underlying theories.

The following sections of this chapter review the relevant theoretical frameworks related to these questions. They also review past studies that have examined the relationship between comprehension and attitude towards an advertisement in particular.

**Consumer Information Processing**

Since there is no well-established theory suggesting how tourists process advertisements, the general advertising literature was used to suggest appropriate models. During the past one hundred years, many models have been suggested to explain how consumers process advertising information. The current section briefly introduces these models and discusses some of the important ones. Finally, the section discusses the application of these models in tourism-related advertising research.

The first formal model was the so-called AIDA (attention, interest, desire, and action) model that suggested an effective salesperson should attract a consumer's attention, gain their interest, create a desire and precipitate action. This model was arguably created in the late 1800s by a sales pioneer (Elias St. Elmo Lewis), although Dragon (2012) recently suggested it was not clear who created this model, as it could have
been Lewis, Hamilton or Strong. What is clear, however, is that, by the 1920s, advertising models were being developed (Presbrey, 1929; Starch, 1923).

Sometime later, Colley (1961) suggested the DAGMAR model (Defining advertising goals for measured advertising results), which emphasised advertising goals are often cognitive effectiveness rather than sales. It was suggested commercial communications should recognise that customers move through four levels before purchase (unawareness to awareness, comprehension, conviction, and finally action, often purchase) and that advertising can be designed to achieve movement at any of these levels. This was probably the first time comprehension appeared in an advertising model.

At the same time, Lavidge & Steiner (1961, p. 59) developed the famous hierarchy of effects (HOE) model, suggesting “advertising may be thought of as a force, which must move people up a series of steps”. This model had seven steps (unawareness, awareness, knowledge, liking, preference, conviction, intention) and integrated the cognitive, affective and conative stages of information-processing. McGuire (1976) advanced the hierarchy of effects model and developed an important seven-stage information-processing model (exposure, attention, comprehension, agreement, retention, retrieval, deciding and acting).

Since then, most of the debate about such hierarchical models has been related to their sequence (e.g., whether the process is “Think-Feel-Do” or “Feel-Do-Think”) (Barry & Howard, 1990). Some argued such hierarchical models were simplistic and
new models were proposed that considered other factors' influences (Krugman, 1965; Robertson, 1976). For example, Vaughn (1980) suggested the FCB grid model (Foote, Cone and Belding Advertising) in which consumer involvement was seen as an important factor. The FCB grid has different levels of involvement that resulted in different processing strategies.

After involvement was identified as a key factor that influences information-processing, Petty and Cacioppo (1986) devised their elaboration likelihood model (ELM) to explain how advertisements influenced attitudes. They suggested involvement influenced the amount of elaboration and that high and low elaboration caused consumers to focus on different advertising cues. Consumers with high elaboration focused on the message’s arguments, while consumers with low elaboration focused on peripheral cues, such as music or scenery.

Previous models had been built on the assumption that consumers were logical thinkers when making decisions. However, Hirschman and Holbrook (1982) questioned whether consumers were always rational and logical. They developed the hedonic experiential model (HEM) and suggested experiential aspects, mood, mindset and feelings were important factors.

Other models have also been developed, such as the Information Response Model (Smith & Swinyard, 1982), the Association Model (Preston, 1982) and the Integrated Model of Information Processing (MacInnis & Jaworski, 1989) to name a few. The information response model was similar to the ELM, but suggested consumers could
move from a peripheral route to a central route as their experience with a product or service increased. The association model tried to incorporate existing models into a more elaborate one. MacInnis & Jaworski’s (1989) integrated model was also similar to the ELM, but had six information-processing levels based on motivation, opportunity and ability. The current review focused on the most important models; namely the IPM (Information-Processing Model) and the ELM (Elaboration Likelihood Model), which are further discussed in subsequent sections.

**The Information Processing Model**

The information-processing model is one of the most commonly used models when researchers attempt to see how advertising information is processed by consumers (Vakratsas & Ambler, 1999). It suggests advertising involves the processing and transfer of information and that there are several progressive stages in which consumers process advertisement information (McGuire, 1976). McGuire (1976) initially suggested six such stages, although he subsequently suggested there might be as many as 13 stages (McGuire, 1999). Despite these variations, the most commonly recognised stages are:

**Stage 1:** In the exposure stage consumers get in touch with the advertising information.

**Stage 2:** In the attention stage, consumers spend their cognitive resources to process the advertising information.
Stage 3: In the comprehension stage, consumers come to understand the meaning of the advertising information.

Stage 4: In the agreement stage, consumers agree with the advertising information.

Stage 5: In the retention stage, the advertised information is memorised.

Stage 6: In the retrieval stage, the memorised advertising information can be accessed and re-used.

Stages 7 & 8: In the deciding and acting stages, consumers make decisions.

After exposure to an advertisement, the model assumes a consumer either pays attention to the advertised message or ignores it. Attention requires the use of cognitive resources to process the message. After attention, a consumer tries to understand the meaning of the message. Agreement means consumers accept what they have comprehended and start to generate attitudes toward the advertisement and the offering. The Retention and Retrieval stages are concerned with memory and how consumers remember a message and how they access and retrieve this information. The Deciding and Acting stages occur when consumers make decisions or take actions based on the advertisement’s information.

Based on this model, when consumers have not comprehended an advertisement, they are unlikely to generate a positive attitude nor to purchase an offering. It
suggests there should be a positive relationship between comprehension and attitudes. Interestingly, the comprehension stage has not been well researched in tourism advertising research (Decrop, 2007). No prior research has explored how comprehension might influence tourists’ attitude towards an advertisement.

**The Elaboration Likelihood Model**

The information-processing model (IPM) discussed in the previous section has some limitations. For example, it assumes cognitive reactions (i.e., comprehension and memory) are necessary for attitudinal reactions (i.e., liking). While a number of studies found attitudinal reactions could be induced without cognitive reactions (Festinger & Maccoby, 1964; Krugman, 1965). Faced with this situation, the IPM model was revised to overcome the limitation (McGuire, 1966, 1967, 1976, 2000; Scholten, 1996). At the same time, new models, such as the elaboration likelihood model (ELM), which proposed two routes to consumer attitude change, were suggested to address the limitation.

This model has been widely used in advertising research (Cacioppo & Petty, 1979; Petty & Cacioppo, 1979, 1984a, 1984b, 1986; Petty, Cacioppo, & Goldman, 1981; Petty, Cacioppo, & Schumann, 1983) and is considered one of the most influential theoretical contributions in marketing (Beard, 2010). Numerous variations of this model have also been suggested. For example, Shimp & Andrews (2013) integrated the ELM into several other models to form an integrated model of persuasion, which becomes a widely adopted variation of the ELM.
The ELM introduced two types of information cues (message arguments and peripheral cues). The message arguments are what an advertisement wishes to convey to consumers, while peripheral cues are the elements around the primary message content (e.g., background music). Advertisements contain verbal, visual and emotional stimuli and it is hard to find an advertisement that does not contain peripheral cues around their central message arguments. These peripheral cues (usually background scenery and music) play an important role in the ways consumers process advertisement, especially if the message is not relevant to them (Shimp & Andrews, 2013).

The ELM assumes consumers are persuaded through a central or peripheral route. The central route is used when a consumer’s elaboration likelihood (EL) is high. Such consumers focus on the message argument and form an enduring attitude from this process. The peripheral route is used when a consumer’s elaboration likelihood (EL) is low. Such consumers focus on elements that are unrelated to the main message argument (i.e., peripheral cues) and form a temporary attitude from this process.

Elaboration likelihood is defined as the possibility that a consumer thinks about or evaluates an advertised message and is determined by a consumer’s motivation, ability and opportunity (MAO) to process an advertised message. Motivation depends on the match between the advertised message and the consumers’ needs and goals. Ability refers to a consumer’s familiarity with an advertisement and whether they have the skills to comprehend its message. Opportunity refers to the
physical conditions in which an advertisement is seen and whether it is possible for consumers to process the message. When consumers’ MAOs are high, their elaboration likelihood is likely to be high. In contrast, when MAO factors are low, or one of the three is deficient, elaboration likelihood is likely to be low.

Factors such as communication modality, consumers’ initial position and consumers’ personal involvement also influence EL (elaboration likelihood). Communication modality is the mode in which an advertisement is placed (e.g., magazine, radio, social media) and this impacts on consumers’ EL. Consumers’ initial position refers to whether consumers have initially favourable or unfavourable feelings about an advertisement’s advocated view and the favourable or unfavourable initial position can lead to high or low EL. Personal involvement refers to the relevance an advertisement has for a consumer and is a critical determinant of the EL, as highly involved consumers are more likely to have high EL.

Some researchers believe involvement and motivation are similar, as both refer to the relevance between an advertisement and a consumer and they define involvement as a consumer’s motivational state (e.g., Laczniak, Muehling, & Grossbart, 1989), while others feel motivation is a broader construct than involvement (e.g., Andrews & Shimp, 1990). This research did not distinguish between involvement and motivation.

The most important part of the ELM is the elaboration continuum. The central and peripheral routes are not mutually exclusive, as they may happen at the same time.
As elaboration likelihood (EL) increases, the central route may outweigh the peripheral route. If the central route is used, the peripheral route may become irrelevant. If elaboration likelihood is low and the peripheral route is initially used, the central route may become relevant after the consumer has had some experience with the product or service (Schumann, Petty, & Clemons, 1990).

Even though the ELM has dominated consumer information-processing theory in recent times, it is not free of limitations. Bitner and Obermiller (1985) identified several major limitations. The most important is that the ELM is not clear about central and peripheral cues. It cannot predict whether a specific element used in an advertisement (e.g., scenery) will be a central cue or a peripheral cue. One person may be less motivated and process a scenery cue peripherally, while another person may process it centrally. In terms of the current research, the ELM noted motivation was an important factor in consumers’ information-processing and that motivation may moderate the relationship between comprehension and attitude.

**Information Processing in Ecotourism**

The preceding sections reviewed some theoretical information-processing models that have been suggested in advertising research. Some of the factors in these frameworks have been examined in tourism advertising research, but two factors remain unexplored (i.e., comprehension and motivation).
The IPM model has been used to examine the effects awareness, memory, and knowledge have in tourism advertising contexts (Kim, Hwang, & Fesenmaier, 2005; MacKay & Smith, 2006; Tussyadiah et al., 2011). For example, advertising awareness impacts on intention to visit an advertised destination (Kim et al., 2005). Tourists’ memory and recall of an advertisement also seem to be influenced by the size of the advertisement, the number of words in the advertisement and the placement of the advertisement (Wilson & Till, 2011). Comprehension, however, is relatively unexplored and its impact is unclear (Tussyadiah et al., 2011).

The ELM has also been used in tourism advertising research to examine the effects of opportunity, ability and involvement. Consumers’ processing strategy when considering tourism advertisements seems to be influenced by opportunity (Wilson & Till, 2011) and ability (Magnini & Karande, 2010). Thus, consumers who were highly involved in nature have high elaboration likelihood when processing ecotourism advertisements (Magnini & Karande, 2010). It has also been suggested there might be a relationship between advertisement comprehension and travel intention, but it remains unclear whether this relationship can be generalised to Chinese ecotourists (Tang et al., 2012; Wang, 2015). Motivation’s role as a moderator of the relationship between comprehension and attitude, however, is unexplored.
**Summary**

Some important advertising research models were introduced and discussed. Two models (the Information-Processing Model and the Elaboration Likelihood Model) were reviewed in depth. Several already researched factors that seem to influence tourists’ information-processing were also identified (i.e., awareness, knowledge, and involvement). It was also pointed out that, while consumers' comprehension is a very important element in advertising, it has rarely been examined in ecotourism-related research. Thus, the next section reviews relevant comprehension research.

**Comprehension**

As discussed previously, comprehension has rarely been researched in tourism contexts and its influence is unclear. The current section discusses comprehension; in particular, its processes, development and influences. Finally, the section narrows the focus to discuss how comprehension relates to tourism and identifies several factors that interact with comprehension’s influences.

**The Process of Comprehension**

Shimp & Andrews (2013) suggested comprehension can be defined as an understanding of a stimuli or symbol and an ability to articulate or elaborate its meaning. Comprehension has two stages (feature analysis and active synthesis). In psychology, comprehension is not usually explicitly discussed, but the two stages have been extensively researched and discussed (Anderson, 2015).
Feature analysis stage is the process through which a person when confronted with a stimulus analyses its features (e.g., colour, shape, size, and angles) and tries to categorise the stimulus into a known template. When the image of a stimulus is transmitted from retina to the brain, the brain compares the image with stored templates and reports the best matching template. Template recognition is achieved by feature analysis through which a stimulus is considered as a combination of its basic features. For example, the capital letter "A" can be seen as being composed of two diagonal lines in opposite directions and a horizontal line that meets the vertical line about halfway up. When a person's brain analyses these features it will recognise the letter "A". Not surprisingly, some letters with common features (e.g., "C" and "G") can easily be confused (Gibson, 1969).

Similarly, a consumer can recognise advertising stimuli. A study that focused on logo incompleteness (e.g., some blank stripes across the IBM logo) found consumers were able to recognise the incomplete letters of the logo based on their analysis of the features of the letters (Hagtvedt, 2011).

The second stage of comprehension is active synthesis in which stimulus features are combined or synthesised. The difference between active synthesis and feature analysis is that feature analysis only uses the information provided by a message, while active synthesis uses the overall situation to obtain understanding. A person’s general knowledge is used to guide this comprehension. High-level general knowledge influences low-level perceptions, which led to this process being
termed top-down processing rather than bottom-up processing (feature analysis) (Anderson, 2015). Cognitive psychologists have found people can interpret strange sentences (e.g. “To xllxstxatx, l cxn rxplxce xvexy txirx lextex of x sextexce xitx an x, anx yox stxll xan xanxge xo rxad xt—in wixh sxme xifxicltx”) (Anderson, 2015, p. 48).

Thus, in advertising, humour can be comprehended by people’s active synthesis of an advertising stimulus with reader’s past experiences. Interestingly, some people immediately comprehend the humour, whereas others see no humour at all (Shimp, 2005). Further, if the same piece of cloth is placed in a discount store (a context) it will be perceived by consumers as lower quality than if it is placed in an expensive boutique (another context) (Shimp & Andrews, 2013).

**Development**

Research into comprehension in marketing began in the 1960s. Colley (1961) was arguably the first to include comprehension in a marketing model, as it was a stage in his DAGMAR (Defining Advertising Goals for Measured Advertising Results) information-processing model, while McGuire (1976) included comprehension in his six-stage information-processing model.

Researchers then began to examine how different consumers comprehend advertisements differently. Jacoby et al. (1980) conducted a large-scale study of people’s comprehension and miscomprehension of TV advertisements that attracted attention to this area (Ford & Yalch, 1982; Gates, 1986; Gates & Hoyer, 1986; Jacoby
However, the ways in which comprehension affected consumers' attitude was not researched.

This led McQuarrie and Mick (1992) to examine this issue and they concluded comprehension had a significant positive impact on attitude and recall. However, the influence comprehension has on attitudes is not always consistent (Mohanty & Ratneshwar, 2016). Other factors that influence the effect comprehension has on attitudes have been examined, including:

- Consumers' involvement with advertised information (Chebat, Charlebois, & Gelines-Chebat, 2001).

- Consumers' motivation to process advertised information (Mohanty & Ratneshwar, 2015).

- Consumers' culture (Hornikx & le Pair, 2017; McQuarrie & Mick, 1999).

Mick (1992) also suggested there were different types of comprehension and that their effects should be examined separately. The following section discusses the different types of comprehension and their influences on consumers’ attitudes.
Comprehension and Attitude

Advertising comprehension is important because it can affect people's attitudes. Attitude is a persistent and enduring positive or negative feeling towards, or evaluative judgment, of an object or issue (e.g., an advertisement or a brand) (Petty & Cacioppo, 1986). Consumers’ attitudes can target many items (e.g., attitude towards an advertisement, attitude towards a brand or attitude towards a product). The current research examined attitude towards an advertisement, focusing on two types of comprehension (subjective comprehension and objective comprehension).

These different types of comprehension and their effects on attitude towards the advertisement have been summarized in Table 1. While most of the suggested relationships between comprehension and attitude were causal (indicated by single headed arrows (→→→)), some researchers have suggested comprehension and attitude are only correlated (indicated by double headed arrow (←←→→)).

Table 1 included the seven articles found that examined the relationship between comprehension and attitude towards an advertisement. Five tried to see whether objective comprehension had a direct influence on attitude. Six tried to see whether subjective comprehension had a direct influence on attitude, including one that suggested a correlational relationship between subjective comprehension and attitude. Interestingly, none of these articles were undertaken in tourism contexts.
Table 1: A Summary of Comprehension’s Effects on Attitude Towards an Advertisement

<table>
<thead>
<tr>
<th>Article</th>
<th>Relationships Examined</th>
<th>Objective Comprehension</th>
<th>Examined Objective Comprehension</th>
<th>Subjective Comprehension</th>
<th>Examined Subjective Comprehension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Millman (1968)</td>
<td>Manipulated Ad → P → Objective comprehension → NE → Attitude Change</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Cox &amp; Cox (2002)</td>
<td>Manipulated Ad → P → Subjective comprehension → M → Attitude</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Jaffe, Jamieson, &amp; Berger (1992)</td>
<td>Objective comprehension → P → Attitude</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Macias (2003)</td>
<td>Objective comprehension → P → Attitude</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pillai, Katsikeas, &amp; Presi (2012)</td>
<td>Objective comprehension → P → Attitude</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Hornikx &amp; le Pair (2017)</td>
<td>Subjective comprehension ← P → Attitude</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Mick (1992)</td>
<td>Objective comprehension → NE → Attitude</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>5</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

Predictable Percentage: 60% 100%

Note: P: Positive Effect, M: Mixed Effect, NE: No Effect,
Single headed arrow (→ → →) : causal relationship, Double headed arrow (← → →) : correlation relationship
Objective Comprehension

The first method used to measure comprehension was objective comprehension, which is usually measured using quiz questions related to the advertised message in order to determine how many points of the advertising message consumers have correctly understood (Jacoby et al., 1980). Jacoby et al. (1980) were the first to conduct a large-scale objective comprehension research to examine the comprehension and miscomprehension of TV and print advertisements. It was controversially assumed consumers could only generate attitudes towards an advertisement after the advertised message was correctly comprehended (Jaffe, Jamieson, & Berger, 1992). The relationship between objective comprehension and attitude towards the advertisement has been examined in a few studies since that time and five of the seven studies identified empirically examined this relationship (coded as 1 in the “Examined Objective Comprehension” column in Table 1). Three of these five studies found a significant positive relationship between the two variables (indicated as “Objective comprehension → Attitude” and coded as 1 in the “Objective Comprehension Predictable” column in Table 1) (Jaffe et al., 1992; Macias, 2003; Pillai, Katsikeas, & Presi, 2012).

It was concluded that, if consumers correctly comprehended an advertised message, their attitude towards the advertisement would be positive and it was suggested that, if they could not, they would be confused or frustrated (Walters et al., 2012). However, two studies found objective comprehension had no effect on attitude.
towards an advertisement (indicated as “Objective comprehension →→NE→→Attitude” in Table 1) (Millman, 1968; Mick, 1992). For example, Millman (1968) used message recall as a measure of objective comprehension (even though recall only reflects a part of comprehension). However, he did not find a relationship between objective comprehension and attitude change. Mick (1992) found objective comprehension was not related to attitude towards the advertisement, perceived advertisement credibility or attitude towards the brand. He suggested this method focused on advertisers' intended meaning rather than on consumers' inferred meaning, thus making it difficult to predict consumers’ attitude using this method.

One disadvantage of this approach is that the measures used to measure objective comprehension (e.g., quiz or recall) can be confounded by memory (Mizerski, 1982; Ratneshwar & Chaiken, 1991). Ford and Yalch (1982) also suggested experts or impartial judges, rather than the researchers, should determine whether a quiz item is accurate or inaccurate. However, Jacoby et al. (1980) noted an appropriate design may maximise the chance of measuring comprehension accurately.

**Subjective Comprehension**

The second method that is often used to measure comprehension is subjective comprehension, which is sometimes termed perceived complexity (Cox & Cox, 2002; Ratneshwar & Chaiken, 1991) or self-assessed comprehension (Mick, 1992). It is usually measured through two to three items (e.g., I found the advertisement is hard/easy to understand) that allow consumers to assess their own understanding.
of the advertised information. Five of the seven studies included in Table 1 used this subjective approach to measure comprehension (coded as 1 in the “Examined Subjective Comprehension” column), and all of them found a significant relationship between the two variables (coded as 1 in the “Subjective Comprehension Predictable” column).

Because of the ease of its measurement, subjective comprehension had been widely used to evaluate the effectiveness of advertising manipulations in experiments (e.g., low/high complexity advertisements) (indicated as “Manipulated Ad” in Table 1). Many studies have found advertisements with lower levels of complexity receive higher subjective comprehension scores (i.e., the advertisement is easier to understand) (Cox & Cox, 1988, 2002; Huang, Tan, Ke, & Wei, 2014; Morgan & Reichert, 1999; See, Petty, & Evans, 2009) (the relevant one included in Table 1 is indicated as “Manipulated Ad → Subjective comprehension”).

Some studies assumed consumers would generate positive attitudes towards an advertisement if their subjective comprehension was high. They found subjective comprehension had a positive relationship with attitude towards an advertisement (Hornikx & le Pair, 2017; Macias, 2003; Mick, 1992; Pillai et al., 2012) (indicated as “Subjective comprehension → Attitude” in Table 1). For example, Mick (1992) found subjective comprehension had a significant positive influence on attitude towards the advertisement and a positive relationship with advertising credibility and attitude towards the brand. The only study that found subjective comprehension
had a mixed effect was undertaken by Cox & Cox (2002) (indicated as “Subjective comprehension $\rightarrow M \rightarrow$ Attitude” in Table 1). They found an inverted U curve for the effect subjective comprehension had on attitude towards the advertisement, perhaps because, when an advertisement is considered too simple (i.e., extremely high subjective comprehension), the advertisement is considered “tedium” (Cox & Cox, 2002).

The relationship between subjective comprehension and attitude was found to dependent on several other factors, such as an advertisement’s interactivity (Macias, 2003) and a consumer’s culture (Hornikx & Pair, 2017). For example, Hornikx & Pair (2017) found high/low context culture moderated the relationship between subjective comprehension and attitude towards an advertisement. The effect subjective comprehension’s impact has on attitude was found to be stronger in a high context culture (Belgium) than in a low context culture (the Netherlands). Other potential moderator factors, such as motivation (Mohanty & Ratneshwar, 2016), have been identified in the literature, but have not been empirically examined.

One criticism of the subjective comprehension approach is that its ability to predict attitudes is not as strong as Mick’s (1992) method. Mick (1992) suggested a thought listing method to measure comprehension in which consumers are asked to list (or verbalise) all the thoughts that came to their mind after seeing an advertisement. However, Mick’s thought listing method is harder to use and it can be difficult to get responses when it is used (Huang & Hutchinson, 2008).
A number of similar constructs have been studied in tourism contexts, including tourists’ vision of a destination (Walters et al., 2012) and tourists’ mental imagery of an advertised destination (Lee & Gretzel, 2012). However, these constructs were generally not measured using either of the two comprehension measures (i.e., objective comprehension and subjective comprehension) that have already been discussed.

Apart from the one exception that focused on comprehension using Mick’s thought listing method (Tang et al., 2012), no one has examined the relationship between advertising comprehension and attitudes in a tourism context. On the other hand, some studies that used the two comprehension measures found tourists’ subjective comprehension was related to travel intention (Tussyadiah et al., 2011) and behaviour (Walters et al., 2012). It can be concluded that advertising comprehension research in tourism is in its initial stage and it is not yet known which type of comprehension has the most influence on tourists’ advertisement processing.

Based on this discussion, it is reasonable to think there is a positive relationship between ecotourists’ subjective comprehension and their attitude towards an ecotourism advertisement, suggesting:

H1: Chinese ecotourists’ subjective comprehension will have a significant positive effect on their attitude towards an ecotourism advertisement.
Some researchers have separated objective comprehension into factual and inferential objective comprehension because it was believed the process of comprehension involves identifying factual meanings and generating inferential meanings (Jacoby et al., 1980; Macias, 2003; Mick, 1992). Factual objective comprehension is the process used to comprehend statements that are explicitly asserted in an advertisement, while inferential objective comprehension is related to the inferences that are drawn from an advertisement. Factual and inferential statements have been found to be slightly different in their miscomprehension rates (Jacoby et al., 1980). However, no research has examined the difference between these two types of objective comprehensions’ ability to predict attitude towards an advertisement. In this study, and based on the prior review, it was suggested:

H2a: Chinese ecotourists’ factual objective comprehension will have a significant positive effect on their attitude towards an ecotourism advertisement.

H2b: Chinese ecotourists’ inferential objective comprehension will have a significant positive effect on their attitude towards an ecotourism advertisement.
As already mentioned, other factors might influence the relationship between comprehension and attitude towards an advertisement. These potential moderators include motivation, involvement and consumer knowledge, while background variables (e.g., gender and age) might be control variables. Since some researchers do not distinguish motivation from involvement or believe motivation is broader than involvement (Lutz, MacKenzie, & Belch, 1983), this study focused on the more important factor (i.e., motivation).

Motivation is the degree of personal relevance advertised information has for a consumer’s goals and needs. As was mentioned in the previous discussion of the ELM model, motivation is a key element in determining the strategies consumers might use to process advertised information. Highly motivated individuals are more likely to process such information (i.e., better comprehension, recall and attitudes), while individuals who are less motivated may focus on peripheral aspects of the advertisement.

Prior research has confirmed that highly motivated consumers have a higher comprehension of an advertisement (e.g., Celsi & Olson, 1988) and, so, are likely to have a more positive attitude towards that advertisement (Chebat et al., 2001). Mohanty & Ratneshwar (2016) found motivation and the incongruity of an advertisement had an interaction effect on people’s subjective comprehension, as, when incongruity was high, consumers’ motivation had more influence on subjective
comprehension. In tourism related research, Tang et al. (2012) found tourists with high and low motivation processed destination websites differently.

While most prior studies found motivation had a positive effect on information-processing, one found highly motivated consumers do not always comprehend better. Three researchers, See, Petty and Evans, wanted to know whether labelling a message as complex or simple (while the message was the same) had an effect on comprehension. They found that, when a message was labelled as complex, participants with high motivation were more likely to process the information. However, when the message was labelled as simple, participants with low motivation were more likely to process the information (See et al., 2009). A study of interactive website advertisements found website interactivity and motivation had an interactive effect on objective comprehension. Thus, highly motivated consumers had a better objective comprehension of a high interactive website advertisement, while less motivated consumers had a better objective comprehension of a low interactive website advertisement (Macias, 2003).

Tang et al.’s (2012) research is the only one that used the ELM model to examine tourism websites in different motivation conditions (high and low). They found consumers focused on the central message argument and listed destination-related thoughts in the high-motivation condition (e.g., it seems as if there is a lot to do at the destination). However, in the low-motivation condition, consumers focused on
peripheral aspects of the website and listed mainly website-related thoughts (e.g., it does a pretty good job of listing several activities to explore).

Based on these discussions about the potential moderating effects of motivation, it can be suggested that:

H3a: Chinese ecotourists who are more motivated to take part in ecotourism will have a stronger positive relationship between their subjective comprehension and their attitude towards an advertisement.

H3b: Chinese ecotourists who are more motivated to take part in ecotourism will have a stronger positive relationship between their factual objective comprehension and their attitude towards an advertisement.

H3c: Chinese ecotourists who are more motivated to take part in ecotourism will have a stronger positive relationship between their inferential objective comprehension and their attitude towards an advertisement.

The Background Variables

Background variables, such as age, education and gender, can play important roles in comprehension. It seems older people are more likely to miscomprehend. Jacoby and Hoyer (1987) found older consumers were more likely to miscomprehend, while
Robinson and Levy (1986) found objective comprehension scores increased with age until people reach 70 years, after which objective comprehension score began to fall.

People with more education generally have better analytical skills and comprehend better than did people with less education (Jacoby & Hoyer, 1987). Gender can also influence comprehension, but results vary. Some researchers found females had better objective comprehension (Noller, 1986), while others found males performed better in reading comprehension (Jiang & Wyer, 2009). On the other hand, considerable research has found no difference in the objective comprehension of males and females (e.g., Jacoby & Hoyer, 1987; McQuarrie & Mick, 1999). Given these different results, the effects of these factors were explored in the present study.

Finally, the effect income has on comprehension is not consistent. Jacoby et al. (1980) found income did not influence objective comprehension. However, Hoyer et al. (1984) found consumers’ comprehension increased as their income increased. Consequently, incomes impact was also examined in this study.

**Conclusions**

This chapter discussed the importance of Chinese ecotourists to Western Australia’s ecotourism industry and noted ecotourists’ response to ecotourism advertising is an area that has lacked a strong research focus. After reviewing relevant information-processing models, the chapter focused on the comprehension construct and its outcomes. Two types of advertising comprehension were noted and hypotheses
related to the relationships between comprehension and attitude towards an advertisement and the moderating role of motivation were suggested. The next chapter discusses the approach that was used to examine these hypotheses.
CHAPTER THREE

THE PRESENT STUDY

Introduction

Chapter Two reviewed some prior research that was relevant to tourism advertising and information-processing. The review suggested there has been little research into ecotourism advertising and, particularly, into Chinese ecotourism. This created an opportunity for the present study to explore Chinese ecotourists’ advertising information-processing. This chapter outlines the approach that was taken in the present study to examine this issue.

The Stimuli

The Visual Advertisement

Visual advertisements, in which the main message is shown in a picture with a few short text descriptions (Miniard, Bhatla, Lord, Dickson, & Unnava, 1991), are an important way to communicate experiential information. Visual advertisements can be placed in different types of media, such as newspapers, magazines, online websites and mobile applications and can be very effective for some types of consumers, products and services (Scott & Batra, 2003).
Visual advertisements were used in this study because it is commonly used in tourism advertising in China. Compared to other formats (e.g., text-based advertisements, radio advertisements and video-based advertisements), visual advertisements dominate the print media (99%) and make up a significant part of the online media (42%) (iResearch Consulting Group, 2017). Tourism advertising, in particular, relies heavily on visual advertisements, as tourism marketers want potential customers to think about and form images of their destinations (Morgan & Pritchard, 2001). In visual advertisements, affective aspects (e.g., positive and negative affect-laden pictures) can be controlled, allowing researchers to influence viewers’ attitudes (Mitchell & Olson, 1981).

In China, it is common practice for the same visual materials to be used in different print media (newspapers and magazines) and in online media without modification (Lin, 2011). Thus, it was seen as appropriate for this research to examine such advertisements in an online survey setting.

**Stimuli Selection**

A total of 59 WA ecotourism pictures were initially examined. Some were obtained from online sources, while others were provided by a Perth travel agency. The pictures included a wide range of tourism interests in Western Australia, including Cottesloe Beach, Margaret River, Wild Flowers, Whale Sharks and Aboriginal Dancing.
An expert panel of academic and industry experts examined the advertisements to determine their appropriateness to represent Western Australian ecotourism offerings. Tourism advertisements tend to use three major types of images (scenery, animals and people) (Morgan & Pritchard, 2001). Thus, two or three pictures were selected in each of these three categories to get a pool of potential advertisements.

Twenty-nine Chinese ecotourists were recruited for pre-test interviews (the first phrase pre-test). These respondents were approached at a Chinese Church in Perth that has frequent visitors from Mainland China. These respondents were obtained through a personal contact. Respondents were not Australian citizens or permanent residents at the time of the interview, had to like ecotourism offerings and had to have undertaken at least one ecotourism activity in Western Australia in the previous two years. Their average age was 26 years and 73% were females. These people were asked about their attitude towards the pictures and to assess how well the pictures matched Western Australia ecotourism.

The result suggested advertisements that included scenery were most preferred and seen as best representing Western Australia’s ecotourism offerings. Treetop walking in the Valley of Giants was found to represent the scenery category well. As a consequence, this activity was selected for the present study.
The Research Design

Advertisement Design

The study’s advertisement featured a selected picture of the destination (the Valley of Giants). The advertisement was professionally designed to resemble real advertisements that might appear in newspapers, magazines or online in Guangzhou. It also included a headline, a short description, a slogan and an ecotourism logo, as is customarily required in such advertisements (Shimp & Andrews, 2013).

The headline was used to get readers' attention and arouse their interest. The headline was brief ("Treetop Walking in Western Australia"), as more than 80 percent of people who read an advertisement just read the headline and shorter headlines are processed more easily (Ifantidou, 2009; Landa, 2010).

The description below the headline was used to expand the information and explain the product in the illustration. It was also simple and direct, as recommended by Landa (2010). Here, the description, which is shown in Simplified Chinese in Appendix B, was:

*Treetop walking is an activity you can take in the Valley of Giants located in the South West of Western Australia. There is a spectacular lightweight suspension bridge soring 40 meters above the Red Tingle Foliage (Eucalyptus trees). Walking though the treetops is a unique way to explore*
Slogans play an important role in advertising. Effective slogans convey a brand’s key positioning and value proposition and provide consumers with a memory tag for distinguishing one brand from another (Pike, 2004). Consequently, the slogan for this advertisement was written to highlight Western Australia's key value in this context (i.e., ecotourism). The English version of the slogan was “Western Australia, your preferred ecotourism destination”. A fictional logo was created, as it was felt the use of such a logo would reduce the effects of beliefs suggested by any pre-existing logos. The logo’s graphic looked like the famous beaches of Western Australia and the dominant hue was green (representing nature) (Ottman, 2011).

The advertisement’s layout followed the so-called "Z-Pattern" principle, which assumes readers start reading at the top left of an advertisement, move horizontally to the top right and then diagonally to the bottom left before finishing with another horizontal movement to the bottom right (Eldesouky, 2013). Consequently, the slogan was placed at the top right of the picture and the headline and short description were placed to the bottom of the picture. The logo was placed at the bottom right of the paragraph of the description. Several rounds of discussions with the panel experts were undertaken to discuss the advertisement’s elements and layout. A number of suggestions were made to improve the design of the advertisement, such as what colour and font should be used for the slogan and
whether the description should be placed inside (on top of) the picture or outside (near) the picture. The final advertisement, which was accepted by the panel, can be seen in Appendix A and Appendix B.

**The Questionnaire**

The questionnaire was originally written in English and then translated into Simplified Chinese by a professional translator. The Simplified Chinese version was back-translated back into English by another professional translator to ensure the translation was accurate (Brislin, 1970). The questionnaire had a total of 13 questions. These included screening questions, tourism interest questions, subjective and objective comprehension questions, attitude towards the advertisement questions and some background and demographic questions. A copy of the questionnaire in English and in Simplified Chinese can be seen in Appendix A and B.

In order to see whether there were any order effect of the questions, two versions of the questionnaire were designed. In Version A, respondents’ were asked about their subjective comprehension after asking about their objective comprehension. In Version B, the objective comprehension questions were asked after the subjective questions. The two versions of the questionnaire were randomly distributed to respondents.
The Dependent Measure

Attitude towards the advertisement

Respondents’ attitude towards the advertisement (at\textsuperscript{ad}) was measured using the semantic differential scale suggested by Liu (2006). The statements, shown below, were measured on a seven-point scale.

- **The ad is bad**
- **The ad is good**
- **I Like the ad**
- **I dislike the ad**
- **The ad is not interesting**
- **The ad is interesting**
- **The ad is favourable**
- **The ad is unfavourable**
- **The ad is not appealing**
- **The ad is appealing**

A pre-test (the second phrase pre-test) was undertaken in order to ensure the scale could be properly used in the tourism context, as Liu’s (2006) research had examined food advertisements. Thirty-one Chinese ecotourists were recruited for the second phrase pre-test. These respondents were approached at a Western Australian university that has students from Mainland China. All respondents were from mainland China and were not Australian citizens or permanent residents at the time of the interview. The 31 respondents were undergraduate or postgraduate students and 25 were females. These students were asked to assist in the development of the Western Australia ecotourism questionnaire and were rewarded by a lucky draw.
The 31 respondents responded to a questionnaire including the developed ecotourism advertisement, the attitude towards the advertisement questions and the subjective and objective comprehension questions. In addition, these respondents were asked to write down all of the thoughts that went through their mind while they were viewing the advertisement (i.e., Mick’s (1992) thought listing comprehension approach). Despite the small number of respondents, a principal components analysis was undertaken to see if the five attitude towards the advertisement items loaded onto a single factor, as was expected. However, two of the five items did not load onto the first factor. A closer look found these were the items that had negatively worded items at the right hand end of the scale. Consequently, all of the items were reworded so all of the items at the right hand end of the scale were positive worded in the finally used questionnaire. That is, the advertisement is:

*The ad is good*

I like the ad

*The ad is interesting*

The ad is favourable

*The ad is appealing*
The Independent Measures

Subjective Comprehension

As was discussed in Chapter Two, the influence of subjective comprehension and objective comprehension were unclear in previous tourism studies (Mohanty & Ratneshwar, 2015; Pillai et al., 2012). However, since most prior advertising research found a positive relationship between subjective comprehension and attitude, the current study hypothesised a positive relationship between these two constructs. Here, subjective comprehension was measured using Pillai et al.’s (2012) three-item scale using a seven-point scale that ranged from strongly disagree (1) to strongly agree (7). The items in this case were:

1. I understand the ad.

2. The ad was easy to understand.

3. The ad was confusing.

The second pre-test, which was discussed earlier, suggested the items in this case loaded onto a single factor (Cronbach’s alpha = 0.89) and, consequently, the items were included in this form in the final questionnaire.
Objective Comprehension

Preston (1967) was possibly the first to use accurate and inaccurate statements to measure consumer’s logical or illogical processing of advertisements. Inspired by this, Jacoby et al. (1980) used true-false statements to measure objective comprehension. They used an advertisement’s script to develop six statements (two true statements and four false statements) to assess people’s objective comprehension of an advertisement. There were more false statements because their study examined miscomprehension. Here, the current study used four true statements and four false statements because the aim was to examine comprehension rather than miscomprehension.

Jacoby et al.’s (1980) miscomprehension approach has been questioned. Some researchers have argued true-false statements were not sufficient to estimate miscomprehension. For example, Schmittlein and Morrison (1983) expressed concern about guessing and yea-saying (i.e., people select the true option when they are not sure about an answer). Others have argued true-false statements might be appropriate to use in some situations but not in others. For example, Gates (1986) found multiple-choice questions reduced miscomprehension scores, possibly because they provided people with explicit alternative answers that reduced the cognitive requirements of the task. He suggested multiple-choice questions were more useful in assessing the meaning of advertisements with affective appeals, while
true-false questions were more useful when assessing advertisements with cognitive appeals.

Despite these concerns, the true-false measurement approach is more widely used than is the multiple-choice approach. For example, Mick's (1992) measure of objective comprehension is similar to Jacoby et al.’s (1980) miscomprehension measure, although he added a "don't know" option. The present study took this approach and used a coding scheme in which correct answers were scored as +1, incorrect answers were scored as -1 and don’t know answers were scored as 0. As mentioned in Chapter Two, some researchers have split the objective comprehension construct into factual comprehension and inferential comprehension (Jacoby et al., 1980; Macias, 2003; Mick, 1992). Here, four factual statements and four inferential statements were used. There were two true statements and two false statements for each of the factual and the inferential options. The statements used in this case were developed collaboratively with experts and they were:

1. There is a suspension bridge above the trees in the Valley of the Giants. (Factual, True)

2. The Valley of the Giants is located in the South West in Western Australia (Factual, True)

3. The bridge on the tree top walk is made of wood. (Factual, False)
4. You cannot see native birds. (Factual, False)

5. The forest around the treetop walk area was formed in recent years. (Inferential, False)

6. Visiting the Valley of Giants is a good way to learn about mystery giant aliens. (Inferential, False)

7. Visiting the Valley of Giants is an activity the entire family can enjoy. (Inferential, True)

8. You may be able to hear the birds singing. (Inferential, True)

Descriptive statistics were obtained for these questions during the second pre-test. The results suggested the four factual items had means ranging from .10 to .90 and standard deviation ranging from .40 to .89. The four inferential items had means ranging from .03 to .77 and standard deviation ranging from .43 to .88. Thus, the pre-test suggested all the items had at least some variance and no questions were answered correctly by all respondents. Factor analysis was not performed for the objective comprehension during the pre-test stage, because all the prior research used a summed score to measure objective comprehension (Jacoby & Hoyer, 1987; Jacoby et al., 1980).
The Moderator

Motivation

As was discussed in the previous chapter, tourists’ motivation is a potential moderator. Following a review by MacInnis, Moorman, & Jaworski (1991), a preferred way of measuring motivation is by asking consumers about their general interest. Ecotourists can be classified into different groups based on their tourism interests. These groups may differ in their information-processing of tourism advertisements. Here, motivation was operationalized as tourists’ interests. Following Bimonte and Faralla’s (2012) suggestion, people were asked about their interest in participating in tourism activities, such as nature-based tourism, adventure tourism, wildlife tourism, culture tourism and shopping tourism. As Mehmetoglu (2007) has suggested such tourism categories are not mutually exclusive, respondents were allowed to choose as many types as they wished. If a respondent was interested in a particular type of tourism, their answer was coded as 1. If a respondent was not interested, their answer was coded as 0.

The Sample

Guangzhou, the capital of Guangdong Province in China, was selected as the place in which to conduct the study, as this is the only Chinese city that has a direct flight to Western Australia. A sample of Chinese tourists were recruited by a commercial panel provider, as is discussed later in this chapter.
Data Collection

Ethical issues were considered when conducting the online data collection. The researcher was obliged to protect the rights to be informed of participants. Informed consent was obtained before they start the survey. Another issue for online data collection is privacy because collecting identifiable data about the respondents can harm their privacy. As a result, this research asked a professional company with the CMRA (China Marketing Research Association) membership to conduct the survey. No children were involved in this research.

The professional survey company obtained the needed data from people on their panel who were interested in tourism and travel and leisure activities. These respondents completed an online questionnaire that contained the advertisement and the items needed to measure the constructs of interest. Respondents first answered two screening questions to ensure they were ecotourists and that they lived in Guangdong. They were then asked to view the ecotourism advertisement and to answer some questions that were related to the advertisement. Respondents were asked not to look back at the advertisement when answering these questions.

They were then asked about their tourism interests, after which they were asked if they had seen the picture before and whether they had been to the Valley of the Giants. The items that asked about their subjective comprehension, objective comprehension and attitude towards the advertisement were then answered, after
which some background information was obtained (age, gender, income and education).

Several steps were taken to maximise data quality. First, the data were obtained by a professional panel provider with many years of experience and state of the art polling technology. Second, while this was an online survey, respondents could not undertake other activities (e.g., search for information online) while answering the questions.

**Conclusions**

This present chapter introduced a discussion of survey design, and measurements that will be tested in the main study. Two pre-test phases were performed in order to maximise the quality of the survey design and measurements. After the main study data collection, the next chapter focuses on the data analysis results of the main study.
CHAPTER FOUR

DATA ANALYSIS

Introduction

This Chapter has three parts. First, it discusses the data collection process used in this study in more detail than was provided in the previous chapter. Second, it outlines the results obtained for each of the scales that were used to measure the constructs of interest (subjective comprehension and objective comprehension, attitude and motivation). Finally, the suggested hypotheses are examined and the findings obtained are discussed.

Data Collection

As noted in the previous Chapter, data were obtained through an online survey that was undertaken by a survey company in 2016. Potential respondents were told the study was examining Western Australian tourism advertisements and they were directed to an online questionnaire webpage with screening questions that ensured they had lived in Guangzhou for at least a year and that they were interested in ecotourism. Only those who met these criteria proceeded to the main part of the questionnaire. This led to a sample of 100 respondents being obtained. As a quota had been used, 50% of the sample were male and 50% were female. Further, 46% were aged 20 to 29 years, 45% were aged 30 to 39 years and 9% were aged 40 to 49 years. While some respondents (23%) had low incomes (4000 to 6999 Chinese yuan
most respondents (77%) had incomes of 7000 Chinese yuan or more per month (equals to 1389 Australian dollars per month) and most (64%) had undertaken university studies, which is not surprising given the topic being studied.

Respondents who met the initial screening requirements were shown the Valley of the Giants’ tree-top walk image advertisement. As was discussed in the previous Chapter, the advertisement was designed in a professional manner and had the feel of real advertisements that might be found in a local magazine. Participants were told to take a look at the advertisement in a way they would normally look at such advertisements and try not to look back when answering subsequent questions. Of the 100 respondents, 99 have not visited the advertised destination (i.e., the Valley of the Giants). However, as the respondent who had visited the Valley did not show any significant deviation from the other respondents, the 100 respondents were retained for the subsequent analysis.

As an online survey was used, all of the items had to be completed prior to a respondent exiting the questionnaire. Consequently, there was no missing data. The possible presence of univariate outliers was examined by computing standardised z-scores for all of the variables. As all were within a -4 to 4 range, it was felt there were no univariate outliers. The possible presence of multivariate outliers was also examined. To do this, Mahalanobis distances were computed across the relevant items. Two respondents had probabilities based on their Mahalanobis distance of
less than 0.01, suggesting they might be multivariate outliers, as they had high subjective comprehension but a more negative attitude toward the advertisement. However, as there were only two such respondents and the current sample was small, they were retained for the subsequent analysis.

**Testing the Constructs**

As was noted in the previous Chapter, existing scales were used for a number of the constructs included in the present study, such as attitude towards the advertisement, and subjective comprehension. (Mick, 1992; Mohanty & Ratneshwar, 2015). As was also noted earlier, the objective comprehension construct was developed within the study using an approach suggested by prior research (Jacoby et al., 1980). These constructs are discussed in subsequent sections.

**Attitude towards the Advertisement**

Five items were used to measure attitude towards the advertisement (at^ad). All of these were written in a positive way, as was discussed previously. An exploratory principal components analysis was used to see whether the five items reflected an underlying single factor. In this case, all of the items loaded onto a single factor that explained 79% of the variation in the data. All of the factor loadings were high, as they ranged from 0.86 to 0.91, and all were much higher than the minimum 0.50 suggested by Hair et al. (2009). Further, the scale’s coefficient alpha was 0.93,
suggesting it was very reliable. Thus, the construct was retained for use in the subsequent analysis.

**Subjective Comprehension**

Three items were used to measure subjective comprehension and, once again, all of the items were written in a positive way. A principal components analysis suggested a single factor that, in this case, explained 79% of the variation in the data, with the factor loadings ranging from 0.76 to 0.90. Coefficient alpha was 0.80, suggesting this construct was also reliable and should be retained.

**Objective Comprehension**

Eight statements were used to measure objective comprehension. Respondents were asked what they thought the advertisements were saying or implying. As was noted previously, the eight statements included two correct factual statements, two incorrect factual statements, two correct inferential statements and two incorrect inferential statements. Respondents were asked if each of the statements were “True” or “False” or if they did not know which was the case. Answers were checked against the correct answers. If an answer was in line with the item’s type (e.g., the respondent had said a correct item was correct), it was coded as 1. If an answer was not in line with the item’s type (e.g., the respondent had said a correct item was incorrect), it was coded as -1. If the “Don’t know” option was used, it was coded as
0. Thus, the maximum overall objective comprehension score was 8 and the minimum overall score was -8.

**Factual and Inferential Comprehension**

As already mentioned, the objective comprehension construct included factual comprehension and inferential comprehension sub-dimensions. As four statements were included for each type of comprehension, factual and inferential comprehension scores were also computed that ranged from -4 (incorrect comprehension of all four statements) to 4 (correct comprehension of all four statements).

When descriptive statistics were initially computed for the comprehension sub-dimensions, it was found all respondents had a score of 4 for factual comprehension, which meant there was no variance and that this construct could not be used in the subsequent analysis. As a result, hypothesis H2a and H3b, which was related to this type of comprehension, could not be examined. Descriptive statistics were also computed for inferential comprehension, which was found to have some variation (SD= 0.65), although almost all of the respondents (92 out of the 100) had scores of 3 or 4, which meant the scale was negatively skewed. Given these results, it was decided that only inferential comprehension should be included in the subsequent analysis.
As was discussed in Chapter Three, some researchers had used a similar method to measure factual and inferential comprehension and found reasonable variance for both sub-dimensions, which was why this approach was used in this case (Jacoby et al., 1980; Macias, 2003; Mick, 1992). Several reasons that may explain why this study had different results will be discussed in Chapter Five.

**Tourism Motivation**

Tourists’ motivation was measured by asking respondents about their interest in five types of tourism (nature-based tourism, adventure tourism, wildlife tourism, culture tourism, and shopping tourism). As discussed in the previous chapter, if a respondent was interested, their answer was coded as 1. If a respondent was not interested, their answer was coded as 0.

The most favoured type of tourism was nature-based tourism (95 out of 100 respondents were interested), while the least favoured type of tourism was shopping tourism (8 out of 100 respondents were interested). A cross tabulation found a significant negative relationship between shopping tourism and nature-based tourism (Chi-Square=7.32, p<0.01), confirming Weaver’s (2007) suggestion that people who are interested in nature-based tourism are less likely to be interested in shopping tourism.
As one purpose of the present study was to see whether there were sub-groups of tourists who were interested in different types of tourism activities, a cluster analysis was undertaken on this part of the data set. In this case, SPSS’s two step procedure was used to group respondents, as it computes the optimal number of clusters and is very good at reproducing “true” clusters (Woodside & Martin, 2008). The BIC change criterion suggested a six-cluster solution was appropriate. However, the small sample size meant a number of these clusters were too small to be analysed in a meaningful way (i.e., the number of respondents in the smallest group was eight). Consequently, the three clusters solution was used, as there was only a small reduction in the goodness of fit measure when this was done and this ensured all of the groups had more than 25 respondents.

The descriptive statistics for each of the clusters are shown in Table 4.1. As can been seen in the Table, all of the clusters were of reasonable size (ranging from 28 to 39 respondents). The first cluster had average interest scores on all the tourism types, suggesting members could be termed “mainstream ecotourists”. The second cluster was very interested in nature based tourism, adventure tourism and wildlife tourism, but not in shopping tourism, suggesting members could be termed “hard ecotourists”. The third cluster was not interested in adventure tourism at all, suggesting the members could be termed “soft ecotourists”. The “hard” and “soft” terminologies were suggested by Laarman & Durst (1987), who characterised ecotourists through hard and soft dimensions (e.g., hard ecotourists are willing to
travel in difficult circumstances and tolerate primitive conditions, while soft ecotourists avoid dangerous activities but still wish to experience nature). The cluster analysis results were also consistent with Mehmetoglu’s (2007) study that found three nature-based tourist clusters (normal tourists, tourists interested in challenging activities and tourists who preferred relaxing activities). These sub-groups were retained and used in some of the subsequent analysis.

Table 4.1: Cluster Analysis Results for the Ecotourism Motivation Items

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Nature-based tourism</th>
<th>Adventure tourism</th>
<th>Wildlife tourism</th>
<th>Culture Tourism</th>
<th>Shopping Tourism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mainstream Ecotourists</td>
<td>33</td>
<td>29</td>
<td>13</td>
<td>2</td>
<td>19</td>
</tr>
<tr>
<td>Hard Ecotourists</td>
<td>28</td>
<td>27</td>
<td>23</td>
<td>28</td>
<td>18</td>
</tr>
<tr>
<td>Soft Ecotourists</td>
<td>39</td>
<td>39</td>
<td>0</td>
<td>39</td>
<td>39</td>
</tr>
</tbody>
</table>

Testing the Hypotheses

The Relationship Between Comprehension and Attitude

This section examines the relationships between subjective comprehension, inferential comprehension and attitude toward the advertisement. While a multivariate regression analysis could have been used, this approach has a number of assumptions, of which the normality of the variables is important. However, Kolmogorov-Smirnov tests suggested the three variables were not normally distributed. While transformations can sometimes remedy such normality issues, no appropriate transformation could be found in this case.
Consequently, it was decided to use a Partial Least Squares (PLS) approach, as this procedure uses bootstrapping techniques to obtain the standard errors needed to test the hypotheses of interest and does not require normally distributed constructs (Hair, Hult, Ringle, & Sarstedt, 2016). The WarpPLS program, which is a PLS-based structural equation modelling program suitable for PLS regression analysis, was used to estimate the relationship of interest (Kock, 2015). A linear factor-based PLS regression was undertaken in this case, in which attitude toward the ad was the dependent variable and subjective comprehension and inferential comprehension were independent variables.

The constructs’ measurement properties were examined before the PLS regression itself, as factor-based PLS algorithms can be affected by these aspects. The measurement properties of the three constructs can be seen in Table 4.2. The three inferential comprehension items were found to have low internal consistency (Cronbach’s alpha = 0.11, average variance extracted score = 0.39), suggesting the three items should not be combined. Consequently, they were included as individual independent variables in the subsequent analysis.

Table 4.2: Measurement Properties of the Three Constructs
The results suggested the regression was a good fit to the data (Tenenhaus’s GoF was 0.70), as it explained 56% of the variation in respondents’ attitude toward the advertisement. As can be seen in Table 4.3, the path between subjective comprehension and attitude toward the advertisement was significant well beyond the 1% level, suggesting subjective comprehension had a positive influence on attitude toward the advertisement, supporting Hypothesis 1. However, the three paths between the inferential comprehension items and attitude toward the advertisement were not significant (p=0.27, p=0.42, p=0.38 respectively), suggesting none of the inferential comprehension items were significant predictors of attitude toward the advertisement. Thus, Hypothesis 2b was not supported.

**Table 4.3: The Path Coefficients and P Values**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Path Coefficient</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjective Comprehension</td>
<td>0.76</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Visiting the Valley of Giants is a good way to learn about mystery giant aliens</td>
<td>0.06</td>
<td>0.27</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Construct</th>
<th>Path Coefficient</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Visiting the Valley of Giants is an activity that the entire family can enjoy

<table>
<thead>
<tr>
<th>Item</th>
<th>Beta (p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visiting the Valley of Giants is an activity that the entire family can enjoy</td>
<td>-0.02 (0.42)</td>
</tr>
<tr>
<td>You may be able to hear the birds singing</td>
<td>0.03 (0.38)</td>
</tr>
</tbody>
</table>

Even though not hypothesized, it was decided to see whether the inferential comprehension items had an effect on subjective comprehension (suggesting subjective comprehension might be a mediating variable). However, only one inferential comprehension item (Visiting the Valley of Giants is a good way to learn about mystery giant aliens) had a significant relationship with the subjective comprehension (Beta= -0.25, p< 0.01) and only explained 7% of the variation in subjective comprehension, suggesting it was not an important aspect. Thus, it seems subjective comprehension did not act as a mediating variable in this case.

The simple PLS model did not include any control variables, such age, gender, income or education, which may affect the relationship between comprehension and attitude toward the advertisement. Thus, the model was re-estimated with these variables included to examine their effects. However, none of the potential control variables were significant (with p values ranging from 0.16 to 0.26). Thus, these variables were not examined further.

It had been hypothesised that ecotourists with high motivation to take part in ecotourism would have a stronger relationship between comprehension and attitude.
(Fodness, 1994; Mehmetoglu, 2007; Tang et al., 2012), which led to the cluster analysis mentioned earlier in the chapter being undertaken. The hard ecotourist group had the highest motivation to take part in ecotourism activities, while the soft ecotourist group had the second highest motivation to take part in ecotourism and the mainstream ecotourists group had the least motivation to take part in ecotourism activities.

Differences between the three clusters were examined by estimating the model for each group and comparing their paths. Thus, three PLS regressions were estimated and these models’ paths were compared. While subjective comprehension was a significant predictor of attitude in each group and the inferential comprehension items were not significant predictors in any group, the relationship between subjective comprehension and attitude was significantly different for two of the groups (t= -1.86, p= 0.03). This relationship was stronger for the soft ecotourist group than for the mainstream ecotourist group (Beta soft ecotourists = 0.91; Beta mainstream ecotourists = 0.59). This suggests the attitude of soft ecotourists group was more responsive to changes in subjective comprehension than was the mainstream ecotourist group, while the hard ecotourists group was not significantly different from the other two groups. Thus, hypothesis H3a was partially supported, while Hypothesis H3c was not supported.
The Background Variables

The effects the background variables had on ecotourists’ information-processing were also explored. However, none of the four variables (age, education, gender, and income) had a significant effect on subjective or objective comprehension. Thus, the three clusters were not significantly different in terms of the background variables collected in this case.

Conclusions

The results showed that with the exception of the objective comprehension scale, all of the scales (e.g., attitude towards the advertisement and subjective comprehension) used were reliable. The results also compared the impacts subjective comprehension and objective comprehension had on Chinese ecotourists’ attitude towards a Western Australia ecotourism advertisement. Further, the effects of motivation and background variables (age, education, gender, and income) were analysed. The next chapter discusses these results and their implications.
CHAPTER FIVE

SUMMARY, CONCLUSIONS AND IMPLICATIONS

Summary of Findings

The primary purpose of this study was to see how advertisement comprehension affected Chinese ecotourists’ attitude toward a Western Australian ecotourism advertisement. None of the background variables examined in the study (age, education, gender, income) had a significant effect on ecotourists’ advertising response. Further, while subjective comprehension had a significant impact on attitude towards the advertisement, objective comprehension did not seem to influence Chinese ecotourists’ attitude towards the ecotourism advertisement. It was also apparent that subjective comprehension did not mediate the relationship between objective comprehension and attitude towards the ecotourism advertisement. Finally, the relationship between subjective comprehension and attitude towards the advertisement was stronger for more motivated ecotourists than for less motivated ecotourists. Table 5.1 summarizes the major findings in this study.
<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Content</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Chinese ecotourists’ subjective comprehension will have a significant positive effect on their attitude towards an ecotourism advertisement.</td>
<td>Supported</td>
</tr>
<tr>
<td>H2a</td>
<td>Chinese ecotourists’ factual objective comprehension will have a significant positive effect on their attitude towards an ecotourism advertisement.</td>
<td>NA</td>
</tr>
<tr>
<td>H2b</td>
<td>Chinese ecotourists’ inferential objective comprehension will have a significant positive effect on their attitude towards an ecotourism advertisement.</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H3a</td>
<td>Chinese ecotourists who are more motivated to take part in ecotourism will have a stronger positive relationship between their subjective comprehension and their attitude towards an advertisement.</td>
<td>Partially Supported</td>
</tr>
<tr>
<td>H3b</td>
<td>Chinese ecotourists who are more motivated to take part in ecotourism will have a stronger positive relationship between their factual objective comprehension and their attitude towards an advertisement.</td>
<td>NA</td>
</tr>
<tr>
<td>H3c</td>
<td>Chinese ecotourists who are more motivated to take part in ecotourism will have a stronger positive relationship between their inferential objective comprehension and their attitude towards an advertisement.</td>
<td>Not Supported</td>
</tr>
<tr>
<td></td>
<td>Background variables (age, gender, education, and income) may have effects on comprehension or motivation.</td>
<td>Not Supported</td>
</tr>
</tbody>
</table>
Discussions and Implications

Comprehension and Attitude

This study found Chinese ecotourists’ subjective comprehension had a significant effect on their attitude towards an ecotourism advertisement. If a Western Australian ecotourism advertiser wants to improve Chinese ecotourists’ attitude towards an advertisement, they need to ensure the advertisement can lead to strong subjective comprehension. While no previous research has examined this relationship in an ecotourism context, this finding is consistent with a number of previous studies done in general marketing contexts (Macias, 2003; Mick, 1992; Pillai et al., 2012).

The study also found Chinese ecotourists’ objective comprehension did not have a significant effect on attitude towards the advertisement and that their objective comprehension had little impact on their subjective comprehension. Chinese ecotourists’ objective comprehension does not seem to impact on their attitude towards the advertisement; a finding is consistent with 40% of the results of past studies (Millman, 1968; Mick, 1992). This may be because objective comprehension has limited predictive ability or because the measurement approach used here (quiz questions) led to scales that had little variance, as almost all respondents made correct assessments.
There are several reasons that may explain this. First, the main study was conducted online and even though respondents were asked to not look back at the advertisement when they answer the quiz, this could be done, making it easy to answer the quiz question correctly. Second, it may be that the quiz design may have had an impact. Third, the advertisement used in this study contained less information (was less complicated) than the advertisements that were used in previous studies. This study used a static picture and the advertisement had only a short description (69 words). The advertisements used in most previous studies appeared to contain considerably more information and, so, were more complicated for respondents to answer correctly. For example, Jacoby et al.’s (1980) study used TV commercials with both visual and audial stimuli, while Jacoby and Hoyer’s (1987) study used several magazine advertisements with an average length of 146 words. Finally, the present product category may have played a role. No previous research has used the quizzes to measure comprehension in an ecotourism context. It may be it is easier to assess tourism advertisements, but further research is needed to explore this issue.

As was discussed in Chapter Two, there is a continuing debate as to whether consumers’ subjective comprehension or objective comprehension have more influence on their attitudes. Should ecotourism advertisers use subjective comprehension or objective comprehension when they want to predict a Chinese ecotourist’s attitude toward an ecotourism advertisement? Jacoby et al.’s (1980) study suggested objective comprehension is important, but Ford & Yalch (1982)
suggested multiple approaches should be used in combination to measure comprehension, while Mick (1992) suggested thought listing or subjective comprehension were better approaches than was objective comprehension. The current results support Mick’s (1992) view that subjective comprehension is more useful, suggesting advertisers should focus on improving subjective comprehension when advertising to Chinese ecotourists.

This result is also consistent with a number of studies that suggested subjective comprehension was more important in advertising. For example, it has been argued that perception (which may be considered similar to subjective comprehension) is more important than reality (which may be considered similar to objective comprehension) when predicting consumers’ choices (Papadopoulos, 1993; Anholt, 2005). Indeed, Papadopoulos (1993) has suggested tourists act on their perceptions, not reality, supporting this view.

**Motivation**

This study found motivation had a significant effect in moderating the relationship between subjective comprehension and attitude towards an advertisement in two of the three identified groups (soft ecotourists and mainstream ecotourists). It seem that, in Western Australian ecotourism advertising, the higher an ecotourist’s motivation towards ecotourism activities, the stronger that will be subjective comprehension’s influence on attitude. This result is consistent with Tang et al. (2012) research, as they found tourists with high/low levels of motivation responded
differently to destination websites. However, this significant moderating effect did not extend to the hard ecotourist group, perhaps because the advertisement used in this study was congruent with soft ecotourists rather than with hard ecotourists.

The ELM is a useful model to help understand the process of persuasion involved in an audience's processing of marketing communications. The ELM suggests people who are highly motivated and who have the ability and opportunity to process information (i.e., the elaboration likelihood level is high) will, upon exposure to a persuasive message, engage in the purposeful, rational processing of central message elements. Alternatively, when elaboration likelihood is low, people will be more likely to effortlessly process elements (peripheral cues) of the message and go through the peripheral route of processing. This study found motivation’s effect was consistent with the ELM model. Ecotourists with high motivation were likely to engage in effortful processing that led to a more positive attitude, while ecotourists with low motivation were less likely process the advertisement deeply.

**The Background Variables**

No significant effects were found for any of the background variables. No significant difference was found for tourists with different ages, genders, education levels or incomes. These results indicate that such variables need not be considered by Western Australian ecotourism marketers targeting Chinese ecotourists. This result is consistent with some marketing research reports that found the percentage of
male and female Chinese tourists coming to Australia were very similar (Tourism Research Australia, 2016).

Limitations & Future Research

Sample and Sample Selection

The size of the sample (n=100) may limit the generalizability of this study. Sample selection criteria may also have affected the generalizability of the findings. For example, due to the sample being obtained online, the average age of the sample was young, which meant people above 50 years old were not well represented in the sample. The sample was also a well-educated one. Nearly 71% of the sample has tertiary education as compared to 64% in the outbound ecotourism population of Guangzhou (China Tourism Academy, 2016). In addition, the income of sample members was skewed, as 77% of the respondents had a monthly family income of more than 7000-yuan (equals to 1389 Australian dollars per month). Future research should increase the upper boundary of the income measure. However, as age, education level, and income were not significant controlling variables, these issues are likely to have had only a minimal effect on the findings.

Further, the sample was obtained from the city of Guangzhou, Capital of China’s Guangdong Province. Although Guangzhou is ranked in the top 10 outbound tourist source cities, it only accounts for a small portion of the China’s ecotourist population. Ecotourists in Guangzhou may not be typical of other ecotourists in China. While
Guangzhou is a key source of tourists, it is one of China’s most developed cities. Thousands of other cities in China are less economically developed and ecotourists in these cities may be different. It is possible that ecotourists outside Guangzhou could respond to the advertisements in a different manner from ecotourists residing in Guangzhou. It is generally believed people living in Guangzhou, which has a direct flight to Western Australia, are more interested in visiting Western Australia than are those people living in cities without a direct flight (Vickery, 2015). However, further research is needed to examine this issue in more detail. This issue should be examined by obtaining information from a wider base, especially as different cities may vary in their attitudes towards ecotourism. There is some evidence that attitude and intentions toward taking part in ecotourism are associated income in China (Liu, 2003) and in Western countries (Luzar, Diagne, Egan, & Henning, 1998). Consequently, consumers in other less economically developed Chinese cities may have different attitudes towards ecotourism.

Due to these differences, other ecotourists may not respond to Western Australia advertisements the same way as did Guangzhou’s ecotourists. These differences also suggest Western Australia marketers need to understand ecotourists from different parts of China when developing marketing strategies.
**Destination Selection**

The destination used in this study was a tree top walk in the Valley of Giants. This destination has unique features when compared to the other Western Australia ecotourism destinations. For example, during the pre-test interview, one participant mentioned that “looking down from 50 meters above the ground is a bit scary” and some were concerned about “the bridge wobbling around”. Nevertheless, the proportion of participants who considered it risky was small. Using treetop walk was appropriate because it is a defining ecotourism destination in Western Australia. However, other Western Australia destinations should be explored in future research to see whether the relationship found here can be generalised. Future studies might look at other Western Australia ecotourism destinations, such as Albany, Margaret River, Cottesloe Beach or Broome. The pre-test found some differences in Chinese ecotourists’ perceptions of pictures from different Western Australia destinations, suggesting such research may provide useful insights.

The present study suggested objective comprehension may not influence attitude toward ecotourism advertising. As only one advertisement was used, future research should see whether this can be generalised to other advertisements. If this is true for most ecotourism advertisements, it would seem to contradict the idea that ecotourism is, in part, a learning experience.
Other Types of Advertising Effectiveness

This study presented a picture of the role comprehension plays in ecotourists’ information-processing because it included two major types of comprehension (subjective and objective comprehension). Even though this study did not find significant effects for objective comprehension, another study that examined the way Taiwanese students responded to New Zealand tourism commercials found recognition (which is similar to objective comprehension) was positively correlated with intention to visit New Zealand (Pan, 2011). Thus, future studies should examine the effects comprehension has on other advertising effectiveness measures (e.g., travel intention and attitude towards the destination).

Conclusions

In recent years, there has been a boom in Chinese outbound tourism and the number of ecotourists has grown rapidly. Although opportunities have been identified for Western Australia being seen as an ecotourism destination, the ways in which Chinese ecotourists respond to Western Australian ecotourism advertisements has not previously been researched.

This study reviewed prior research that examined advertisement comprehension and was the first to empirically examine the effects subjective and objective comprehension had on Chinese ecotourists’ attitude towards a Western Australian ecotourism advertisement. Chinese ecotourists’ subjective comprehension
seemed to have more influence on their attitude towards the advertisement than did objective comprehension. This suggests Western Australian advertisers need to focus on improving ecotourists’ subjective comprehension and motivation of their advertisement if they are to make advertising to Chinese ecotourists more effective.
APPENDICES

Appendix A – English Version Questionnaire

English Version Questionnaire (Version A)

Q1 Are you interested in Ecotourism? (Single Choice)
1. Yes, I’m interested.
2. No, I’m not interested.

Q2 Have you lived in Guangzhou for longer than one-year. (Single Choice)
1. Yes.
2. No

(If both of the above two screening questions are yes, then continue to show the following questions.)

Please take a look at the following advertisement featuring a Western Australian ecotourism destination then answer the following questions. Please try not to look back at the advertisement when you answer the questions in the next page.

Valley of Giants in Western Australia
Treetop walking is an activity you can take in the Valley of Giants located in the South West of Western Aus-
tralia. There is a spectacular lightweight suspension bridge soaring 40 meters above the Red Tingle Foliage
(Eucalyptus trees). Walking though the treetops is a unique way to explore old-growth natural forests in
Western Australia. You can also see a variety of native birds and plants grown in this region.

Q3 Have you seen the ad before? (Single Choice)
1. Yes
2. No

Q4 Have you visited Treetop before? (Single Choice)
1. Yes
2. No

Q5 What kind of tourism are you interested in? (Multiple Choice)
1. Nature based tourism
2. Adventure Tourism
3. Wildlife Tourism
4. Culture Tourism
5. Shopping Tourism
Q6 The following questions ask your understanding of the advertisement. Please choose one number that best represents your view. (1: Strongly Disagree, 4: Neutral, 7: Strongly Agree).

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>1. I understand the advertisement.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. The advertisement was easy to understand.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. The advertisement was not confusing.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q7 Please answer if you believe the following statements are true or false based on the advertisement. If you are not sure, please choose don't know.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>True</td>
<td>False</td>
<td>Don't know</td>
</tr>
<tr>
<td>1. There is a suspension bridge above the trees in the Valley of the Giants.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Valley of the Giants is located in the South West in Western Australia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. The bridge in the tree top walk is made of wood.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. You cannot see native birds.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. The forest in the treetop walk area has only be formed in the recent years.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Visiting the Valley of Giants is a good way to learn about mystery giant aliens.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. It is an activity that the entire family can enjoy.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. You may be able to hear the birds singing.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q8 After viewing the advertisement, what’s your attitudes toward the advertisement. (1: Strongly Disagree, 4: Neutral, 7: Strongly Agree).

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>1. The ad is good.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I like the ad.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. The ad is interesting.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. The ad is favourable.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. The ad is appealing.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q9 How old you are? (Fill in a number)

Q10 What's your age group? (Single Choice)
1. Below 20
2. 20-29
3. 30-39
4. 40-49
5. Above 50

Q11 What's your gender? (Single Choice)
1. Male
2. Female

Q12 What's your level of education? (Single Choice)
1. Below high-school
2. College
3. Bachelor
4. Masters or above
5. Other

Q13 What's your monthly family income (Chinese yuan/month) (Single Choice)
1. Below 3000
2. 3000-3999
3. 4000-4999
4. 5000-5999
5. 6000-6999
6. Above 7000
Appendix B – Chinese Version Questionnaire

Ecotourism Questionnaire (Chinese Version)

Q1 您是否对生态旅游感兴趣？（单选）
1. 是，有兴趣
2. 否，没有兴趣

Q2 您是否生活在广东省超过一年？（单选）
1. 是
2. 否
（只有当上面的两个筛选问题都选是，才会继续下面的问题。）

请看下面这个介绍西澳生态旅游的广告，然后回答接下来的问题。当你在下一页回答问题时，请尽量不要回头看广告。

巨®️人谷，西澳

树顶漫步是您可以在位于西澳大利亚州西南部的巨人谷进行的活动。这里在郁郁葱葱的自然环境内有一个壮观的轻型悬浮桥。沿着树梢行走探索西澳大利亚古老的森林。您还可以看到各种本地独一无二的鸟类和土生土长的植物。

Q3 请问你以前有看过这个广告吗？（单选）
1. 是
2. 没有

Q4 请问你以前有去过巨人谷的树顶漫步吗？（单选）
1. 有
2. 没有

Q5 请问您对以下哪种旅游感兴趣？（多选）
1. 以自然环境为主的旅游
2. 探险旅行
Q6 以下是关于您对广告内容理解程度的问题。（1：非常不同意，4：中等，7：非常同意）

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q7 请您根据广告判断以下说法正确与否。如果您不确定，请选择“不知道”

<table>
<thead>
<tr>
<th></th>
<th>正确</th>
<th>错误</th>
<th>不知道</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q8 看完广告后，您对该广告的总体态度是什么？（1：非常不同意，4：中等，7：非常同意）

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q9 请问您的年龄是？（填写数字）

Q10 您的年龄段是？（单选）

1. 20 岁以下
2. 20-29
3. 30-39
4. 40-49
5. 50 岁及以上

Q11 您的性别？（单选）

1. 男
2. 女

Q12 您的教育程度？（单选）

1. 高中及以下
2. 大专
3. 大学本科
4. 硕士及以上
5. 其他

Q13 您的家庭月收入水平（人民币/月）？（单选）

1. Below 3000
2. 3000-3999
3. 4000-4999
4. 5000-5999
5. 6000-6999
6. Above 7000
REFERENCES


