

**Understanding how user-generated content empowers the
online consumer in the travel industry**

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Attestation of Authorship

“I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.”

Author's Signature:

A handwritten signature in blue ink, reading "Luigi Augusto M. Pando Jello". The signature is written in a cursive style and is placed on a light yellow rectangular background.

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Abstract

User-generated content (UGC) is having a significant impact on the travel industry whereby travelers have direct access to the information they need to make their travel decisions and by doing so are empowered to create and distribute their own content. However, little is known about the role that UGC plays in the users' travel behavior and decision-making processes, and there is limited insight into how UGC empowers travelers to make their own decisions.

This study aims to provide a mechanism for understanding how UGC empowers online consumers when making their travel plans. A research model is developed to identify and evaluate the factors that empower travelers when making their travel decisions. This study investigates, in the context of travelers' use of UGC, (1) the role of informational social influence and normative social influence and their impact on perceived empowerment when using UGC to help make their travel plan decisions; (2) the extent to which perceived empowerment impacts attitude towards using UGC when making travel plans; and (3) the impact of attitude, subjective norms, and perceived behavioral control on intention to use UGC when making travel plans. Dual-process-theory (DPT), psychological empowerment (PE), and the theory of planned behavior (TPB) are the theories used to develop the theoretical foundations underlying the research model.

The research model is tested using partial least squares (PLS). Specifically, PLS-Graph Version 3.0 Build 1130 is employed to examine the proposed hypotheses. An extensive survey is adopted to gather field information from international backpackers staying at hostels in Auckland, New Zealand. The survey asks backpackers about their views on UGC (specifically online travel review) they had read from websites (e.g., HostelWorld.com, HostelBookers.com, TripAdvisor.com, Booking.com, etc) when making their travel plans. Altogether 268 usable responses were received.

This study confirms that travelers feel empowered by using UGC when making their travel plans, and the empirical results of the survey lead to several significant findings. The findings show that attitude towards using UGC and subjective norm explain a

significant amount of variance in the dependent variable, that is, intention to use UGC when making travel plans. In addition, travelers' perception of psychological empowerment significantly influences their attitude toward using UGC when making travel plans. The results also show that psychological empowerment is impacted by informational social influence and normative social influence.

Given the fairly high explanatory power of the model findings, this thesis has significant theoretical and practical implications. From a theoretical viewpoint, this study provides a framework that explains how UGC empowers online consumers when making travel plans. The theoretical contribution is grounded in the use of three theories (i.e., DPT, PE and TPB) to model and reason about the impact of online travel reviews on consumer behavior. In addition to the contributions to academic research, this study has provided a more in-depth understanding of how UGC empowers online consumers, and makes suggestions on how travel service providers can respond to these trends and utilize UGC to their benefit. From a practical viewpoint, these findings can also help enhance the competitiveness of the accommodation sector, which is a cornerstone of broader tourism development.

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List of Acronyms

| Acronyms | Full name |
|-----------------|--|
| AUT | Auckland University of Technology |
| AUTEC | Auckland University of Technology Ethics Committee |
| AVE | Average Variance Expected |
| CR | Composite Reliability |
| DPT | Dual-Process Theory |
| IS | Information Systems |
| ISI | Informational Social Influence |
| NSI | Normative Social Influence |
| NZTRI | New Zealand Tourism Research Institute |
| OTR | Online Travel Review |
| PE | Psychological Empowerment |
| PBC | Perceived Behavioral Control |
| PLS | Partial Least Squares |
| SDT | Self-Determination Theory |
| SEM | Structural Equation Modeling |
| TPB | Theory of Planned Behavior |
| TRA | Theory of Reasoned Action |
| TSP | Travel Service Providers |
| UGC | User-Generated Content |
| WOM | Word-of-Mouth |
| YHA | Youth Hostels Association |

CHAPTER 1: INTRODUCTION

1.1. Chapter Overview

This chapter first outlines the importance of the thesis and the motivation of the study in the UGC context in the travel industry. This is discussed through the three theories adopted by this research: psychological empowerment (PE), dual-process theory (DPT), and the theory of planned behavior (TPB). The chapter then presents the aims of the thesis and its research questions. An overview of the methodology is given next before the chapter discusses the theoretical and practical contributions of this research. Finally, the structure of this thesis is outlined with a brief description of each chapter.

1.1.1 Chapter Outline

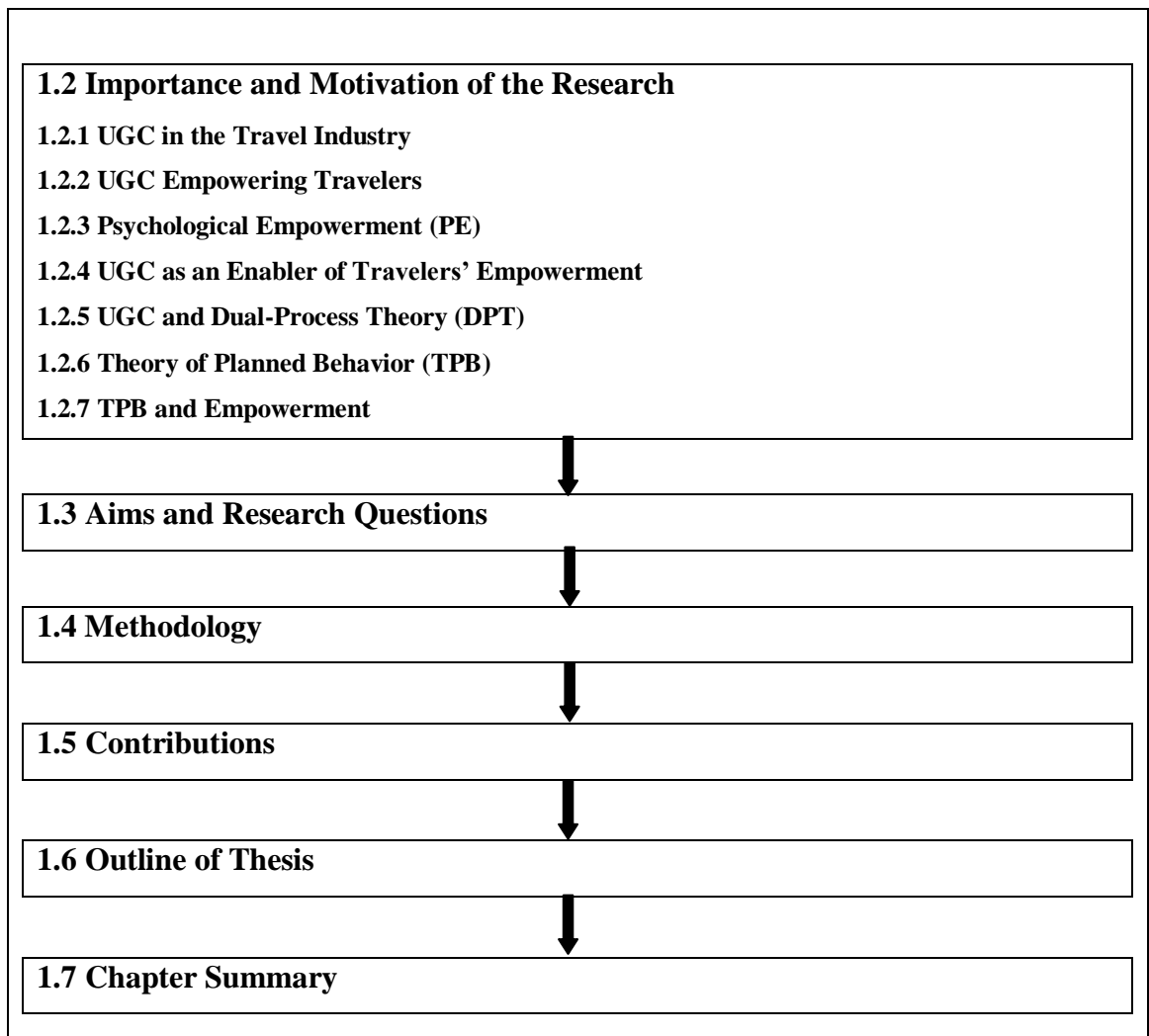


Figure 1. Chapter 1 Outline

1.2 Importance and Motivation for the Research

Travelers often collect various forms of information early in the travel decision-making process (Jeng & Fesenmaier, 2002). Advice from friends, family, and other peer groups helps travelers when planning visits to destinations (Litvin, Goldsmith, & Pan, 2008). Word-of-mouth (WOM) is an example of this advice and it is considered one of the most influential information sources that consumers can turn to when planning travel (Cox, Burgess, Sellito, & Buultjens, 2009). Traditional WOM often consists of face-to-face conversations between consumers about product and service experiences (Kwon & Raab, 2010). WOM contributes to the dissemination of information about products and services. Consumers tend to be more influenced by WOM than by more commercial sources such as travel agents or accommodation operators (Litvin et al., 2008). Thus, WOM plays a major role in consumers' purchasing decisions (Richins & Root-Shaffer, 1988).

With the advent of the Internet, consumers can easily seek destination information from other consumers and the online environment provides the opportunity for consumers to offer their own consumption-related advice by engaging in electronic WOM (Dellarocas, 2003; Hennig-Thurau, Gwinner, Walsh, & Gremler, 2004; Litvin et al., 2008). Electronic WOM is highly effective through the Internet and there is a far greater abundance of electronic WOM than traditional WOM in the offline world (Lee, Park, & Han, 2008). The Internet is an important information source for travel planning (Burgess, Sellito, Cox, & Buultjens, 2009; Cai, Feng, & Breiter, 2004; Choi, Lehto, & O'Leary, 2007; Ip, Lee, & Law, 2011; Pan & Fesenmaier, 2006). Information is essential for travelers, and the Internet allows them to search for travel-related information (air-ticket bookings, online room reservations, etc) (Buhalis & Law, 2008; Litvin et al., 2008; Pan, MacLaurin, & Crotts, 2007; Papathanassis & Knolle, 2011; Rezabakhsh, Bornemann, Hansen, & Schrader, 2006).

Hence, no longer is the distribution of product/service information under the full control of the service provider (i.e., accommodation operators) – now consumers are both users and co-producers of content about goods and services which in turn impacts decision-making (Duan, Gu, & Whinston, 2008). In a study conducted by Sidali, Schulze and

Spiller (2009) to measure the impact of user-generated content (UGC) on the choice of holiday accommodation, they found that more than 80% of the respondents purchased accommodation promoted by UGC. Additionally, some hotels are gaining business over their competitors because of positive UGC. For example, accommodations in Paris, London, and Barcelona that are listed on Booking.com (an online travel agent) and have received positive UGC are able to charge higher prices (Yacouel & Fleischer, 2011).

UGC has increasingly been seen as one of the vital information sources for web users and is having an increasing impact on electronic commerce (Forman, Ghose, & Wiesenfeld, 2008). In fact, UGC is considered as a new form of WOM (Hills & Cairncross, 2011; Litvin et al., 2008; Yoo & Gretzel, 2011). UGC, also known as consumer-generated content (CGC), constitutes the data, information, or media produced by the general public (rather by professionals) on the Internet (Arriga & Levina, 2008; Daugherty, Eastin, & Bright, 2008). UGC is a “new form of word-of-mouth that serve informational needs by offering non-commercial, detailed, experiential and up-to-date information with an access beyond the boundaries of one’s immediate social circle” (Yoo & Gretzel, 2011, p. 610). Examples of such online content are digital video, blogging, podcasting, photography, wikis, social networks, and user-forum posts (Constantinides, 2007; Daugherty et al., 2008). UGC is increasingly available online for a wide range of products and services (Mudambi & Schuff, 2010). For instance, UGC related to travel can be posted on specific travel-related websites (Burgess et al., 2009).

Generally, travelers are using UGC to assist with tourism-related decisions including decisions about accommodations, destinations, and restaurants (Cox et al., 2009; Gretzel & Yoo, 2008). Travelers have direct access to the information they need to make their decision and by doing so are empowered to create and distribute their own content (Sigala, 2011). However, travelers believe more in UGC that is supported by explanations, valid evidences, and strong arguments. When the information is perceived to have valid arguments, readers will develop a positive attitude toward the information (Cheung, Luo, Sia, & Chen, 2009). Low levels of argument quality are less likely to lead to empower traveler, and consequently have less impact on intention to use UGC to make travel plans. Understanding consumers’ interaction and perceptions of UGC is relevant for travel and other business sectors (Papathanassis & Knolle, 2011) since the

content generated by Internet users is empowering online travelers in the planning and buying processes of their trips (Schegg, Liebrich, Scaglione, & Ahmad, 2008).

1.2.1 UGC in the Travel Industry

This research focuses on one type of UGC related to the travel industry: online travel review (OTR). OTR is one of the most prominent forms of travel-related consumer-generated media (O'Connor, 2008; Vermeulen & Seegers, 2009; Yoo & Gretzel, 2011; Yoo & Gretzel, 2008). OTR includes product ratings and short descriptions about trips described by travelers (Yoo & Gretzel, 2011). Ye, Law, Gu and Chen (2011) assert that the travelers' accommodation decisions are strongly influenced by OTR. For example, a study conducted by Gretzel, Yoo and Purifoy (2007) with online travelers discovered that 77.9% thought UGC was extremely or very important for accommodation decisions, which is the most important travel-related decision among all the options (restaurants comes in second place with only 33.6%).

This research focuses on international tourism backpackers visiting New Zealand who have used UGC (specifically OTR) when making travel plans. Information Systems (IS) and tourism studies reveal that backpackers are very active users of communication technologies such as OTR (Hofstaetter & Egger, 2009; Paris, 2010; Zhang & Watts, 2003; Zhang & Watts, 2008). The power of UGC in the travel planning process lies in its role as an online source of WOM (Cox et al., 2009). WOM and recommendations have been a powerful source of information for backpackers when making decisions regarding travel and accommodation (Hampton, 1998; Hills & Cairncross, 2011; Howard, 2005; Murphy, 2001; Murphy, Mascardo, & Benckendorff, 2007; Pearce, Tan, & Schott, 2004; Sorensson, 2008; Tourism New South Wales, 2008; Westerhausen & Macbeth, 2003). The Internet is facilitating the flow of WOM among backpackers before and during their trips (Luo & Li, 2009; Mohsin & Ryan, 2003; Nash, Thyne, & Davies, 2006).

Backpacker use of the Internet for pre-trip information searches has increased considerably (Paris, 2009). Backpacking has increased overseas and has become a common phenomenon worldwide (Sorensson, 2008; Westerhausen & Macbeth, 2003).

The international backpacker market is a significant element of the visitor market mix for New Zealand as well as an important component of its tourism earnings (Newlands, 2004). Indeed, backpacker guest nights in 2006 had the fastest growth, increasing by 107% since 1997 (Ministry of Tourism, 2006). The number of backpacker guest nights totaled 4,543,775 in 2008, which was approximately 13.6% of the total of the guest nights by accommodation type (Ministry of Tourism, 2008). Pearce et al. (2004) found that a larger proportion of international guests stay in the backpacker hostels in New Zealand.

Increasingly consumers are reading and sharing travel-related content online posted by their peers rather than reading comments from travel service providers (Gretzel et al., 2007). UGC such as OTR written by travelers on virtual communities is readily available and is frequently used to help in making travel-related decisions (Gretzel & Yoo, 2008). OTR is one of the most prominent forms of travel-related consumer-generated media (O'Connor, 2008; Vermeulen & Seegers, 2009; Yoo & Gretzel, 2011; Yoo & Gretzel, 2008). OTR can pass on a strong sense of a travel service (such as accommodations) to travelers (Ye et al., 2011). Such reviews are playing an increasingly important role in the consumer decision-making process (Litvin et al., 2008). For instance, a web-based survey carried out by Gretzel & Yoo (2008) showed that 97.7% of Internet users who travel said they read other travelers' reviews during the process of planning a trip; 84% of the online travel readers in another survey affirmed that reviews had a significant influence on their purchase decisions (comScore, 2007), and 61% of travelers consult online search engines before booking trips (Conrady, 2007). According to Hock (2007), the Internet is being used by the travelers in more than 75% of all journeys. The OTR is therefore having a significant impact on travel-related sales (Ye et al., 2011).

O'Mahony (2008) highlights that in November 2007, the *Sunday Times* Top 100 travel sites list was dominated by travel reviews and blogs, where web users can share their experiences and book directly. Examples of websites that help travelers to interact and offer peer to peer advice on the Internet are TripAdvisor.com, Booking.com, IgoUgo.com, WAYN.com, Virtualtourist.com, Trekshare.com, and LonelyPlanet.com (Chung & Buhalis, 2008; Schmallegger & Carson, 2008). Approximately 45 million travelers had planned trips through TripAdvisor by April 2011 (HotelMarketing,

2011b). TripAdvisor is the largest website for supporting people in the pre-travel phase (researching and bookings) as well as in the post-travel phase, for example, sharing experiences, reviewing hotels and destinations, posting photos and videos from their trips (Chung & Buhalis, 2008; Litvin et al., 2008). Indeed, UGC enables travelers to evaluate trip alternatives during decision-making processes on the Internet (O'Connor, 2008). UGC is therefore having a considerable influence on travelers and impacting the competitive reality of the tourism sector as a whole (Papathanassis & Knolle, 2011). Thus, hospitality and tourism organizations cannot ignore the role that UGC is playing in the trip planning behavior of travelers due to the rising popularity of this tool (Cox et al., 2009). A good understanding of how travelers' decision-making processes are being impacted by UGC can help the hospitality and tourism organizations respond appropriately.

UGC is impacting not only on the behavior and decision-making of travelers, but also on the business models that travel service providers need to develop or adapt in order to conduct their business online (Ye et al., 2011). UGC is therefore changing the structure of travel information, the accessibility of travel information, and travelers' knowledge and perception of many travel products (Litvin et al., 2008). Therefore, if a travel service provider makes available more resources to improve the valence of its UGC (i.e., OTR), it is likely to receive more bookings, and improve its service and gains a competitive edge (Hills & Cairncross, 2011; Ye et al., 2011). Hospitality and tourism marketers need to understand that an increasing number of travelers are making their purchases online, and that this trend is strongly influenced by UGC (Litvin et al., 2008; Ye et al., 2011).

Travel service providers therefore need to respond to the impact that UGC is having on the market (Haussman, 2005). Starkov and Price (2007) recommend that travel service providers should keep a close eye on UGC activities such as blogs, and implement customer reviews and experience sharing on their websites as part of their Internet marketing strategy. For example, Sheraton Hotels and Resorts offers guests and potential guests the opportunity to read and post customer reviews, making UGC the central focus of its homepage (Buhler, 2007). The American Hotel & Lodging Association (AH&LA) developed a new Web 2.0 resource to model the current consumer online experience in order to transmit and share opinions among its members

(Soklow, 2008). Koumelis (2008) also suggests that tourism organizations and destinations need to adapt to the UGC revolution in order to meet customers' expectations. Destination management organizations are also adding UGC components to their websites (Beirne, 2007).

Litvin et al. (2008) suggest that travel service providers should take the lead in understanding and utilizing the new technologies because the travel industry is getting more and more competitive. If travel service providers use OTR properly (e.g., including an UGC facility to their websites, which allows consumers to post their opinion and receive feedback from the service provider about the issue presented), this will help them improve their services and gain a competitive edge (Hills & Cairncross, 2011; Ye et al., 2011).

Although there is a plethora of research in the IS and marketing literatures related to the influence of UGC on decision-making, this has focused mostly on low-involvement products such as books, CDs, and movies (Chevalier & Mayzlin, 2006b; Chintagunta, Gopinath, & Venkataraman, 2010; Dellarocas, Zhang, & Awad, 2007; Duan et al., 2008; Hu, Liu, & Zhang, 2008; Koh, Hua, & Clemons, 2010; Mudambi & Schuff, 2010). Relatively little attention has been paid to high-involvement products such as travel planning (Gu, Park, & Konana, 2011). UGC plays a critical role in travelers' decision-making due to the intangible nature of tourism services such as travel plans (Ip et al., 2011). Little is known about the role that UGC plays in the users' travel behavior and decision-making processes (Cox et al., 2009; Vermeulen & Seegers, 2009).

1.2.2 UGC Empowering Travelers

Although previous studies have shown that UGC can influence the decisions of travelers during travel planning (Bronner & de Hoog, 2011; Cox et al., 2009; Gretzel & Yoo, 2008; Litvin et al., 2008; Parra-López, Bulchand-Gidumal, Gutiérrez-Tano, & Díaz-Armas, 2011; Vermeulen & Seegers, 2009; Xiang & Gretzel, 2010; Yacouel & Fleischer, 2011), there is limited insight into how UGC empowers travelers to make their own decisions. Yet it is clear from the literature that the content generated by

Internet users is empowering online travelers in the planning and choosing of their trips (Schegg et al., 2008). The role of UGC in supporting empowerment in the travel industry (e.g., how UGC empowers consumers to make their own decision about service consumption) is therefore a topic that is highly important and relevant to IS, marketing and tourism, and one which has not yet been thoroughly explored.

Consumers that use UGC do not wholly depend on travel service providers to publish the information they look for, but are relying more on information provided by their own peers (O'Connor, 2008). Thus, UGC has contributed to an increasing level of consumer empowerment (Constantinides, 2007). Empowerment is seen as one of the most important themes in IS literature, but so far IT technologies and tools have been rarely discussed in the context of empowerment literature, especially relating to consumer empowerment (Füller, Mühlbacher, Matzler, & Jawecki, 2009). For instance, a prior study proposed a construct of empowerment to describe consumers' perceived influence on product design and decision-making (Füller et al., 2009). The authors investigated how consumers participating in Internet-based co-creation activities during new product development (NPD) perceive their engagement and explored the antecedents and consequences of consumers' perceived empowerment during virtual co-creation. Doll and Dell (2010) developed a technology empowerment model for the post-adoptive context of engineering work, where empowerment is affected by software capabilities and peer support, which in turn motivates engineering problem solving/decision support efforts and work process innovations.

1.2.3 Psychological Empowerment (PE)

It is generally accepted that empowerment has two meanings in the literature. Some studies have used the term 'empowerment' to refer to authority delegation and decentralisation of decision-making power (Burker, 1986), and others have explored empowerment from a motivational perspective (Thomas & Velthouse, 1990). For this study, empowerment is defined as a motivational construct and is viewed as a psychologically enabling process (Conger & Kanungo, 1988). Thus, to be empowered in this sense is to be psychologically enabled. Sehgal (2007) states that psychological empowerment (PE) is the most researched type of empowerment and is usually referred

to simply as empowerment by many researchers. Spreitzer (1995b) provided the first validated PE measurement model using four dimensions: meaning (value of a task goal or purpose), competence (self-efficacy), self-determination (individual's autonomy in having choice), and impact (influence on task outcomes). This model has been validated across multiple sectors and organizations and has been found to be stable over time and reliably measured (Liden, Wayne, & Sparrowe, 2000).

Studies on PE mostly focus on employee empowerment in organizations (Menon, 2001). For instance, in the IS literature Doll and Deng (2010) proposed a technology empowerment model that adapts the concept of PE to the context of engineering work. Also, Ng and Kim (2009) examined IS infusion using employee empowerment as the authentic motivation based on PE.

PE focusing on the consumer remains relatively unexplored. There are a few studies on hospital patients' PE (Aujoulat, d'Hoore, & Deccache, 2007), and a few on empowerment in the travel and hospitality industry (Chiang & Jang, 2008; George & Hancer, 2003; Han & Li, 2006; Kim & George, 2005; Sparrowe, 1994). Also, Leung (2009) studied what motivates users to create content online and how the gratifications of UGC, PE and civic engagement affect Internet content-generation activities. Despite the increasing influence of UGC within the travel sector (Daugherty et al., 2008), no other study has explored the role of UGC as an enabler of travelers' PE in the travel industry.

1.2.4 UGC as an Enabler of Travelers' Empowerment

Researchers have also examined different antecedents (i.e. enablers) in relation to empowerment such as organizational culture and leader-member exchange (Sparrowe, 1994); job characteristics (Liden et al., 2000); support and software capabilities (Doll & Deng, 2010); role ambiguity, span of control, sociopolitical support, access to resources, participative unit climate, and access to information (Spreitzer, 1996); organizational culture, role of ambiguity, access to resources, access to information, and sociopolitical support (Spreitzer, 1995a); locus of control, self-esteem, rewards, and access to information (Spreitzer, 1995b).

Of interest to this study is how the “information” generated by travelers (i.e., UGC) is empowering other travelers. Several studies have raised the issue of empowerment as a potential outcome of information use (Barak, Boniel-Nissim, & Suler, 2008; Edwards, Davies, & Edwards, 2009; Harrison, Waite, & Hunter, 2006; Pires, Stanton, & Rita, 2006).

Spreitzer (1996) states that people who have a high degree of access to information tend to report a higher level of empowerment than those who have less access to information. Spreitzer (1995a; 1995b; 1996) has examined access to information as an antecedent of PE in her works. Sharing information is considered a necessary precondition to empowerment (Pfeffer, 1994). According to Kanter (1986, p. 5), organizations in order to be empowering “must make more information more available to more people at more levels through more devices.” Access to all the necessary information is critical for empowerment (Psoinos, Kern, & Smithson, 2000).

Consumers feel empowered when they can access information and take independent voluntary action in their own behalf (Freedman, 2007). According to Berman & Phillips (2001, p. 183), “the informational aspect of empowerment concerns the extent to which information contributes to enabling people, as citizens, to develop their full potential”. Since information is the lifeblood of travel, UGC is having a significant impact on this industry whereby travelers have direct access to the information they need to make their travel decision and by doing so are empowered to create and distribute their own content (Sigala, 2011).

1.2.5 UGC and Dual-Process Theory (DPT)

This research delved into the current literature on information influence and found that Dual-Process Theories (DPT) provide comprehensive discussions on how individuals process information (and its relevant factors) to make decisions (Eagly & Chaiken, 1993). For instance, most of previous DPT-based research used argument quality and source credibility as salient factors. Researchers in the IS field have begun to apply DPT to understand how individuals’ information processing behavior impacts their decision

outcomes (Cheung et al., 2009; Sussman & Siegal, 2003; Zhang & Watts, 2003; Zhang & Watts, 2008) and behavioral intention after they assess the validity of review messages on online review platforms (Zhang, Lee, & Zhao, 2010). Thus, DPT can help identify which informational factors are relevant to empowerment and how they relate to each other, and how they relate to empowerment.

According to Deutsch and Gerard's DPT (1955), there are two types of influence on the persuasiveness of received messages: informational social influence (ISI) and normative social influence (NSI). An ISI is defined "as an influence to accept the information obtained from another as evidence about reality" (Deutsch & Gerard, 1955, p. 629), whereas NSI refers to other people's opinions about the received information and how these opinions would affect others' choice preferences (Kaplan & Miller, 1987). When travelers process the information in the UGC environment, they consider not just traditional informational factors (e.g., argument quality, source credibility, information framing, and information consistency) as important criteria to make travel plans, but also use the normative cues (such as recommendation consistency and recommendation rating) that are now accessed in an on-line context (Cheung et al., 2009). The DPT approach is useful to explain communication effectiveness when group opinions/discussions are present (Briggs, Burford, De-Angeli, & Lynch, 2002; Sia, Tan, & Wei, 2002). Since UGC is considered an open discussion that involves numerous participants (Cheung et al., 2009) and has several distinctive informational factors (e.g. source credibility and measurability) (Chatterjee, 2001), DPT is suitable for applying in UGC studies.

DPT is therefore used in this study to better understand how and to what extent both types of social influence: informational (argument quality, source credibility, information framing, and information consistency) and normative (recommendation consistency and recommendation rating), impact travelers' perceptions of PE when using UGC to make travel plans.

Recent studies on UGC have identified that the source credibility and travelers' review rating should be considered when evaluating a review's usefulness (Gretzel et al., 2007). Drawing on Deutsch and Gerard's (1955) DPT, previous research has showed that the informational determinants (i.e., argument strength, source credibility, and

confirmation of prior belief) and normative determinants (i.e., recommendation consistency and recommendation rating) can influence perceived electronic WOM review credibility in China (Cheung et al., 2009). Another study found out that people read online product recommendations mainly to make better buying decisions (Hennig-Thurau et al., 2004). However, the informational determinants (argument quality, source credibility, information framing, and information consistency) and normative determinants (recommendation consistency and recommendation rating) from DPT have not been examined as antecedents of empowerment. This study suggests that the determinants of DPT as antecedents of PE can help explain how travelers are empowered by UGC. This study will therefore fill this knowledge gap in the context of UGC, since no other study has explored the role of UGC as an enabler of travelers' PE in the travel industry.

This research not only investigates how travelers are empowered by UGC, but also how this in turn influences their attitude and behavioral intention in making travel plans. To assess this impact, this study will utilize the theory of planned behavior (TPB) which is one of the most comprehensive intention-based models in the literature explaining the most variance in behavioral intention (Taylor & Todd, 1995b).

1.2.6 Theory of Planned Behavior (TPB)

According to Ajzen (1991) the TPB is a theory that considers social behavior as a combined function of intention and perceived behavioral control (PBC). Intentions are motivational factors that indicate how hard people are willing to try or how much effort they would exert to perform the behavior (Ajzen, 1991). TPB has three independent determinants of intention (Ajzen, 1991): attitude toward behavior, subjective norm (the perceived social pressure to perform or not to perform the behavior), and PBC (the perceived ease or difficulty of performing the behavior).

There are some studies on online consumer behavior and UGC in the marketing, IS, and tourism literatures utilizing the TPB framework (Dellarocas et al., 2007; Park, Lee, & Han, 2007; Parra-López et al., 2011; Ye et al., 2011). According to George (2004), more and more studies of online consumer behavior are being done within the TPB

framework. This research contributes to the further development of a robust theory of online consumer behavior by confirming which dimensions are most important in the UGC context in the travel industry. Hence, this study suggests that attitude, subjective norms, and PBC influence travelers' intention to use UGC when making travel plans.

The antecedents of attitude, subjective norm and PBC are a set of salient behavioral, normative and control beliefs, respectively (Ajzen, 1991). Behavioral beliefs are assessments that influence attitudes toward the behavior, which is the probability of the behavior's consequences. Each behavioral belief links a given behavior to a certain outcome or to some other attitude, for example the cost incurred in performing the behavior (Armitage & Conner, 2001).

1.2.7 TPB and Empowerment

Several studies have provided evidence that constructs from self-determination theory (SDT) can be integrated into social cognitive theories of intentional behavior such as TPB (Hagger & Chatzisarantis, 2009; Hagger, Chatzisarantis, Culverhouse, & Biddle, 2003; Ntoumanis, 2001; Sarrazin, Vallerand, Guillet, Pelletier, & Cury, 2002; Standage, Duda, & Ntoumanis, 2003; Wilson, Rodgers, Blanchard, & Gessell, 2003). SDT identifies three universal and psychological needs for humans: autonomy, competency, and relatedness (Deci & Ryan, 1985).

SDT and empowerment can be viewed as related theories/topics. According to Bono and Judge (2003), there is a conceptual overlap between PE (Thomas & Velthouse, 1990) and SDT (Deci & Ryan, 1985, 2000). PE has direct links to SDT (Bono & Judge, 2003), as autonomy (self-determination) and competence are dimensions of empowerment, and both theories deal with intrinsic task motivation (Thomas & Velthouse, 1990).

Being a generic model of human behavior, the TPB does not identify the specific beliefs that are relevant to a particular context or behavior (Bhattacharjee, 2000; George, 2004). However, based on previous research integrating the TPB and SDT/Empowerment (Hagger & Chatzisarantis, 2009), an underlying premise of this study is that beliefs

about PE inform traveler 'attitude' towards using UGC when making travel plans; these beliefs in turn are influenced by the ISI and NSI of DPT.

According to Ajzen (2008), attitude is considered one of the most powerful factors that determines behavior. Across different meta-analyses, Ajzen shows that the prediction of intentions from attitudes, correlating up to 0.60, while the prediction of intention from perceived behavioral control is up to 0.46, and from subjective norm is up to 0.42. Since attitude accounts for the greater proportion of the variance, there is a need to further explore factors that can influence attitude in online consumer behavior. Further, according to Pavlou and Fygenson (2006), there is only a limited and fragmented understanding of online consumer behavior, making this study a worthwhile undertaking.

Some researchers have already demonstrated the relationship between empowerment and attitude (Deci & Ryan, 2000). A model proposed by Gagné (2009) uses the TPB and empowerment dimensions to predict intentions to share knowledge and actual behavior in organizations. Gagné suggests that psychological needs (i.e., autonomy, competence, and relatedness) predicts attitude toward sharing knowledge. In another knowledge-sharing paper, Bock and Kim (2002) discovered that expectations to increase competence and relatedness led to more positive attitudes toward sharing knowledge. Based on the empowerment concepts (Deci & Ryan, 2000), Malhotra, Galleta and Kirsch (2008) analyzed how endogenous psychological feelings of autonomy, freedom, conflict, and external pressure could explain user intentions. The results indicated that perceived autonomy to use a web-based educational platform was related to attitude towards it and greater intentions to use it.

Although previous research has established links between empowerment and TPB within a given context (Hagger & Chatzisarantis, 2009; Hagger, Chatzisarantis, & Biddle, 2002; Hagger, Chatzisarantis, & Harris, 2006; McLachlan & Hagger, 2011), no study has investigated the influence of empowerment on attitude towards using UGC in the travel industry. Also, some studies have called for more research on examining other consequences to better explain PE (Chiang & Jang, 2008; Spreitzer, 1995b). This study therefore suggests that travelers' perceptions of PE influence their 'attitude' towards

using UGC when making travel plans, and this in turn influences their behavioral intention to use UGC when making travel plans.

In tourism marketing and planning, service providers need to understand which factors influence individuals' travel decisions, how attitudes are formed, and how various reference groups affect travel behaviors (Moutinho, 1987). Studies have used behavioral theories to investigate how tourist motivations help develop travelers' attitudes and how these attitudes lead to behavioral intentions in choosing a travel destination (Lam & Hsu, 2004, 2006; March & Woodside, 2005). Yoo and Gretzel (2008) state that not enough is known about the impact of UGC on travel decision making. This study will look at how travelers are empowered by UGC in their travel decision making.

Research on destination choice intention has also been conducted based on TPB (Lam & Hsu, 2004, 2006; Sparks & Pan, 2009). However, there is still a scarcity of more comprehensive studies on consumers' online purchase behaviors in the hotel industry (Kim, Ma, & Kim, 2006). Little is known about what motivates travelers to follow the advice obtained in an online travel community (Casaló, Flavián, & Guinalíu, 2011), and little is known about the role that UGC has in the users' travel behavior and decision-making processes (Cox et al., 2009; Vermeulen & Seegers, 2009). This study suggests that empowerment is a key motivator of decision-making. However, no other study has looked at the role of empowerment in the UGC context in the travel industry. Given its importance in online consumer behavior in making travel plans, this study therefore contributes to the IS, marketing and tourism literatures.

1.3 Aims and Research Questions

The Internet is an important information source for travel planning (Cai et al., 2004; Choi et al., 2007; Ip et al., 2011; Pan & Fesenmaier, 2006). Information is essential for travelers, and the Internet allows them to search for travel-related information (air-ticket bookings, online room reservations, etc) (Buhalis & Law, 2008; Pan et al., 2007; Rezabakhsh et al., 2006).

UGC such as OTR written by travelers in virtual communities is increasingly available and frequently used to transmit travel-related decisions (Gretzel & Yoo, 2008).

Travelers have direct access to the information they need to make their decision and by doing so are empowered to create and distribute their own content (Sigala, 2011). Importantly, the content generated by Internet users is empowering online travelers in the planning and buying processes of their trips (Schegg et al., 2008). Thus, UGC enables travelers to evaluate travel alternatives during decision-making processes on the Internet (O'Connor, 2008).

Little research could be found investigating how UGC empowers travelers and influences their attitude and behavioral intentions when making travel plans. Therefore, this study provides a mechanism for understanding how UGC empowers online consumer when making travel plans.

This thesis aims to identify and evaluate the factors that empower travelers when using UGC to make their travel decisions. To address this aim the study will investigate, in the context of travelers' use of UGC, (1) the role of informational social influence and normative social influence and their impact on perceived empowerment when using UGC to help make their travel plan decisions; (2) the extent to which perceived empowerment impacts attitude towards using UGC when making travel plans; and (3) the impact of attitude, subjective norms, and PBC on intention to use UGC when making travel plans.

The following research questions are examined in relation to the research aims mentioned above.

Research Question 1: To what extent do informational social influence and normative social influence impact travelers' perceptions of psychological empowerment when using UGC to make travel plans?

Research Question 2: To what extent do travelers' perceptions of psychological empowerment influence their attitude toward using UGC when making travel plans?

Research Question 3: To what extent do attitude, subjective norms, and perceived behavioral control influence travelers' intention to use UGC when making travel plans?

This study suggests the dimensions of PE (Spreitzer, 1995b) influence online consumer behavior in the UGC context, which in this study is modeled using the TPB (Ajzen, 1991). TPB has three constructs: attitude, subjective norm, and PBC, which in turn determine behavioral intention. Four dimensions are proposed to form the concept of PE: competence, self-determination, impact, and meaning (Spreitzer, 1995b). The roles of informational social influence (argument quality, source credibility, information framing, and information consistency) and normative social influence (recommendation consistency and recommendation rating) proposed by Deutsch and Gerard's (1955) DPT are examined to determine the extent to which these two types of influence affect the PE that travelers experience when using UGC to help them make their travel plans.

1.4 Methodology

This study empirically tests a research model that is aimed at identifying and evaluating the factors that empower travelers when making their travel decisions. The technique chosen to empirically test the research model was survey research, instrumented via a self-completion questionnaire. This survey method was adopted to gather field information from international backpackers staying in hostels in Auckland, New Zealand. Nine backpacker hostels participated to this study: Auckland YHA (Youth Hostels Association), Auckland Central Backpackers, Queen Street Backpackers, Nomads Auckland Backpackers, Choice Plaza Backpackers, Base Backpackers Auckland, City Travellers Auckland Hostel, YWCA (Young Women's Christian Association), and Cozy Kiwi Backpacker.

The survey asked backpackers about their views on OTR they had read from websites (e.g., HostelWorld.com, HostelBookers.com, TripAdvisor.com, Booking.com, etc) when making their travel plans. The survey asked participants about their perceptions of OTR and its impact on their travel planning. Participants were asked to think back to when they were planning their travel and indicate how the information provided by other travelers (i.e., OTR) influenced their actual travel plans.

The research model was tested using partial least squares (PLS). This study follows the widely accepted structure in reporting the results of PLS analysis proposed by Chin

(2010b). Specifically, PLS-Graph Version 3.0 Build 1130 (Chin, 2001) was employed to examine the proposed hypotheses. The PLS analysis is presented in terms of the measurement model and then the structural model is discussed. The testing of the measurement model includes internal consistency reliability, and the convergent and discriminant validity of the instrument items. The structural model and hypotheses are then assessed by evaluating the R^2 values (explained variances) and the path coefficients (i.e., loadings and significance). Path coefficients represent the relationship between dependent and independent constructs.

PLS is able to specify the relationships among the principal construct and their underlying items, resulting in an analysis that indicates whether the hypothesized relationships at the theoretical level are empirically acceptable, as well as how well the measures relate to each construct (Chin, 1998a).

The findings of the final survey are presented in accordance with the underlying research questions. These results are then discussed and the findings compared with previous research including that which is related to DPT, PE, and TPB. The main academic contributions and contributions to practice are then presented.

1.5 Contributions

This thesis expects to make a number of contributions to the literature, and practice, as well as suggestions for future research. This study contributes to a more comprehensive understanding of how UGC empowers online consumers when making travel plans. The theoretical contribution lies in demonstrating the use of three theories (i.e., DPT, PE, and TPB) to model and investigate the impact of OTR on consumer behavior. A main contribution is expected to be the specification, justification, and empirical validation of a set of interrelationships between important factors that tend to be associated with consumer behavior in making travel plans in UGC context.

This research provides a mechanism for developing a better understanding of the types of social influence (i.e. informational and normative) in the UGC context that can influence and help travelers to make travel plans, and their feelings of psychological enabling (i.e., perceived empowerment) when making their travel decisions. This is the first research to bring together social influence derived from DPT and PE to explain this form of consumer enabling.

This study suggests that argument quality, source credibility, information framing, and information consistency share a common variance labeled herein as “Informational Social Influence” in the UGC context in the travel industry. The IS literature often deals with argument quality, source credibility, information framing, and information consistency dimensions as separate phenomena rather than as facets of a single informational social influence gestalt (Cheung et al., 2009; Zhang et al., 2010; Zhang & Watts, 2003; Zhang & Watts, 2008). Thus, the second-order formative measurement model of informational social influence proposed is formed by argument quality, source credibility, information framing, and information consistency.

This research suggests that recommendation consistency and recommendation rating share a common variance labeled herein as “Normative Social Influence” in the UGC context in the travel industry. The IS literature often deals with recommendation consistency and recommendation rating dimensions as separate phenomena rather than as facets of a single normative social influence gestalt (Chen, Wu, & Yoon, 2004;

Cheung et al., 2009; Duan et al., 2008). Thus, the second-order formative measurement model of normative social influence proposed is formed by recommendation consistency and recommendation rating.

Existing IS research on PE is largely concentrated on employee empowerment in organizations (e.g., Doll & Deng, 2010; Ng & Kim, 2009). PE focusing on “consumer” remains relatively unexplored in IS literature. This study explores the role of UGC as an enabler of PE and provides explanations for how consumers (i.e., travelers) feel empowered when making travel plans, contributing further to the literature and practice. Thus, the research model is expected to provide a mechanism for understanding the impacts of UGC on consumer empowerment.

This study is a pioneering attempt to examine how the dimensions of PE influence behavioral beliefs, as specified in the TPB, within the UGC context in the travel industry. It therefore contributes to the extension of TPB. Integrating PE into TPB essentially links a new variable with existing TPB constructs, providing a substantial foundation for the fundamental role of empowerment in UGC context (i.e., consumer decision-making and more specifically in the travel industry related to travel planning). Therefore, another contribution of this study is expected to be the explication the role of empowerment through the integration of it with the well-accepted TPB, in order to reveal its effect on online consumer behavior.

This research is also expected to contribute to discovering which dimensions of TPB influence the use of UGC when travelers make travel plans. The research is aimed at getting a better understand of how attitude, subjective norm, PBC, and psychological empowerment, work together to determine online consumer behavior. Since more and more studies of Internet consumer behavior are done within the TPB framework (George, 2004), this research contributes to the further development of a robust theory of Internet consumer behavior confirming which dimensions are most important. Also, this study follows Pavlou and Fygenon (2006) and contributes to the emerging role of IS as a reference discipline for online consumer behavior.

In terms of implications for practice, the research model provides a mechanism for understanding the impacts of UGC on consumer empowerment, which in turn on the

influence of UGC on accommodation choices. This could then provide important guidance to service providers in the accommodation/travel sectors. For example, the model could help them understand how the characteristics of UGC (e.g. argument quality, source credibility, recommendation rating) and use of UGC sites ultimately empower consumers to make decisions. For example, low levels of argument quality will be less likely to lead to consumer empowerment and consequently will have less impact on intentions to make travel plan. Web designers could develop a system to help consumers report any UGC with low level of argument quality or inappropriate content. This system could also assist consumers in recognizing the source credibility of the UGC. For example, the system could initiate reward schemes to recognize reputable contributors who consistently post high-quality UGC (Cheung et al., 2009). Also, travel service providers could provide guidelines to readers on how to contribute good UGC in terms of the service provided by accommodation. This will improve the argument quality of the UGC. This study can therefore be valuable to web researchers and travel practitioners interested in (re)designing their websites. The rising importance of UGC has enormous implications for web design and for travel service providers (Yoo & Gretzel, 2008). Businesses (e.g., travel service providers) need to consider more carefully how they design the UGC sections of their websites (Awad & Ragowsky, 2008).

This study can potentially provide a better understanding of travelers' behavior when using UGC to make travel plans. From the practical perspective, travel service providers and other decision-makers in the travel industry need information about how travelers act and react. Thus, by knowing travelers and their behaviors, travel service providers would be able to acquire a better understanding of their customers and build a stronger relationship with them.

Understanding consumers' interaction and perceptions of UGC is relevant for travel and other business sectors (Papathanassis & Knolle, 2011). For instance, travel service providers can have their image damaged by negative UGC (Hills & Cairncross, 2011). It is important to monitor UGC regularly in order to ensure that any negative UGC is responded by the service providers. In fact, a good suggestion for the service providers would be to include an UGC facility on their websites which allows consumers to post their opinion and receive feedback from the service providers about the issue presented.

UGC can affect brand perceptions and customer relations (Papathanassis & Knolle, 2011). A survey undertaken by RateGain and Revenue by Design to track ongoing adoption of social media by hotels discovered that over 90% of hotels see a need to constantly monitor UGC, but only 13% have invested in a brand reputation reporting platform (HotelMarketing, 2011a). Thus, it is important to manage UGC by identifying relevant conversations and consequently taking care of the service provider brand reputation. Organizations can utilize UGC to improve their understanding of the market's reaction to their offering (Dellarocas, 2003).

Lastly, this study is expected to show the importance of UGC in empowering backpackers when making travel plans. In New Zealand, the backpacker industry is an important contributor to tourism earnings and job creation (Newlands, 2004). Building an understanding of convergence of technology and backpacking is one of the top items on a recent agenda developed by tourism researchers and business leaders (Pearce, Murphy, Brymer, 2009). From a practical standpoint, these findings have the potential to help the competitiveness of the accommodation sector, which is a cornerstone of broader tourism development, and supports the growth of tourism in New Zealand.

1.6. Outline of Thesis

This thesis is organized into seven chapters, as shown in Figure 2 below. Chapter 1 begins with the importance of the research and the motivation of the study. The aims and research questions of the study are then presented, followed by an overview of the methodology. The expected theoretical and practical contributions of the research are then discussed.

In Chapter 2, a literature relating to the underlying theories of DPT, PE, and TPB is conducted, as well as a survey of current research about UGC and its impacts on decision-making, and on empowering travelers' decisions. This study's three research questions are derived at the end of chapter.

The aim of Chapter 3 is to develop a research model based on three research questions set out in the previous chapter. DPT, PE, and TPB are the theories selected to design the theoretical foundation of the research model. A set of six hypotheses is developed in relation to the research questions.

In Chapter 4, the research design is outlined in three parts: philosophical worldview, strategy to inquiry, and specific methods of research. A detailed description of the survey procedures is provided. The measurement issues are identified and PLS is introduced as the structural equation modeling technique used to analyze the data. The approach used for instrument design is presented, and the preliminary details of the final survey are reported.

PLS is used in Chapter 5 to investigate how UGC empowers travelers and influences their attitude and behavioral intentions when making travel plans. A number of observations are made from the results of the structural model analysis. Chapter 6 discusses the findings from Chapter 5. All three research questions are answered and the six hypotheses are discussed.

A summary of each of the preceding six chapters is provided in Chapter 7. The main academic contributions and contributions to practice are presented. The chapter also

highlights the limitations of this research, and then discusses and provides guidelines for future work. Finally, the concluding remarks of the thesis are presented.

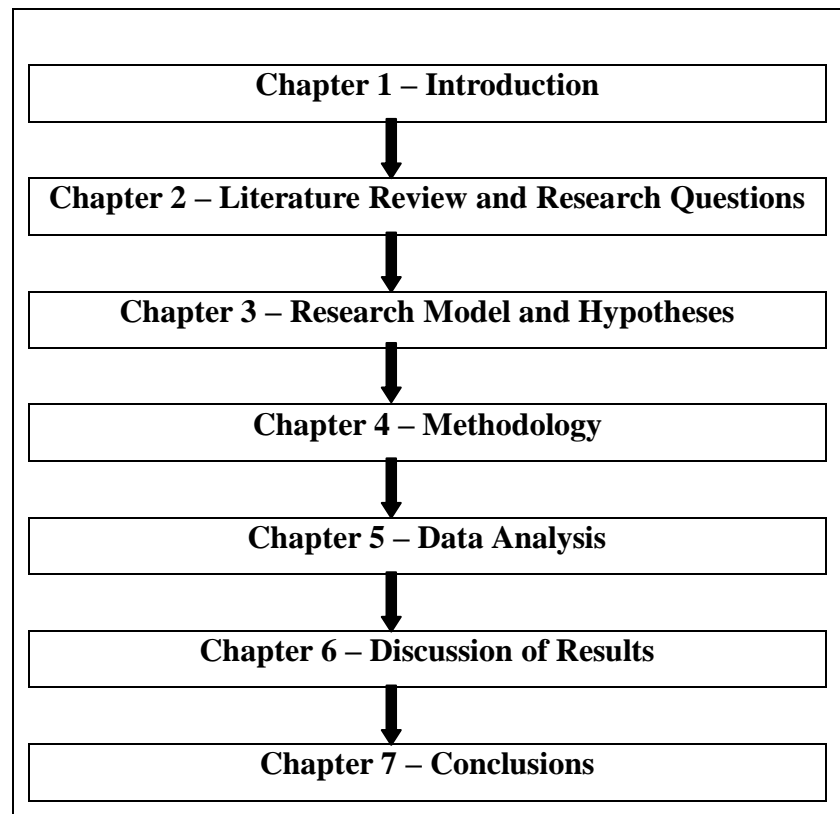


Figure 2. Thesis Outline

1.7. Chapter Summary

This chapter laid the foundations for this study. First, it introduced the importance and motivation of the research. The aims and research questions of the research were then presented, and the research methodology was briefly described. The potential contributions to the literature and implications for practice were outlined, and then the organization of the thesis was described. The following chapter reviews the existing literature in order to develop a clear understanding of how UGC empowers travelers and influences their attitude and behavioral intention when making travel plans.

CHAPTER 2: LITERATURE REVIEW AND RESEARCH QUESTIONS

2.1 Chapter Overview

The purpose of this chapter is to critically review the existing literature in order to develop a clear understanding of how user-generated content (UGC) empowers travelers and influences their attitude and behavioral intention when making travel plans. The roles of informational social influence (ISI) and normative social influence (NSI) proposed by Deutsch and Gerard's (1955) dual-process theory (DPT) are examined to determine the extent to which these two types of influence affect travelers' perceptions of psychological empowerment (PE) (Spreitzer, 1995b) when using UGC to make travel plans. This study applies the theory of planned behavior (TPB) (Ajzen, 1991) to suggests that the dimensions of PE influence online consumer behavior in the UGC context.

This chapter is organized as follows: first, it provides an overview of UGC, its definitions, the existing research on how UGC influences decision-making, and the important knowledge gaps in this area. The chapter continues with discussions on UGC empowering travelers to make their own decisions. The chapter then reviews the three theories used in this research (i.e., PE, DPT, and TBP) and their key constructs, surveys what has been demonstrated by each theory, and identifies the important knowledge gaps relating to each. Three research questions are then derived from these knowledge gaps.

2.1.1 Chapter Outline

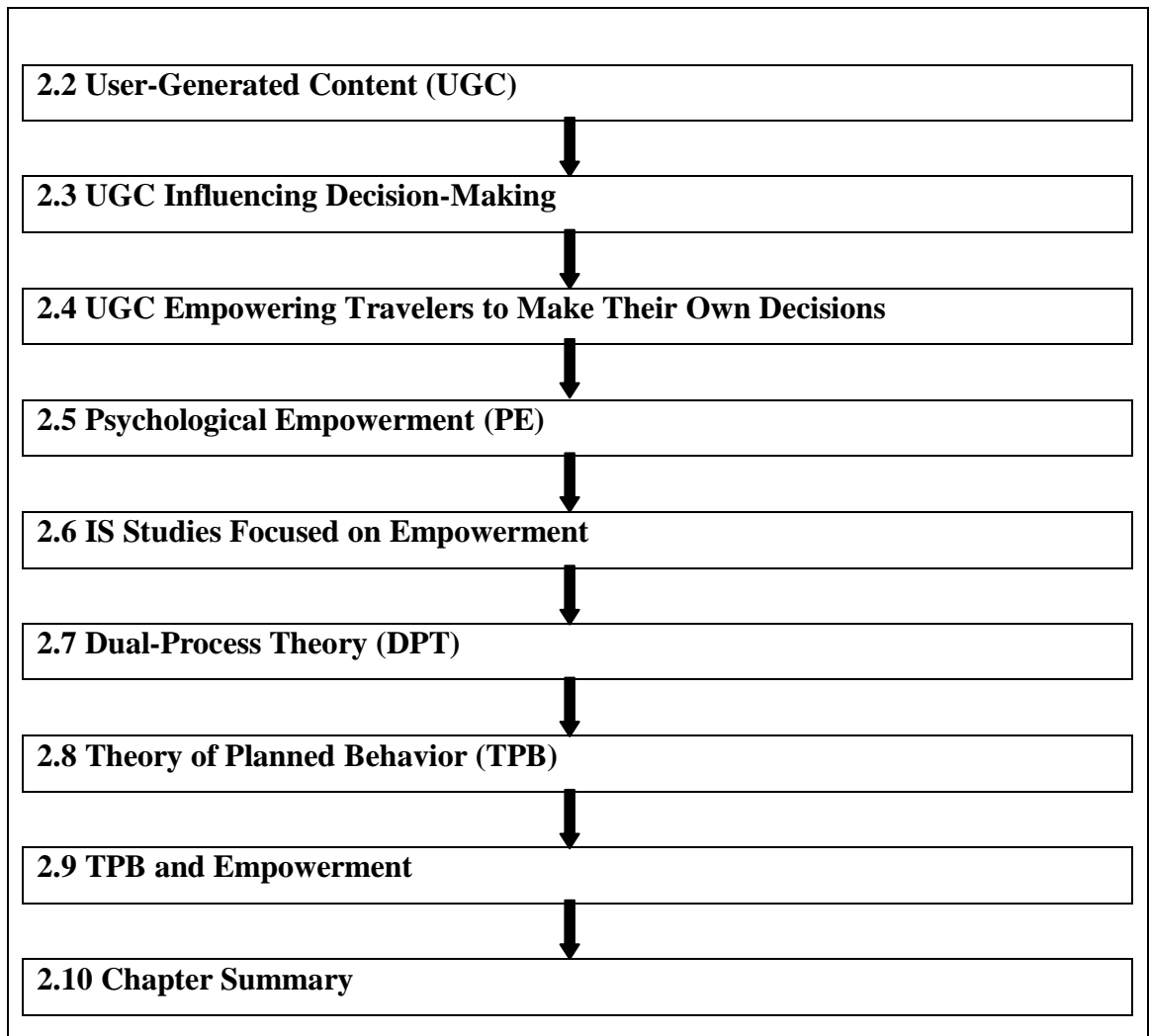


Figure 3. Chapter 2 Outline

2.2 User-Generated Content (UGC)

Word-of-mouth (WOM) may play an important role when consumers need information to help them decide whether to purchase a product/service they do not know well (Liu, 2006). Westbrook (1987, p. 261) defines WOM as “informal communications directed at other consumers about the ownership, usage, or characteristics of particular goods and services and/or their sellers.” The way in which information is communicated has profoundly changed through the use of information technology, and this has transcended the traditional limitations of WOM (Duan et al., 2008). Consumers can easily access information and exchange opinions on products and services on the web (Duan et al., 2008; Park & Lee, 2008a), and meeting customers’ expectation has become more important than ever (O'Connor, 2008). Web 2.0 technologies (described below) have enabled the efficient creation and distribution of electronic WOM (Kwon & Raab, 2010). Electronic WOM communication can be described as “any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet” (Hennig-Thurau et al., 2004, p. 39).

Internet users are generating content and communicating with each other using Web 2.0 tools. Web 2.0 refers to a second generation of web-based services that includes social networking sites, blogging, podcasting, and wikis that enable users to collaborate and share information online (Lefebvre, 2007; O'Reilly, 2005; Reactive, 2007). Web 2.0 can be defined as “a collection of open source, interactive and user-controlled online applications expanding the experiences, knowledge and market power of the users as participants in business and social processes” (Constantinides, 2007, p. 2). Web 2.0 helps the flow of ideas and knowledge among Internet users (Constantinides, 2007). Thus, Web 2.0 serves as a forum for people to pass information to others, inviting site visitors to comment, collaborate, and edit information through web tools (Oberhelman, 2007).

Web 2.0 tools provide a great opportunity for customers to personalize their information (Carkeek, 2008), enabling a host of new services and possibilities on the Internet (George & Scerri, 2007) such as blogs (online journals or personal websites), podcasts

(audio recordings), videos (e.g., YouTube), wikis (e.g., Wikipedia), online social networks (e.g., Facebook, LinkedIn, MySpace, Hi5, and Bebo), and dissemination of users' comments and reviews (WOM opinions) (Carrera et al., 2008; Hoegg, Martignoni, Meckel, & Stanoevska-Slabeva, 2006). Basically, the Web 2.0-based services consist of three main components:

- Content and services for collaborative creating, management, updating and sharing of content (text, videos, photos or links);
- Services and automatic update procedures which allow users to input and create a new state of knowledge and content;
- Trust building services such as ratings, voting and similar (Hoegg et al., 2006).

Web 2.0 technologies have enabled the creation and distribution of UGC, which is causing vast changes in the online media landscape (Daugherty et al., 2008). UGC, which is also known as consumer-generated content (CGC), constitutes the data, information, or media produced by the general public (rather by professionals) on the Internet (Arriga & Levina, 2008; Daugherty et al., 2008).

UGC is considered a new kind of WOM communication (Park et al., 2007). Examples of such online content are digital video, blogging, podcasting, mobile phone, photography, wikis, social networks, and user-forum posts (Constantinides, 2007; Daugherty et al., 2008). In all these UGC activities, the user is the central point and is not only consumer, but also content contributor (Constantinides, 2007; Cox et al., 2009). As a result, people are gaining unprecedented power on the web (George & Scerri, 2007). As informants, web consumers are requesting product information as well as providing recommendation information at the same time, which includes their experiences, evaluations, and opinions (Park & Lee, 2008b). UGC can take the form of analysis and commentary, entertainment, and criticism and review (e.g. books, products, entertainment, and travelers' comments on hotels) (George & Scerri, 2007).

UGC is a new form of information (i.e., reviews, experiences, and opinions) presented from the perspective of consumers who have purchased and used a product or service (Park et al., 2007). Most review websites allow consumers to provide product/service reviews with content that includes star ratings (ranging from 1 to 5 stars) and open-ended consumer detailed comments about the product/service (Duan et al., 2008;

Mudambi & Schuff, 2010). Thus, the ratings and comments could influence other consumers' perceptions of product/service quality (Duan et al., 2008).

UGC is increasing in popularity and importance (Hennig-Thurau & Walsh, 2004), and has become a major informational source for consumers because of the fast spread of WOM communication on the web (Hu et al., 2008; Koh et al., 2010). UGC can reduce product uncertainty and perceived risks for consumers searching for information during their choice processes, helping them infer product quality (Bronner & de Hoog, 2011; Hu et al., 2008; Koh et al., 2010).

Different from the information supplied by sellers, UGC has a consumer perspective helping consumers making purchase decisions through relevant recommendations (Lee et al., 2008). In fact, UGC such as opinions, experiences, and reviews are helpful for making purchase decisions because it provides new consumers with indirect experiences, and consequently UGC reduces the uncertainty involved in purchase decisions (Bronner & de Hoog, 2011; Gu et al., 2011; Hennig-Thurau & Walsh, 2004; Hu et al., 2008; Lee et al., 2008; Park et al., 2007). Thus, consumers are increasingly dependent on UGC to make purchase decisions (Koh et al., 2010). Given its importance, there is a need to understand what makes UGC helpful to a consumer in the process of making a purchase decision (Cheung, Lee, & Rabjohn, 2008; Duan et al., 2008; Hu et al., 2008; Mudambi & Schuff, 2010; Zhang et al., 2010).

2.3 UGC Influencing Decision-Making

Several studies have researched the use of UGC to make purchase decisions. Lee and Lee (2009) empirically investigated the impact of UGC on consumer purchase intention to determine the effect of product information on the consumers' online purchasing processes. Quality and preference were found to be the major antecedents of consumer purchase intention. Park et al. (2007) examined whether the quality and quantity of UGC can influence consumers' purchasing intentions. The findings revealed that both factors have a positive effect on consumers' purchasing intention. Also, low-involvement consumers are influenced more by the quantity of UGC than the quality of UGC, whereas high-involvement consumers are more influenced by the quality of UGC when the quality of UGC is high. Lee et al. (2008) used two UGC metrics (i.e., quality and proportion) to empirically analyze how negative UGC affects consumer behavior. Lee et al. discovered that consumers conform to UGC and their attitudes become unfavorable as the proportion of negative UGC increases. In addition, high-quality negative UGC was found to influence consumer attitudes more than low-quality negative UGC.

Zhang, Lee and Zhao (2010) studied how the ISI of UGC can affect the consumers' decision behavior. They collected data from a Chinese online review platform (Dianping.com) and found that UGC plays an important role in consumers' decision-making. Cheung, Luo, Sia and Chen (2009) conducted an online survey with members from Myetone.com (a popular consumer forum in China) to determine the informational and normative factors that influence credibility of UGC, and the extent to which perceived credibility leads to adoption of the UGC recommendations to make purchase decision. They found that three informational-based factors (i.e., argument strength, source credibility, and confirmation of prior belief) and two normative-based factors (i.e., recommendation consistency and recommendation rating) significantly influence both the credibility of UGC and its adoption. Cheung, Lee and Rabjohn (2008) also empirically investigated how UGC in online customer communities affects the consumption decision by researching which factors (i.e., argument quality, source credibility, and information usefulness) encourage UGC adoption. Using a sample of 154 users who had experience within the online restaurant customer community in

Hong Kong (Openrice.com), the results showed that the usefulness of UGC had a significant impact on consumer decisions to adopt UGC within online communities, and comprehensiveness and relevance were the most effective components of the argument quality that influenced UGC adoption. However, source credibility did not play a significant role in influencing usefulness of UGC.

Park and Lee (2008b) empirically investigated how the type and amount of UGC affect the perceived review informativeness (informant role) and popularity of a product (recommender role), and consequently affect consumer purchasing intention. The results reveal that the amount of UGC increases the perceived popularity of a product as well as increases the perceived informativeness of the UGC. The type of review also increases the perceived informativeness of the UGC, and the effects of perceived popularity and informativeness on purchasing intention were significant for all participants. Park and Kim (2008) investigated the effect of the type and number of UGC on consumer decision-making. They found that effect of the type of UGC on purchase intention is stronger for experts than for novices, whereas the effect of the amount of UGC on purchase intention is stronger for novices than experts. Godes and Mayzlin (2004) studied how the dispersion and volume of UGC from Usenet conversations about television shows relate to their Nielsen ratings (reported weekly in *Broadcasting & Cable* magazine). The results indicated the dispersion of conversations among different newsgroups has significant explanatory power, but not the volume.

Seneca and Nantel (2004) conducted research on the use and influence of UGC on consumers, and they found that consumers are strongly influenced in their online product choices by UGC. Three determinants that influence the impact of UGC on consumers were used: the nature of the product recommended, the nature of the website on which the recommendations is proposed, and the type of recommendation source. Awad and Ragowsky (2008) analyzed how UGC affects trust and how this in turn influences intention to shop online; the role of gender as a moderator was also assessed. They found that men and women value UGC differently, and these factors affect trust differently across genders. Also, trust affects intention to shop online more for women than for men. Chatterjee (2001) examined the impact of negative UGC on retailer evaluation, and the results indicate that the impact of negative UGC on the perceived reliability of a retailer and purchase intention is mitigated by consumer familiarity with

the retailer. Riegner (2007) studied the influence of UGC on purchase decisions, across many product categories, purchase channels, and user groups.

Considerable research in the information systems (IS) and marketing literature related to the influence of UGC on decision-making has focused mostly on low-involvement products (such as books, CDs, and movies), and data is usually extracted from Amazon.com and Yahoo! Movies. For instance, Mudambi and Schuff (2010) investigated what makes UGC helpful to a consumer in the process of making a purchase decision by analyzing 1,587 reviews from Amazon.com regarding three aspects review extremity, review depth, and product type. There was some indication that product type moderates the effect of review extremity on the helpfulness of the UGC, and review depth was found to have a greater positive effect on the helpfulness of the UGC for search goods than for experience goods. Hu et al. (2008) assessed how consumers utilize UGC to reduce the uncertainties associated with online purchases. The authors focus on four elements that can influence the consumer's interpretation of UGC and subsequent purchase decisions: reviewer exposure, reviewer quality (i.e., source credibility), product coverage, and age of the product. A range of books, DVDs, and videos from Amazon.com was randomly chosen for the data analysis. According to Hu et al., reviewer quality and reviewer exposure are important aspects of UGC when consumers are making decisions online.

Chevalier and Mayzlin (2006a) studied the effect of UGC on the relative sales of books at two leading online booksellers: Amazon.com and Barnesandnoble.com. The results show that UGC affects consumer purchasing behavior at both online booksellers. Chen, Wu and Yoon (2004) assessed the impact of UGC and recommendations on book sales on data from Amazon.com. The findings reveal that consumer ratings are not found to be related to sales, whereas more recommendations are positively associated with more sales at Amazon.com. On the other hand, Gu et al. (2011) compared the impact between retailer-hosted reviews and UGC regarding retailer sales for high-involvement products (e.g., digital cameras) using data from Amazon.com and three UGC websites (Cnet, DpReview, and Epinions). The findings suggest that UGC has significant influence on sales of high-involvement products, whereas retailer-hosted reviews have a limited influence on its sales of high-involvement products.

Chintagunta, Gopinath and Venkataraman (2010) measured the impact of UGC on off-line purchase behavior using data from Yahoo! Movies on box office performance. They investigated three measures of UGC: volume the reviews, valence of reviews or mean user rating, and variance in reviews, and discovered that the valence of user ratings has a significant and positive impact on box office earnings. Liu (2006) examined the dynamic patterns of two important UGC attributes (i.e., volume and valence) and how they help explain box office revenue using data from the Yahoo Movies website. Only the volume of UGC offers significant explanatory power for box office revenue. Koh et al. (2010) studied how cultural differences influence consumers to write UGC. Data were gathered from two online movie websites (IMDB.com and Douban.com). The results indicate consumers' rating behaviors are affected by cultural influences in China and U.S.

Duan et al. (2008) investigated the impact of UGC on movies' box office revenues on data gathered from three sources: Yahoo! Movies, Variety.com, and BoxOfficeMojo.com. Their findings reveal that box office sales are significantly influenced by the volume of UGC, but the valence rating of UGC has no explanatory power on box office sales. Dellarocas, Zhang and Awad (2007) proposed models that can be used for decision support in sales forecasting of entertainment goods using metrics such as volume, dispersion, and valence of UGC. Dellarocas et al. evaluated the models using metrics obtained from online movie reviews posted on Yahoo! Movies during the opening weekend of a movie, and found that volume, valence, and dispersion of UGC are all statistically significant in predicting future sales.

Overall existing studies on UGC influence in the IS and marketing literature focus mainly on low-involvement products (i.e., books). Relatively little attention has been paid to high-involvement products, such as travel planning (Gu et al., 2011). However, studies show that UGC plays a critical role in travelers' decision-making due to the intangible nature of tourism services such as travel plans (Ip et al., 2011). Studies on tourism literature have researched how UGC is used to help making decisions on travel planning. For example, Cox et al. (2009) studied the role that UGC plays in the travel planning process and assessed how trustworthy this type of information is thought to be in comparison to more traditional forms of online travel information sources. The results showed that UGC is definitely being viewed and considered by a large

proportion of travelers when making travel plans, but that UGC source is not necessarily considered to be the most trustworthy source of travel information. Burgess, Sellito, Cox and Buultjens (2009) empirically assessed the views of travelers that use the Internet to assist with travel plans/decisions in relation to the specific benefits and concerns identified with UGC. The results suggest that the most notable of these benefits and concerns is the level of trustworthiness and reliability that can be associated with the postings. Burgess et al. claim that UGCs can be trusted because they are real experiences by real people who are independent. On the other hand, they can be untrustworthy because UGC that is posted may be faked by an Internet user with a vested interest. Gretzel, Yoo and Purifoy (2007) conducted an online survey with 1,480 TripAdvisor users to examine the role and impact of UGC in the travel planning process. The findings show that more than 80% of the travelers agreed that reading UGC increases confidence in making travel decisions, and 88% of the travelers thought that UGC is important for deciding where to stay.

Yoo and Gretzel (2011) conducted an online survey to investigate the influence of personality on travel-related UGC creation motivation, perceived barriers and specific behaviors. The research provided relevant insights regarding online travelers' UGC behaviors. For instance, UGC has become an important source for travelers as more than half of online travelers used UGC for their recent overnight pleasure trip planning and the majority trusted its contents. Also, travelers' personality is an important determinant of motivations and barriers to UGC creation, and of specific creation behaviors. Ye, Law, Gu and Chen (2011) studied the influence of UGC on traveler behavior using data extracted from a major Chinese online travel agency. The results showed the valence of UGC had a significant impact on the online sales of hotel rooms. For example, Ye et al.'s data analysis suggested that a 10% increase in the ratings of user reviews can boost online hotel bookings by more than 5%. Sidali, Schulze and Spiller (2009) tested within an experimental design if UGC has a predominant role on consumer behavior in comparison to other sources of information (e.g., hotel rating system, travel guides, and recommendations of travel agents). The results indicate that UGC is the most referential information source.

Vermeulen and Seegers (2009) analyzed the impact of UGC on consumer choice, testing empirically three key elements in online travel reviews: review valence, reviewer

expertise, and consumer familiarity with a hotel brand. The findings revealed that both positive and negative reviews increase consumer awareness of hotels, and positive reviews improve attitudes toward hotels. The results also suggest that when travelers read UGC, the average probability that they will consider booking a room in the reviewed hotel increases. Ye, Law and Gu (2009) empirically assessed the impact of UGC on hotel room bookings using data from the largest Chinese travel website (Ctrip.com). The results suggest that positive UGC can significantly increase the number of bookings in a hotel. Ip, Lee and Law (2011) analyzed the profile of the Hong Kong online users who use UGC for planning, and the results indicated that travelers who are young, well educated, and have high incomes are more likely to use UGC for travel planning.

Although previous studies have shown that UGC can influence the decisions of travelers during travel planning (Bronner & de Hoog, 2011; Cox et al., 2009; Gretzel & Yoo, 2008; Litvin et al., 2008; Parra-López et al., 2011; Vermeulen & Seegers, 2009; Xiang & Gretzel, 2010; Yacouel & Fleischer, 2011), there is still limited information available on how UGC empowers travelers to make their own decisions.

2.4 UGC Empowering Travelers to Make Their Own Decisions

Increasingly travel organizations have incorporated the Internet in their businesses (Doolin, Burgess, & Cooper, 2002). Since the travel and tourism industry is an information-oriented business, the Internet is a suitable environment for building a dynamic platform for information supply and exchange (Ho & Lee, 2007). The Internet enables travelers to receive and pass on recommendations of traveler experiences (Hjalager, 2001). Travelers are getting in touch directly with other travelers who have similar destination interests on the Internet (Laboy & Torchio, 2007). Increasingly travelers are taking advantage of such content (Gretzel & Yoo, 2008), and since more and more travelers are going online, the travel and tourism industry need to be aware that their consumers are being influenced by travel sites related to the selling or discussion of tourists' trips (Hills & Cairncross, 2011; Litvin et al., 2008). For instance, a study with international vacation travelers in New Zealand showed that the Internet was rated significantly more useful than other sources of information when making accommodation decisions (Hyde, 2006).

Travelers obtain travel content on the Internet, and seek suggestions regarding experiences of trips (Stockdale & Borovicka, 2006). They are using the Internet to share information about their trip experiences and compare services related to their previous trips (Arsal, Backman, & Baldwin, 2008; Parra-López et al., 2011; Vermeulen & Seegers, 2009). Rezabakhsh et al. (2006) suggest that the Internet encourages consumers to engage in an information search in the pre-purchase phase. The Internet is an important information source for travel planning (Choi et al., 2007; Ip et al., 2011; Pan & Fesenmaier, 2006). More and more travelers have used the Internet as the key source of information for travel planning (Cai et al., 2004; Choi et al., 2007).

Internet users are generating travel-related valuable information (i.e., UGC) on the travel industry (Laboy & Torchio, 2007). The power of UGC travel sites lies in their role as a source of electronic WOM in travel planning (Cox et al., 2009). UGC about travel destinations, hotels, and tourism services has become an important source of information for travelers (Pan et al., 2007). UGC concepts are becoming popular as

travelers share their experiences and travel recommendations (Carrera et al., 2008; O'Connor, 2008). UGC is changing the structure of travel information, its accessibility of travel information, and consequently travelers' knowledge and perception of various travel products (Arsal et al., 2008; Laboy & Torchio, 2007; Litvin et al., 2008). For instance, travelers are relying more and more on UGC to inform their purchase decisions (Casaló et al., 2011; Hills & Cairncross, 2011). Indeed, UGC facilitates tourists in evaluating travel alternatives during decision-making processes on the Internet (O'Connor, 2008). Travelers are exposed to and are likely empowered by UGC websites devoted to the selling or discussion of travel (Litvin et al., 2008). UGC can provide a strong sense of a traveler service/product, add to the consumer's overall image of the hotel or destination, and likely reduce pre-purchase doubt (Litvin et al., 2008). This survey of research suggests that UGC provided by travelers is having a tremendous impact on decision-making behavior (Sigala, 2007, 2011). Thus, UGC is playing an increasing role in traveler decision-making (Gretzel & Yoo, 2008), and travelers are empowered by accessing UGC to make their trip decision (Papathanassis & Knolle, 2011).

Consumer empowerment has been related to changes in the travel industry (Freedman, 2007). For instance, the Internet has empowered consumers by providing an efficient medium for sharing information and opinions in the travel industry (Litvin et al., 2008). Travelers have been empowered by Web 2.0 technologies (Ip et al., 2011), which have allowed two-way information communications in travel services and have generated an enormous number of UGC on hotels, travel destinations and travel services (Sigala, 2008). Therefore, UGC is empowering travelers in the travel industry (Cox et al., 2009; Ye et al., 2011). Hjalager (2001, p. 289) points out that "a truly empowered tourist is a person who, without much pain or intellectual effort, is able to make an informed choice of services and products in accordance with his/her own preferences". UGC empowers consumers, acting as a vehicle for the sharing of information and opinion from consumer to consumer (Litvin et al., 2008). Hence, UGC is empowering online travelers in the planning and buying processes of their trips (Schegg et al., 2008; Sigala, 2007). The literature on empowerment provides a useful theoretical basis when designing consumer-related IS studies (e.g., UGC) (Füller et al., 2009).

2.5 Psychological Empowerment (PE)

The literature on empowerment presents insights across many non-IS areas such as management, healthcare, politics, women, minority groups, education, sociology, and psychology (Lincoln, Travers, Ackers, & Wilkinson, 2002). Researchers in the management literature initially focused their work on empowering management practices such as authority delegation and the decentralization of decision-making power, and increasing access to information and resources for individuals at the lower levels (Blau & Alba, 1982; Bowen & Lawer, 1992; Burkner, 1986; Mainiero, 1986; Neilsen, 1986).

Lee and Koh (2001) argue that empowerment as an authority-delegation concept lacks the dimension of self-efficacy, which is a core dimension of empowerment. The conceptual scope of empowerment has been shown to be wider than authority delegation (Ford & Fottler, 1995). Conger and Kanungo (1988) used a motivational approach based on a comprehensive review of research on the process of enhancing feelings of self-efficacy to define empowerment as psychologically enabling, and criticized the literature on decision-making authority. According to Conger and Kanungo (1988, p. 474), “enabling implies creating conditions for heightening motivation for task accomplishment through the development of a strong sense of personal efficacy”.

Sehgal (2007) points out that self-efficacy lacks the behavioral aspect of empowerment and cannot be substituted for empowerment. Also, autonomy, self-determination, self-management, self-control, and self-influence are constructs in the organizational literature directly related to making decisions for one’s self (including autonomy) (Lee & Koh, 2001).

Following the Conger and Kanungo (1988) conceptual model of empowerment, Thomas and Velthouse (1990) extended this approach by defining empowerment as a perceptual process model arousing intrinsic task motivation manifested in four cognitions: meaningfulness, competence (self-efficacy), choice, and impact. Thus, empowerment is not captured by a single concept (i.e. self-efficacy) - it is rather a multifaceted construct

(Thomas & Velthouse, 1990). Thomas and Velthouse were the first to provide a definition of psychological empowerment (PE). They define it as a pattern of experienced psychological cognitions and state that their four dimensions of empowerment combine to make up an individual's overall experience of empowerment (Thomas & Velthouse, 1990).

As noted above, early management empowerment theory focuses on management practices such as delegating authority or providing resources, whereas later management theory emphasizes PE (Doll & Deng, 2010). Spreitzer (1995b) defined the PE model based on Thomas and Velthouse (1990) approach, i.e., using the four cognitive dimensions of meaning, competence, self-determination, and impact. Conger and Kanungo (1988), Thomas and Velthouse (1990), and Spreitzer (1995b) explore the "perception" aspect, focusing on empowerment as psychologically enabling.

Rappaport (1987) refers to empowerment as a psychological sense of personal control or influence that can be applicable to individuals, organizations, and neighborhoods. Empowerment can be defined as a process by which people gain control over their own destiny, as well as work with others to achieve goals (Perkins & Zimmerman, 1995; Rappaport, 1987). Since empowerment is a construct that may be used in organizations and communities, PE is part of this construct, but at the individual level of analysis (Zimmerman, 1995; Zimmerman & Rappaport, 1988). PE is a concept that originated from Empowerment that embraces the idea of person-environment fit (Zimmerman, 1990).

Spreitzer (1995b) provides the first validated PE measurement model using the four-dimensional conceptualization of Thomas and Velthouse (1990). The four cognitions (meaning, competence, self-determination, and impact) are combined to create an overall motivational construct of PE (Figure 4). The lack of any single dimension will deflate, though not completely eliminate the overall degree of empowerment (Sehgal, 2007).

- **Meaning** is defined as the value of a work goal or purpose, judged in relation to an individual's own ideals (Thomas & Velthouse, 1990).

- **Competence** (or self-efficacy) is defined as the individual's belief in his/her capability to perform activities with skill (Gist, 1987).
- **Self-determination** is the individual's autonomy in having choice in initiating and regulating work behaviors and processes, such as making decisions about work methods, pace and effort (Spector, 1986).
- **Impact** is the degree to which an individual can influence strategic, administrative, or operating outcomes at work (Ashforth, 1989).

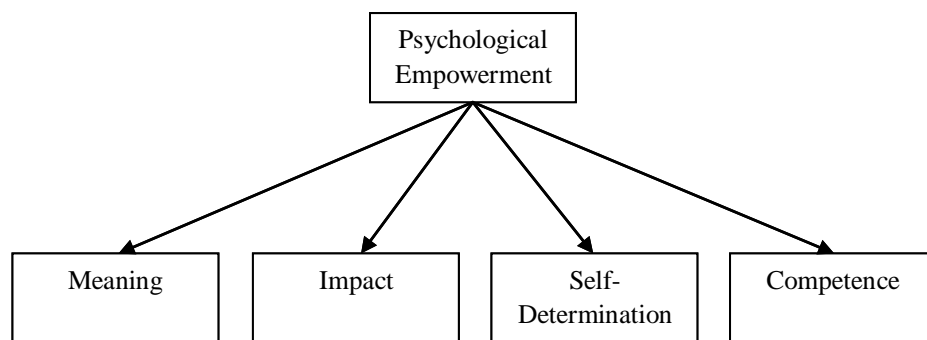


Figure 4. Psychological Empowerment (Speitzer, 1995b)

The literature on empowerment mostly focuses on theory building (Sehgal, 2007) and measuring employees' experience of PE (Menon, 2001). For instance, Doll and Deng (2010) proposed a technology empowerment model that adapts the concept of PE to the context of engineering work. Research on PE has been carried out in many different contexts: bank employees (Kark, Shamir, & Chen, 2003), hospital employees (Aujoulat et al., 2007; Koberg, Boss, Senjem, & Goodman, 1999; Kraimer, Seibert, & Liden, 1997), large service organization (Liden et al., 2000), team level of analysis (Kirkman & Rosen, 1999), and employees in the travel and hospitality industry (Chiang & Jang, 2008; George & Hancer, 2003; Han & Li, 2006; Kim & George, 2005; Sparrowe, 1994). PE focusing on the consumer remains relatively unexplored. There are a few studies on patients' PE (Aujoulat et al., 2007). Despite the increasing influence of UGC within the travel sector (Daugherty et al., 2008), no other study has explored the role of UGC as an enabler of travelers' PE in the travel industry.

The Internet can enhance the empowerment of an individual through interaction with others (Füller et al., 2009). PE is especially important in the online travel industry where UGC can help travelers to interact and offer peer to peer advice on decision-making processes such as travel planning (Ip et al., 2011; O'Connor, 2008). Similarly to employee empowerment, UGC can be interpreted as an enabling activity for travelers to exercise choice (self-determination) when deciding which accommodation to stay at, gain self-efficacy (competence) through making travel plans, enhance their perceptions of UGC impact on their travel plans, and increase the value of their experience when making a travel plan. Thus, travelers may feel empowered by using UGC when making their travel plans.

This study uses the perception aspect of the PE, which is defined as a motivational construct and viewed as an enabling process. Since this study involves PE in the UGC context, the literature draws mainly upon the IS-related studies and specifically the literature on empowerment.

2.6 IS studies focused in Empowerment

Several researchers have demonstrated the relationship between IS and empowerment. One empirical example is the study by Sia, Tang, Soh and Boh (2002), which examines how the different forces play out in the context of enterprise resource planning (ERP) implementation and its consequential implications for the traditional power distribution in organizations. The findings indicated that ERP can facilitate empowerment in organizations, but also that management has resisted empowerment by working to reinstitute the power lost through the ERP implementation. Duane and Finnegan (2003) assessed the effects of Intranet control activities on users' perception of empowerment in Hewlett Packard (Ireland). The results revealed that an Intranet is a vital system for user empowerment, but timely implementation of Intranet control activities is essential to maximize this empowerment.

Amichai-Hamburger, McKenna and Tal (2008) investigated the empowerment literature and proposed a four-level model that serves to explain the ways in which the Internet is being used as an empowering tool. They referred to their model as E-empowerment and studied the effects on four levels: personal, interpersonal, group, and citizenship. Rezabakhsh et al. (2006) conceptually analyzed if consumer power has increased with the diffusion of the Internet. The authors suggest that the Internet enables consumers to obtain high levels of market transparency; to easily band together against companies; and to take on a more active role in the value chain and influence products and prices.

Some IS studies have been discussed in the context of employee PE literature. As noted above, Doll and Deng (2010) developed a technology empowerment model that adapts the theory of PE to the context of engineering work. The findings revealed that software capabilities and support network of colleagues enhance PE, whereas decision support enactment and work process innovations are enhanced by PE. Ng and Kim (2009) empirically analyzed IS infusion using empowerment to represent motivation based on PE theory which can explain employee's behavior. The findings suggested that all four empowerment dimensions (i.e., competence, impact, meaning, and self-determination) have significant effects on IS infusion.

Sehgal and Stewart (2004) studied the importance of empowerment as an enabler of enterprise systems success (ESS) across three hierarchical levels of management in a higher education organization in Australia. The PE and user empowerment theories are depicted as the antecedents of ESS. An instrument was developed and validated for measuring user empowerment in ESS context. Freedman (2007) presented a model that connects technology use to PE and explores the factors that motivate persistent voluntary engagement with cooperative information systems. Another IS study on employee empowerment (which does not use the psychology approach) is by Psoinos, Kern and Smithson (2000), who analyzed the relationship between computer-based IS and empowerment based on an in-depth empirical study in the context of UK manufacturing firms. The results indicate IS supports empowerment through improving the employee decision-making process, providing access to both general and task-specific information, and facilitating communication between individuals.

Limited IS research has been conducted in the context of consumer empowerment literature (Füller et al., 2009), however. Vatanasombut, Igbaria, Stylainou and Rodgers (2008) validated a model incorporating empowerment, relationship benefits, termination cost, commitment, shared value, communication, perceived security, and trust as determinants of the IS continuance intention through a survey of online banking customers. The findings showed that perceived user empowerment and trust can influence relationship commitment, because it influences the IS continuance intention of users. Pires, Stanton and Rita (2006) reviewed the literature on consumer empowerment, focusing on information communication technology (ICT) enabled processes. The authors concluded that the role of marketing strategies in fostering controlled consumer empowerment is reflected in the development of information-based consumer-centric marketing strategies that seek to enable and control delegation.

Füller et al. (2009) empirically examined how consumers are empowered through Internet-based co-creation activities during new product development (NPD). The empowerment construct was extended to describe consumers' perceived influence on product design and decision-making. The results suggested that empowerment influences consumers' trust in the provider of the virtual co-creation task and enhances their intention to participate in future virtual NPD projects. Harrison, Waite and Hunter (2006) assessed the extent to which the Internet empowers consumers in terms of online

information provision. The results indicated that consumers generally feel empowered by the Internet. For example, consumers armed with increased information and knowledge gained from the Internet benefited from negotiating price discounts or better service. However, this sense of empowerment was not realized in the context of pension websites.

Considering IS research has focused on empowerment, there is one PE study in the UGC context. Leung (2009) investigated what motivates Internet users (in general) to create content online and how the gratifications derived from UGC, PE and civic engagement affect Internet content-generation activities. Leung suggests that obtaining gratification from being recognized and being able to articulate views, thoughts, and experiences through content creation online are key determinants influencing a person's perceived empowerment.

Heeding Füller et al.'s (2009) call for more IS research on empowerment in different contexts, and since IS research on consumer empowerment is relatively naïve, this research investigates how consumers are empowered to make their own decisions about product/service consumption in the UGC context. Building on Spreitzer's (1995b) model of PE in organizations, this thesis proposes a research model that captures the consumer's feelings of empowerment toward making a travel plan using UGC. It is further suggested that the key determinants of empowerment are the informational social influence (ISI) and normative social influence (NSI). These determinants are derived from Deutsch and Gerard's (1955) dual-process theory (DPT). ISI and NSI are used to explore the extent to which these two kinds of influences affect PE construct when travelers make travel plans. Ultimately, the research explores to what extent the four dimensions of PE influence online consumer behavior through the theory of planned behavior (TPB) (Ajzen, 1991).

2.7 Dual-Process Theory (DPT)

Spreitzer (1995a; 1995b; 1996) suggested access to information as an antecedent of PE in her works. Access to all the necessary information is critical for empowerment (Psoinos et al., 2000). Consumers feel empowered when they can access information and take independent voluntary action on their own behalf (Freedman, 2007). Since information is the lifeblood of travel, UGC is having a significant impact on this industry (Sigala, 2011). Travelers now have direct access to the information they need to make their decision and by doing so are empowered to create and distribute their own content (Sigala, 2011).

A survey of the current literature on information influence found that studies using DPT provide comprehensive discussions on how individuals process information (and its relevant factors) to make decisions (Eagly & Chaiken, 1993). For instance, most of previous DPT-based research used argument quality and source credibility as salient factors. Researchers in the IS field have begun to apply DPT to understand how individuals' information processing behavior can impact their decision outcomes (Cheung et al., 2009; Sussman & Siegal, 2003; Zhang & Watts, 2008) and consumers' behavioral intention after they assess the validity of review messages on online review platforms (Zhang et al., 2010). Thus, DPT helps identify which factors are relevant and how they relate to each other, and how they relate to empowerment.

Dual-process theories have been applied in a variety of areas such as social attitudes, person perception, judgment, and decision-making (Chaiken & Trope, 1999). Dual-process models have been proposed to understand individual's persuasion communications and validity seeking behavior (Chaiken, Liberman, & Eagly, 1989; Petty & Caciopo, 1986). DPTs differ on a number of dimensions, but they all share the basic assumption that two qualitatively different modes of information processing operate in making decisions (Chaiken & Trope, 1999). The three most prominent theories that use this approach are the heuristic-systematic model (HSM) (Eagly & Chaiken, 1993), the elaboration likelihood model (ELM) (Petty & Caciopo, 1986), and the theories of informational social influence (ISI) and normative social influence (NSI) (Deutsch & Gerrard, (1955).

Developed by Petty and Cacioppo (1986), ELM posits that a message can influence attitudes among individuals via two different routes: central and peripheral. The central route requires a person to think about issue-related arguments in an informational message, i.e. it refers to the nature of arguments in the message. The peripheral route refers to issues that are not directly related to the subject matter of the message (Petty & Cacioppo, 1986).

HSM invokes two information processing modes that people consider when assessing the validity of a message: systematic processing and heuristic processing (Eagly & Chaiken, 1993). In systematic processing people examine all relevant pieces of information and try to incorporate it into what they already know, while in heuristics processing people consider a few informational cues and form a judgment based on these cues (Zhang & Watts, 2008).

Deutsch and Gerard's (1955) DPT posits two components of social influence on the persuasiveness of received messages: informational social influence (ISI) and normative social influence (NSI). An ISI is defined "as an influence to accept the information obtained from another as evidence about reality" (Deutsch & Gerard, 1955, p. 629), and is based on the content of the received information (Cheung et al., 2009). In this study, UGC refers to the information received from other travelers when travelers are making travel plans.

In ISI research, four informational determinants have been used in studies (see Figure 5): argument quality, source credibility, information framing, and information consistency (Cacioppo, Petty, & Morris, 1983; Cheung et al., 2009; Grewal, Gotlieb, & Marmorstein, 1994; Wathen & Burkell, 2002; Zhang & Watts, 2003).

- **Argument Quality:** refers to the persuasive strength of arguments embedded in an informational message (Bhattacharjee & Sanford, 2006);

- **Source Credibility:** is defined as the extent to which an information source is perceived to be believable, competent, and trustworthy by information recipients (Petty & Caciopo, 1986);
- **Information Framing:** refers to the content of the message, if it is positively framed or negatively framed (Cheung et al., 2009);
- **Information Consistency:** indicates the extent to which the current message is consistent with the prior knowledge of the person accessing it (Zhang & Watts, 2003).

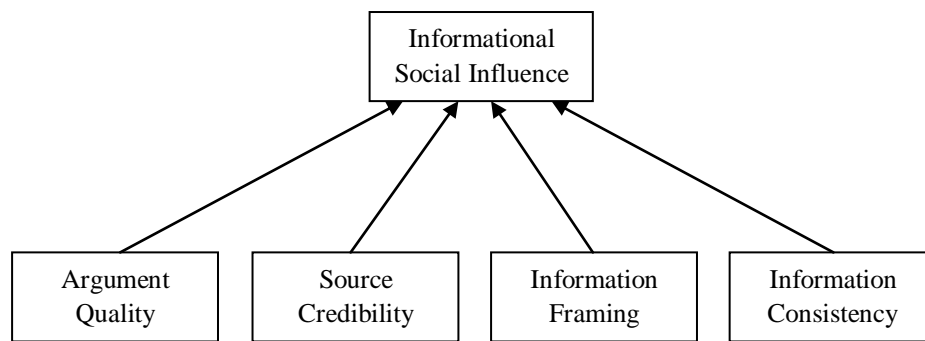


Figure 5. Informational Social Influence and its dimensions

NSI refers to other people's opinions about the received information and how these opinions affect others' choice preferences (Kaplan & Miller, 1987). For this study, others' choice preferences refer to travelers' choice preferences when they are reading other travelers' opinions about the received information (i.e., UGC). One's communication evaluation in NSI is based not so much on the received information as on the opinions of other audiences (Cheung et al., 2009). Other studies using Deutsch and Gerard's DPT have demonstrated the significant role of normative forces in various contexts (Burnkrant & Cousineau, 1975; Cheung et al., 2009; Kaplan & Miller, 1987).

In research related to online consumer recommendations, two types of normative determinants are presented (see Figure 6): recommendation consistency and recommendation rating (Cheung et al., 2009; Cheung, Luo, Sia, & Chen, 2007). Both report the views of others on the topic of discussion.

- **Recommendation Consistency:** refers to the extent to which the current recommendation is consistent with other contributors' experiences regarding the same product/service evaluation (Zhang & Watts, 2003);
- **Recommendation Rating:** refers to the overall rating provided by other people on a recommendation (Cheung et al., 2007).

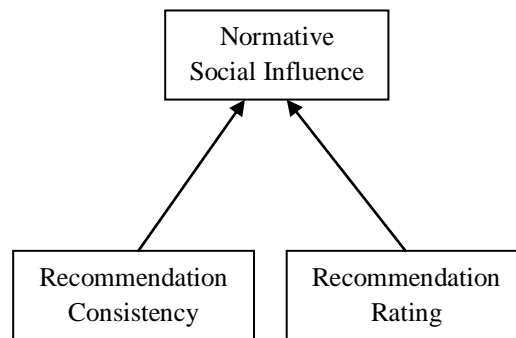


Figure 6. Normative Social Influence and its dimensions

The specific DPT of interest to this study is that of Deutsch and Gerard (1955). Their dual-process approach is useful to explain communication effectiveness when group opinions/discussions are present (Briggs et al., 2002; Sia, Tan et al., 2002). Also, UGC affects consumer behavior through ISI and NSI (Park & Lee, 2008b).

UGC plays an informant role so that it has ISI like consumer conformity. For example, UGC can provide information describing a product in terms of usage situations and measure the product performance from a consumer's perspective (Bickart & Schindler, 2001). Also, ISI is important when consumers feel the need to make informed choices such as the decisions based on the UGC (Lord, Lee, & Choong, 2001).

NSI is operative in public/group settings and is based on premise that individuals tend to conform to group opinions (Venkatesan, 1966). UGC delivers others' beliefs, indicating whether other consumers like or dislike a product. For instance, when UGC about a product is positive overall, potential consumers are likely to think the product is desirable and conform with the reviewers (Park & Lee, 2008b). Thus, this theory is suitable for applying in UGC studies.

Limited research has been conducted on ISI and NSI of UGC. For example, Zhang et al. (2010) studied how the ISI factors (i.e., perceived informativeness, argument strength, source credibility, and perceived quantity of reviews) of UGC can affect the consumers' decision behavior. They collected data from a Chinese online review platform (Dianping.com) and found that perceived informativeness, argument strength, and perceived quantity of reviews are important determinants of consumers' behavioral intention. However, source credibility did not have a significant impact on behavioral intention. Cheung et al. (2009) applied Deutsch and Gerard's (1955) DPT to examine how Chinese consumers of an online discussion forum evaluate the credibility of UGC. The findings showed that ISI (i.e., argument strength, source credibility, and confirmation of prior belief) and NSI (i.e., recommendation consistency and recommendation rating) significantly influenced perceived UGC credibility.

The ISI (argument quality, source credibility, information framing, and information consistency) and NSI (recommendation consistency and recommendation rating) proposed by Deutsch and Gerard's (1955) DPT have not been examined as antecedents of empowerment. This study suggests that ISI and NSI as antecedents of PE can explain how travelers are empowered by UGC. This research will therefore fill this knowledge gap in the context of UGC.

Based on the discussion above, the following research question was derived:

Research Question 1: To what extent do informational social influence and normative social influence impact travelers' perceptions of psychological empowerment when using UGC to make travel plans?

This research is not only investigating how travelers are empowered by UGC, but also how this in turn influences their attitude and behavioral intention in making travel plans.

2.8 Theory of Planned Behavior (TPB)

Models of behavior have been developed by social psychologists to improve the predictive power of attitudes, including additional determinants of behavior such as social norms or intentions (Olson & Zanna, 1993). The most widely researched of these models are the theory of reasoned action (TRA) (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) and the theory of planned behavior (TPB) (Ajzen, 1988, 1991).

TRA is a conceptual framework that predicts and explains an individual's social behavior when such behavior is under his or her volitional control (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). TRA has two independent determinants of behavioral intention (Ajzen & Fishbein, 1980): attitude toward behavior (a personal component) and Subjective norm (a social influence component) (see Figure 7). For instance, the more end-users experience developing an attitude towards using the system, the stronger and more confidently held their attitude will be (Fazio & Zanna, 1981). Also, more strongly held attitudes will have greater influences on behavior. Social influences may be stronger than attitudinal influences until attitudes are strongly formed (Adamson & Shine, 2003).

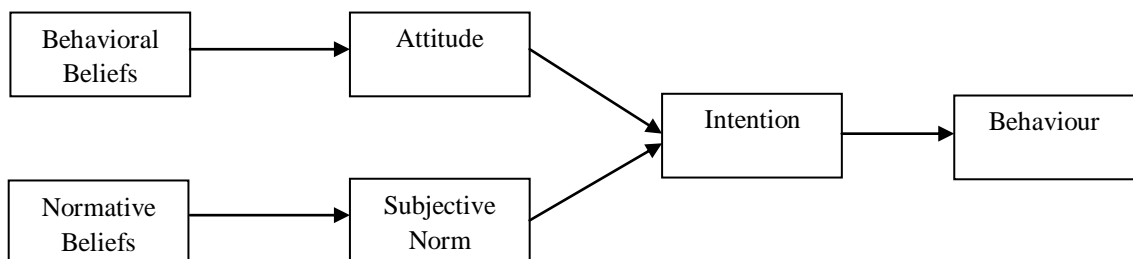


Figure 7. Theory of Reasoned Action (Fishbein & Ajzen, 1975)

However, the problem with the TRA is that it only accounts for actions under individuals' volitional control (Ajzen, 1985). TPB was developed to overcome this limitation of TRA, and can predict and explain actions that are outside the volitional control of a person (Ajzen, 1988, 1991).

TPB extends TRA by adding a third antecedent of the behavioral intention (BI): perceived behavioral control (PBC). Two pathways were included in the model: one

from PBC to behavioral intention and the other from PBC directly to behavior (see Figure 8). Ajzen (1991) claims that the TPB can explain more variance in behavioral intention and behavior in comparison with TRA in cases of incomplete volitional control. TPB has three independent determinants of behavioral intention:

- **Attitude** is “the individual’s positive or negative evaluation of performing the particular behavior of interest” (Ajzen, 2005, p. 188);
- **Subjective Norm** is “the person’s perception of the social pressure to perform or not perform the behavior under consideration” (Ajzen, 2005, p. 188);
- **Perceived Behavioral Control** is “the sense of self-efficacy or ability to perform the behavior of interest” (Ajzen, 2005, p. 188).

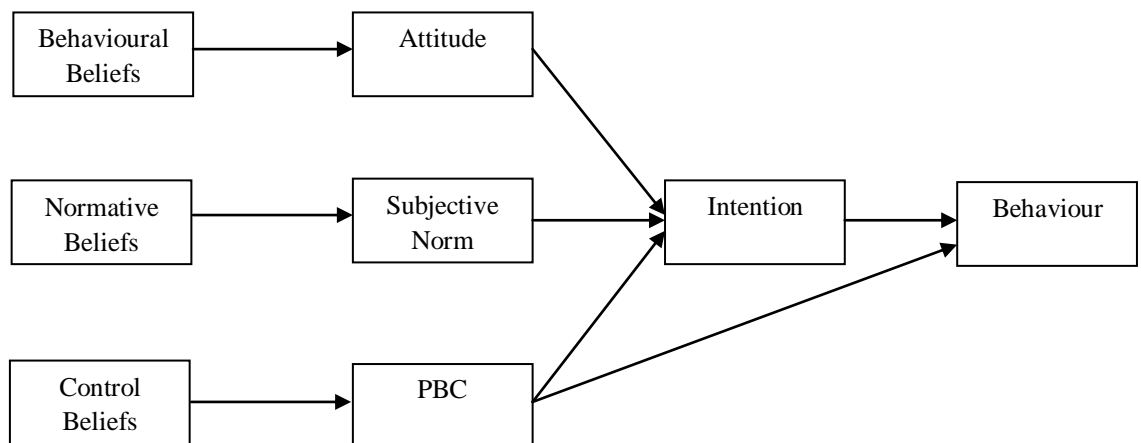


Figure 8. Theory of Planned Behavior (Ajzen, 1991)

The antecedents of attitude, subjective norm and perceived behavioral control consists of salient behavioral, normative and control beliefs, respectively (Ajzen, 1991). Behavioral beliefs are assessments that influence attitudes toward the behavior, which is the probability of the behavior’s consequences. Each behavioral belief links a given behavior to a certain outcome or to some other attitude, for example the cost incurred in performing the behavior (Armitage & Conner, 2001). Normative beliefs are assessments about what constitute the underlying determinants of subjective norms. The underlying normative beliefs are concerned with the likelihood that specific individuals or groups with whom the individual is motivated to comply will approve or disapprove of the

behavior (Armitage & Conner, 2001). Control beliefs are the antecedents of PBC, and are concerned with the perceived power of specific factors to facilitate or inhibit performance of the behavior (Ajzen, 1991). PBC is increased by salient beliefs concerning adequate resources and opportunities and fewer anticipated obstacles or impediments (Armitage & Conner, 2001).

Most studies of online consumer behavior follow the TRA implicitly assuming that behavior is volitional. However, the inclusion of PBC in online consumer behavior models is important because online consumers deal with several constraints such as the impersonal nature of the online environment, the extensive use of IT, and the uncertainty of the open Internet infrastructure (Pavlou & Fygenon, 2006). Pavlou and Fygenon also point out that neglecting PBC may lead to online consumer behavior models that are incomplete and potentially misleading.

There is still a scarcity of more comprehensive studies on customers' online purchase behaviors in the hotel industry (Kim et al., 2006). Little is known about what motivates travelers to follow the advice obtained in an online travel community (Casaló et al., 2011), and little is known about the role that UGC has in the users' travel behavior and decision-making processes (Cox et al., 2009; Vermeulen & Seegers, 2009). This study suggests that empowerment is a key motivator of decision-making. However, no other study has looked at the role of empowerment in the UGC context in the travel industry. Given its importance in online consumer behavior in making travel plans, this study contributes to the literature in IS, marketing and tourism.

TPB is a well-established general theory of social psychology that has been shown to predict behavior across a variety of settings (Armitage & Conner, 2001), including IS settings (George, 2004; Mathieson, 1991; Pavlou & Fygenon, 2006; Taylor & Todd, 1995a; Venkatesh, Morris, Davis, & Davis, 2003). Chen (2009) asserts that the research of online consumer behavior needs a more comprehensive model, describing not only the effect of personal beliefs, but also the impacts of social norms and personal behavioral control on intention in the online context. TPB is expected to better explain online consumer behavior (Pavlou & Fygenon, 2006). Thus, TPB has been chosen as the theoretical framework for this study.

Some studies have conducted research on online consumer behavior and UGC in the travel and tourism industry. For instance, Parra-López et al. (2011) proposed a theoretical model to explain the factors (i.e., benefits, costs, and incentives) determining the intentions to use UGC when making travel plans. The authors found that travelers mainly use UGC for its functional, psychological and hedonic benefits, and the social interaction that they perceive they get. Casaló et al. (2011) investigated some of the antecedents of the travelers' intention to follow the advice obtained from UGC in the online travel community. Perceived usefulness of the advice, trust in the online travel community, and attitude toward the advice were found to be relevant to Spanish-speakers members of several online travel communities in determining their intention to follow the advice obtained in these communities. Ye et al. (2011) assessed the impact of UGC on business performance using data from a major Chinese travel agency. The findings indicated that the tourists' purchase decision is strongly influenced by online travel reviews. Lim, Ma, and Kim (2006) employed the TPB model to test the antecedents of negative UGC intention of Chinese consumer in restaurants. The results revealed that attitude, subjective norm, and perceived behavioral control were related to consumers' negative UGC intention.

Based on the discussion above, the following research question was derived:

Research Question 3: To what extent do attitude, subjective norms, and perceived behavioral control influence travelers' intention to use UGC when making travel plans?

2.9 TPB and Empowerment

While the TPB identifies the factors that guide behavior, it does not address *why* individuals form attitudes, subjective norms, PBC, or intentions (McLachlan & Hagger, 2011). Being a generic model of human behavior, TPB does not specify the particular beliefs that are relevant to any particular context (Bhattacharjee, 2000; George, 2004). Self-determination theory (SDT) aims to explain such general motives and to contextualize the social cognitive constructs proposed by the TPB (Hagger et al., 2002). The integration of TPB with SDT can provide a more comprehensive account of the determinants of intentional behavior (McLachlan & Hagger, 2011). Researchers have sought to integrate SDT and the TPB since these approaches are deemed to able provide complementary explanations of the processes that underlie motivate behavior (Hagger & Chatzisarantis, 2009; Hagger et al., 2003; Ntoumanis, 2001; Sarrazin et al., 2002; Standage et al., 2003; Wilson et al., 2003). For this study, SDT (Deci & Ryan, 1985) is used to assist in helping why individuals form attitudes, subjective norms, PBC, and intentions (Hagger et al., 2002), and linking PE to the TPB (McLachlan & Hagger, 2011).

SDT is an intrinsic motivation that explicitly endorses the role of a set of global psychological needs in determining human motivation and specific motivational styles (Deci & Ryan, 1985, 2000). According to SDT, humans strive to satisfy innate psychological needs. SDT identifies three universal and psychological needs for humans (Deci & Ryan, 1985):

- **Autonomy** refers to one's desire to feel that his/her action is volitional and freely chosen (Deci & Ryan, 1985);
- **Competence** is the desire to be effective and skilful in performing an activity or interaction with the environment (Deci & Ryan, 1985; White, 1959);
- **Relatedness** is the need to feel connected with and cared by others that one considers to be important (Baumeister & Leary, 1995).

People perform better in activities that satisfy the above three basic needs (Deci et al., 2001). They are viewed as the “nutriments or conditions that are essential to an entity’s growth” (Ryan, 1995, p.410). SDT states that these needs are complementary (Hagger et al., 2006).

Little work has utilized the SDT in the tourism and leisure domain. A study undertaken by White and Thompson (2009), investigated the role of product and purchasing involvement in mediating the relationship between motivation orientations from SDT and wine club attribute preferences. The results showed that motivation orientations have a direct impact on wine club attribute preferences. Alexandris, Tsorbatzoudis, and Grouios (2002) examined the relationship between perceived constraints with intrinsic motivation, extrinsic motivation and a motivation on recreational sport participation. The findings supported a significant positive relationship between frequency of participation and intrinsic and extrinsic motivation.

SDT and empowerment can be viewed as related theories/topics. According to Bono and Judge (2003), there is a conceptual overlap between PE (Thomas & Velthouse, 1990) and SDT (Deci & Ryan, 1985, 2000). PE has direct links to SDT (Bono & Judge, 2003), as autonomy (self-determination) and competence are dimensions of empowerment, and both theories deal with intrinsic task motivation (Thomas & Velthouse, 1990). Also, autonomy and competence have been found to be the most powerful influences on intrinsic motivation (Deci & Ryan, 2000). SDT is a key explanatory system for understanding the motivation behind behaviors, for when humans are active in their pursuit of behaviors and activities (Deci & Ryan, 1985), and for linking PE to TPB.

Since the TPB does not specify the particular beliefs that are relevant with any particular context (Bhattacharjee, 2000; George, 2004), there is a need to explore beliefs that can influence attitude in online consumer behavior. There is only a limited understanding of online consumer behavior (Pavlou & Fygenon, 2006). Based on previous research integrating the TPB and SDT/Empowerment (Hagger & Chatzisarantis, 2009), an underlying premise of this study is that beliefs about PE inform traveler’s attitude in making travel plans.

Attitude is considered one of the most powerful factors that determines behavior in the TPB (Ajzen, 2008). Ajzen has demonstrated that attitude accounts for the greatest proportion of the variance compared to the other two factors that determines behavior (i.e., PBC and subjective norm). Across different meta-analyses, Ajzen shows that the prediction of intentions from attitudes, correlating up to 0.60, while the prediction of intention from PBC is up to 0.46, and from subjective norm is up to 0.42. Since attitude accounts for the greater proportion of the variance, there is a need to explore factors that can influence attitude in online consumer behavior.

Some IS studies have already demonstrated the relationship between empowerment and attitude (Deci & Ryan, 2000). A model proposed by Gagné (2009) uses TPB and empowerment dimensions to predict intentions to share knowledge and actual behavior in organizations. Gagné suggests that psychological needs (i.e., autonomy, competence, and relatedness) predict attitude toward sharing knowledge. In another knowledge-sharing study, Bock and Kim (2002) discovered that expectations to increase competence and relatedness led to more positive attitudes toward sharing knowledge. Based on the empowerment concepts (Deci & Ryan, 2000), Malhotra, Galleta and Kirsch (2008) analyzed how endogenous psychological feelings of autonomy, freedom, conflict, and external pressure could explain user intentions. The results indicated that perceived autonomy to use a web-based educational platform was related to attitude toward it and greater intentions to use it. Psounos et al. (2000) studied the relationship between computer-based IS and empowerment in the British manufacturing industry, and they found out that users' attitude is clearly strongly influenced by perceived power. Also, Fuchs and Schreier (2011) examined the consequences of customer empowerment in NPD, and their research suggests that customer empowerment leads to better corporate attitudes and behavioral intentions.

Previous research has established links between empowerment and TPB within a given context (Hagger & Chatzisarantis, 2009; Hagger et al., 2002; Hagger et al., 2006; McLachlan & Hagger, 2011). However, no study has investigated the influence of empowerment on attitude in the UGC context in the travel industry. Some studies have called for more research on examining other consequences to better explain PE (Chiang

& Jang, 2008; Spreitzer, 1995b). This study suggests that beliefs about PE inform traveler's attitude in making travel plans; these beliefs in turn are influenced by the ISI and NSI of DPT. This study will fill this knowledge gap in the context of UGC.

Based on the discussion above, the following research question was derived:

Research Question 2: To what extent do travelers' perceptions of psychological empowerment influence their attitude toward using UGC when making travel plans?

2.10 Chapter Summary

Literature relating to the underlying theories of DPT, PE, and TPB has been reviewed, as well as current research about UGC and its impacts on decision-making, specifically travelers' decision-making. IS studies focused on empowerment were also summarized. From the literature review, the importance of UGC in empowering travelers when making travel plans was identified. Prior research on UGC was discussed and a knowledge gap was identified. This signaled that more research is needed about how UGC empowers travelers and influences their attitude and behavioral intentions when making travel plans. Three research questions were derived from this knowledge gap. The following chapter discusses the theoretical framework formed from these research questions and a set of hypotheses is developed to theorize the relationships among the selected constructs.

CHAPTER 3: RESEARCH MODEL AND HYPOTHESES

3.1 Chapter Overview

The knowledge gaps identified in the preceding chapter set new directions for research into how user-generated content (UGC) empowers travelers and influences their attitude and behavioral intention when making travel plans. Basically, the theoretical foundation of this research draws on three theories: dual-process theory (DPT), psychological empowerment (PE), and theory of planned behavior (TPB). In essence, this study empirically tests a research model that is aimed at identifying and evaluating the factors that empower travelers when making travel plans. Based on research questions derived in Chapter 2, this chapter covers the development of the theoretical model for this study. From an analysis of prior research, a set of hypotheses is developed to theorize the relationships among the selected constructs.

3.1.1 Chapter Outline

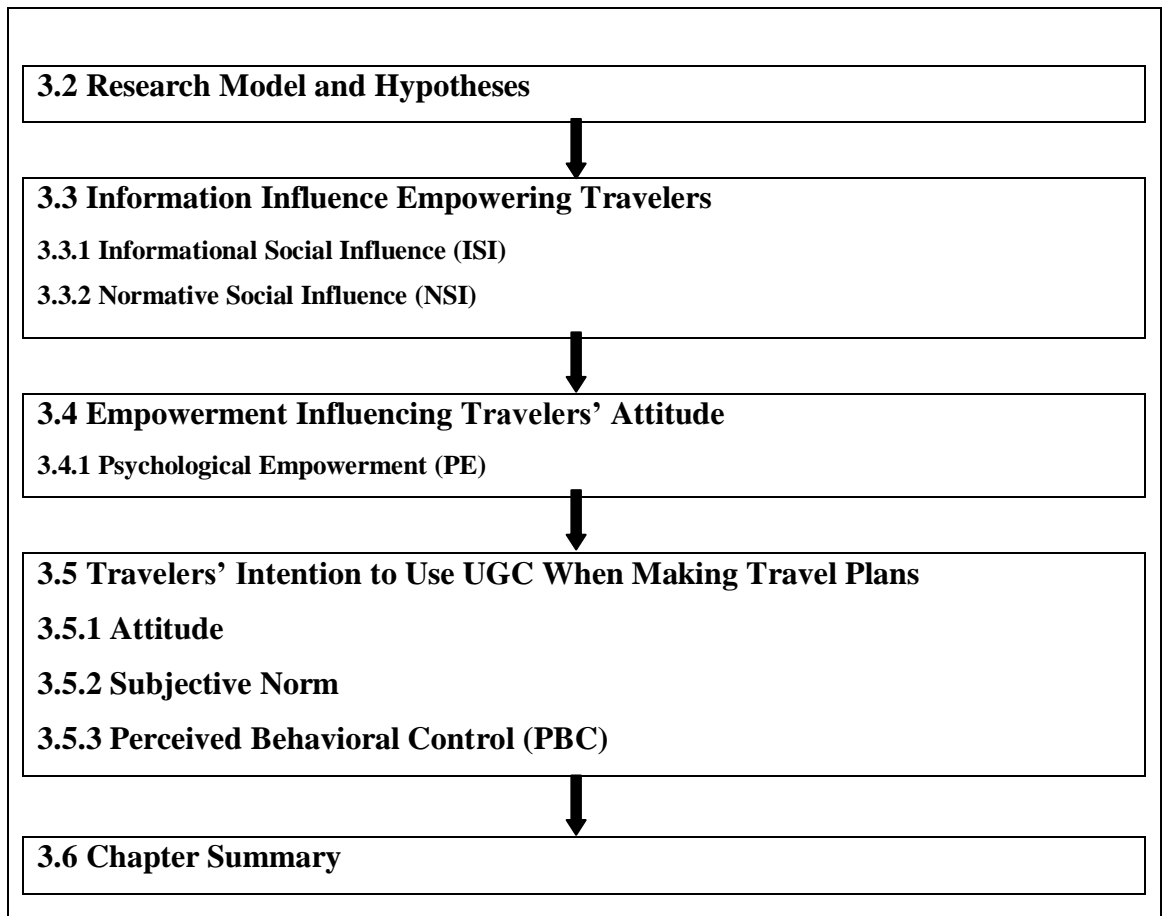


Figure 9. Chapter 3 Outline

3.2 Research Model and Hypotheses

This thesis aims to identify and evaluate the factors that empower travelers when making their travel decisions. From the research questions raised in Chapter 2, a research model is developed (see Figure 10). Sections 3.3, 3.4, and 3.5 review the seven constructs (and associated sub-dimensions) from the research model and develop the hypotheses. In total, there are six main hypotheses, which will be tested in this study. The theoretical foundation of this research draws on three theories: DPT, PE, and TPB.

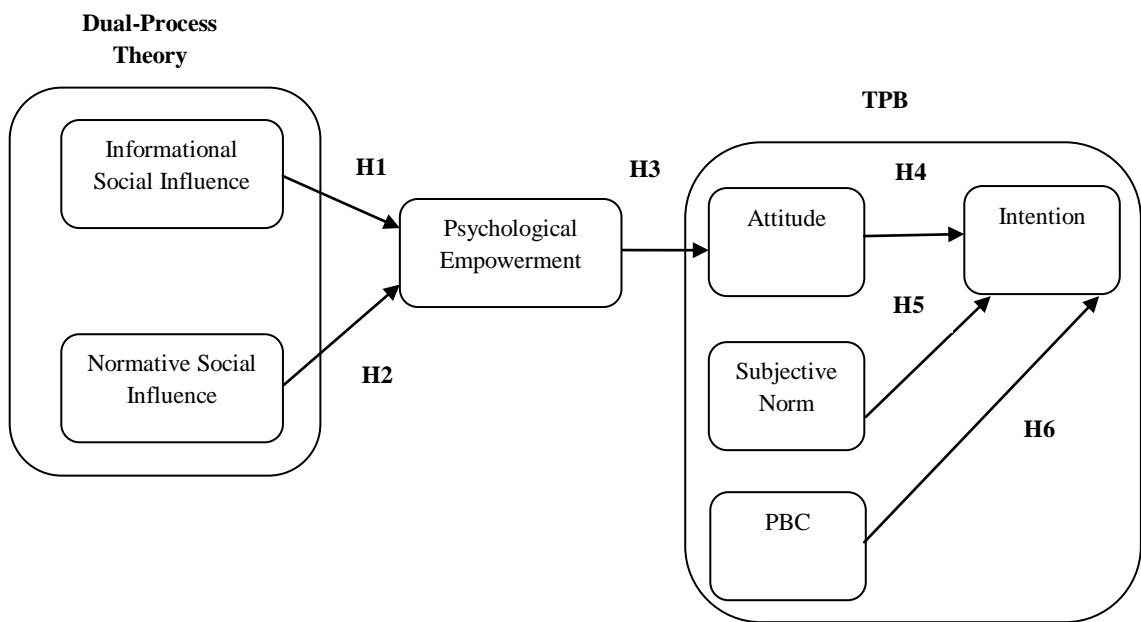


Figure 10. Research Model and Hypotheses

The roles of ISI and NSI proposed by the DPT of Deutsch and Gerard (1955) are examined to determine the extent to which these two types of influence affect travelers' perceptions of PE when using UGC to make travel plans. For this study, the information (i.e., UGC) which empowers travelers to make decisions is represented by ISI and NSI. The following section (3.3) provides support for the roles of ISI and NSI on PE. Thus, H1 and H2 are derived from DPT and PE.

This study also suggests the dimensions of PE (Spreitzer, 1995b) influence online consumer behavior in the UGC context, which in turn this study is modeled using TPB (Ajzen, 1991). In the context of this study, it is expected that beliefs about PE inform traveler's attitude toward using UGC (Hagger & Chatzisarantis, 2009) when making

travel plans. Section 3.4 discusses the role of PE and its sub-dimensions in relation to attitude. The resulting hypothesis, H3 is derived from consideration of PE in the context of attitude and the TPB.

This research is not only investigating how travelers are empowered by using UGC and how this influences their attitude, but also how attitude, subjective norms and perceived behavioral control in turn influence their behavioral intention in making travel plans. Ajzen (1991) demonstrated that TPB is a theory where a social behavior is a combined function of intention and perceived behavioral control (PBC). TPB has three independent determinants of intention (Ajzen, 1991): attitude toward behavior, subjective norm, and PBC. Section 3.5 discusses the TPB dimensions in relation to travelers' intention to use UGC when making travel plans as well as the hypotheses (H4, H5, and H6) derived from this theory.

The following is a list of all the hypotheses that have been developed based on the literature review. The following sections will discuss their development. These hypotheses will be tested in this study to empirically validate the proposed research model (Figure 10).

Hypothesis 1: Informational social influence positively affects travelers' perceptions of psychological empowerment when using UGC to make travel plans.

Hypothesis 2: Normative social influence positively affects travelers' perceptions of psychological empowerment when using UGC to make travel plans.

Hypothesis 3: Travelers' perception of psychological empowerment positively influences their attitude toward using UGC when making travel plans.

Hypothesis 4: Travelers' attitude toward using UGC positively influences their intention to use UGC when making travel plans.

Hypothesis 5: Subjective norm about using UGC positively influences travelers' intention to use UGC when making travel plans.

Hypothesis 6: Perceived behavioral control over using UGC positively influences travelers' intention to use UGC when making travel plans.

3.3 Information Influence Empowering Travelers

The management literature has examined information as an antecedent of empowerment. For instance, Pfeffer (1994) states that sharing information is a necessary precondition to empowerment. Bowen and Lawer (1992) point out that information about an organization allows employees to see the “big picture” and develop alternative frames of reference for understanding their roles in the operations. Spreitzer (1996) states that people who have a high degree of access to information tend to report a higher level of empowerment than those who have less access to information. According to Kanter (1986, p. 5), in order to be empowering organizations “must make more information more available to more people at more levels through more devices”.

Of interest in this study is how the use of the “information” generated by travelers is empowering other travelers to make travel plans. Since information is the lifeblood of travel, user-generated content (UGC) is having an increasingly significant impact on this industry (Sigala, 2011). Travelers now have direct access to the information they need to make their decision and by doing so are empowered to create and distribute their own content (Sigala, 2011). Access to the necessary information for decision-making is critical for empowerment (Harrison et al., 2006; Pires et al., 2006; Psounos et al., 2000).

Empowerment is a construct that may be used in organizations and communities. PE is part of this construct, it reflects an individual level of assessment, i.e., the individuals perception of their empowerment in a given situation (Zimmerman, 1995; Zimmerman & Rappaport, 1988). Spreitzer (1995b) suggested a model of PE using Thomas and Velthouse’s (1990) approach as theoretical foundation. The model consists of four cognitive dimensions: meaning, competence, self-determination, and impact. Spreitzer’s PE model has been assessed in many different contexts: engineering work (Doll & Deng, 2010), bank employees (Kark et al., 2003), hospital employees (Aujoulat et al., 2007), large service organization (Liden et al., 2000), the team level of analysis (Kirkman & Rosen, 1999), and employees in the travel and hospitality industry (Chiang & Jang, 2008). The PE concept is especially important in the online travel industry

where UGC helps travelers to interact and offer peer to peer advice on decision-making processes such as travel planning (Ip et al., 2011; O'Connor, 2008).

Spreitzer (1995a; 1995b; 1996) has examined access to information as an antecedent of PE, and found that information is a key contextual factor associated with empowerment. Other researches also suggest a strong link between information and the sub-dimensions of PE (i.e., competence, meaning, impact, and self-determination). For example, access to information facilitates self-efficacy/competence (Gist & Mitchell, 1992). Information about organizational vision is also important because it helps to create a sense of meaning (Conger & Kanungo, 1988), as well as enhance people's ability to make and influence/impact decisions (Lawler, 1992). Nonaka (1988) considered the sharing of information freely across functions to be a critical ingredient for individual autonomy (self-determination).

This research has surveyed the current literature on informational influence and found that DPT provide comprehensive discussions on how individuals process information (and its relevant factors) to make decisions (Eagly & Chaiken, 1993). Researchers in the information systems (IS) field have begun to apply DPT to understand how individuals' information processing behavior impacts their decision outcomes (Cheung et al., 2009; Sussman & Siegal, 2003; Zhang & Watts, 2008) and behavioral intention after they assess the validity of review messages on online review platforms (Zhang et al., 2010). Thus, DPT helps identify which factors are relevant to empowerment and how they relate to each other, and how they relate to empowerment.

According to Deutsch and Gerrard's (1955) DPT, there are two types of influence on the persuasiveness of received messages: ISI and NSI. UGC affects consumer behavior through ISI and NSI (Park & Lee, 2008b). When travelers process the information in an UGC environment, they do not simply consider traditional informational factors (e.g., argument quality, source credibility, information framing, and information consistency) as important criteria to make travel plans, but also use the normative cues (such as recommendation consistency and recommendation rating) that are now accessible in an online context (Cheung et al., 2009).

The literature suggests that beliefs about PE are affected by ISI and NSI (Spreitzer, 1995a, 1995b, 1996). The ISI (argument quality, source credibility, information framing, and information consistency) and NSI (recommendation consistency and recommendation rating) from the dual-process theory of Deutsch and Gerard (1955) are therefore examined to determine the extent to which these two types of influences affect travelers' perceptions of PE when using UGC to make travel plans. The ISI and NSI constructs are presented in the following subsections 3.3.1 and 3.3.2 respectively.

3.3.1 Informational Social Influence (ISI)

Informational social influence (ISI) is defined “as an influence to accept the information obtained from another as evidence about reality” (Deutsch & Gerard, 1955, p. 629). ISI is based on the content of the received information (Cheung et al., 2009). For this study, UGC refers to the information received from other travelers when travelers are making travel plans.

According to Hovland, Janis and Kelley (1953), the relevant components of the received information, such as the message, source, and audience, are all important sources of ISI. Hovland’s fundamental framework (Hovland et al., 1953), also known as the Yale model of communication and persuasion, provides the major elements to evaluate UGC.

Based on the Yale model (Hovland et al., 1953; Hovland, 1957; Hovland & Janis, 1959), most research on persuasive communication has investigated variation in message factors, source factors, and audience characteristics, and how they influence the effectiveness of a given communication (e.g., UGC). For example, several message factors may influence the effectiveness of the communication process including the order of arguments, the explicitness of requests, and the use of emotional appeals (Hovland, 1957). Many source factors are thought to affect recipients’ acceptance of a communication, such as the source’s level of expertise, trustworthiness, and status (Hovland et al., 1953). Finally, the model states that audience characteristics may influence communication effectiveness such as an individual’s persuasibility, intelligence, and personality (Hovland & Janis, 1959).

Argument quality and source credibility are important factors related to source and message respectively, when modelling DPTs (Bhattacharjee & Sanford, 2006; Zhang & Watts, 2008). Information framing is another relevant message element in ISI research (Angst & Agarwal, 2009; Grewal et al., 1994). Information consistency (also known as confirmation with prior belief) is an audience characteristic and may affect evaluations of an incoming message (Cheung et al., 2009; Zhang & Watts, 2003). Thus, the Yale Model is a useful theory to link the four dimensions of ISI (i.e., argument quality,

source credibility, information framing, and information consistency) in the UGC context, and treat them as a higher-order construct.

The ISI dimensions are discussed individually in the following subsections, and a second-order formative measurement model of ISI in the UGC context in the travel industry is proposed. As noted above, this study is investigating how the ISI generated by travelers (i.e., UGC) is empowering other travelers when making travel plans.

Argument Quality

Argument quality refers to the persuasive strength of arguments embedded in an informational message (Bhattacharjee & Sanford, 2006). Eagly and Chaiken (1993) also define argument quality as a recipient's perception that a message's arguments are strong. According to Cheung et al. (2009), when the received information is perceived to have valid arguments, receivers will develop a positive attitude towards the information. The more relevant and helpful the information embedded in the argument is, the higher quality members will perceive the content-based arguments to be (Sussman & Siegal, 2003). Altogether these studies suggest that the recipient will believe an argument is high quality if they believe the argument is strong.

Internet users in online communities compose messages to provide other users with helpful information (Sussman & Siegal, 2003). In the UGC context, consumers can easily observe and assess the argument quality because UGC is published in a written form (Lee et al., 2008). When UGC is persuasive with sufficient reasons based on specific facts about the product, it will have a strong positive effect on purchasing intention (Park et al., 2007). In the travel industry context, it is reasonable to suggest that argument quality is a key part of ISI when travelers use UGC to make travel plans.

Source Credibility

Source credibility is defined as the extent to which an information source is perceived to be believable, competent, and trustworthy by information recipients (Petty & Caciopo, 1986). People are more receptive to information that comes from a highly credible source, and conversely are less likely to accept it when the source has low credibility (Grewal et al., 1994). Source credibility can be defined as a reviewer's perception of the

credibility of the source of a review message, as opposed to the content of the review itself (Chaiken, 1980).

In online communication where messages are exchanged, some attributes, such as attractiveness and physical appearance of the source are difficult to assess due to the nature of the virtual discussion (Cheung et al., 2009). Thus, Internet users consider a reviewer's credibility as an important indicator of information credibility (Wathen & Burkell, 2002). When consumers read UGC to make decisions, they pay attention to the source credibility (Hu et al., 2008). In general, UGC is considered more trustworthy and credible than information provided by suppliers of products and services because consumers are believed to provide more honest advice (Chatterjee, 2001; Park et al., 2007). Consumers rely heavily reliable on information from online sources even though much UGC is anonymous (Hennig-Thurau, 2005).

Due to the lack of commercial self-interest connected with UGC consumers tend to trust and be more influenced by this type of information than by more commercial sources such as travel agents or accommodations operators (Burgess et al., 2009). A high level of source credibility improves the information adoption of UGC (Zhang & Watts, 2008). Some consumers prefer to read UGC from reviewers with better quality reputations since this UGC are more trustworthy, credible, and reliable (Hu et al., 2008). In the context of this study, it is reasonable to suggest that source credibility is a key part of ISI when travelers use UGC to make travel plans.

Information Framing

Information framing refers to the content of the message, if it is positively framed or negatively framed (Cheung et al., 2009). Positively framed information is related to a product's strengths, whereas negatively framed information is associated with a product's weaknesses/problems (Grewal et al., 1994). Positively framed information not only contains credible content, but also it emphasizes the beneficial outcomes that the individual might realize, whereas negatively framed information contains strong messages emphasizing the unfavorable results that may be attained (Angst & Agarwal, 2009). This study follows Angst and Agarwal's (2009) concept of information framing, which restricts the analysis to messages that are positively framed. The reason for not using both positively and negatively framed messages is to avoid potentially biasing the

respondents. Also, positive messages are more likely to be internalized by recipients and more influential in changing attitudes (Chaiken, 1980; Ford, Smith, & Swasy, 1990).

Positive UGC typically gives either a direct or an indirect recommendation for product purchase as well as enhances expected quality, and consumers' attitudes toward a product (Liu, 2006). Positive UGC has a much larger impact on consumer behavior in the travel industry than negative UGC (Vermeulen & Seegers, 2009). According to Vermeulen and Seegers (2009), a single negative UGC does not cause much harm, whereas a single positive UGC can do a lot of good. Thus, in the travel industry context, it is reasonable to suggest that information framing is a key part of ISI when travelers use UGC to make travel plans.

Information Consistency

Information consistency indicates the extent to which the current message is consistent with the prior knowledge of the person accessing it (Zhang & Watts, 2003). Consumers can detect the level of confirmation or disconfirmation between the received information and their prior beliefs relating to the reviewed product/service through various direct or indirect experiences (Cheung et al., 2009).

When people perceive the information as consistent with their prior knowledge or expectations, they have more confidence in the received information and therefore use the criteria for subsequent purchase decisions (Alloy & Naomi, 1984; Zhang & Watts, 2003). Hence, when people read UGC with advice that confirms the reader's existing belief, they will be more likely to believe the UGC, and consequently use it for their purchase decision (Cheung et al., 2009). In the context of this study, it is reasonable to suggest that information consistency is a key part of ISI when travelers use UGC to make travel plans.

Informational Social Influence as a Formative Second-Order Structure

This research proposes a second-order formative measurement model of ISI in the UGC context in the travel industry. The Jarvis, Mackenzie, and Podsakoff's (2003) guidelines were used to model ISI as formative. For example the dimensions of source credibility (source factor), argument quality (message factor), information framing (message factor), and information consistency (audience characteristic) are viewed as defining

characteristics of ISI. Also, another formative condition is related to interchangeability of items, where the factors comprising the ISI dimensions (i.e., source, message, and audience) do not necessarily share a common theme. Furthermore, the dimensions need not co-vary – for instance, a high likelihood of one particular dimension, say low source credibility would influence the level of ISI, but would not necessarily be correlated with the other measures (e.g., argument quality).

Thus, this research suggests that the four first-order formative factors (i.e., argument quality, source credibility, information framing, and information consistency) share a common variance labeled “Informational Social Influence” in Figure 11.

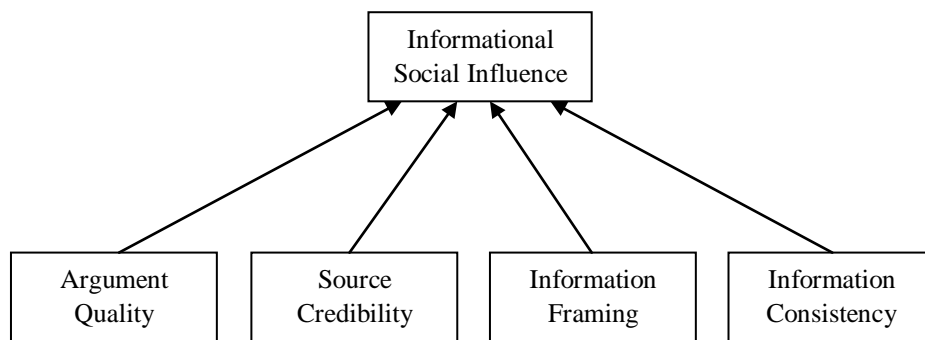


Figure 11. Formative Measurement Model of Informational Social Influence

Informational Social Influence affecting Psychological Empowerment

This study researches how the ISI generated by travelers (i.e., UGC) is empowering other travelers when making travel plans. Consumers feel empowered when they can access information and take independent voluntary action on their own behalf (Freedman, 2007). Empowerment arouses intrinsic task motivation that is manifested in four cognitions: choice (self-determination), competence (self-efficacy), meaning, and impact (Thomas & Velthouse, 1990).

Travelers may have better choices in making travel plans when they accept the information (i.e., UGC) obtained from other travelers (Spector, 1986). Also, travelers may have more confidence in their ability to make travel plans when they accept the information obtained from other travelers (Gist, 1987). When travelers accept the information from other travelers, this may strengthen the value of their experience when making travel plans (Thomas & Velthouse, 1990), and consequently this may have a positive impact on their travel plans. Hence, it seems reasonable to posit that the ISI

affects travelers' perceptions of PE when using UGC to make travel plans. Thus, the following hypothesis is proposed:

Hypothesis 1: Informational Social Influence positively affects travelers' perceptions of Psychological Empowerment when using UGC to make travel plans.

3.3.2 Normative Social Influence (NSI)

Normative social influence (NSI) refers to other people's opinions about the received information and how these opinions would affect others' choice preferences (Kaplan & Miller, 1987). For this study, others' choice preferences refer to travelers' choice preferences when they are reading other travelers' opinions about the received information (i.e., UGC). Venkatesan (1966) pointed it out that normative pressures are operative in public/group settings and that individuals tend to conform to group opinions.

People do not always make decisions in isolation; rather they look to others to guide their thoughts and actions (Turner, 1991). In looking to others, people might be interested in what society says they should do in a situation (Hornsey, Majkut, Terry, & McKimmie, 2003). NSI occurs when information on the position favored by other members is available during communication (Kaplan & Miller, 1987). Hence, the influence occurs when people comply with what others think they should do.

Kelley's attribution theory is a normative model that attempts to explain why we behave in a certain way in response to inferences from others (Kelley, 1967). According to Kelley (1967), attribution is caused by three criteria: consistency, distinctiveness, and consensus. The causal attribution identifies the causes of certain effects and forms the basis for decisions (Kelley, 1973).

Attribution theory argues that consistency and distinctiveness are important parameters of individual experience. According to Kelley and Michela (1980), a person trusts his or her reactions to a stimulus when they are consistent and distinctive from those of other stimuli. Kelley and Michela (1980) claim that when perceivers are informed that the consensus is based on a representative sample, the more an actor's behavior conforms with the consensus, the more the behavior is attributed to the consensus information. The attribution derived from consensus information may be determined by the attributions made for that information itself (Kelley & Michela, 1980).

There are two types of normative opinions present in the UGC context (Yee, 2006). One is the normative opinion on the discussion issue (which reflects the consistency aspect in attribution theory) and the other is the normative response to the communication, which is how other audiences evaluate the received information (which reflects the consensus dimension in attribution theory). In other words, UGC from other reviewers on the same accommodation are considered as an aspect of consistency while others' opinions on that particular UGC relates to the issue of consensus. Both provide views/positions that are evaluated by others and may act as normative cues for an individual's own information evaluation.

For this study, the two normative opinions in UGC in the travel industry are captured: (i) the normative opinion on the discussion issue with concerns about whether the feedback from the current review is consistent with the others (identified as "recommendation consistency" in this study), and; (ii) the normative response to the communication, which focuses on how other users react to or evaluate the current view (identified as "recommendation rating" in this study). Both aspects report the views of others on the topic of discussion. Recommendation consistency and recommendation rating are the most popular and significant normative determinants adopted by information readers to help their evaluations of electronic word-of-mouth (WOM) credibility (Eysenbach, 2000; Vandenbosh & Higgins, 1996).

The NSI dimensions are discussed individually in the following subsections, and a second-order formative measurement model of Normative Social Influence in the UGC context in the travel industry is proposed. As noted above, this study is investigating how the NSI generated by travelers (i.e., UGC) is empowering other travelers when making travel plans.

Recommendation Consistency

Recommendation consistency refers to the extent to which a current recommendation is consistent with other contributors' experiences regarding the same product/service evaluation (Zhang & Watts, 2003). People are more likely to rate the credibility of the recommendation highly when there is consistency between the recommendations (Cheung et al., 2007). People tend to follow and believe normative opinions (Zhang & Watts, 2003).

When UGC is submitted by more than one consumer, it is then easy to get opinions from different users and to compare the consistency between recommendations (Cheung et al., 2009). Also, if many online consumers recommend a product, other consumers acting in conformity with their views, are likely to believe the recommendations and have a favorable attitude toward the product (Park et al., 2007). Consistency with other travel reviews (i.e. UGC) is an important aspect when travelers are making their travel plans (Gretzel et al., 2007). Hence, it is reasonable to suggest that recommendation consistency is a key part of NSI when travelers use UGC to make travel plans.

Recommendation Rating

Recommendation rating refers to the overall rating provided by other people on a recommendation (Cheung et al., 2007). This rating has been used to measure the persuasive effect of UGC in several studies (Chen et al., 2004; Cheung et al., 2009; Chevalier & Mayzlin, 2006a; Chintagunta et al., 2010; Duan et al., 2008; Li & Hitt, 2008; Liu, 2006; Mudambi & Schuff, 2010). Most review websites allow an Internet user to provide an overall rating (Duan et al., 2008).

Online consumers can mark a high or low rating depending on the perception of the message (Cheung et al., 2009). When most Internet users give a high-level rating to a message, it means that the majority believe the content of the message. The rating may influence other consumers' perception of the product/service (Duan et al., 2008). When consumers read UGC, they pay attention to the recommendation rating (Hu et al., 2008). Chen et al. (2004) show that consumers are more likely to purchase books with higher recommendation ratings than those with lower recommendation ratings. Frequent online travel review readers are more likely to consider other travelers' ratings when evaluating an UGC for making their travel plans (Gretzel et al., 2007). Thus, it is reasonable to suggest that recommendation rating is a key part of NSI when travelers use UGC to make travel plans.

Normative Social Influence as a Formative Second-Order Structure

This research proposes a second-order formative measurement model of NSI in the UGC context in the travel industry. In a formative model, the measures are referred to

as casual indicators (Bollen & Lennox, 1991). In Kelley’s attribution theory (Kelley, 1973), the measures together form a causal attribution (i.e., consistency/distinctiveness and consensus). Basically, attribution theory provides a framework for understanding how individuals make “causal” inferences (Kelley, 1967).

The Jarvis, Mackenzie, and Podsakoff’s (2003) guidelines were used to model NSI as formative. For example, the dimensions of recommendation consistency (consistency) and recommendation rating (consensus) are viewed as defining characteristics of NSI. The interchangeability of the measures is also verified in the NSI, where the two factors (i.e., consistency and consensus) do not necessarily share a common theme. According to Kelley and Michela (1980), the two kinds of information in the attribution theory (i.e., consistency and consensus) are likely to be treated differently. Finally, the dimensions need not co-vary – for example, Baumeister and Bushman (2008) state that people generally make an internal attribution when consistency is high but consensus is low.

Thus, this research suggests that the two first-order formative factors (i.e., recommendation consistency and recommendation rating) share a common variance labeled “Normative Social Influence” in Figure 12.

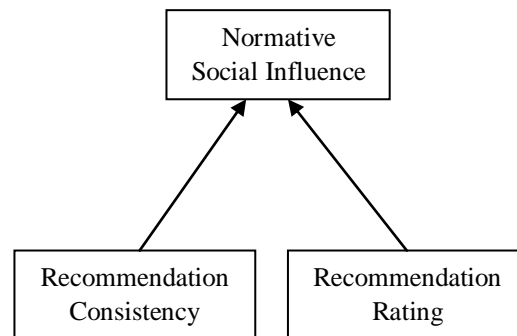


Figure 12. Formative Measurement Model of Normative Social Influence

Normative Social Influence affecting Empowerment

This study investigates at how the NSI generated by travelers (i.e., UGC) is empowering other travelers when making travel plans. Consumers feel empowered when they can access information and take independent voluntary action on their own behalf (Freedman, 2007). This study proposes that PE (i.e., self-determination, competence,

meaning, and impact) is affected by the NSI. When travelers look to other travelers' opinions about the received information (i.e., UGC), this may affect their choices when making travel plans (Spector, 1986). For example, other travelers' opinions about the received information may enable travelers to feel more confident in their ability to make travel plans (Gist, 1987). Looking to other travelers' opinions, travelers may strengthen the value of their experience when making travel plans (Thomas & Velthouse, 1990), and consequently this may impact their travel plans. Hence, it seems reasonable to posit that NSI affects travelers' perceptions of PE when using UGC to make travel plans.

Hypothesis 2: Normative Social Influence positively affects travelers' perceptions of Psychological Empowerment when using UGC to make travel plans.

3.4 Empowerment Influencing Traveler's Attitude

This study suggests the dimensions of PE (Spreitzer, 1995b) influence online consumer behavior in the UGC context, which in turn this study is modeled using TPB (Ajzen, 1991). TPB has three constructs: attitude, subjective norm, and perceived behavioral control (PBC), which in turn determine behavioral intention.

As noted earlier in the chapter, TPB does not specify the particular beliefs that are relevant with any particular context (Bhattacharjee, 2000; George, 2004). Since there is only a limited understanding of online consumer behavior (Pavlou & Fygenon, 2006), there is a need to explore beliefs that can influence attitude in online consumer behavior. Self-determination theory (SDT) aims to explain such general motives and contextualize the social cognitive constructs proposed by TPB (Hagger et al., 2002). The integration of TPB with SDT can provide a more comprehensive account of the determinants of intentional behavior (McLachlan & Hagger, 2011).

SDT and empowerment can be viewed as related theories/topics. According to Bono and Judge (2003), there is a conceptual overlap between PE (Thomas & Velthouse, 1990) and SDT (Deci & Ryan, 1985, 2000). PE has direct links to SDT (Bono & Judge, 2003), as autonomy (self-determination) and competence are dimensions of empowerment, and both theories deal with intrinsic task motivation (Thomas & Velthouse, 1990).

PE (i.e., self-determination, competence, meaning, and impact) is the most known type of empowerment and is usually referred to simply as empowerment by many researchers (Sehgal, 2007). The literature on PE mostly focuses on employee empowerment in organizations (Menon, 2001; Ng & Kim, 2009). This research proposed a model that adapts the concept of PE (Spreitzer, 1995b) to the consumer context exploring the role of UGC as an enabler of travelers' PE in the travel industry. The PE is especially important in the online travel industry where UGC helps travelers to interact and offer peer to peer advice on decision-making processes such as travel plans (Ip et al., 2011; O'Connor, 2008).

Previous research has established links between empowerment and TPB within a given context (Hagger & Chatzisarantis, 2009; Hagger et al., 2002; Hagger et al., 2006; McLachlan & Hagger, 2011). However, no study has investigated the influence of empowerment on attitude in the UGC context in the travel industry. Also, some studies have called for more research on examining other consequences to better explain PE (Chiang & Jang, 2008; Spreitzer, 1995b). This study suggests that beliefs about Psychological Empowerment inform traveler's attitude when making travel plans.

According to Ajzen (2008), attitude is considered one of the most powerful factors that determines behavior. Across different meta-analyses, Ajzen shows that the prediction of intentions from attitudes, correlating up to 0.60, while the prediction of intention from perceived behavioral control is up to 0.46, and from subjective norm is up to 0.42. Since attitude accounts for the greater proportion of the variance, there is a need to explore factors that can influence attitude in online consumer behavior. Further, according to Pavlou and Fygenson (2006), there is only a limited and fragmented understanding of online consumer behavior, making this study a worthwhile undertaking.

The research literature provides support for the role of PE dimensions in relation to attitude. A model proposed by Gagné (2009) uses TPB and empowerment dimensions to predict intentions to share knowledge and actual behavior in organizations. Gagné suggests that psychological needs (i.e., autonomy, competence, and relatedness) predict attitude toward sharing knowledge. In another knowledge-sharing paper, Bock and Kim (2002) discovered that expectations to increase competence and relatedness led to more positive attitudes toward sharing knowledge. Based on the empowerment concepts (Deci & Ryan, 2000), Malhotra, Galleta and Kirsch (2008) analyzed how endogenous psychological feelings of autonomy, freedom, conflict, and external pressure could explain user intentions. The results indicated that perceived autonomy to use a web-based educational platform was related to attitude toward it and greater intentions to use it.

3.4.1 Psychological Empowerment (PE)

A traveler who feels empowered by UGC is more likely to have positive attitudes toward using UGC when making travel plans. This research proposes PE as an antecedent for attitude in the UGC context in the travel industry. Furthermore, this study investigates those dimensions which jointly reflect an existing overall individual empowerment construct – PE (Spreitzer, 1995b). The four individual dimensions of PE have been utilized (discussed in Chapter 2): self-determination, competence, meaning, and impact.

PE dimensions are presented individually in the following subsections, and a second-order reflective measurement model of PE in the UGC context in the travel industry is proposed. The literature suggests that beliefs about PE inform traveler attitude toward using UGC when making travel plans (Bock & Kim, 2002; Deci, Connell, & Ryan, 1989; Gagné, 2009; Malhotra et al., 2008).

Self-determination

Self-determination is the individual's autonomy in having choice in initiating and regulating work behaviors and processes, such as making decisions about work methods, pace and effort (Deci & Ryan, 1985; Spector, 1986). An empowered person would perceive having autonomy when performing his/her tasks (Thomas & Velthouse, 1990). When a user perceives the IS usage environment as having enabling opportunities, one would take the initiative to more fully use IS in tasks (Gagné & Deci, 2005). For example, the use of UGC facilitates travelers to evaluate trip alternatives during decision-making processes on the Internet (O'Connor, 2008). Therefore, it is reasonable to suggest that the use of UGC is an enabling activity for travelers to exercise choice (self-determination) when making travel plans.

In the management literature, the concept of self-determination is often examined in the context of job autonomy, which perceptions emerge from interactions between individuals and their work processes. Malhotra et al. (2008) found that perceived autonomy to use a web-based educational platform was related to attitude toward it. Also, Deci et al. (1989) showed that when managers were trained to be more supportive

of autonomy, their subordinates displayed more positive work-related attitudes. Thus, the literature supports the relationship between self-determination and attitude.

Competence

Competence is defined as the individual's belief in his/her capability to perform activities with skill (Gist, 1987). Competence can also be defined as the degree to which a person can perform task activities skillfully (Thomas & Velthouse, 1990). In the psychology literature, Bandura (1977) has studied competence using the terms self-efficacy or personal mastery.

In the organizational context, self-efficacy refers to the capability of the employees to perform work activities. According to the PE theory, an individual who perceives they are competent develops a feeling of being in control of a particular situation (Thomas & Velthouse, 1990). Therefore, when travelers perceive they have competence in using the UGC to accomplish tasks, s/he would be able to maximize its usage (Bandura, 1997).

An empowered traveler is a person who feels confident to make a travel decision without exerting much intellectual effort (Hjalager, 2001). Reading other travelers' UGC increases confidence in decisions (Gretzel et al., 2007). A study conducted by Gretzel et al. (2007) also showed that frequent travel review readers are more skilled at using the Internet and are more likely to use UGC. UGC increases confidence by reducing risk in the trip planning process (Gretzel & Yoo, 2008). If a traveler is using UGC to help make a travel plan, s/he will feel more confident about making the right decision. Hence, in the travel industry context, the use of UGC can be interpreted as an enabling activity for travelers to gain self-efficacy (competence) through making travel plans.

The research literature shows support for the impact of competence on attitude. For example, attempting to understand the factors affecting the individual's knowledge sharing behavior in the organizational context, Bock and Kim (2002) discovered that expectations to increase competence led to more positive attitudes toward sharing knowledge. Self-efficacy (competence) has been found to be related to academic achievement, behaviors and attitudes (Hagger, Chatzisarantis, & Biddle, 2001; Salami & Ogundokun, 2009).

Meaning

Meaning is defined as the value of a task goal or purpose, judged in relation to an individual's own ideals or standards (Thomas & Velthouse, 1990). Meaning is believed to be a vital component of an individual's empowerment experience (Spreitzer, 1992) since it acts as the fit between the requirements of one's work role and one's beliefs, values, and behaviors (Brief & Nord, 1990). For example, meaning is a cognition that pertains to the work process itself, where the work process is viewed as the causal agent that contributes to the workers' beliefs and values (Doll & Deng, 2010).

Following PE theory, an individual is likely to perform a target activity because s/he has perceived it to be meaningful (Thomas & Velthouse, 1990). When a user perceives an IS usage environment to be meaningful, s/he will use the IS to accomplish tasks (Hunton & Price, 1997). If a user perceives value in IS usage to be in accordance with his/her personal needs, s/he will perceive such use as being personally important (Baroudi, Olson, & Ives, 1986; Jackson, Chow, & Leitch, 1997). For example, Gretzel et al. (2007) conducted a survey of 1,480 online travelers to examine the impact of UGC in the travel planning process, and the results revealed that 88% of the travelers thought that UGC is important for deciding where to stay. Thus, it seems reasonable to posit that the use of UGC is an enabling activity for travelers to strengthen the value of their experience when making travel plans.

The research literature supports the role of meaning on attitude. For example, users of a web-based educational platform who feel that doing what they are doing is personally important and feel good about themselves while doing it will have a positive attitude (Malhotra et al., 2008). Gagné (2009) proposed a model in which autonomous motivation is positively related to having a positive attitude toward knowledge sharing. According to Gagné, people pursue autonomous motivation because it is personally meaningful and fits their value system. Csikszentmihalyi (1998) states that the greater the conflict between personally meaningful goals and those people feel coerced into adopting, the more intense are the negative evaluative feelings (attitude) toward the specific behaviors. What is not perceived as personally meaningful or important has a less lasting effect on attitude (Malhotra et al., 2008).

Impact

Impact is the degree to which an individual can influence strategic, administrative, or operating outcomes at work (Ashforth, 1989). Thomas and Velthouse (1990) defines impact as to the degree to which behavior is seen as making a difference in terms of accomplishing the purpose of the task.

When an individual feels empowered, his/her use of IS will have a significant influence over his/her tasks (Ashforth, 1989; Spreitzer, Kizilos, & Nason, 1997). UGC is currently having a considerable influence on travelers' plans and impacting the competitive reality of the tourism sector as a whole (Papathanassis & Knolle, 2011). Ye et al. (2011) assert that the travelers' accommodation decisions are strongly influenced by online travel reviews. In the context of this study, it is reasonable to suggest that the use of UGC is an enabling activity for travelers to enhance their perceptions of UGC impact on their travel plans.

The impact dimension has received less attention in the literature than the other three dimensions of PE (i.e., self-determination, competence, and meaning) (Spreitzer et al., 1997). While research is sparse, it is expected that the impact dimension would be related to satisfaction (Spreitzer et al., 1997). For example, Thomas and Tymon (1994) showed that impact was strongly related to enhanced work satisfaction. Also, previous studies has used an attitude-related construct – satisfaction in consumer research in marketing and IS literature (LaTour & Peat, 1979; Liao, Chen, & Yen, 2007). As attitude is related to satisfaction (LaTour & Peat, 1979; Liao et al., 2007) and impact is related to satisfaction (Thomas & Tymon, 1994), it is expected that there is a relationship between impact and attitude.

Psychological Empowerment as a Reflective Second-Order Structure

In the organizational context, Spreitzer (1995b) developed the first validated PE measurement model using the four-dimensional conceptualization of Thomas and Velthouse (1990). Spreitzer proposed the concept of PE as second-order factor with four first-order reflective factors: self-determination, competence, meaning, and impact. These four cognitions reflect an overall motivational construct of PE (Spreitzer, 1995b; Thomas & Velthouse, 1990).

The IS literature often deals with self-determination, competence, meaning, and impact dimensions as separate phenomena rather than as facts of a single motivational gestalt (Doll & Deng, 2010). This research suggests that these four first-order reflective factors share a common variance labeled “Psychological Empowerment” in Figure 13. Thus, this research is proposing a second-order reflective measurement model of PE in the UGC context in the travel industry. The argument for a second-order reflective structure of PE is consistent with the management literature (Spreitzer, 1995b, 1996; Spreitzer et al., 1997), and IS literature (Doll & Deng, 2010), where PE was measured as a second-order reflective construct.

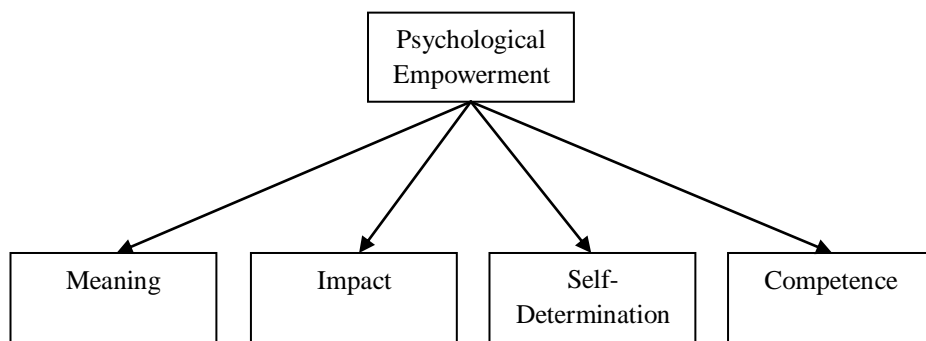


Figure 13. Reflective Measurement Model of Psychological Empowerment

Psychological Empowerment influence attitude toward behavior

The Internet can enhance empowerment of the individual through interaction with others (Füller et al., 2009). PE is especially important in the online travel industry where UGC can help travelers to interact and offer peer to peer advice on decision-making processes such as travel plans (Ip et al., 2011; O'Connor, 2008). Travelers are psychologically empowered when: they perceive themselves as having choices in how they make their travel plans using UGC; have confidence in their ability to be successful in using UGC when making travel plans; believe that their travel plans have inherent value using UGC; and perceive that using UGC will have a positive impact on their travel plans. Thus, travelers may feel empowered by using UGC when making their travel plans.

In tourism marketing and planning, service providers need to understand which factors influence individuals' travel decisions, how attitudes are formed, and how various reference groups affect travel behaviors (Moutinho, 1987). The literature suggests that

beliefs about PE inform traveler attitude toward using UGC when making travel plans. Many researchers have established links between empowerment and attitude (Brock & Kim, 2002; Deci & Ryan, 2000; Fuchs & Schreier, 2011; Gagné, 2009; Malhotra et al., 2008; Psorinos et al., 2000). Thus, the following hypothesis is proposed:

Hypothesis 3: Travelers' perception of Psychological Empowerment positively influences their attitude toward using UGC when making travel plans.

3.5 Travelers' Intention to Use UGC when Making Travel Plans

This research is not only investigating how travelers are empowered by UGC and how this influences their attitude, but also how this in turn influences their behavioral intention when making travel plans. TPB is a well-established general theory of social psychology and has three independent determinants of intention (Ajzen, 1991): attitude toward behavior, subjective norm, and perceived behavioral control (PBC). TPB has been shown to predict behavior across a variety of settings (Armitage & Conner, 2001) including IS settings (George, 2004; Mathieson, 1991; Pavlou & Fygenson, 2006; Taylor & Todd, 1995a; Venkatesh et al., 2003).

There are some studies on online consumer behavior and UGC in the marketing and IS literatures. For instance, UGC has been shown to represent a valuable tool for companies, who can use it to monitor consumer attitude toward their products (Dellarocas et al., 2007). UGC also increases the consumers' intention to purchase a product and maximizes the likelihood that consumers will buy a recommended product (Park et al., 2007; Seneca & Nantel, 2004).

There are also some studies on online consumer behavior and UGC in the travel and tourism industry. For example, Parra-López et al. (2011) proposed a theoretical model to explain the factors (i.e., benefits, costs, and incentives) determining the intentions to use UGC when making travel plans. Casaló et al. (2011) investigated some of the antecedents of the travelers' intention to follow the advice obtained from UGC in the online travel community. Furthermore, Ye et al. (2011) assessed the impact of UGC on business performance using data from a major Chinese travel agency. Lim, Ma, and Kim (2006) employed the TPB model to test the antecedents of negative UGC intention of Chinese consumer in restaurants, while Kim et al. (2006) identified the determinants affecting Chinese hotel customers' online reservation intentions and assessed their satisfaction with online hotel reservation.

Thus, TPB has been chosen as the theoretical framework for this study in the UGC context in the travel industry. TPB has three independent determinants of intention: attitude, subjective norm, and PBC.

3.5.1 Attitude

Attitude is the degree to which a person has a favorable evaluation of the behavior in question (Ajzen, 1991). The more favorable the attitude toward the behavior, the stronger should be the individual's intention to perform it (Armitage & Conner, 2001). Attitude has long been shown to influence behavioral intentions (Ajzen & Fishbein, 1980). Following the TPB, a favorable attitude toward using UGC is likely to encourage travelers to use UGC when making travel plans.

The research literature supports the role of attitude on behavioral intentions. For example, using TPB, Pavlou and Fygenson (2006) investigated the process of e-commerce adoption by consumers, and found that attitude was related to online consumers' behavioral intention to purchase a product and to get information from a web vendor. Taylor and Todd (1995b) examined potential users of a computer resource centre, and their findings indicated that attitude was an important predictor of IT usage intention.

Some studies have used TPB in the tourism context. For example, in a study of travelers' behavior formation process in visiting an international travel destination, Hsu and Huang (2011) found that attitude had a positive impact on behavioral intention. Lam and Hsu (2006) showed attitude was related to Chinese's behavioral intention of visiting Hong Kong. Thus, the following hypothesis is proposed:

Hypothesis 4: Travelers' attitude toward using UGC positively influences their intention to use UGC when making travel plans.

3.5.2 Subjective Norm

Subjective norm is “the person’s perception of the social pressure to perform or not perform the behavior under consideration” (Ajzen, 2005, p. 188). For instance, if others approve of doing something, an individual is likely to intend to perform it; conversely if others disapprove of doing something, the individual is less likely to intend to perform it (Armitage & Conner, 2001). Applied to the UGC context, subjective norm reflects a traveler’s perception of the social pressure to use or not use UGC when making travel plans.

The relationship between subjective norm and behavioral intentions has received substantial empirical support in the IS literature. For example, subjective norm was an important predictor of intention to use online brokerage services in Bhattacharjee’s research (2000). In a study of cross-sectional comparison of pre-adoption and post-adoption of information technology use, Karahanna, Straub and Chervany (1999) discovered that top management, supervisors, and peers influenced adoption intention for both potential technology adopters and actual users. Using TPB, Morris and Venkatesh (2000) analyzed age differences in adoption intentions and continued use of information technology, and they showed that workers were strongly influenced by subjective norm. In a TPB study in the tourism context, Hsu and Huang (2011) showed that subjective norm was related to travelers’ intention to visit an international travel destination. Thus, the following hypothesis is proposed:

Hypothesis 5: Subjective norm about using UGC positively influences travelers’ intention to use UGC when making travel plans.

3.5.3 Perceived Behavioral Control (PBC)

Perceived Behavioral Control (PBC) is a person's perception of how easy or difficult it would be to carry out a behavior (Ajzen, 1991). The magnitude of the PBC-intention relationship is dependent upon the type of behavior and the nature of the situation (Ajzen, 1991). According to Bandura (1997), a person is more likely to engage in behavior that is believed to be achievable. In the context of this study, PBC is the traveler's perceived ease or difficulty of using UGC when making travel plans.

The IS research literature supports for the role of PBC on behavioral intentions. For example, Pavlou and Fygenson (2006) used TPB to explain and predict the process of e-commerce adoption by consumers. The results indicated that PBC was a significant predictor of intention to purchase a product and to get information from a web vendor. Taylor and Todd (1995b) investigated users in a computer resources centre and found a positive relationship between PBC and intentions. Also, Mathieson (1991) showed that PBC influences intention to use an IS. In the tourism research literature, Sparks and Pan (2009) demonstrated that PBC was correlated with the behavioral intention of Chinese in choosing Australia as an international destination. Thus, the following hypothesis is proposed:

Hypothesis 6: Perceived behavioral control over using UGC positively influences travelers' intention to use UGC when making travel plans.

3.6 Chapter Summary

The aim of this chapter was to develop a research model based on the three research questions set out in the previous chapter. This study empirically tests a research model that is aimed at identifying and evaluating the factors that empower travelers when making their travel decisions. DPT, PE, and TPB were the theories used to develop the theoretical foundation of the research model. A set of six hypotheses were also developed in this chapter. Chapter 4 describes the research design employed in this study, provides a detailed description of the survey procedures, and introduces the data analysis method used in this research.

CHAPTER 4: METHODOLOGY

4.1 Chapter Overview

In the previous chapter, a research model was developed to explain the role of user-generated content (UGC) in empowering travelers when making travel plans. Dual-process theory (DPT), psychological empowerment (PE), and the theory of planned behavior (TPB) were the theories used to construct the theoretical foundation of the research model. A set of six hypotheses were also developed in relation to the three research questions derived in Chapter 2.

The function of the current chapter is to explain the research design, describe the survey method (i.e., classification, sample, and ethics), identify the measurement issues, introduce the structural equation modelling technique used to analyze the data (i.e., partial least squares), describe the approach used for instrument design (i.e., focus group, pre-test, pilot survey, measurement items, and questionnaire format and administration), and report the preliminary details of the final survey.

4.1.1 Chapter Outline

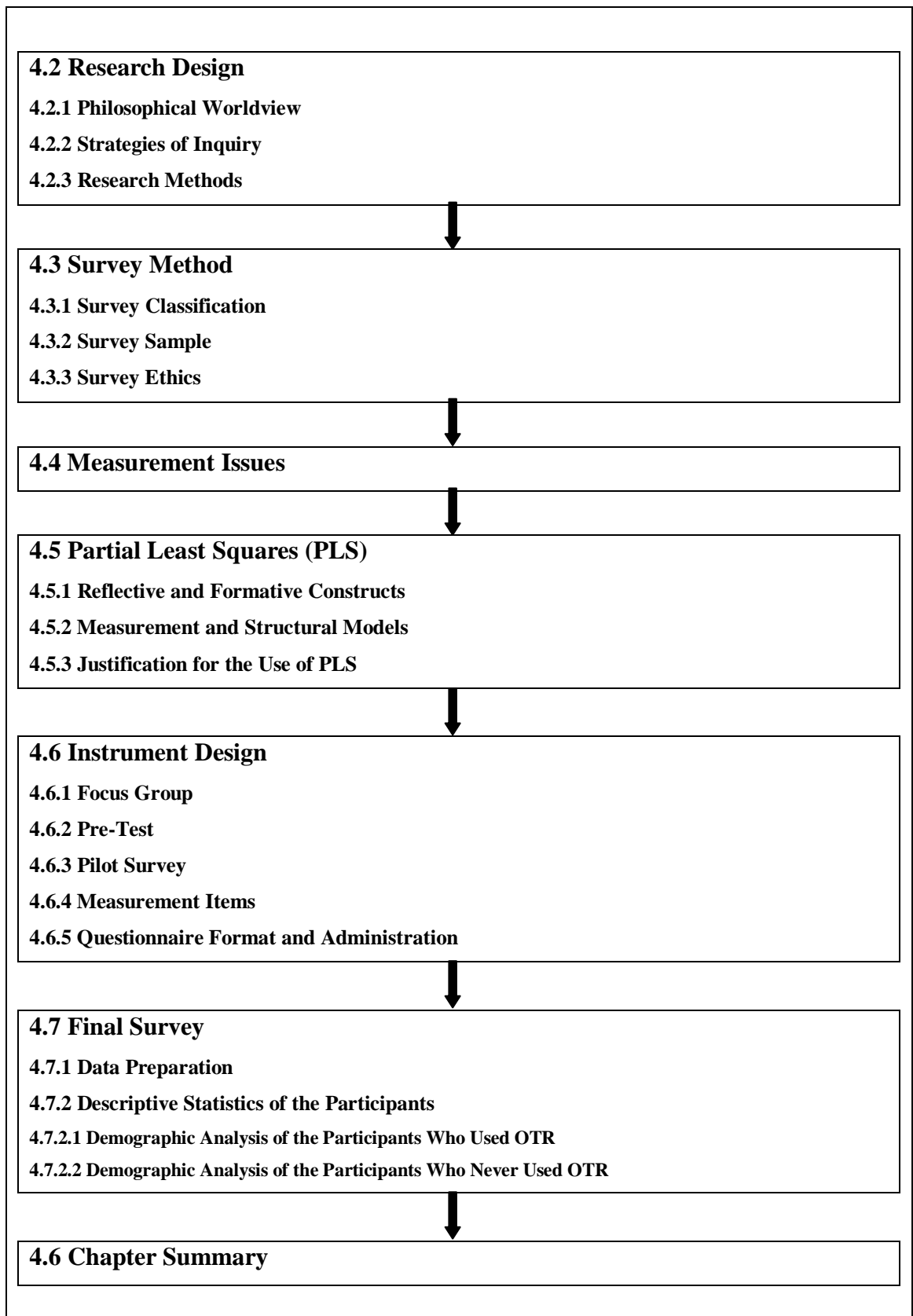


Figure 14. Chapter 4 Outline

4.2 Research Design

Before choosing a plan and method(s) to conduct a research, the underlying paradigm needs to be considered. Guba and Lincoln (1994, p. 105) define a paradigm as “the basic belief systems or worldview that guides the investigator, not only in choices of method but in ontologically and epistemologically fundamental ways”. The term worldview means “a basic set of beliefs that guide action” (Guba, 1990, p. 17). The researcher’s worldview needs to be defined in epistemologically and ontologically ways to underpin the selection of the research design (Cornford, 1996; Guba & Lincoln, 1994).

Epistemology refers to the acceptable knowledge in a discipline that can be obtained about the phenomena being studied according to the same principles, procedures, and ethos as the natural sciences (Bryman & Bell, 2007). Two epistemological positions advocate the application of the methods of the natural sciences: positivism and interpretivism (Bryman & Bell, 2007). Positivism takes the position that the aim of theory is to create hypotheses that can be tested through research strategies and analysis methods (Bryman & Bell, 2007). Interpretivism is a term given to approaches that contrast with positivism, where the researcher in a subjective role is involved in the activity and tends to gather data prior to committing to the hypotheses (Cornford, 1996). The epistemological position taken in this study is consistent with positivism as it uses prior theory to generate hypotheses to be tested using an analysis method.

Ontology refers to questions related to the nature of social entities (Bryman & Bell, 2007). These questions framed according one of two ontological positions: objectivism and constructionism. Objectivism is an ontological position where the entities have a reality external to social actors, which implies that social phenomena have an existence that is independent or separate from actors (Bryman & Bell, 2007). From the constructionism position, on the other hand, social phenomena and their meanings are continually being created by social actors, where social constructions are built up from the perceptions and action of social actors (Bryman & Bell, 2007). The methods selected for this study conform to objectivism since social phenomena of the study and their meanings are separate from social actors.

Next the research plan is outlined using the guidelines recommended by Creswell (2009): first the philosophical worldview proposed in the study is presented, then the strategy of inquiry that is related to this worldview, and finally the specific methods of research.

4.2.1 Philosophical Worldview

Four philosophical worldviews were considered in relation to this study: constructivism, advocacy/participatory, pragmatism, and postpositivism (Creswell, 2009). The constructivism refers to social phenomena produced through social interaction, multiple participant meanings, social and historical construction, and theory generation (Bryman & Bell, 2007; Creswell, 2009). Participants work as active collaborators in the advocacy/participatory worldview, which seeks to originate a political debate and discussion in order that change will occur (Creswell, 2009). In the pragmatism worldview, researchers do not focus on methods (as in Postpositivism), they emphasize the research problem and try to use all approaches available to understand the problem (Creswell, 2009).

The postpositivist worldview is one in which causes determine the effects or outcomes (Creswell, 2009). For example, postpositivists develop numeric measures of observations and study the behavior of individuals. According to Creswell (2009), an approach used by postpositivists begins with a theory, collects data, and then tests the hypotheses proposed. This worldview holds true more for quantitative research than qualitative research (Creswell, 2009). Thus, for this study, the postpositivist worldview is employed since it starts with theory to generate hypotheses, and then collects data that either supports or refutes the theory.

4.2.2 Strategies of Inquiry

Another element when preparing a research plan is the strategy of inquiry that is related to the worldview. Strategies of inquiry include quantitative, qualitative, and mixed

methods research designs that offer directions for procedures in a research design (Creswell, 2009). Others researchers have also referred to strategies of inquiry as “research methodologies” (Mertens, 2003).

A quantitative strategy is a research approach in which the focus is on quantification in data collection and analysis, and involves a deductive approach (testing of theory) to the relationship between theory and research (Bryman & Bell, 2007). A quantitative research approach is useful for testing theories by examining the relationship among variables. These variables are then measured with instruments to enumerate data that is then be analyzed using statistical procedures (Creswell, 2009). There are two quantitative strategies of inquiry: surveys and experiments (Creswell, 2009).

Qualitative strategy is a research approach in which the focus is on words in data collection and analysis rather than quantification, and which involves an inductive approach (generation of theory) to the relationship between theory and research (Bryman & Bell, 2007). A qualitative research approach begins by generating questions, data is then collected in the respondents’ setting, and data analysis is built from particulars to general themes. Finally the researcher makes interpretations of the meaning of the data (Creswell, 2009). There are five key qualitative strategies of inquiry: narrative research, phenomenology, ethnographies, grounded theory studies, and case study (Creswell, 2009).

The mixed methods strategy is a research that combines both quantitative and qualitative approaches into a single study (Bryman & Bell, 2007).

This study adopts the quantitative strategy as it primarily involves a deductive approach (i.e., testing of theory), and examines the relationship among variables using statistical procedures in order to measure information numerically through unbiased approaches.

Certain kinds of research problems call for specific approaches (Creswell, 2009). For instance, if the problem calls for the identification of factors that influence an outcome, then a quantitative approach is more acceptable. This research will identify and evaluate the factors that empower travelers when making their travel plans. Hence, the quantitative strategy is adopted.

4.2.3 Research Methods

The third element that has to be considered when doing a research plan is the specific methods of data collections and analysis (Creswell, 2009). This needs to take into account the range of possibilities for data collections and to organize these methods according to their focus on numeric versus non-numeric data analysis. According to Creswell (2009), researchers decide which type of method will be used at the beginning based on the type of data that will be collected (i.e., quantitative) or allow the data to form itself from the respondents in the study (i.e., qualitative).

Quantitative methods are used by researchers when the instrument is based on predetermined questions (usually closed-ended questions), and statistical analysis is employed to interpret the data (Creswell, 2009). Qualitative methods, on the other hand, are used when the researchers collect data by observing the behavior of individuals without predetermined questions, or using interviews with open-ended questions - text and image analysis may also be included (Creswell, 2009). Finally, mixed methods research includes characteristics from both the quantitative and qualitative methods (Creswell, 2009).

The research methods used in this study are consistent with the quantitative approach as it identifies the type of data that will be collected in the beginning, uses a survey instrument based on predetermined questions, and then analyzes the data using statistical procedures.

4.3 Survey Method

The previous sections detailed the selection of the research design, which was influenced by philosophical worldview, strategy of inquiry, research methods, and the research problem. This study is testing a model by relating variables in hypotheses, collecting data that either supports or refutes the model, using an instrument based on predetermined questions, and employing statistical procedures to analyze the data. Thus, the quantitative approach has been selected based on the elements mentioned above.

Creswell (2009) states that there are two quantitative method of inquiry: surveys and experiments. Surveys can provide numeric descriptions of opinions of a population by studying a sample of that population, whereas experiments are used to determine if a specific treatment influences an outcome (Creswell, 2009). Experiments consists of true experiments and the random assignment of participants to treatment conditions (Creswell, 2009).

Survey research is a quantitative method that requires standardized information to describe variables or to study relationships between variables (Malhotra & Grover, 1998). This study involves empirical testing of variables and the relationships between them. The research context is about travelers using UGC when making travel plans. To investigate this context, the survey method was used to gather actual field information and because it allows for quantitative testing of variables. Also, surveys are the most popular method for studying UGC since individuals can be asked directly about their communication habits (Dellarocas et al., 2007).

In this section, a detailed description of the survey procedures is provided, including survey classification, survey sample, and survey ethics.

4.3.1 Survey Classification

Survey research can be classified depending on the goal of the study as exploratory (descriptive) or explanatory (causal) (Kerlinger, 1986; Yin, 1994). The objective of exploratory surveys is to become familiar with a topic (appropriate for early stages of

the research), and to help identify the concepts and basis for measurement (Malhotra & Grover, 1998). Usually there is no research model adopted in exploratory survey research (Malhotra & Grover, 1998).

Explanatory research is considered the most important type of survey research, and is used to find causal relationships between variables (Malhotra & Grover, 1998). Hypotheses are then tested and the results are interpreted in order to contribute to theory development (Malhotra & Grover, 1998). This study is classified as explanatory; its main objectives being to explain, hypothesize and test how travelers are empowered by using UGC influences their attitude, and how this in turn influences their behavioral intention in making travel plans.

Surveys can also be further classified as cross-sectional or longitudinal studies using questionnaires or structured interviews for data collection, in order to generalize from a sample to a population (Babbie, 1990). In the cross-sectional design, information is collected at one point in time from a sample chosen to represent the population, with the intention to collect a body of quantitative data in connection with two or more variables, which are then examined to detect patterns of association (Bryman & Bell, 2007; Malhotra & Grover, 1998). On the other hand, longitudinal designs are more appropriate for studying phenomenon that change over time by collecting data from the same respondents at two or more points in time (Malhotra & Grover, 1998).

This study is cross-sectional in nature. It means data was only gathered at one point in time (spanning four months). In such a study, data is collected at a certain period of time from a convenience sample to describe the larger population of interest. The unit of analysis is the major entity investigated in a study (Babbie, 1990). For the purpose of this study, this is the individual; in particular the study focuses on international backpackers traveling in New Zealand.

4.3.2 Survey Sample

In surveys, information is collected via a sample of the population with the intention of being able to generalize findings from the sample to the population (Malhotra & Grover,

1998). To do this, the samples should be randomly chosen from populations of individuals who are relevant to the construct under investigation (Lewis, Templeton, & Byrd, 2005).

The sample for this study consisted of international backpackers traveling in New Zealand. Backpackers are one of the six types of tourists in New Zealand identified by Becken (2003). The others are: coach tourists, tourists visiting friends and relative, auto tourists, campers, and comfort travelers. The term “backpacker” has been used to describe predominantly young (between 20 to 29 years of age), budget tourists on extended vacation or working holidays by the tourism industries in New Zealand, Australia and South East Asia (Chitty, Ward, & Chua, 2007; Loker-Murphy & Pearce, 1995; Murphy, 2001; Nash et al., 2006). Backpackers are also known as “independent travelers” (Tourism New South Wales, 2008). In the last few decades, the term backpacker has become used everywhere in the world, mostly by people setting up hostels and tours to cater to this market segment (Tourism New South Wales, 2008). Backpacking has increased worldwide and has become a common phenomenon (Sorensson, 2008; Westerhausen & Macbeth, 2003).

The international backpacker market is a significant element of the visitor market mix for New Zealand as well as an important component of its tourism earnings (Newlands, 2004). Indeed, backpacker guest nights in 2006 was the fastest growth segment among the six types mentioned above, increasing by 107% since 1997 (Ministry of Tourism, 2006). The number of backpacker guest nights totaled 4,543,775 in 2008, which was approximately 13.6% of the total of the guest nights by accommodation type (Ministry of Tourism, 2008). Pearce et al. (2004) found that a large proportion of international guests stay in the backpacker hostels in New Zealand.

This research is focusing on one type of UGC related to the travel industry, which is online travel review (OTR). OTR is one of the most prominent forms of travel-related consumer-generated media (O'Connor, 2008; Vermeulen & Seegers, 2009; Yoo & Gretzel, 2011; Yoo & Gretzel, 2008). OTR includes product ratings and short descriptions of trips described by travelers (Yoo & Gretzel, 2011). Ye et al. (2011) assert that the travelers' accommodation decision is strongly influenced by online travel reviews.

This research focuses on international tourism backpackers to New Zealand who have used OTR when making travel plans. The power of OTR in the travel planning process lies in their role as an online source of word-of-mouth (WOM) (Cox et al., 2009). WOM and recommendations have been a powerful source of information for backpackers when making decisions regarding travel and accommodation (Hampton, 1998; Hills & Cairncross, 2011; Howard, 2005; Murphy, 2001; Murphy et al., 2007; Pearce et al., 2004; Sorensson, 2008; Tourism New South Wales, 2008; Westerhausen & Macbeth, 2003). The Internet is facilitating the flow of WOM among backpackers before and during their trips (Luo & Li, 2009; Mohsin & Ryan, 2003; Nash et al., 2006). Backpacker use of the Internet for pre-trip information searches has increased considerably (Paris, 2010). Although generalisability may be limited, backpackers represent the kind of users that would typically use OTR. IS and tourism studies reveal that backpackers are very active users of communication technologies such OTR (Hofstaetter & Egger, 2009; Paris, 2010; Zhang & Watts, 2003; Zhang & Watts, 2008).

Auckland was selected as a data collection location because it is the point of entry for the majority of visitors to New Zealand (Hyde, 2006). Auckland is the gateway to the North and South Islands of New Zealand. Also, Auckland can be considered a well-developed backpacker enclave, as it has a dense collection of backpacker hostels in the downtown area providing access to large number of potential survey participants.

In this study, the survey method was adopted to gather field information from international backpackers staying in hostels in Auckland, New Zealand. Instead of selecting persons representative of the general population of travelers, the participants for this research were selected based on convenience and accessibility sampling (Cavana, Delahaye, & Sekaran, 2001). For this study nine backpacker hostels were approached to participate in this study. All of them agreed to participate: Auckland YHA (Youth Hostels Association), Auckland Central Backpackers, Queen Street Backpackers, Nomads Auckland Backpackers, Choice Plaza Backpackers, Base Backpackers Auckland, City Travellers Auckland Hostel, YWCA (Young Women's Christian Association), and Cozy Kiwi Backpacker. In each location, the hostel manager was first approached to get permission to distribute the surveys for data collection, and

access to an appropriate area (e.g., kitchen, reception, lounge) to administer the surveys from. Permission was granted by them at the reception.

4.3.3 Survey Ethics

The ethical guidelines published by Auckland University of Technology Ethics Committee (AUTEC) were strictly adhered throughout the data collection process. Ethical approval was granted by AUTEC on 11/06/2009 for a period of three years (reference no 09/115) (see Appendix A).

AUT obliges all research which involves human to be approved by the AUTEC to make sure that research is conducted in an ethical manner observing the principles of informed consent, respect for privacy, truthfulness, avoidance of conflict of interest and respect for cultural sensitivity (AUTEC, 2007). AUTEC (2007) requires the research to be conducted based around the following principles of the Treaty of Waitangi: Partnership, Participation, and Protection.

Partnership

This research project represents a partnership between the researcher, New Zealand Tourism Research Institute (NZTRI), backpacker hostels, and the research participants (backpackers) with the aim of enabling a better understanding of how UGC empowers backpackers to make travel plans. Participant organizations were given opportunity to receive a summary of the research findings, which ensures that they are not only involved in the study outcomes, but also its process. NZTRI and backpacker hostels will also receive a report of the main findings.

Participation

During the recruitment process, participants were made aware that their participation was voluntary and could be withdrawn at any time during the data collection process. All the participants were informed of this condition through an information sheet (see Appendix C) and consent form (see Appendix B) that was provided along with the questionnaire (see Appendix D) before the surveys and focus group.

Protection

The questions in the questionnaire and focus group are generic. There are no sensitive or personal questions, except for the demographic ones. No participants or their responses are able to be identified. Also, the survey and focus group sessions did not include questions about the participants' specific values, practices, and culture. The research was conducted under the principle of social and cultural sensitivity. The principle of privacy and confidentiality were acknowledged.

For privacy issues, subjects were asked to read an information sheet prior to engaging in the research. By filling in the survey, or by signing the consent form for the focus group, they consented to participate in this research. Participants were allowed to withdraw at any time at during the data collection process, even after signing the consent form. As well they were informed that their participation was voluntary and assured that any data gathered will be remained anonymous. All the information collected about participants is kept strictly confidential. No information on specific individuals completing surveys or focus group participants will be identified in any report or publication that arises from this research thesis.

The data will be retained for a period of six years as required by AUT's standard research practice. Questionnaire forms will be stored in a locked steel cabinet at the researcher's office, whereas the consent forms will be stored in the room of the primary supervisor. The electronic data (i.e. audio files from focus group) will be stored on the primary supervisor's personal computer. At the end of the six-year period, the questionnaire and consent forms will be destroyed by shredding it with an automated shredder. Also, the electronic data will destroyed by deleting permanently from the system. The researcher, the primary supervisor, second supervisor, and third supervisor will have access to the data and consent forms.

4.4 Measurement Issues

This study involves developing reliable and valid measures of the constructs that comprise the research model. The reliability and validity of the measures to represent each construct provides an evaluation of how reliable (i.e., internal consistency) the measures are as well as their convergent and discriminant validities (Chin, 2010b). This study fully re-tested the instrumentation used (Straub, 1989).

Reliability is a statement about measurement accuracy, which is defined as the extent to which an instrument produces consistent or error-free results (Boudreau, Gefen, & Straub, 2001). Kerlinger (1986) states that reliability refers to the lack of measurement error in the items on a scale. Lewis et al. (2005) also mention that reliability is the consistency of a measure across different samples. Straub (1989) states that reliability is the extent to which the respondent can answer the same questions (or close approximations) the same way each time.

For this study, internal consistency is examined to evaluate how reliable the measures are. Composite reliability is a measure of internal consistency when using Partial Least Squares (Chin, 2010b). The composite reliability of all constructs should be 0.7 or higher, which indicates the constructs are within accepted limits and reliable (Gefen, Straub, & Boudreau, 2000). In addition, loadings should be higher than 0.707 and significant at the 0.050 level (Chin, 1998b). Loadings represent the influence of individual scale items on reflective constructs, whereas weights are considered to evaluate the role of each formative indicator to measure the constructs in the model (Chin, 1998b). However, composite reliability is only applicable for reflective constructs (Straub, Boudreau, & Gefen, 2004). Weights need to be considered for formative constructs, and even if there is no minimum threshold only those that are significant would really have an impact (Chin, 1998b).

This research also examines convergent validity, which is defined as the extent to which blocks of items strongly converge in their representation of the underlying construct they were created to measure (Chin, 2010b). According to Campbell and Fiske (1959), measures that are related to the same construct should correlate at a significant level

with one another. It is suggested that convergent validity is adequate when constructs have an average variance extracted (AVE) of at least 0.5 and loadings in excess of 0.7 for reflective items (Fornell & Larcker, 1981). Chin (2010b) points out that higher average loadings and narrower range between 0.7 and 0.9 will allow greater confidence that all items converge in estimating the underlying construct.

In addition to convergent validity, this study looks at the discriminant validity of the measures. Discriminant validity is defined as the extent to which indicators are differentiated among constructs (Gefen et al., 2000). It is suggested that the AVE from the construct should be greater than the variance shared between the construct and other constructs in the model (Chin, 1998a). For adequate discriminant validity, the square root of the AVE of a measure should exceed the correlations between the measure and all other measures (Gefen et al., 2000). Another test of discriminant validity is obtained by correlating the component scores of each latent variable with all other items. It is expected that a group of indicators will load higher on its respective construct than the indicators for any of the other constructs (Chin, 1998b). Nomological validity is also examined to test strength of relationships between constructs (Straub et al., 2004). If the path is significant between the constructs, the construct validity is established through nomological validity.

Convergent, discriminant, and nomological validities are considered to be components of construct validity (Bagozzi, 1980; Straub et al., 2004). While reliability is an issue of measurement *within* a construct, construct validity is an issue of measurement *between* constructs (Straub et al., 2004). Construct validity is defined as the extent to which an operationalization measures the concepts that it purports to measure (Straub, 1989). In other words, it is important that instrument items considered together for a given construct are a reasonable operationalization of the construct when compared to other constructs (Cronbach & Meehl, 1955). Therefore, construct validity is concerned that the measures chosen are true constructs describing the event (Campbell & Fiske, 1959). Construct validity is adequate when there are relatively high correlations between measures of the same construct using different methods and low correlations between measures of constructs that are expected to differ (Nunnally, 1978).

Finally, this study also looks at the content validity of the instrument items. Content validity is the degree to which items in an instrument reflect the content universe to which the instrument will be generalized (Cronbach, 1971). Nunnally (1978) states that content validity concerns the appropriateness of the items on the instrument for measuring the construct. Collectively the instrument items should cover all aspects of the construct, being each of the items representative of the construct (Lewis et al., 2005). Basically, straightforward definitions of the construct are matters for content validity (Straub et al., 2004). Content validity is established through literature reviews and several rounds of pretesting the instrument with different groups of expert judges or panels (Straub, 1989).

4.5 Partial Least Squares (PLS)

With structural equation modeling (SEM) techniques and programs which uses covariance-based (e.g., LISREL, AMOS) and component-based (e.g., PLS-PC, PLS-GRAPH) analysis, IS researchers are able to examine measurement and structural models simultaneously (Gefen et al., 2000; Petter, Detmar, & Rai, 2007). The two most widely employed SEM techniques in IS research are LISREL and PLS (Gefen et al., 2000).

Partial Least Squares (PLS) is used to analyze the findings in this study (Lohmoller, 1989; Wold, 1985). Specifically, PLS-Graph Version 3.0 Build 1130 (Chin, 2001) is employed to examine the proposed hypotheses. PLS is a latent variable modeling approach which subsumes other component-based analysis such as canonical correlation, multiple regression, MANOVA, and principal component analysis (Chin & Gopal, 1995). PLS is a technique which estimates path models involving latent constructs indirectly measured by multiple indicators (Mathieson, Peacock, & Chin, 2001). Also, PLS is a robust and frequently adopted technique in the IS literature (Ahuja & Thatcher, 2005; Gefen & Straub, 1997; Meso, Musa, Straub, & Mbarika, 2009; Pavlou & Fygenson, 2006; Venkatesh & Morris, 2000).

PLS path modeling is a component-based methodology that provides determinate construct scores for predictive purposes, estimating the variance of endogenous constructs and in turn their respective manifest variables (if reflective) (Chin, 2010a). In PLS, the predictive power of the structural model is assessed by the R^2 values, which indicate the amount of variance in the constructs that is explained by the model (Barclay, Higgins, & Thompson, 1995; Chin, 1998b). Also, the structural model in PLS tests the path coefficients (Meso et al., 2009). Path coefficients represent the relationship between dependent and independent constructs. However, significance tests and estimates of confidence intervals for the path coefficients are not directly provided by PLS (Ravichandran & Rai, 2000). A bootstrapping technique is used to estimate the significance of path coefficients though.

The PLS algorithm allows each indicator to vary in how much it contributes to the composite score of the latent variable so that indicators with weaker relationships to related indicators and to the latent construct are given lower weightings (Chin, Marcolin, & Newsted, 2003). Compared with other SEM techniques such as LISREL, PLS has strong ability to model latent constructs under conditions of non-normality and with less restrictive demands on sample size and residual distribution (Chin, 1998a; Chin et al., 2003). PLS is also considered better suited for explaining complex relationships (Fornell & Bookstein, 1982).

4.5.1 Reflective and Formative Constructs

In PLS, latent constructs can be modeled as either formative or reflective constructs. Reflective observed variables reflect the latent variable and as a representation of the construct should be unidimensional and correlated (Gerbing & Anderson, 1988). Indicators of reflective constructs are viewed as being affected by the same underlying construct and are parallel measures that co-vary in the extent that they measure the same underlying construct (Ravichandran & Rai, 2000). The direction of causality is from the construct to the indicators, and changes in the underlying construct are hypothesized to cause changes in the indicators (Jarvis et al., 2003). Thus, the measures are referred to as reflective (Fornell & Bookstein, 1982) or effects (Bollen & Lennox, 1991) indicators. In the IS literature, concepts such as satisfaction, perceived usefulness, and perceived ease of use are often operationalized using reflective indicators (Petter et al., 2007). For example, respondent variations in the latent construct of perceived ease of use will cause all of its measures to reflect those changes.

Formative observed variables cause the latent construct representing different dimensions of it (Gefen et al., 2000). Formative indicators are measures that form or cause the creation or change in a latent variable (Chin, 1998a). They combine to approximate the underlying construct and are weighted according to their relative importance in forming the construct (Ravichandran & Rai, 2000). These observed variables are not assumed to be correlated with each other or to represent the same underlying dimension (Chin, 1998a). Rather, each indicator may occur independently of the others (Chin & Gopal, 1995). Formative indicators need not be correlated nor have

high internal consistency like Cronbach's alpha (Bollen & Lennox, 1991). Thus, changes in the formative measures cause changes in the underlying construct (Jarvis et al., 2003). For example, a construct such as organizational performance may be operationalized using three measures: productivity, profitability, and market share. The operationalization of the construct is formative since each measure captures differing aspects of organizational performance (Petter et al., 2007). The combination of these measures defines the construct of organizational performance.

Therefore, the main difference between reflective and formative measurement is that whereas the construct causes variance in its reflective indicators, the direction of causality is reversed with formative indicators which cause the variance observed in the construct (Centefelli & Bassellier, 2009). As such, formative indicators are drawn with an arrow leading to the latent construct, while reflective indicators are drawn with an arrow leading away from the latent construct (Gefen et al., 2000). A latent variable can be either latent or emergent, depending on its epistemic relationship with its measures (Chin & Gopal, 1995) (see Figure 15).

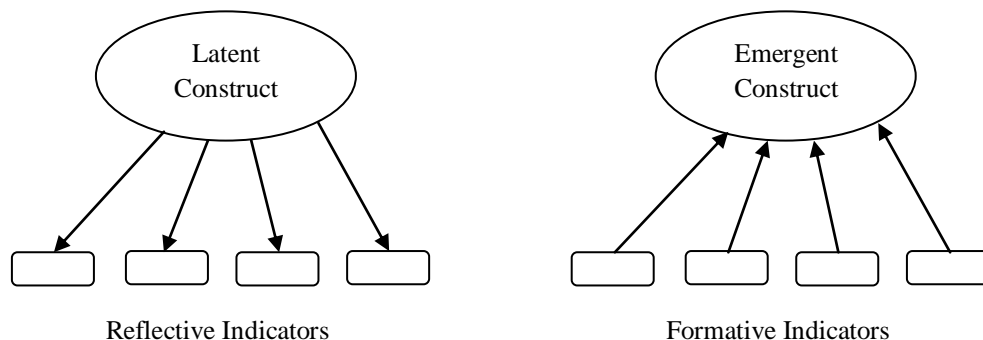


Figure 15. Latent Construct with Reflective Indicators and Emergent Construct with Formative Indicators (Chin, 2010b)

When assessing measures associated with a particular construct, the type of measure dictates whether one looks at the weights or the loadings (Mathieson et al., 2001). For constructs using reflective measures, it is appropriate to examine the loadings as they represent the correlation between the indicators and component score (Gefen et al., 2000). While for those constructs with formative measures, the interpretation of formative indicators should be based on weight, as it provides information regarding the importance of each indicator in the formation of the component (Chin, 1998a). Thus, it assumes that the measures all have an impact on a single construct so that the direction

of causality flows from the indicators to the latent construct, and the indicators, as a group, jointly determine the conceptual and empirical meaning of the construct (Jarvis et al., 2003).

4.5.2 Measurement and Structural Models

PLS is a technique comprised of measurement and structural models (Chin, 1998b; Gefen et al., 2000). The measurement model defines how each block of indicators relates to its latent variable (Chin, 1998b). The measurement model defines the constructs (latent variables) that the model will use, and assigns observed variables to each (Gefen et al., 2000). Thus, the measurement model is tested in this study to specify how well the latent variables are measured in terms of the observed variables, and how these are used to describe the measurement properties (validity and reliability) of the observed variables. It is important to ensure the measurement items are reliable and are measuring the associated constructs. At the measurement model level, PLS estimates item loadings and weights, and residual covariance (Gefen et al., 2000).

The structural model examines the strength and direction of the relationship among theoretical latent factors (Gefen et al., 2000). At the structural model level, PLS estimates path coefficients and correlations among the latent variables, together with the individual R^2 and AVE (Average Variance Extracted) for each of the latent constructs. (Gefen et al., 2000). A discriminant validity analysis is conducted by creating AVE statistics and comparing these with the correlations of the latent variables in the instrument (Gefen et al., 2000). The structural model and hypotheses are tested by examining the path coefficients. T-values of both paths and loadings are calculated using a bootstrap method. Good model fit is established with significant path coefficients, acceptably high R^2 and internal consistency (construct reliability) being above .70 for each construct (Thompson, Barclay, & Higgins, 1995).

Thus, PLS is able to specify the relationships among the principal construct and their underlying items, resulting in an analysis of both that determines whether the hypothesized relationships at the theoretical level are empirically acceptable, as well as how well the measures relate to each construct (Chin, 1998a).

4.5.3 Justification for the Use of PLS

While other techniques could have been used to analyze the data, PLS was chosen for several reasons. First, PLS is capable of modeling latent constructs under conditions of non-normality (Chin, 1998b). Since the research sample is convenience-based, the data might not be normal. Second, the research model uses formative constructs, and modeling of constructs with formative indicators is allowed using PLS (Chin, 2010b). Identification of estimates can be more difficult in other SEM techniques (e.g., LISREL, AMOS) for formative measurement estimation than PLS, which only requires structurally linking to one other construct (Chin, 2010b). Since PLS explicitly estimates the outer weights to form construct scores, modeling formative indicators is much less problematic (Chin, 2010b). In fact, IS researchers have relied mostly on component-based techniques such as PLS when testing formatively measured models (Petter et al., 2007). Third, since this study uses a large number of variables and relationships, PLS is applied to avoid inadmissible solutions and factor indeterminacy (Chin, 1998b). Fourth, PLS allows assessment of psychometric properties of the constructs (measurement model) within its theoretical context (structural model) (Chin, 2010b). Fifth, the research model is in its early stages and the research is theoretically developmental in nature, and it is suitable to use PLS for the data analysis in such circumstances. Sixth, PLS has been used successfully in IS research (Meso et al., 2009; Pavlou & Fygenson, 2006; Pavlou, Liang, & Xue, 2007; Venkatesh & Agarwal, 2006). Accordingly, the use of PLS for this research is considered appropriate.

Finally, there are 14 constructs in the proposed research model (see Table 6), which means that the minimum sample size to ensure appropriate use of PLS in this study is 140. According to Gefen et al. (2000), a PLS sample size should have at least ten times more data points than the number of constructs in the model. Considering that the total sample size is 268 in this study, this research meets the sample-size requirements for PLS. This sample size is large enough to capture the largest number of structural paths throughout the research model constructs (Chin et al., 2003).

4.6 Instrument Design

This section details the approach used for instrument design, which is divided in five parts:

- **Focus group:** qualitative data from backpackers to confirm the importance of the components of Informational Social Influence and Normative Social Influence in the OTR context;
- **Pre-test:** it was done in two steps. A number of experts were approached for their opinions on questionnaire design, IS, and tourism, and a pre-test survey was then carried out with students to critique matters relevant for initial instrument design;
- **Pilot survey:** it was conducted with backpackers with the purpose of collecting initial data, refining the questionnaire, and assessing the measurement model;
- **Measurement items:** all the instrument items were developed based on a comprehensive review of the literature, and they were refined by the pre-test and pilot survey;
- **Questionnaire format and administration.**

4.6.1 Focus Group

The focus group discussion enabled the researcher to gather qualitative data from backpackers to confirm the importance of the aspects of ISI (argument quality, source credibility, information framing, and information consistency) and NSI (recommendation consistency and recommendation rating) in the OTR context for inclusion in this study. According to Park and Lee (2008b), UGC (i.e., OTR) affects consumer behavior through ISI and NSI.

The focus group was moderated by the researcher and managed in accordance with standard procedures (Lunt & Livingstone, 1996). For instance, the researcher was capable of moderating and participating in the discussion without providing biased or leading the focus group participants into a desired response. Recordings of the focus group comments were transcribed and analyzed by the researcher line by line to confirm

what aspects of ISI and NSI are important in the OTR context. A perceived advantage of focus group is that participants generate rich and believable data, and then compensate for their lack of reliability with greater validity (Lunt & Livingstone, 1996).

Participants in the discussions were international tourist backpackers staying at Auckland YHA (Youth Hostels Association) hostel, New Zealand. The focus group interview was advertised by the YHA receptionists. Only international backpackers who spoke sufficient English to communicate well participated in the focus group. The participants were contacted and reminded about the discussion and importance of this research. The focus group session was held in June 2009, and lasted 75 minutes. In return for their participation, backpackers received one free night of accommodation at YHA Auckland. A digital audio recorder was used to record the discussion. All backpackers were informed that their discussion would be recorded prior the beginning of the session.

During the session, refreshments were provided to the participants as an expression of gratitude for their cooperation. The moderator started the focus group by explaining what this research was all about, and why they were invited to the focus group so that they understood what they were expected to do. According to Stewart, Shamdasani and Rook (2007), focus group interviews should involve between 8 to 12 people in order to discuss a particular topic in depth, and gain a better understanding of their response.

A total of ten international backpackers participated in the focus group discussion session (see Table 1). There were seven females and three males. The participants were all aged over 20 years. Ninety percent of the participants had at least undergraduate degree. Most participants had more than six years of computer experience. Participants came from six different countries: England, Ireland, Wales, Australia, Germany, and Korea.

Table 1. Demographics of Focus Group Participants

| Demographic variable (n = 10) | Frequency |
|----------------------------------|-----------|
| Gender | |
| Female | 7 |
| Male | 3 |

| | |
|----------------------|---|
| Age (years) | |
| 21-30 | 9 |
| 31-40 | 0 |
| 41-50 | 0 |
| 51 or above | 1 |
| Education | |
| Primary school | 0 |
| Secondary school | 1 |
| Undergraduate degree | 8 |
| Postgraduate degree | 1 |
| Computer Experience | |
| 1 year or less | 0 |
| 2-3 years | 1 |
| 4-5 years | 3 |
| 6 years or more | 6 |
| Nationalities | |
| England | 4 |
| Ireland | 2 |
| Wales | 1 |
| Australia | 1 |
| Germany | 1 |
| Korea | 1 |

The focus group questions were developed by the researcher, and questions included: “Have you ever used OTR when making travel plans?”, “Do you think that OTR has influenced you when making travel decisions?”, “Do you think that source credibility in the OTR has influenced you when making travel decisions?”, “Do you think that the information provided in the OTR was valuable when making travel plans?”, “Do you think the OTR were consistent with other OTR?”, and “Do you think that the OTR rating has influenced you when making travel plans?”. Basically, interviewees were asked to discuss the advantages, disadvantages, and anything else they associated with their experiences using OTR when making travel plans. A similar procedure is recommended by Ajzen and Fishbein (1980, p. 68).

The results confirmed the existence of the four salient aspects of ISI (i.e., argument quality, source credibility, information framing, and information consistency) and two salient aspects of NSI (recommendation consistency and recommendation rating) in the

OTR context during the focus group session. The focus group findings on ISI and NSI components are discussed below. Participant comments are presented within parenthesis and within double quotation marks.

Informational Social Influence

- **Argument Quality:** all participants considered argument quality important. For example, up-to-date information is quite relevant to make the accommodation decision (“If the review is from two years ago, the hostel may be deteriorated by now”). Also, the amount of reviews makes a difference too (“People will be more influenced if they read a reasonable amount of reviews rather than just one good or bad comment”; “If it is just one person’s comment, it doesn’t make my decision about the accommodation. I need to get information from different people, not just one person”).
- **Source Credibility:** participants were concerned about the UGC on the Internet because they do not know who they are dealing with (“You have to be careful with the user comments”). One participant gave an example of a user who posted several good comments about an accommodation, and commented that this person may be one of the accommodation employee or perhaps a friend of the owner (“Good comments can come from people who work on there”). Another participant preferred going through TripAdvisor.com to read comments rather than hostel websites. She said that there are generally positive comments on hostel websites. So these comments do not look trustworthy, and that is why she preferred reading online comments on TripAdvisor.com.
- **Information Framing:** participants felt more confident making the decision to book accommodation if they had both positive and negative comments on their hands (“Looks more believable when there are both positive and negative comments. When there are just positive comments, you wondering where are the negative ones?”). One participant made an analogy between UGC and a review magazine (“It is like a review magazine. The reviewer writes both negative and positive things about the magazine. If you take into consideration UGC, you

believe that person is going to take a more measureable view of the place been reviewing to. So, I will be more inclined to follow that view”). Another participant was skeptical if there was just one negative comment related to a hostel (“Depends how bad the comment is, and perhaps it is just a minor incident”). However, if he saw several bad comments for the same hostel, that could impact on his decision to book an accommodation there.

- **Information Consistency:** many participants were keener to accept information that was consistent with their prior beliefs. One participant said that she is more likely to believe the advice from a review on the web about an accommodation provider if the information confirmed her own opinion. She mentioned that she stops researching accommodation when the information confirms her opinion (“When I read the first comment about a hostel on the web and it has the same opinion as me, I stop researching and go for it”). Participants were more willing to trust information from people with similar opinions.

Normative Social Influence

- **Recommendation Consistency:** most participants believed that if similar experiences are repeatedly posted by different people on the web, the likelihood of backpackers trusting those experiences is higher (“When comments are consistent, you know exactly what you will have in the accommodation”). One participant said that when the comments were consistent, you got to know more about the hostel before you book it. For instance, when there are several negative comments from different people complaining about small rooms or bad Internet connection, this helps you not to be surprised when you get to the accommodation.
- **Recommendation Rating:** recommendation ratings were considered important by the backpacker participants (“Ratings from user-generated content on accommodation really influences me to make the decision to book”). One gave an example of her experience with ratings (“I think definitely it helps. When I used hostelworld.com looking for information about Auckland. I looked at

anything above 60% rating first. I never use low rating regarding accommodation and its facilities”). Other participants were cautious if just a few people had rated a hostel (“It is better when many people have been rated for that accommodation”). Participants felt more confident before booking if several people rate the accommodation and its facilities.

Therefore, the results of the focus group discussion confirmed the importance of the components of the ISI (argument quality, source credibility, information framing, and information consistency) and NSI (recommendation consistency and recommendation rating) in the OTR context. The questionnaire was then developed with items adapted from previous studies (Chapter 2).

4.6.2 Pre-Test

For this study, the pre-test was done in two steps. First, a number of experts were approached for their opinions on questionnaire design, IS, and tourism. Second, a pre-test survey was carried out with students to critique matters relevant for initial instrument design (i.e., format, content, understandability, and ease and speed of completion).

Straub (1989) suggests that rounds of pre-testing with different groups of experts are highly advisable. Participants can identify items that could be added or deleted from the instrument, and make suggestions for enhancements, if necessary (Lewis et al., 2005). Three professors (Texas A&M University, Bournemouth University, and Queen Margaret University) were approached for their expertise on Tourism. Two internal (AUT) academic staff members were also approached for their expertise on questionnaire design and IS. Each of the items on the questionnaire was reviewed by the experts for its content, scope, and purpose (content validity). Experts were asked to comment on various aspects of the survey design such as the clarity or ambiguity of definitions, items’ representativeness, appropriateness of the scale, and clarity of the instructions. Items were removed, added, and/or minor wording changes were made prior to the pre-test survey with the students as a result.

The pre-test survey was carried in August 2009 with AUT students. All surveys were confidential and no identifying personal information was required. A total of 54 students participated in the survey, but 20 were excluded because they had not used UGC to help them make travel plans. Thus, the final sample size for the pre-test was 34, of which 38% were Master's students, 36% undergraduate students, and 26% PhD students. Most respondents (67%) were between 21 and 30 years old, and 53% were male; 91% had more than seven years of computer experience.

During a pre-test, participants are asked to complete the instrument and critique matters relevant for initial instrument design, for instance: format, content, understandability, terminology, and ease and speed of completion (Lewis et al., 2005). When pre-testing an instrument, it is possible to consider how well the questions flow and move to some of them around to improve instrument comprehension (Bryman & Bell, 2007). A pre-test also allows the researcher check the adequacy of instructions to respondents (Bryman & Bell, 2007). In fact, pre-testing is the "first attempt to get empirical feedback from a highly controlled sample to assess the appropriateness of the original instrument" (Lewis et al., 2005, p. 392).

The students completed the questionnaire in the presence of the researcher. This allowed the researcher to identify and respond immediately to difficulties with interpretation of questions. Emphasis was placed on identifying questions that respondents misunderstood or found difficult to answer, and format or design problems. Attention was also given to the instructions for the respondents. The students provided written comments about length, wording, and instructions. After the feedback from the students, the format of the questionnaire was changed to appear more compact, that is, the survey was reformatted as a four-page A5-sized survey (instead of A4-sized); this was aesthetically more appealing to the respondents. Minor changes to the wording of the instrument were made as well.

4.6.3 Pilot Survey

A pilot survey is a "dress-rehearsal" of the instrument with a small sample, in which participants should be similar to the population that will be target of the administrations

of the final survey (Lewis et al., 2005). Results should be examined and adequate adjustments made to the instrument based on the observations of the participants (Lewis et al., 2005). Thus, the pilot survey aims to detect problems associated with the measures of the newly developed instrument based on adapted existing instruments.

All instrument items were developed based on a comprehensive review of the literature (Chapter 2). An extensive literature review of the existing measures can provide a precise handle on the boundaries, dimensions, and content domain of the constructs, and consequently enhance the validity of the measures (Netemeyer, Bearden, & Sharma, 2003).

Prior to administering the actual survey for this study, a pilot test was conducted. A pilot survey was carried out with the purpose of collecting initial data, refining the instruments prior to the actual data collection (Churchill, 1979), and assessing the measurement model. The survey questions were developed from validated instruments based on a literature review, and wording was adapted to fit the OTR context. The pilot was conducted at Auckland YHA with international backpackers during September 2010. Backpackers were approached at the kitchen area when having breakfast, and asked to fill in the pilot questionnaires. This was followed by a brief interview which aimed to identify any difficulties in understanding the questions. Participants were also invited to give comments on the questionnaire. Results indicated that there were no major problems in understanding the questionnaire instructions and items. Table 2 provides demographic information of the participants.

The total sample size was 54 backpackers, where 62% had at least an undergraduate degree, and 53% had 11 years or more of Internet experience. Most respondents (55%) were between 18 and 25 years old, and 55% were male. The nationalities with the most respondents were: Germany (31%), England (15%), Brazil (11%), USA (9%), Malaysia (7%), Canada (5%), France (4%) and Chile (4%).

Table 2. Demographics of Pilot Survey Participants

| Demographic variable (n = 54) | Frequency | Percent |
|----------------------------------|-----------|---------|
| Gender | | |
| Female | 24 | 45% |
| Male | 30 | 55% |
| Age (years) | | |
| 18-25 | 30 | 55% |
| 26-34 | 19 | 36% |
| 35-49 | 4 | 7% |
| 50-64 | 1 | 2% |
| 65 or above | 0 | 0% |
| Education | | |
| Primary school | 0 | 0% |
| Secondary school | 20 | 38% |
| Undergraduate degree | 17 | 31% |
| Postgraduate degree | 17 | 31% |
| Internet experience | | |
| 1 year or less | 0 | 0% |
| 2-4 years | 1 | 2% |
| 5-7 years | 9 | 17% |
| 8-10 years | 15 | 28% |
| 11 years or more | 29 | 53% |
| Nationalities | | |
| Germany | 17 | 31% |
| England | 8 | 15% |
| Brazil | 6 | 11% |
| USA | 5 | 9% |
| Malaysia | 4 | 7% |
| Canada | 3 | 5% |
| France | 2 | 4% |
| Chile | 2 | 4% |
| Israel | 1 | 2% |
| Pakistan | 1 | 2% |
| Bangladesh | 1 | 2% |
| Belgium | 1 | 2% |
| Taiwan | 1 | 2% |

When asked whether how many times they had used OTR when making travel plans, 65% of participants responded that they used it between 1 and 10 times. Forty one percent of participants used OTR often or very often when making travel plan. At the

same time, 60% had posted or written an OTR after traveling themselves. Table 3 provides information about using of OTR when making travel plans.

Table 3. Use of OTR When Making travel Plans

| Demographic variable (n = 54) | Frequency | Percent |
|----------------------------------|-----------|---------|
| How many times use OTR | | |
| Not at all | 0 | 0% |
| 1-5 times | 19 | 35% |
| 6-10 times | 17 | 30% |
| 11-15 times | 9 | 17% |
| 16-20 times | 2 | 4% |
| 21-25 times | 1 | 2% |
| More than 25 times | 6 | 12% |
| How often use OTR | | |
| Not at all | 0 | 0% |
| Rarely | 3 | 5% |
| Occasionally | 11 | 20% |
| Sometimes | 9 | 17% |
| Often | 14 | 26% |
| Very often | 8 | 15% |
| Every time I plan a trip | 9 | 17% |
| How often post OTR | | |
| Not at all | 22 | 40% |
| Rarely | 20 | 36% |
| Occasionally | 6 | 12% |
| Sometimes | 4 | 8% |
| Often | 2 | 4% |
| Very often | 0 | 0% |
| Every time I plan a trip | 0 | 0% |

The descriptive statistics also provides usage of various OTR websites when backpackers make their travel plans. Table 4 provides the list of the OTR websites. The five most popular OTR websites among participants were: HostelWorld.com (56%), LonelyPlanet.com (54%), TripAdvisor.com (50%), HostelBookers.com (26%), and Travelocity.com (15%). Other websites used by them were: Blogspot.com (10%), Booking.com (6%), Virtualtourist.com (6%), Realtravel.com (4%), Yelp.com (4%), Mytravelguide.com (2%), Fodors.com (2%), Hihostel.com (2%), and Bug.co.uk (2%).

Table 4. OTR Websites Used When Participants Made Their Travel Plans

| Demographic variable (n = 54) | Frequency | Percent |
|----------------------------------|-----------|---------|
| HostelWorld.com | 30 | 56% |
| LonelyPlanet.com | 29 | 54% |
| TripAdvisor.com | 27 | 50% |
| HostelBookers.com | 14 | 26% |
| Travelocity.com | 8 | 15% |
| Blogspot.com | 5 | 10% |
| Booking.com | 3 | 6% |
| Virtualtourist.com | 3 | 6% |
| Realtravel.com | 2 | 4% |
| Yelp.com | 2 | 4% |
| Mytravelguide.com | 1 | 2% |
| Fodors.com | 1 | 2% |
| Hihotel.com | 1 | 2% |
| Bug.co.uk | 1 | 2% |

PLS-Graph Version 3.0 was used to evaluate both the measurement properties and relationships specified in the structural model. PLS is suitable for handling small samples sizes (Straub, Hoffman, Weber, & Steinfield, 2002). The results of the pilot study were used evaluate the psychometric properties of the scales including reliability and validity. Thus, the test of the measurement in the first and second-order models includes the estimation of internal consistency (reliability) and the convergent and discriminant validity of the instrument.

In the first-order model, all constructs were modeled as reflective. All items except for one item in argument quality (0.65) exhibited high loadings (>0.70), ranging from 0.77 to 0.97 on their respective constructs. The composite reliability (CR) of all constructs is 0.85 or higher, which indicates the constructs are within accepted limits and reliable (Gefen et al., 2000). Table 5 shows that the diagonal elements of the correlation matrix, which are the square root of AVE, all exceeded the off-diagonal elements, indicating satisfactory discriminant validity (Chin, 1998b). Constructs have AVE ranging from 0.66 to 0.93, which is considered adequate (>0.5) (Fornell & Larcker, 1981).

Table 5. Reliability, Validity of the First-Order Measurement Model

| | Mean (SD) | CR | IC | SC | AQ | IF | RC | RR | CO | ME | SD | IM | AT | SN | IN |
|-------------------------|----------------|------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Information consistency | 5.30 (0.85) | 0.85 | 0.81 | | | | | | | | | | | | |
| Source Credibility | 4.87 (1.01) | 0.94 | 0.46 | 0.92 | | | | | | | | | | | |
| Argument quality | 5.72 (0.88) | 0.87 | 0.25 | 0.21 | 0.83 | | | | | | | | | | |
| Information framing | 4.88 (0.95) | 0.91 | 0.41 | 0.47 | 0.45 | 0.88 | | | | | | | | | |
| Recommend Consistency | 4.86 (1.15) | 0.91 | 0.31 | 0.19 | 0.16 | 0.16 | 0.88 | | | | | | | | |
| Recommend rating | 5.02 (0.89) | 0.86 | 0.30 | 0.27 | 0.21 | 0.43 | 0.20 | 0.82 | | | | | | | |
| Competence | 5.76 (1.08) | 0.92 | 0.44 | 0.32 | 0.15 | 0.41 | 0.27 | 0.31 | 0.89 | | | | | | |
| Meaning | 4.83 (1.43) | 0.96 | 0.41 | 0.27 | 0.42 | 0.42 | 0.25 | 0.33 | 0.57 | 0.94 | | | | | |
| Self-determination | 5.49 (1.17) | 0.96 | 0.31 | 0.23 | 0.15 | 0.27 | 0.17 | 0.33 | 0.35 | 0.53 | 0.92 | | | | |
| Impact | 4.58 (1.47) | 0.97 | 0.40 | 0.13 | 0.41 | 0.29 | 0.01 | 0.16 | 0.47 | 0.65 | 0.59 | 0.96 | | | |
| Attitude | 5.65 (0.95) | 0.96 | 0.41 | 0.06 | 0.32 | 0.24 | 0.23 | 0.33 | 0.50 | 0.50 | 0.61 | 0.57 | 0.94 | | |
| Subjective norm | 4.06 (1.50) | 0.98 | 0.18 | 0.08 | 0.10 | 0.13 | 0.12 | 0.12 | 0.22 | 0.48 | 0.46 | 0.42 | 0.49 | 0.97 | |
| Intention | 5.16 (1.39) | 0.94 | 0.37 | 0.09 | 0.44 | 0.47 | 0.15 | 0.22 | 0.48 | 0.65 | 0.51 | 0.63 | 0.61 | 0.40 | 0.91 |

In the second-order model, PE is modeled as reflective, whereas ISI and NSI were modeled as formative. As noted above, loadings represent the influence of individual scale items on reflective constructs, whereas weights are considered to evaluate the role of each formative indicator in measuring the constructs in the model (Chin, 1998b).

Competence (0.74), meaning (0.86), self-determination (0.77), and impact (0.84) had significant influence on PE (i.e., $p < 0.001$). The composite reliability of PE is 0.88 and AVE is 0.65, which is adequate for data analysis (Fornell & Larcker, 1981). Thus, a second-order reflective structure for PE is consistent with the management literature (Spreitzer, 1995b, 1996; Spreitzer et al., 1997) and IS literature (Doll & Deng, 2010).

The constructs of ISI have the following weights: information consistency (0.63), information framing (0.38), argument quality (0.29), and source credibility (-0.01). Three of the four constructs contribute significantly to the ISI construct: information consistency ($p < 0.001$), information framing ($p < 0.1$), and argument quality ($p < 0.2$). Since this study is exploratory in nature, a loading significance of $p < 0.2$ is fine (Gold, Malhotra, & Segars, 2001; Hoe, 2008). It should be noted that the role of source credibility in forming the ISI construct emerged as insignificant. Although the results of the current study suggest that this construct is not significantly related to the latent variable, it was not dropped from the research model since it contributes conceptually to the second-order model of ISI (Roberts & Thatcher, 2009). Conceptual reasoning holds more influence than statistical results when deciding whether or not to drop formative indicators (Edwards & Bagozzi, 2000; Fornell, Rhee, & Yi, 1991; Petter et al., 2007).

Recommendation rating (0.84) had a significant influence on NSI ($p < 0.001$), whereas Recommendation consistency (0.40) was only significant at $p < 0.2$ (Gold et al., 2001; Hoe, 2008) on Normative Social Influence. Hence, both constructs are significantly related to the latent variable, and contributes conceptually to the second-order model of NSI.

According to Straub et al. (2004), composite reliability is not applicable for formative constructs such as ISI and NSI. Only the weights need to be considered for formative constructs, and no minimum threshold values for them are required (Chin, 1998b). Collectively, the results indicate that the constructs demonstrate adequate measurement properties.

The results indicated satisfactory reliability and validity of the measures. Through successive stages of theoretical specifications, statistical testing and refinement, the measurement statistics results were good enough to proceed to the actual data collection. Based on the suggestions of the respondents, some alterations to the layout of the questionnaire were made and some minor changes such as refining the items of some constructs and adding new items were carried out wherever appropriate. The final questionnaire was further improved based on feedback from the pilot survey.

4.6.4 Measurement Items

One of the most important steps in the scaling process is clear definition of the constructs and their content domains (Churchill, 1979; Netemeyer et al., 2003). For this study, the measurement items were adapted from previously validated constructs in IS and management research (based on psychometric properties reported in the original studies), and the wording of the items modified to fit the context of OTR. Straub (1989) suggests reusing previously validated instruments when employing survey methods.

Adopting the same measures as others instead of creating new measures enhances the comparability of the study with others, specifically when existing measures have already become a field standard (Churchill, 1999). Another advantage of using existing measures is that reliability and validity testing has already taken place, allowing the researcher to know about the measurement qualities of the existing measures (Bryman & Bell, 2007). Fourteen constructs were measured in this study using multiple-item (see Table 6). All constructs had three items, except self-determination which had four items. All items were measured using fully anchored, seven-point Likert scales ranging from “strongly disagree” to “strongly agree”.

The TPB constructs were measured as follows. Measures for attitude and PBC were based on the empirical studies of Taylor and Todd (1995b). Subjective norm was measured using scales adapted from Mathieson (1991) and Taylor and Todd (1995a). Intention measures were adapted from Taylor and Todd (1995a; 1995b).

The adapted measures of PE in the OTR context were based on Spreitzer's (1995b) work in developing and validating a measurement model of PE as a single second-order construct with four first-order factors: competence, self-determination, meaning, and impact. Competence measures were based on both Spreitzer's (1995b) and Doll and Deng's (2010) work.

The Yale model (Hovland et al., 1953) provided the major elements (i.e., message, source, and audience) to help create a single second-order formative measurement model of ISI in the OTR context which has four constructs: argument quality, source credibility, information consistency, and information framing. Argument quality was based on Bhattacharjee and Sanford (2006), source credibility on Bhattacharjee and Sanford (2006) and Sussman and Siegal (2003), information consistency on Zhang and Watts (2003), and information framing on Cheung et al. (2009).

Kelley's (1967) attribution theory was used to develop a second-order formative measurement model of NSI in the OTR context. NSI consisted of two constructs: recommendation consistency and recommendation rating, which were measured using scales adapted from Cheung et al. (2009).

Table 6. Measurements of Constructs

| Constructs | Items | References |
|-----------------------------------|--|---|
| Theory of Planned Behavior | | |
| Attitude | 1. Using OTR when I make my travel plans is a good idea 2. Using OTR when I make my travel plans is a wise idea 3. I like the idea of using OTR when I make my travel plans | (Taylor & Todd, 1995b) |
| Perceived Behavioral Control | 1. I would be able to use OTR when I make my travel plans 2. I have the resources, knowledge, and ability to use OTR when I make my travel plans 3. Using OTR is entirely under my control when I make my travel plans | (Taylor & Todd, 1995b) |
| Subjective Norm | 1. Most people who are important to me think that I should use OTR when I make my travel plans 2. The people who influence my decisions think that I should use OTR when I make travel plans 3. People whose opinions I value think I should use OTR when I make my travel plans | (Mathieson, 1991; Taylor & Todd, 1995a) |
| Intention | 1. I intend to use OTR the next time I make my travel plans 2. I intend to use OTR whenever I need to make my travel plans 3. I plan to use OTR whenever I make my travel plans | (Taylor & Todd, 1995a, 1995b) |
| Psychological Empowerment | | |
| Competence | 1. I am confident about my ability to use OTR when I make my travel plans 2. I believe in my capabilities to use OTR when I make my | (Doll & Deng, 2010; Spreitzer, 1995b) |

| | | |
|---------------------------------------|---|---|
| | travel plans 3. I have mastered the skills necessary for using OTR when I make my travel plans | |
| Self-Determination | 1. Using OTR, I can decide on my own how to go about making my travel plans 2. Using OTR, I have considerable opportunity for independence in how I make my travel plans 3. Using OTR, I have considerable opportunity for freedom in how I make my travel plans 4. Using OTR, I have significant autonomy in determining how I make my travel plans | (Spreitzer, 1995b) |
| Meaning | 1. Using OTR to make my travel plans is very important to me 2. Using OTR when I make travel plans activities is significant to me 3. Using OTR to make my travel plans is meaningful to me | (Spreitzer, 1995b) |
| Impact | 1. My use of OTR has significant influence over my travel plans 2. My use of OTR has a large effect on my travel plans 3. The impact of using OTR on my travel plans | (Spreitzer, 1995b) |
| Informational Social Influence | | |
| Argument Quality | 1. The information provided in the OTR was informative 2. The information provided in the OTR was helpful 3. The information provided in the OTR was valuable | (Bhattacharjee & Sanford, 2006) |
| Source Credibility | 1. The person providing the OTR was trustworthy 2. The person providing the OTR was credible 3. The person providing the OTR was reliable | (Bhattacharjee & Sanford, 2006; Sussman & Siegal, 2003) |
| Information Consistency | 1. OTR reinforced my confidence in making travel plans 2. OTR supported the actions in my then existing travel plans 3. OTR verified my assumptions for my travel plans | (Zhang & Watts, 2003) |
| Information Framing | 1. Overall, the OTR emphasize positive comments about the discussed product/service 2. Overall, the OTR emphasize encouraging comments about the discussed product/service 3. Overall, the OTR emphasize a favourable assessment of the discussed product/service | (Cheung et al., 2009) |
| Normative Social Influence | | |
| Recommendation Consistency | 1. The OTR were consistent with other online travel reviews 2. The OTR were comparable with other online travel reviews 3. The OTR were similar to other online travel reviews | (Cheung et al., 2009) |
| Recommendation Rating | 1. Based on the review rating, the OTR were found to be favourable by other online travellers 2. Based on the review rating, the OTR were highly rated by other online travellers 3. Based on the review rating, the OTR were rated well by other online travellers | (Cheung et al., 2009) |

4.6.5 Questionnaire Format and Administration

The technique chosen to empirically test the research model was survey research, via a self-completion questionnaire. Participants answer questions by completing the questionnaire themselves; the researcher for example hands out questionnaires to all

respondents and collects them back after they have been completed (Bryman & Bell, 2007).

A survey entails collection of information by asking respondents for information using a structured format such as a questionnaire (Malhotra & Grover, 1998). There were three main sections in the questionnaire used in this study (see Appendix D). The first section – the front page of the questionnaire – included a brief introduction of the purpose of the research and a definition of OTR. The questionnaire focused on the task of backpacker use of OTR, which is the subject of this study. Assurances of confidentiality and anonymity were clearly stated at the beginning of the questionnaire as well.

In the second section, participants were asked to answer the questions referring to the OTR they had read on websites when making travel plans. The questions themselves are anchored seven-point Likert scales, ranging from 1 (“strongly disagree”) to 7 (“strongly agree”). A screening question was included in the questionnaire to ensure that participants had used OTR when making travel plans. Only participants who had used OTR before were directed to the next question; those who had not were directed to answer the demographic questions only.

In the last section, participants were asked to fill in some personal demographic information for statistical purposes. Demographic questions were placed at the end of questionnaire because it is better keep respondents’ minds on the purpose of the questionnaire at the beginning (Sudman & Bradburn, 1982)

4.7 Final Survey

The survey asked participants about their views on OTR they had read on websites (e.g., HostelWorld.com, HostelBookers.com, TripAdvisor.com, Booking.com, etc) when making their travel plans. These websites usually provide many OTRs about accommodations. Prior research on information adoption mostly focuses on the acceptance of one piece of information such as one review or one message (Cheung et al., 2009; Sussman & Siegal, 2003; Zhang & Watts, 2008). In this study, it was possible that it would be difficult to identify how many OTRs that travelers read when making travel plans. Some OTR might also provide advice and recommendations about their accommodation decision, whereas some might just provide simple or objective descriptions of services (Park et al., 2007). Travelers may need to process many OTRs before making their travel plans. This study follows Zhang, Lee and Zhao's (2010) research, in which they focused on the collective impact of online reviews on consumer decision-making process. Hence, this study is looking at the collective impact of OTR on traveler decision-making, not just one OTR.

This study examines traveler's behavioral intention to use OTR when making travel plans. This refers to travelers' willingness to use OTR the next time they make their travel plans. Travelers' behavioral intention in making travel plans can be illustrated by the following scenario. A traveler plans to book an accommodation in a country, which s/he has never been to before. S/he reads OTRs on the websites such as HostelWorld.com, HostelBookers.com, TripAdvisor.com, and Booking.com. After reading the online travel reviews, s/he can then make the travel plans.

The survey asked participants about their experiences and perceptions of OTR and its impact on their travel planning. Thus, participants were asked to think back to when they were planning their travel and indicate how the information provided by other travelers (i.e., OTR) influenced their actual travel plans. Travelers today have direct access to the information they need to make their decision and by doing so are empowered to create and distribute their own content (Sigala, 2011). This study suggests that empowerment is a key motivator of decision-making. Travelers may feel empowered by using UGC when making their travel plans. The role of OTR in the

support of empowerment (e.g., how OTR empowers travelers to make their own decision about service consumption) is of importance and relevance to IS, marketing and tourism, and one which has not yet been explored in great depth.

The data collection was conducted in the four months from November 2010 to February 2011. A total of 512 questionnaires were handed out to backpackers. Completion time for the survey ranged from 10 minutes to 15 minutes. Backpackers were invited in nine backpacker hostels: YHA Auckland, Auckland Central Backpackers, Queen Street Backpackers, Nomads Auckland Backpackers, Choice Plaza Backpackers, Base Backpackers Auckland, City Travellers Auckland Hostel, YWCA, and Cozy Kiwi Backpacker. Backpackers were approached in the kitchen, reception or lounge area of these places, during breakfast time (between 8 a.m. and 10 a.m.), and asked if they could take a few minutes to complete the survey. To promote a high response rate chocolate fish were offered to participants as a token of appreciation.

4.7.1 Data Preparation

The data preparation process involves coding and data entry into a database, data-filtering and finding any missing responses (Fink, 2006). First, a visual assessment was carried out on all of the unprocessed data when the surveys were collected. The surveys were numbered as they were handed in by participants and checked to ensure completeness and readability of the responses. Frequencies were computed for each variable and checks made for missing data and to identify outlier responses. The researcher also verified if the questionnaires were answered appropriately by the participants. For example, if a participant answered all questions similarly (e.g., selected “4” for all the items), the questionnaire was considered ineligible for analysis.

The data were then analyzed using the statistical package SPSS 17.0 for Windows. SPSS was used to calculate frequencies for every variable, to check for absent data, and the existence of any coding errors caused by the process of data entry. Data from the final survey was statistically examined via SPSS and PLS Graph. In total, 512 participants took part in the survey.

To further assess the quality of data, normal probability plot was used to confirm the normality of data distribution. Q-Q plot was examined for each variable using SPSS to check for the normality. The plots suggested normality somewhat since the responses were skewed more towards 5-7 rather than 1-3 on the scales. Since PLS has strong ability to model latent constructs under conditions of non-normality (Chin, 1998a; Chin et al., 2003), this small statistical inadequacy is not of concern for this study.

4.7.2 Descriptive Statistics of the Participants

A total of 512 questionnaires were handed out to participants and 365 questionnaires were returned giving an overall response rate of 71%. According to Bailey (1978), a 60% response rate is considered a reasonable assurance of an absence of systematic bias from respondents. Hence, this study has met the prescribed threshold.

The returned questionnaires were then screened for usable responses. Ten questionnaires were considered unusable because they had many missing response items. Eighty-seven questionnaires were also excluded from the analysis because the participants had never used OTR to help them making travel plans; they only filled in the demographic information. Thus, 268 questionnaires were found to be complete and usable, giving a usable response rate of 52%. A total of nine backpacker hostels were approached to distribute surveys and collect data from (Table 7). Most questionnaires were collected (67.2%) at the Youth Hostels Association (YHA).

Table 7. Backpacker Hostels

| Questionnaires collected (n=268) | Frequency | Percent |
|-------------------------------------|-----------|---------|
| Youth Hostels Association (YHA) | 180 | 67.2% |
| Auckland Central Backpackers | 34 | 12.7% |
| Queen Street Backpackers | 25 | 9.3% |
| Nomads Auckland Backpackers | 13 | 4.9% |
| Choice Plaza Backpackers | 6 | 2.2% |
| Base Backpackers Auckland | 4 | 1.5% |
| City Travellers Auckland Hostel | 3 | 1.1% |
| Young Women's Christian Association | 2 | 0.7% |
| Cozy Kiwi Backpacker | 1 | 0.4% |

The data was imported into SPSS 17.0 and split into two groups – those who used OTR when making travel plans (i.e., eligible participants), and those who had not (i.e., ineligible participants). Only the eligible responses (n = 268) were used for testing the research hypotheses. The results of the demographic analysis of the eligible responses are presented in Section 4.7.2.1. The ineligible responses (n = 87) were used for demographic analysis purpose only – see Section 4.7.2.2.

4.7.2.1 Demographic Analysis of the Participants Who Used OTR

The demographics of the questionnaire participants who used OTR when making travel plans, such as their age, gender, highest educational level, and Internet experience, are discussed in this section. These demographic figures were analyzed and are summarized in Table 8. Overall, 147 females participated in this survey, which represents 54.9% of the total respondents; 121 males participated (45.1%). The 24-34 year group ranked highest with 124 respondents (46.3%), followed by the 18-25 year group with 115 respondents (42.9%). With regard to the highest level of education of participants, the results revealed that 121 respondents (45.1%) were undergraduate students, 73 (27.2%) were postgraduate students, 70 (26.1%) were secondary school students) and 4 (1.5%) were primary school students. Looking at the Internet experience, most backpackers had used Internet for 11 years or more (140 participants or 52.2%). Another 78 (29%) had 8-10 years of Internet experience, while 46 (17.2%) had 5-7 years of Internet experience, and only 4 (1.5%) had between 2 and 4 years of Internet experience.

Table 8. Demographics of Participants Who Used OTR

| Demographic variable (n=268) | Frequency | Percent |
|------------------------------|-----------|---------|
| Gender | | |
| Male | 121 | 45.1% |
| Female | 147 | 54.9% |
| Age (years) | | |
| 18-25 | 115 | 42.9% |
| 26-34 | 124 | 46.3% |
| 35-49 | 18 | 6.7% |
| 50-64 | 5 | 1.9% |
| 65 or above | 6 | 2.2% |

| | | |
|----------------------|-----|-------|
| Highest education | | |
| Primary school | 4 | 1.5% |
| Secondary school | 70 | 26.1% |
| Undergraduate degree | 121 | 45.1% |
| Postgraduate degree | 73 | 27.2% |
| Internet experience | | |
| 1 year or less | 0 | 0.0% |
| 2-4 years | 4 | 1.5% |
| 5-7 years | 46 | 17.2% |
| 8-10 years | 78 | 29.1% |
| 11 years or more | 140 | 52.2% |

The nationalities of the survey participants who used OTR are shown in Table 9. There are 36 different nationalities listed. The nationalities with most respondents were Germany (20.9%) with 56 participants and England (20.1%) with 54 participants. Other countries with most participants were USA with 16 participants (6.0%), France with 15 participants (5.6%), Canada with 14 participants (5.2%), the Netherlands with 12 participants (4.5%), Brazil with 10 participants (3.7%), Australia with 7 participants (2.6%), Argentina with 6 participants (2.2%), Scotland with 6 participants (2.2%), and Sweden with 6 participants (2.2%).

Table 9. Nationalities of Participants Who Used OTR

| Country (n=268) | Frequency | Percent |
|-----------------|-----------|---------|
| Germany | 56 | 20.9% |
| England | 54 | 20.1% |
| USA | 16 | 6.0% |
| France | 15 | 5.6% |
| Canada | 14 | 5.2% |
| Netherlands | 12 | 4.5% |
| Brazil | 10 | 3.7% |
| Australia | 7 | 2.6% |
| Argentina | 6 | 2.2% |
| Scotland | 6 | 2.2% |
| Sweden | 6 | 2.2% |
| Chile | 5 | 1.9% |
| China | 5 | 1.9% |
| Malaysia | 5 | 1.9% |
| Taiwan | 5 | 1.9% |
| Wales | 5 | 1.9% |

| | | |
|----------------|---|------|
| Ireland | 4 | 1.5% |
| New Zealand | 4 | 1.5% |
| Belgium | 3 | 1.1% |
| Israel | 3 | 1.1% |
| Japan | 3 | 1.1% |
| Spain | 3 | 1.1% |
| Thailand | 3 | 1.1% |
| Finland | 2 | 0.7% |
| Hong Kong | 2 | 0.7% |
| Korea | 2 | 0.7% |
| Slovenia | 2 | 0.7% |
| Switzerland | 2 | 0.7% |
| Austria | 1 | 0.4% |
| Bolivia | 1 | 0.4% |
| Czech Republic | 1 | 0.4% |
| Denmark | 1 | 0.4% |
| Italy | 1 | 0.4% |
| Latvia | 1 | 0.4% |
| Poland | 1 | 0.4% |
| Saudi Arabia | 1 | 0.4% |

Table 10 summarizes participants' experience of using OTR when making travel plans. When asked about how many times the participants had used OTR when making travel plans, 36.9% (99 participants) had used it between 1 and 5 times, and 27.7% (69 participants) used OTR between 6 and 10 times when making travel plans. Fifty-eight participants (21.6%) used OTR occasionally and 55 participants (20.5%) had used OTR sometimes when making travel plans. About 32% of the participants (86) had used OTR from ½ hour to 1 hour when making travel plans. Fifty percent of the participants (140) had never posted or written an OTR after traveling, and 25.4% (68 participants) said they posted an OTR only rarely after traveling.

Table 10. Use of OTR When Making Travel Plans

| Demographic variable (n=268) | Frequency | Percent |
|------------------------------|-----------|---------|
| How many times used OTR | | |
| Not at all | 0 | 0.0% |
| 1-5 times | 99 | 36.9% |
| 6-10 times | 69 | 25.7% |
| 11-15 times | 32 | 11.9% |
| 16-20 times | 19 | 7.1% |
| 21-25 times | 10 | 3.7% |
| More than 25 times | 39 | 14.6% |

| | | |
|--------------------------|-----|-------|
| How often used OTR | | |
| Not at all | 0 | 0.0% |
| Rarely | 31 | 11.6% |
| Occasionally | 58 | 21.6% |
| Sometimes | 55 | 20.5% |
| Often | 47 | 17.5% |
| Very often | 33 | 12.3% |
| Every time I plan a trip | 44 | 16.4% |
| How much time used OTR | | |
| Not at all | 0 | 0.0% |
| Almost never | 18 | 6.7% |
| Less than 1/2 hour | 57 | 21.3% |
| From 1/2 hour to 1 hour | 86 | 32.1% |
| From 1 to 2 hours | 60 | 22.4% |
| From 2 to 3 hours | 25 | 9.3% |
| More than 3 hours | 22 | 8.2% |
| How often posted OTR | | |
| Not at all | 134 | 50.0% |
| Rarely | 68 | 25.4% |
| Occasionally | 28 | 10.4% |
| Sometimes | 23 | 8.6% |
| Often | 4 | 1.5% |
| Very often | 4 | 1.5% |
| Every time I plan a trip | 7 | 2.6% |

Table 11 provides the list of the OTR websites used when participants made their travel plans. The five most popular OTR websites were: HostelWorld.com (used by 158 participants or 59%), LonelyPlanet.com (used by 132 participants or 49.3%), TripAdvisor.com (used by 113 participants or 42.2%), HostelBookers.com (used by 84 participants or 31.3%), and Booking.com (used by 58 participants or 21.6%). Other websites used were: Blogspot.com (used by 35 participants or 13.1%), Travelocity.com used by 24 participants or 9%), Mytravelguide.com (used by 18 participants or 6.7%), Gusto.com (used by 7 participants or 2.6%), and Travepost.com (used by 6 participants or 2.2%).

Table 11. OTR Websites Used When Participants Made Their Travel Plans

| OTR Websites (n=268) | Frequency | Percent |
|------------------------|-----------|---------|
| Hostelworld.com | 158 | 59.0% |
| LonelyPlanet.com | 132 | 49.3% |
| Tripadvisor.com | 113 | 42.2% |
| Hostelbookers.com | 84 | 31.3% |
| Booking.com | 58 | 21.6% |
| Blogspot.com | 35 | 13.1% |
| Travelocity.com | 24 | 9.0% |
| Mytravelguide.com | 18 | 6.7% |
| Gusto.com | 7 | 2.6% |
| Travelpost.com | 6 | 2.2% |
| Realtravel.copm | 4 | 1.5% |
| Yelp.com | 4 | 1.5% |
| Hihotel.com | 4 | 1.5% |
| Hostels.com | 4 | 1.5% |
| Virtualtourist.com | 3 | 1.1% |
| Expedia.com | 3 | 1.1% |
| Hotelz.com | 3 | 1.1% |
| Fodors.com | 2 | 0.7% |
| Wotif.com | 2 | 0.7% |
| Igougo.com | 1 | 0.4% |
| Hotelscombined.com | 1 | 0.4% |
| Holidaysuncovered.com | 1 | 0.4% |
| Travelblog.org | 1 | 0.4% |
| Gapyear.com | 1 | 0.4% |
| Hotelclub.co.nz | 1 | 0.4% |
| Laterooms.com | 1 | 0.4% |
| Backpackersboard.co.nz | 1 | 0.4% |
| Gumtree | 1 | 0.4% |
| Hotels.com | 1 | 0.4% |
| Agoda.com | 1 | 0.4% |
| Bug.co.uk | 1 | 0.4% |
| Travellife.org | 1 | 0.4% |
| Backpacker.com.tw | 1 | 0.4% |
| Bookabatch.co.nz | 1 | 0.4% |
| Bbh.co.nz | 1 | 0.4% |

4.7.2.2 Demographic Analysis of the Participants Who Never Used OTR

Apart from the 268 participants who used OTR when making travel plans (Table 10), there was also 87 participants who were excluded from the analysis since they had never

used OTR to help them making travel plans (i.e. ineligible participants). Table 12 summarizes the demographics of participants who never used OTR when making travel plans.

Similar to the eligible participants who used OTR when making travel plans (i.e., 268 backpackers), the ineligible participants who never used OTR (i.e., 87 backpackers) also had the percentage of female (55.2%) higher than the percentage of males (44.8%). On the other hand, most eligible participants are older than ineligible ones since the 26-34 group is represented by 46.3% of the total eligible sample, whereas 60.9% of the ineligible sample is represented by the 18-25 group. Consequently, the eligible participants are more educated than the ineligible ones. For example, the highest level of education of the most eligible participants was undergraduate degree with 45.1%, while the highest level of education of the most ineligible participants was secondary school represented by 49.4% of this sample. Moreover, the eligible participants had more Internet experience than the ineligible ones. For instance, eligible participants with Internet experience of 11 years or more comprised 52.2% of this sample, whereas ineligible participants with Internet experience of 11 years or more is represented by 29.9% of ineligible sample. Generally, the results showed that the eligible participants (i.e., those who have used OTR) are older, more educated and had more Internet experience than the ineligible participants who never used OTR when making travel plans.

Table 12. Demographics of Participants Who Never Used OTR

| Demographic variable (n=87) | Frequency | Percent |
|-----------------------------|-----------|---------|
| Gender | | |
| Male | 39 | 44.8% |
| Female | 48 | 55.2% |
| Age (years) | | |
| 18-25 | 53 | 60.9% |
| 26-34 | 21 | 24.1% |
| 35-49 | 5 | 5.7% |
| 50-64 | 4 | 4.6% |
| 65 or above | 4 | 4.6% |
| Highest education | | |
| Primary school | 3 | 3.4% |
| Secondary school | 43 | 49.4% |

| | | |
|----------------------|----|-------|
| Undergraduate degree | 28 | 32.2% |
| Postgraduate degree | 13 | 14.9% |
| Internet experience | | |
| 1 year or less | 4 | 4.6% |
| 2-4 years | 10 | 11.5% |
| 5-7 years | 22 | 25.3% |
| 8-10 years | 25 | 28.7% |
| 11 years or more | 26 | 29.9% |

Table 13 lists the nationalities of the ineligible participants. The nationalities with most respondents were Germany (24.1%) with 21 participants, England (13.8%) with 12 participants, and USA (5.7%) with five participants. These results are similar to the eligible participant nationality figures (Table 9), where Germany (20.9%), England (20.1%), and USA (6%) were also the nationalities with the most respondents. The 87 ineligible participants came from 28 different nationalities, whereas the 268 eligible participants came from 36 different nationalities.

Table 13. Nationalities of Backpackers Who Never Used OTR

| Country (n=87) | Frequency | Percent |
|----------------|-----------|---------|
| Germany | 21 | 24.1% |
| England | 12 | 13.8% |
| USA | 5 | 5.7% |
| Australia | 5 | 5.7% |
| Chile | 4 | 4.6% |
| New Zealand | 4 | 4.6% |
| Argentina | 3 | 3.4% |
| Brazil | 3 | 3.4% |
| Italy | 3 | 3.4% |
| Sweden | 3 | 3.4% |
| Switzerland | 3 | 3.4% |
| Belgium | 2 | 2.3% |
| France | 2 | 2.3% |
| Israel | 2 | 2.3% |
| Korea | 2 | 2.3% |
| Austria | 1 | 1.1% |
| Canada | 1 | 1.1% |
| China | 1 | 1.1% |
| Estonia | 1 | 1.1% |
| Fiji | 1 | 1.1% |
| Ireland | 1 | 1.1% |
| Japan | 1 | 1.1% |

| | | |
|-------------|---|------|
| Mexico | 1 | 1.1% |
| Nepal | 1 | 1.1% |
| Netherlands | 1 | 1.1% |
| Spain | 1 | 1.1% |
| Taiwan | 1 | 1.1% |
| Thailand | 1 | 1.1% |

4.8 Chapter Summary

This chapter outlined the research design in three parts: the philosophical worldview proposed in the study; the strategy of inquiry that is related to this worldview; and the specific methods of research. A detailed description of the survey procedures was provided, including survey classification, survey sample, and survey ethics. The measurement issues were identified and PLS was introduced as the structural equation modeling technique used to analyze the data. The approach used for instrument design was divided in five parts: focus group, pre-test, pilot survey, measurement items, and questionnaire format and administration. Finally, the preliminary details of the final survey were reported. The following chapter describes the findings in terms of both the measurement model and the structural model.

CHAPTER 5: DATA ANALYSIS

5.1 Chapter Overview

This chapter tests the model and its specified hypotheses using the research methodology outlined in Chapter 4. Partial least squares (PLS) were used to test the research model. This study follows the widely accepted structure for reporting the results of PLS analysis proposed by Chin (2010b). The PLS analysis is presented in terms of the measurement model and then the structural model is discussed. The testing of the measurement model includes internal consistency reliability, and the convergent and discriminant validity of the instrument items. The structural model and hypotheses are then assessed by evaluating the R^2 values (explained variances) and the path coefficients (i.e., loadings and significance). Finally, the research model's goodness of fit is discussed.

5.1.1 Chapter Outline

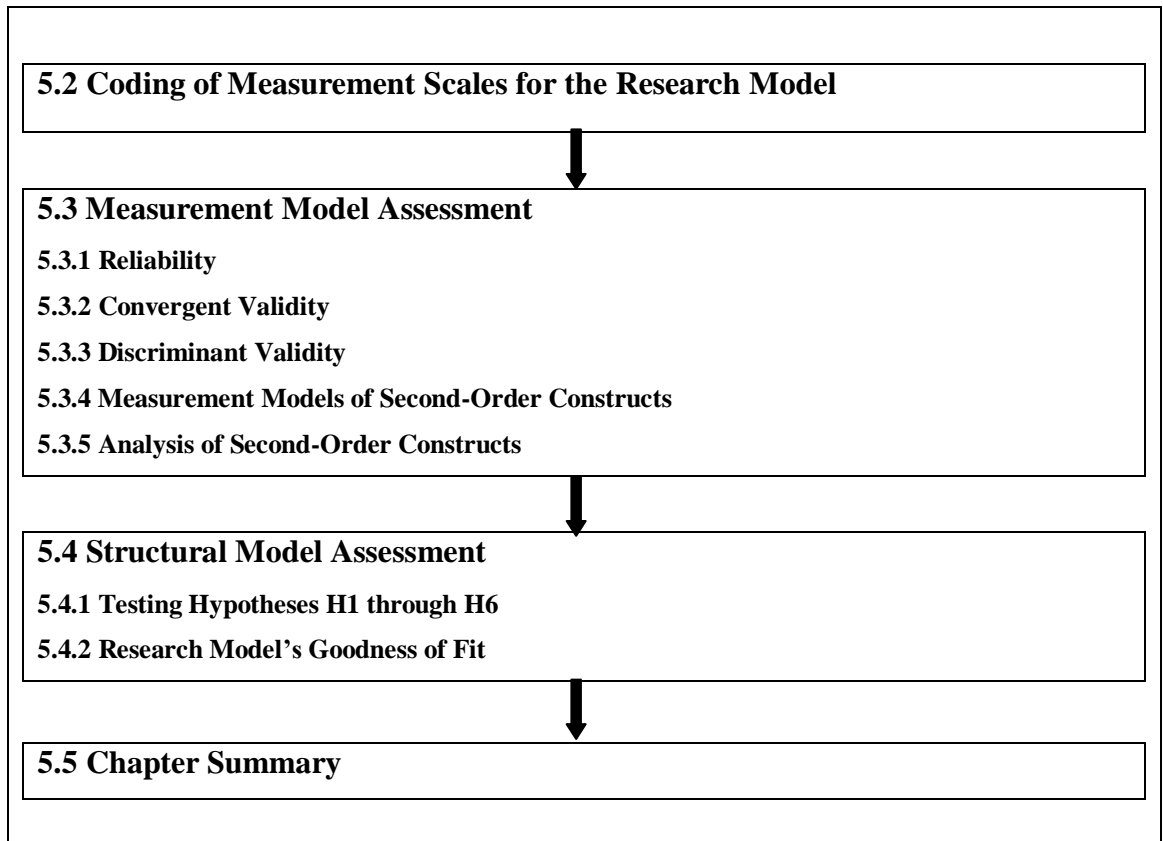


Figure 16. Chapter 5 Outline

5.2 Coding of Measurement Scales for the Research Model

This section describes how the measurement model scales were coded in this research. These scales are shown in Table 14 as they appear in the outline instrument. Forty-three scale items were implemented in the survey as follows: information consistency (3 items), argument quality (3 items), source credibility (3 items), information framing (3 items), recommendation consistency (3 items), recommendation rating (3 items), competence (3 items), meaning (3 items), self-determination (4 items), impact (3 items), attitude (3 items), subjective norm (3 items), perceived behavioral control (3 items), and intention (3 items). The coding of the measurement scales for the research model is presented below.

Table 14. Coding of Measurement Scales

| Code | Scale items |
|---------------------------------------|--|
| Construct: Information Consistency | |
| IC1 | OTR reinforced my confidence in making travel plans |
| IC2 | OTR supported the actions in my then existing travel plans |
| IC3 | OTR verified my assumptions for my travel plans |
| Construct: Argument Quality | |
| AQ1 | The information provided in the OTR was informative |
| AQ2 | The information provided in the OTR was helpful |
| AQ3 | The information provided in the OTR was valuable |
| Construct: Source Credibility | |
| SC1 | The person providing the OTR was trustworthy |
| SC2 | The person providing the OTR was credible |
| SC3 | The person providing the OTR was reliable |
| Construct: Information Framing | |
| IF1 | Overall, the OTR emphasize positive comments about the discussed product/service |
| IF2 | Overall, the OTR emphasize encouraging comments about the discussed |
| IF3 | Overall, the OTR emphasize a favourable assessment of the discussed product/service |
| Construct: Recommendation Consistency | |
| RC1 | The OTR were consistent with other online travel reviews |
| RC2 | The OTR were comparable with other online travel reviews |
| RC3 | The OTR were similar to other online travel reviews |
| Construct: Recommendation Rating | |
| RR1 | Based on the review rating, the OTR were found to be favourable by other online travellers |
| RR2 | Based on the review rating, the OTR were highly rated by other online travellers |
| RR3 | Based on the review rating, the OTR were rated well by other online travellers |

| | |
|------|---|
| | Construct: Competence |
| COM1 | I am confident about my ability to use OTR when I make my travel plans |
| COM2 | I believe in my capabilities to use OTR when I make my travel plans |
| COM3 | I have mastered the skills necessary for using OTR when I make my travel plans |
| | Construct: Meaning |
| MEA1 | Using OTR to make my travel plans is very important to me |
| MEA2 | Using OTR when I make travel plans activities is significant to me |
| MEA3 | Using OTR to make my travel plans is meaningful to me |
| | Construct: Self-Determination |
| SED1 | Using OTR, I can decide on my own how to go about making my travel plans |
| SED2 | Using OTR, I have considerable opportunity for independence in how I make my travel plans |
| SED3 | Using OTR, I have considerable opportunity for freedom in how I make my travel plans |
| SED4 | Using OTR, I have significant autonomy in determining how I make my travel plans |
| | Construct: Impact |
| IMP1 | My use of OTR has significant influence over my travel plans |
| IMP2 | My use of OTR has a large effect on my travel plans |
| IMP3 | The impact of using OTR on my travel plans |
| | Construct: Attitude |
| ATT1 | Using OTR when I make my travel plans is a good idea |
| ATT2 | Using OTR when I make my travel plans is a wise idea |
| ATT3 | I like the idea of using OTR when I make my travel plans |
| | Construct: Subjective Norm |
| SN1 | Most people who are important to me think that I should use OTR when I make my travel plans |
| SN2 | The people who influence my decisions think that I should use OTR when I make travel plans |
| SN3 | People whose opinions I value think I should use OTR when I make my travel plans |
| | Construct: Perceived Behavioral Control (PBC) |
| PBC1 | I would be able to use OTR when I make my travel plans |
| PBC2 | I have the resources, knowledge, and ability to use OTR when I make my travel plans |
| PBC3 | Using OTR is entirely under my control when I make my travel plans |
| | Construct: Intention |
| INT1 | I intend to use OTR the next time I make my travel plans |
| INT2 | I intend to use OTR whenever I need to make my travel plans |
| INT3 | I plan to use OTR whenever I make my travel plans |

5.3 Measurement Model Assessment

The research model was tested using Partial Least Squares (PLS). PLS-Graph Version 3.0 Build 1130 (Chin, 2001) was used to assess the measurement model and the structural model. This program assesses the psychometric properties of the measurement model, and estimates the parameters of the structural model. The testing of the measurement model included internal consistency reliability, and the convergent and discriminant validity of the instrument items (Chin, 2010b).

In the first-order model, all constructs were modeled as reflective. In the second-order model, psychological empowerment (PE) was modeled as reflective, and informational social influence (ISI) and normative social influence (NSI) were modeled as formative. Thus, the PE construct was specified as a reflective first- and second-order construct, whereas the ISI and NSI constructs were specified as reflective first-order and formative second-order constructs.

The adequacy of the measurement model was assessed by looking at individual item reliabilities, the convergent validity of the measures associated with individual constructs, and discriminant validity. It is important to separate constructs from measures in order to test if the measurement items are reliable and are measuring the associated constructs (Hulland, 1999).

The measurement model assessment was assessed in two stages. First, the reliability (Section 5.3.1), convergent validity (Section 5.3.2) and discriminant validity (Section 5.3.3) for the 14 first-order factors were examined. Second, the measurement models for the second-order factors of PE, ISI and NSI (section 5.3.4) were assessed. The hypothesized second-order model of ISI and NSI were also analyzed in Section 5.3.5.

5.3.1 Reliability

Descriptive and reliability statistics for all the first-order constructs in the research model are shown in Table 15. Reliability is a statement about measurement accuracy,

which is defined as the extent to which an instrument produces consistent or error-free results (Boudreau et al., 2001). For this study, the internal consistency was examined to evaluate how reliable the measures were. Composite reliability is a measure of internal consistency when using PLS (Chin, 2010b). The data indicated that the measures were robust in terms of their internal consistency reliability as indexed by their composite reliability. The composite reliabilities of the different measures ranged from 0.880 to 0.968, above the recommended threshold value of 0.707, indicating that the constructs are within accepted limits and reliable (Gefen et al., 2000).

Moreover, all items exhibited loadings exceeding 0.707, ranging from a lower bound of 0.770 to an upper bound of 0.964 on their respective constructs. Loadings should be higher than 0.707 and significant at the 0.050 level (Chin, 1998b). Table 15 shows that all the items' loadings on their respective constructs are significant ($p < 0.001$) as indicated by the T-statistics for the outer model loadings in the PLS-Graph output. These values ranged from a low of 3.433 to a high of 53.118.

Table 15. Descriptive and Reliability Statistics

| Constructs | Item | Mean | Stand. Dev. | Loadings | T-statistic |
|--|------|-------|-------------|----------|-------------|
| Information Consistency Composite Reliability=0.882 | IC1 | 5.224 | 1.237 | 0.856 | 17.344 |
| | IC2 | 5.078 | 1.163 | 0.869 | 18.602 |
| | IC3 | 4.940 | 1.169 | 0.808 | 14.260 |
| Argument Quality Composite Reliability=0.885 | AQ1 | 5.519 | 0.966 | 0.817 | 11.261 |
| | AQ2 | 5.470 | 0.934 | 0.894 | 14.309 |
| | AQ3 | 5.239 | 1.040 | 0.832 | 10.538 |
| Source Credibility Composite Reliability=0.939 | SC1 | 4.578 | 1.008 | 0.900 | 12.504 |
| | SC2 | 4.612 | 1.016 | 0.923 | 12.336 |
| | SC3 | 4.571 | 0.990 | 0.920 | 13.315 |
| Information Framing Composite Reliability=0.880 | IF1 | 4.780 | 1.078 | 0.770 | 3.433 |
| | IF2 | 4.799 | 1.103 | 0.878 | 6.461 |
| | IF3 | 4.784 | 1.080 | 0.879 | 6.880 |
| Recommendation Consistency Composite Reliability=0.923 | RC1 | 4.642 | 1.098 | 0.900 | 17.656 |
| | RC2 | 4.750 | 1.067 | 0.916 | 21.362 |
| | RC3 | 4.754 | 1.164 | 0.866 | 13.253 |

| | | | | | |
|-------------------------------------|------|-------|-------|-------|--------|
| Recommendation Rating | RT1 | 4.862 | 1.049 | 0.899 | 14.412 |
| Composite Reliability=0.940 | RT2 | 4.817 | 1.046 | 0.933 | 16.787 |
| | RT3 | 4.840 | 0.998 | 0.916 | 17.811 |
| Competence | COM1 | 5.653 | 1.099 | 0.929 | 16.747 |
| Composite Reliability=0.933 | COM2 | 5.701 | 0.976 | 0.930 | 21.738 |
| | COM3 | 5.425 | 1.223 | 0.862 | 11.667 |
| Meaning | MEA1 | 4.549 | 1.566 | 0.884 | 19.629 |
| Composite Reliability=0.939 | MEA2 | 4.399 | 1.519 | 0.936 | 31.194 |
| | MEA3 | 4.429 | 1.501 | 0.926 | 31.562 |
| Self-Determination | SED1 | 5.261 | 1.174 | 0.883 | 15.284 |
| Composite Reliability=0.945 | SED2 | 5.194 | 1.132 | 0.922 | 18.557 |
| | SED3 | 5.201 | 1.160 | 0.911 | 20.378 |
| | SED4 | 5.131 | 1.191 | 0.888 | 16.169 |
| Impact | IMP1 | 4.373 | 1.563 | 0.928 | 29.600 |
| Composite Reliability=0.959 | IMP2 | 4.228 | 1.595 | 0.955 | 34.930 |
| | IMP3 | 4.104 | 1.648 | 0.942 | 39.451 |
| Attitude | ATT1 | 5.478 | 1.133 | 0.909 | 26.683 |
| Composite Reliability=0.935 | ATT2 | 5.228 | 1.238 | 0.929 | 26.539 |
| | ATT3 | 5.306 | 1.117 | 0.893 | 31.477 |
| Subjective Norm | SN1 | 3.896 | 1.444 | 0.942 | 22.210 |
| Composite Reliability=0.968 | SN2 | 3.828 | 1.441 | 0.960 | 23.582 |
| | SN3 | 3.884 | 1.491 | 0.960 | 25.250 |
| Perceived Behavioral Control | PBC1 | 5.649 | 1.076 | 0.892 | 8.306 |
| Composite Reliability=0.925 | PBC2 | 5.713 | 1.058 | 0.941 | 14.506 |
| | PBC3 | 5.552 | 1.171 | 0.857 | 6.939 |
| Intention | INT1 | 5.485 | 1.225 | 0.907 | 38.810 |
| Composite Reliability=0.954 | INT2 | 5.198 | 1.330 | 0.964 | 53.118 |
| | INT3 | 5.026 | 1.472 | 0.931 | 50.874 |

5.3.2 Convergent Validity

Convergent validity is defined as the extent to which blocks of items strongly converge in their representation of the underlying construct they were created to measure (Chin, 2010b). Convergent validity is adequate when constructs have an average variance

extracted (AVE) of 0.5 or more, and with loadings in excess of 0.7 for reflective items (Fornell & Larcker, 1981). Higher average loadings and a narrow range between 0.7 and 0.9 will allow greater confidence that all items converge in estimating the underlying construct (Chin, 2010b).

AVE results are given in Table 16. The constructs had AVE ranging from 0.711 to 0.911, which exceeded the recommended threshold value of 0.5. In addition, all item loadings were above 0.7 (see Table 15), satisfying the minimum threshold value for convergent validity.

Table 16. AVE for First-Order Constructs

| Constructs | Average Extracted Variance (AVE) |
|------------------------------|----------------------------------|
| Information Consistency | 0.714 |
| Argument Quality | 0.720 |
| Source Credibility | 0.836 |
| Information Framing | 0.711 |
| Recommendation Consistency | 0.800 |
| Recommendation Rating | 0.839 |
| Competence | 0.824 |
| Meaning | 0.839 |
| Self-Determination | 0.812 |
| Impact | 0.887 |
| Attitude | 0.829 |
| Subjective Norm | 0.911 |
| Perceived Behavioral Control | 0.805 |
| Intention | 0.873 |

5.3.3 Discriminant Validity

Discriminant validity is defined as the extent to which indicators differentiate among constructs (Gefen et al., 2000). For adequate discriminant validity, the square root of the AVE of a measure should exceed the correlations between the measure and all other measures (Gefen et al., 2000). The bolded elements in the matrix diagonals in Table 17, which represent the square roots of the AVEs, all exceeded the off-diagonal elements in their corresponding row and column, supporting the discriminant validity of the constructs.

Another test of discriminant validity was obtained by correlating the component scores of each latent variable with all other items. It is expected that each group of indicators will load higher for its respective construct than indicators for any of the other constructs (Chin, 1998b). The factor loadings (bolded) and cross loadings are presented in Table 18. All items loaded more highly on their construct than on any other construct as not one of the 616 cross loadings had a difference greater than 0.10.

Table 17. Correlations of First-Order Factors

| | IC | AQ | SC | IF | RC | RR | COM | MEA | SED | IMP | ATT | SN | PBC | INT |
|------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Information Consistency | 0.845 | | | | | | | | | | | | | |
| Argument Quality | 0.544 | 0.848 | | | | | | | | | | | | |
| Source Credibility | 0.300 | 0.549 | 0.914 | | | | | | | | | | | |
| Information Framing | 0.302 | 0.376 | 0.392 | 0.843 | | | | | | | | | | |
| Recommendation Consistency | 0.466 | 0.352 | 0.373 | 0.275 | 0.894 | | | | | | | | | |
| Recommendation Rating | 0.313 | 0.269 | 0.266 | 0.310 | 0.385 | 0.916 | | | | | | | | |
| Competence | 0.351 | 0.306 | 0.201 | 0.172 | 0.296 | 0.325 | 0.908 | | | | | | | |
| Meaning | 0.525 | 0.429 | 0.299 | 0.222 | 0.391 | 0.313 | 0.310 | 0.914 | | | | | | |
| Self-Determination | 0.473 | 0.374 | 0.289 | 0.137 | 0.416 | 0.377 | 0.404 | 0.581 | 0.901 | | | | | |
| Impact | 0.516 | 0.449 | 0.293 | 0.233 | 0.382 | 0.391 | 0.332 | 0.717 | 0.500 | 0.941 | | | | |
| Attitude | 0.575 | 0.504 | 0.356 | 0.200 | 0.428 | 0.375 | 0.385 | 0.569 | 0.530 | 0.598 | 0.910 | | | |
| Subjective Norm | 0.308 | 0.422 | 0.267 | 0.287 | 0.291 | 0.223 | 0.067 | 0.541 | 0.389 | 0.487 | 0.430 | 0.954 | | |
| Perceived Behavioral Control | 0.279 | 0.253 | 0.119 | -0.018 | 0.250 | 0.285 | 0.486 | 0.238 | 0.322 | 0.341 | 0.497 | 0.209 | 0.897 | |
| Intention | 0.580 | 0.460 | 0.327 | 0.232 | 0.418 | 0.333 | 0.346 | 0.604 | 0.473 | 0.614 | 0.734 | 0.455 | 0.396 | 0.934 |

Table 18. Factor Loadings and Cross Loadings

| | Infcon | Argqua | Soucre | Inffra | Recon | Recrat | Compet | Meanin | Seldet | Impact | Attuse | Subnor | PBC | Intuse |
|------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------|--------|--------|--------|--------|-------|--------|
| IC1 | .856 | .511 | .303 | .273 | .418 | .264 | .329 | .474 | .462 | .468 | .564 | .314 | .287 | .511 |
| IC2 | .869 | .487 | .233 | .233 | .422 | .236 | .320 | .466 | .363 | .465 | .484 | .259 | .214 | .500 |
| IC3 | .808 | .365 | .216 | .262 | .331 | .300 | .228 | .381 | .366 | .363 | .391 | .196 | .198 | .454 |
| AQ1 | .457 | .817 | .428 | .341 | .367 | .278 | .277 | .318 | .322 | .343 | .430 | .317 | .209 | .425 |
| AQ2 | .490 | .894 | .495 | .292 | .319 | .237 | .270 | .366 | .340 | .400 | .445 | .370 | .242 | .388 |
| AQ3 | .439 | .832 | .474 | .326 | .215 | .173 | .234 | .406 | .290 | .398 | .409 | .385 | .192 | .362 |
| SC1 | .301 | .487 | .901 | .351 | .348 | .241 | .190 | .231 | .260 | .266 | .330 | .235 | .133 | .290 |
| SC2 | .272 | .516 | .923 | .372 | .333 | .270 | .206 | .298 | .262 | .282 | .318 | .260 | .097 | .298 |
| SC3 | .250 | .503 | .920 | .351 | .343 | .218 | .155 | .287 | .271 | .255 | .330 | .235 | .099 | .309 |
| IF1 | .198 | .244 | .212 | .770 | .175 | .184 | .105 | .130 | .038 | .143 | .120 | .255 | -.071 | .120 |
| IF2 | .285 | .379 | .380 | .877 | .271 | .249 | .161 | .210 | .128 | .236 | .170 | .237 | .017 | .247 |
| IF3 | .266 | .306 | .362 | .879 | .232 | .330 | .158 | .203 | .154 | .193 | .201 | .246 | -.016 | .193 |
| RC1 | .471 | .380 | .392 | .272 | .900 | .356 | .272 | .369 | .412 | .370 | .430 | .274 | .248 | .400 |
| RC2 | .406 | .297 | .308 | .218 | .916 | .343 | .261 | .384 | .394 | .352 | .394 | .256 | .234 | .392 |
| RC3 | .364 | .256 | .294 | .247 | .866 | .332 | .264 | .286 | .296 | .296 | .312 | .248 | .179 | .322 |
| RR1 | .252 | .227 | .203 | .273 | .346 | .899 | .258 | .262 | .322 | .361 | .338 | .211 | .270 | .273 |
| RR2 | .310 | .251 | .284 | .316 | .364 | .933 | .324 | .307 | .362 | .378 | .360 | .191 | .270 | .333 |
| RR3 | .295 | .259 | .240 | .261 | .346 | .916 | .307 | .288 | .352 | .334 | .330 | .212 | .244 | .306 |
| COM1 | .356 | .319 | .232 | .210 | .289 | .343 | .929 | .280 | .381 | .310 | .374 | .075 | .444 | .341 |
| COM2 | .337 | .301 | .196 | .180 | .291 | .285 | .930 | .276 | .364 | .294 | .375 | .079 | .403 | .324 |
| COM3 | .246 | .196 | .102 | .055 | .217 | .247 | .862 | .294 | .355 | .304 | .288 | .020 | .493 | .268 |

| | | | | | | | | | | | | | | |
|------|------|------|------|-------|------|------|------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| MEA1 | .509 | .413 | .252 | .187 | .375 | .305 | .342 | .885 | .525 | .670 | .566 | .467 | .263 | .601 |
| MEA2 | .472 | .363 | .272 | .211 | .356 | .277 | .276 | .936 | .538 | .673 | .506 | .508 | .208 | .543 |
| MEA3 | .454 | .399 | .297 | .211 | .339 | .272 | .222 | .922 | .529 | .618 | .482 | .511 | .175 | .505 |
| SED1 | .476 | .363 | .242 | .151 | .414 | .323 | .307 | .562 | .883 | .442 | .469 | .386 | .281 | .452 |
| SED2 | .473 | .373 | .262 | .146 | .400 | .341 | .372 | .548 | .922 | .508 | .526 | .374 | .327 | .452 |
| SED3 | .369 | .290 | .260 | .090 | .332 | .373 | .374 | .521 | .911 | .423 | .459 | .353 | .289 | .402 |
| SED4 | .375 | .317 | .279 | .100 | .345 | .324 | .406 | .455 | .888 | .424 | .450 | .284 | .257 | .394 |
| IMP1 | .543 | .426 | .272 | .198 | .365 | .384 | .308 | .705 | .507 | .928 | .594 | .433 | .343 | .584 |
| IMP2 | .438 | .412 | .275 | .237 | .364 | .368 | .311 | .644 | .424 | .955 | .538 | .434 | .293 | .552 |
| IMP3 | .470 | .430 | .281 | .225 | .351 | .350 | .319 | .671 | .478 | .942 | .552 | .509 | .324 | .597 |
| ATT1 | .591 | .498 | .311 | .203 | .398 | .326 | .308 | .486 | .451 | .531 | .909 | .391 | .427 | .636 |
| ATT2 | .522 | .452 | .328 | .184 | .376 | .315 | .314 | .534 | .480 | .529 | .928 | .407 | .462 | .701 |
| ATT3 | .461 | .430 | .332 | .160 | .396 | .380 | .426 | .532 | .514 | .570 | .893 | .376 | .466 | .665 |
| SN1 | .290 | .406 | .253 | .271 | .268 | .215 | .083 | .489 | .368 | .422 | .407 | .942 | .235 | .419 |
| SN2 | .282 | .395 | .255 | .259 | .269 | .217 | .060 | .542 | .385 | .486 | .392 | .960 | .180 | .422 |
| SN3 | .309 | .407 | .256 | .289 | .293 | .206 | .051 | .519 | .363 | .483 | .429 | .960 | .184 | .460 |
| PBC1 | .255 | .251 | .082 | -.024 | .216 | .278 | .412 | .249 | .322 | .314 | .477 | .247 | .892 | .383 |
| PBC2 | .264 | .241 | .153 | -.019 | .248 | .252 | .476 | .226 | .280 | .333 | .464 | .185 | .941 | .399 |
| PBC3 | .227 | .173 | .075 | -.001 | .202 | .234 | .420 | .146 | .259 | .256 | .380 | .105 | .857 | .253 |
| INT1 | .555 | .420 | .273 | .197 | .394 | .347 | .306 | .531 | .443 | .547 | .726 | .423 | .382 | .907 |
| INT2 | .532 | .408 | .326 | .210 | .386 | .309 | .323 | .586 | .458 | .590 | .683 | .416 | .368 | .964 |
| INT3 | .536 | .464 | .319 | .243 | .391 | .273 | .341 | .578 | .423 | .585 | .642 | .436 | .358 | .931 |

5.3.4 Measurement Models of Second-Order Constructs

The theory of planned behavior (TPB) constructs (attitude, subjective norm, perceived behavioral control, and intention) were modeled as reflective and measured using multiple indicators. PE (modeled as reflective), and ISI and NSI (both modeled as formative), were represented by second-order factors derived from the confirmatory factor analysis.

Psychological Empowerment as a Reflective Second-Order Structure

This research is proposing a second-order reflective measurement model of PE in the user-generated content (UGC) context in the travel industry with four first-order factors: meaning, impact, self-determination, and competence. This second-order measurement model and its loadings are depicted in Figure 17.

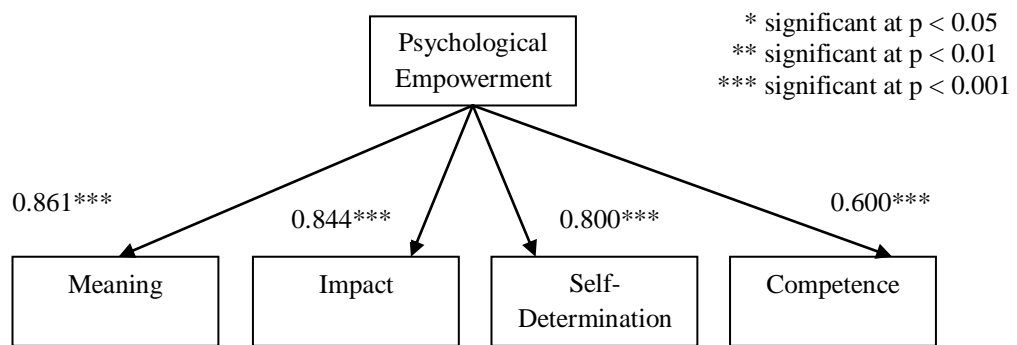


Figure 17. Second-Order Factor of Psychological Empowerment

The constructs of PE had the following loadings: meaning (0.861), impact (0.844), self-determination (0.800), and competence (0.600). Of the four PE constructs, only one had a loading of less than 0.707, which was competence with 0.600. According to Chin (1998a), most of the loadings should be at least 0.600, and preferably at 0.707. All item loadings were highly significant ($p < 0.001$), as indicated by the T-statistics on Table 19. Competence is significant and was retained for sound theoretical reasons as well. A second-order reflective structure for PE is consistent with the management literature (Spreitzer, 1995b, 1996; Spreitzer et al., 1997) and IS literature (Doll & Deng, 2010), where PE was measured as a second-order reflective construct with four first-order factors: meaning, impact, self-determination, and competence. The composite reliability

of PE was 0.861, which clearly exceeded the threshold of 0.700, suggesting acceptable reliability (Gefen et al., 2000).

Table 19. Loadings for Psychological Empowerment Constructs

| Constructs | Loadings | T-statistics |
|--------------------|----------|--------------|
| Competence | 0.600 | 11.372 |
| Meaning | 0.861 | 43.507 |
| Self-Determination | 0.800 | 31.196 |
| Impact | 0.844 | 42.100 |

Convergent validity of PE was considered adequate since its AVE was 0.613, which is above the threshold of 0.500 (Fornell & Larcker, 1981). For adequate discriminant validity, the bold elements in the matrix diagonals in Table 20 (which represent the square roots of the AVEs), all exceeded the off-diagonal elements in their corresponding row and column, supporting the discriminant validity of PE. Correlations between PE and the other two constructs were less than 0.700, which indicates sufficient discriminant validity (Bruhn, Georgi, & Hadwich, 2008).

Table 20. Correlations of Second-Order factors

| | InfSoc | NorSoc | PsyEmp |
|--------|--------------|--------------|--------------|
| InfSoc | 0.694 | | |
| NorSoc | 0.517 | 0.831 | |
| PsyEmp | 0.643 | 0.556 | 0.783 |

Informational Social Influence as a Formative Second-Order Structure

This research is proposing a second-order formative measurement model of ISI in the UGC context in the travel industry. The research suggests that the four first-order formative factors (i.e., argument quality, source credibility, information framing, and information consistency) share a common variance labeled “Informational Social Influence”. Figure 18 shows ISI constructs and its weights.

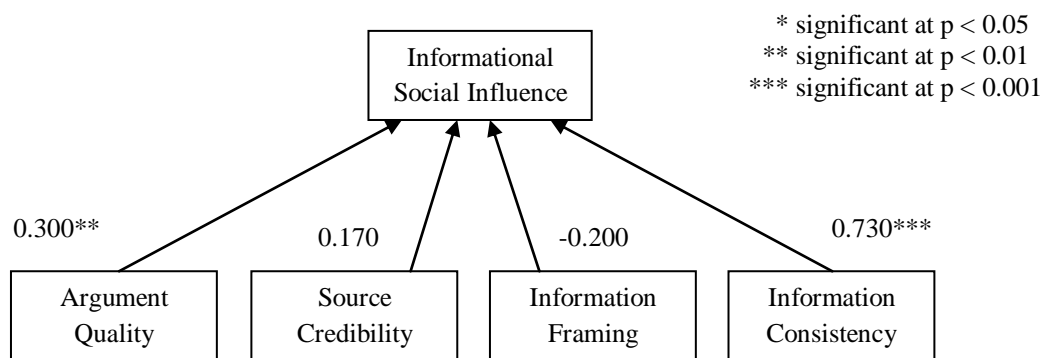


Figure 18. Second-Order Factor of Informational Social Influence

The standard practice when measuring formative constructs is to examine item weights, which usually have smaller absolute values than item loadings in reflective constructs (Karimi, Somers, & Bhattacharjee, 2007). Loadings represent the influence of individual scale items on reflective constructs, whereas weights are considered to evaluate the role of each formative indicator to measure the constructs in the model (Chin, 1998b). In PLS, indicator weights measure the contribution of each formative indicator to the variance of the latent variable (Petter et al., 2007).

The first-order constructs do not reflect the second-order constructs when using a formative higher-order model. Instead, each construct represents a unique aspect that contributes a new aspect to the higher-order construct (Chin, 1998a). Thus, conventional validity and reliability assessments applied for reflective models do not apply to manifest variables that are used in formative measurement models (Bagozzi, 1994; Bollen, 1989; Diamantopoulos & Winklhofer, 2001). For example, reliability is not assessed in formative constructs because indicators are not expected to be internally consistent (Bollen, 1984). Moreover, AVE is not evaluated since it assumes that the indicators will demonstrate convergent validity, which is a condition not required for evaluating formative constructs (Jarvis et al., 2003).

Alternative approaches should be applied to evaluate the quality of measures that are based on formative indicators (Diamantopoulos & Winklhofer, 2001). In PLS, Henseler et al. (2009) recommend assessing the validity of formative constructs on two levels: the indicator and the construct levels. This research followed this suggestion and the procedure used in Roberts and Thatcher (2009), which assesses the indicator and the constructs levels in formative models.

The first approach to validate formative models was to examine the significance of the construct weights (Roberts & Thatcher, 2009). Similar to a regression equation, the weights of formative constructs can be interpreted as validity coefficients (Bollen, 1989). The researcher should monitor the significance of the construct weights by means of bootstrapping (Efron & Tibshirani, 1993). A significant level of at least 0.05 demonstrates that a construct is relevant for the formative model, and indicates an acceptable level of validity (Urbach & Ahlemann, 2010). In PLS, the weights of formative constructs are treated as PLS coefficients (Chin et al., 2003). Also, Chin

(1998b) recommends path coefficients greater than 0.200. Table 21 details the weights and respective T-statistics for ISI constructs.

The results showed the constructs of ISI had the following weights: information consistency (0.730), argument quality (0.300), source credibility (0.170), and information framing (-0.200). Two of the four constructs contributed significantly to the ISI construct: information consistency ($p < 0.001$) and argument quality ($p < 0.01$). Both constructs explained a significant portion of the variance in the formative second-order model.

Table 21. Weights for Informational Social Influence Constructs

| Constructs | Weights | T-statistics |
|-------------------------|---------|--------------|
| Information Consistency | 0.730 | 8.482 |
| Argument Quality | 0.300 | 2.832 |
| Source Credibility | 0.170 | 1.646 |
| Information Framing | -0.200 | 0.231 |

It should be noted that source credibility and information framing in forming ISI construct emerged as not significant. Although the results of the current study suggest that these two constructs were not significantly related to the latent variable, they were not dropped from the research model since they contributed conceptually to the second-order model of ISI (Roberts & Thatcher, 2009).

The Yale model (Hovland et al., 1953; Hovland, 1957; Hovland & Janis, 1959) was used to link conceptually the four dimensions of ISI (i.e., argument quality, source credibility, information framing, and information consistency) in the UGC context, which were treated as higher-order constructs. Based on the Yale model, most research on persuasive communication has investigated variation in “message” factors, “source” factors, and “audience” characteristics, and how they influence the effectiveness of a given communication (e.g., UGC). For example, argument quality and source credibility are important factors related to source and message respectively, when modeling dual-process theories (DPT) (Bhattacharjee & Sanford, 2006; Zhang & Watts, 2008). Information framing is another relevant message element in ISI research (Angst & Agarwal, 2009; Grewal et al., 1994). Information consistency (also known as confirmation with prior belief) is an audience characteristic and may affect evaluations of an incoming message (Cheung et al., 2009; Zhang & Watts, 2003). Thus, all four

constructs were retained in order to ensure sufficient breadth of coverage for capturing the content of the ISI construct and comparability with other research.

This research was consistent with prior studies in which non-significant indicators that nevertheless contribute to the content validity of the construct were retained (Bollen & Lennox, 1991; Petter et al., 2007). The argument is that conceptual reasoning holds more influence than statistical results when deciding whether or not to drop formative indicators (Edwards & Bagozzi, 2000; Fornell et al., 1991; Petter et al., 2007). When using formative indicators, “omitting an indicator is omitting a part of the construct” (Bollen & Lennox, 1991, p. 308).

A final approach to validate formative constructs involved linking the measure to other constructs (antecedents and/or consequences) with which it would be expected to be linked (i.e., nomological validation) (Diamantopoulos & Winklhofer, 2001; Roberts & Thatcher, 2009; Straub et al., 2004). Three procedures must be followed for this validation: (1) that information is collected for at least one more construct than the one captured by the formative construct; (2) that this other construct is reflective; (3) that a theoretical relationship can be posited to exist between the constructs (Diamantopoulos & Winklhofer, 2001; Roberts & Thatcher, 2009). The research model of this study adheres to these three conditions (see Figure 19). For more details about the theoretical relationship between ISI and PE (Procedure 3 above), see Chapter 3, Section 3.3.1.

Figure 19 posits the relationship (standardized path coefficient) between the formative construct and related endogenous construct. The results showed that ISI was significantly related to PE ($\beta = 0.49$, $t = 8.650$, $p < 0.001$), which is a reflective construct. Thus, the results supported the nomological validation of the formative ISI measure.

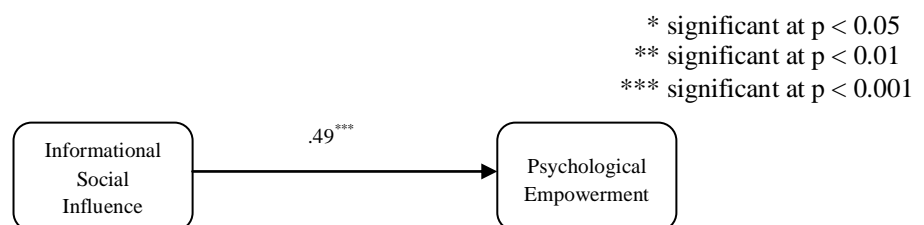


Figure 19. Informational Social Influence related to Psychological Empowerment

Normative Social Influence as a Formative Second-Order Structure

This research is proposing a second-order formative measurement model of NSI in the UGC context in the travel industry. The research suggests that the two first-order formative factors (i.e., recommendation consistency and recommendation rating) share a common variance labeled “Normative Social Influence”. Figure 20 shows NSI constructs and its weights.

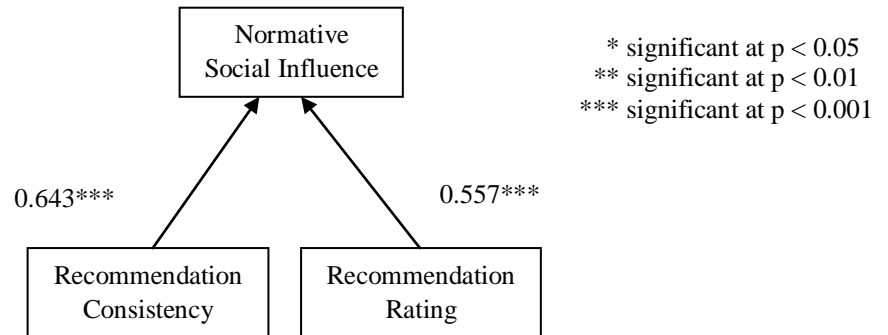


Figure 20. Second-order factor of Normative Social Influence

The constructs of NSI had the following weights: recommendation consistency (0.643), and recommendation rating (0.557). Similar to the ISI measurement model, this research followed Henseler et al. (2009) who recommend assessing the validity of formative constructs on two levels (i.e., the indicator and the construct levels), as well as the procedure used in Roberts and Thatcher (2009), which assesses the indicator and the constructs levels in formative models.

The first approach to validate formative models is to examine the significance of the construct weights (Roberts & Thatcher, 2009). Table 22 indicates that both constructs (i.e., recommendation consistency and recommendation rating) accounted for a significant portion of the variance in NSI (i.e., $p < 0.001$).

Table 22. Weights for Normative Social Influence Constructs

| Constructs | Weights | T-statistics |
|----------------------------|---------|--------------|
| Recommendation Consistency | 0.643 | 6.769 |
| Recommendation Rating | 0.557 | 5.643 |

The second approach to validate formative constructs involves linking a measure to other constructs with which it would be expected to be linked (i.e., nomological validation) (Diamantopoulos & Winklhofer, 2001; Roberts & Thatcher, 2009; Straub et al., 2004). NSI was validated using the three procedures that were applied to the ISI measurement model: (1) that information is collected for at least one more construct than the one captured by the formative construct; (2) that this other construct is reflective; (3) that a theoretical relationship can be posited to exist between the constructs (Diamantopoulos & Winklhofer, 2001; Roberts & Thatcher, 2009). The research model of this study adheres to these three conditions (see Figure 21). For more details about the theoretical relationship between NSI and PE (Procedure 3 above), see Chapter 3, Section 3.3.2.

Figure 21 posits the relationship (standardized path coefficient) between the formative construct and related endogenous construct. The results showed that NSI was significantly related to PE ($\beta = 0.31$, $t = 5.594$, $p < 0.001$), which is a reflective construct. Thus, the results supported the nomological validation of the formative NSI measure.

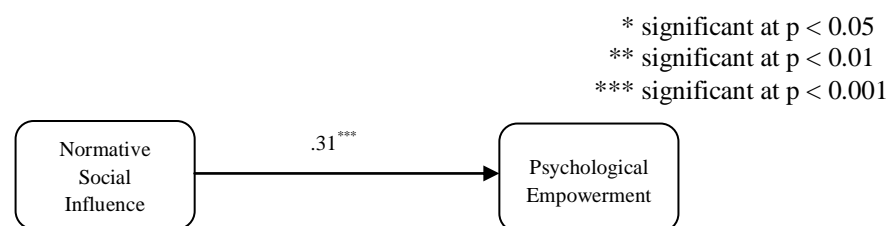


Figure 21. Normative Social Influence related to Psychological Empowerment

5.3.5 Analysis of Second-Order Constructs

In PLS, higher-order factors can be tested using two procedures (Chin et al., 2003). The first procedure involves measuring the higher-order constructs using all the measurement items of the lower-order factors (Lohmoller, 1989). The second procedure models the paths from the lower-order to the higher-order construct using a principal component factor analysis (Diamantopoulos & Winklhofer, 2001).

To estimate the hypothesized formative second-order model of ISI and NSI the second approach was used in this study. Other IS research has used the same approach for analyzing formative second-order constructs (Karimi et al., 2007; Pavlou & Fygenson, 2006). The second-order constructs were formed by calculating the coefficients/weights (γ_i) of the first-order constructs using a principal components factor analysis (Diamantopoulos & Winklhofer, 2001):

$$ISI = \gamma_1(\text{Infcon}) + \gamma_2(\text{Argqua}) + \gamma_3(\text{Soucre}) + \gamma_4(\text{Inffra})$$

$$ISI = 0.73(\text{Infcon}) + 0.30(\text{Argqua}) + 0.17(\text{Soucre}) - 0.2(\text{Inffra})$$

$$NSI = \gamma_1(\text{Recon}) + \gamma_2(\text{Recrat})$$

$$NSI = 0.64(\text{Recon}) + 0.56(\text{Recrat})$$

The coefficients (γ_i) of the two first-order enabling factors (i.e., information consistency and argument quality) to the second-order factors were statistically significant ($p < 0.001$), providing justification for the existence of the hypothesized ISI as a formative second-order model (Figure 18).

The impact of all (γ_i) first-order constructs on NSI was significant ($p < 0.001$), which provides justification for the existence of the hypothesized NSI as a formative second-order model (Figure 20).

The assessment of ISI and NSI as second-order factors involved examining the correlations among their first-order factors (Karimi et al., 2007). Tanaka and Huba (1984) claim that there is a possible validity of a second-order factor if the first-order factors are highly correlated. Table 23 shows that pairs of the first-order factors of ISI were correlated and significantly different from zero, suggesting a second-order factor structure and validating their expected relationships.

Table 23. Correlations for Informational Social Influence Constructs

| | Infcon | Argqua | Soucre | Inffra |
|--------|--------|--------|--------|--------|
| Infcon | --- | | | |
| Argqua | 0.544 | --- | | |
| Soucre | 0.300 | 0.549 | --- | |
| Inffra | 0.302 | 0.376 | 0.392 | --- |

As shown in Table 24, the correlation between the two first-order factors of NSI was statistically significant ($p < 0.001$), suggesting a second-order factor structure and validating its expected relationship.

Table 24. Correlations for Normative Social Influence Constructs

| | Recon | Recreat |
|---------|-------|---------|
| Recon | --- | |
| Recreat | 0.385 | --- |

Since none of the correlations between the pairs were negative in both second-order constructs (i.e., ISI and NSI), a high value on one did not preclude a high value on the other (Karimi et al., 2007). In addition, the correlation among the first-order constructs with both second-order constructs was below the suggested cutoff value of 0.90 (Bagozzi, Yi, & Phillips, 1991), which demonstrates that the contents captured by the first-order factors are distinct from one another and indicative of discriminant validity. Thus, the results supported the current representation of the second-order factor models for ISI and NSI respectively.

5.4 Structural Model Assessment

In the previous section, the statistical results indicated that the measurement model has demonstrated satisfactory reliability and validity, and the retained items were able to measure the constructs under study. This section provides the results of the hypothesized structural model analysis.

The structural model and hypotheses were assessed by evaluating the R^2 values (explained variances) and the path coefficients (i.e., loadings and significance), which indicate how well the data supports the proposed research model (Wixom & Todd, 2005). R^2 values represent the amount of variance explained by the independent variables (Wixom & Todd, 2005). Urbach and Ahlemann (2010) state that the R^2 values should be sufficiently high for the structural model to have a minimum level of explanatory power. R^2 values of approximately 0.67 are substantial, values about 0.33 are average, and values of 0.19 are considered weak (Chin, 1998a).

The next step of the structural model and hypotheses assessment is the evaluation of the path coefficients between the latent variables. The path coefficients indicate the strengths of the relationships between the dependent and independent variables (Wixom & Todd, 2005). The values for path coefficients in the structural model should be assessed in terms of signs, magnitude, and significance (Henseler et al., 2009; Urbach & Ahlemann, 2010). When path signs are contrary to the theoretically assumed relationship, the hypotheses are not supported (Urbach & Ahlemann, 2010). A path coefficient magnitude represents the strength value between two latent variables (Urbach & Ahlemann, 2010). Chin (1998a) recommends a path coefficient of at least 0.20 and ideally above 0.30 to be considered meaningful. Moreover, 0.05 is the suggested lower limit of significance for path coefficients (Pedhazur, 1997; Urbach & Ahlemann, 2010).

Significance tests for the path coefficients are not directly provided by the PLS method (Patnayakuni, Ruppel, & Rai, 2006). This study used the method of bootstrapping ($n=500$) to generate T-statistics for testing the significance levels of constructs' loadings/weights on their latent variables and path coefficients (Chin, 1998a). For this

study, the bootstrapping generated 500 samples of 268 data points each. The structural model assessment is split in two parts. First, the model assessed all the hypotheses as well as R^2 values, and the path coefficients are presented (Section 5.4.1). Second, the research model goodness of fit is evaluated (Section 5.4.2).

5.4.1 Testing Hypotheses H1 through H6

Figure 22 shows the results of the assessment of the hypothesized structural model (e.g., R^2 values and the path coefficients). For clearer exposition, the item loadings of each first-order factor were omitted since they are all above 0.77. Item loadings for the second-order factor of PE (reflective) and item weights for second-order factors of ISI and NSI (both formative) are also shown in Figure 22.

The results of the assessment (Table 25) showed that all the hypotheses were supported, except one (i.e., Hypothesis H6). To validate the research model and proposed hypotheses, the path coefficients between each construct needs to be statistically significant. All beta path coefficients were positive (i.e., in the expected direction), and statistically significant at least $p < 0.01$, but one insignificant. The statistically significant beta paths ranged from 0.17 to 0.67.

Reporting R^2 values for all dependent variables incorporated in the model is suggested in PLS studies (Hulland, 1999). The three dependent variables in the research model are PE, attitude and intention, and their R^2 values were 0.48, 0.45, and 0.56 respectively. Table 25 shows the results of the testing of the hypothesized structural model.

The model (Figure 22) explained a significant amount of variation in the dependent variable, intention to use UGC when making travel plans ($R^2 = 0.56$). For example, attitude had a strong path coefficient ($\beta = 0.64$, $t = 11.191$, $p < 0.001$) to intention. Thus, Hypothesis H4 that travelers' attitude toward using UGC positively influences their intention to use UGC when making travel plans was supported. Similarly, subjective norm had a significant path coefficient ($\beta = 0.17$, $t = 3.666$, $p < 0.001$) to intention. Thus, Hypothesis H5 that subjective norm about using UGC positively influences their intention to use UGC when making travel plans was supported. Surprisingly, the

relationship between PBC and intention was not significant ($\beta = 0.04$, $t = 0.735$), rejecting Hypothesis H6 that PBC over using UGC positively influences travelers' intention to use UGC when making travel plans. In addition, for intention, 0.56 of the variance was largely explained via attitude and subjective norm.

Hypothesis H3 posits that travelers' perception of PE positively influences their attitude toward using UGC when making travel plans. This hypothesis was supported since PE has a strong path coefficient ($\beta = 0.67$, $t = 18.329$, $p < 0.001$) to attitude, accounting for 0.45 of the variance explained. This variance was also explained by the indirect effects of ISI and NSI through PE.

ISI and NSI together explained a significant amount of variation in PE ($R^2 = 0.48$). The results showed ISI has a strong path coefficient ($\beta = 0.49$, $t = 8.650$, $p < 0.001$) to PE. Thus, Hypothesis H1 that ISI positively affects travelers' perceptions of PE when using UGC to make travel plans was supported. Furthermore, NSI had a strong path coefficient ($\beta = 0.31$, $t = 5.594$, $p < 0.001$) to PE. Thus, Hypothesis H2 that NSI positively affects travelers' perceptions of PE when using UGC to make travel plans was supported.

Table 25. Structural Model Results

| Hypothesized paths | Path Coefficient | T-statistics | Supported |
|--|------------------|--------------|-----------|
| H1. Informational Social Influence → Psychological Empowerment | 0.49*** | 8.650 | Yes |
| H2. Normative Social Influence → Psychological Empowerment | 0.31*** | 5.594 | Yes |
| H3. Psychological Empowerment → Attitude | 0.67*** | 18.329 | Yes |
| H4. Attitude → Intention | 0.64*** | 11.191 | Yes |
| H5. Subjective Norm → Intention | 0.17*** | 3.666 | Yes |
| H6. Perceived Behavioral Control → Intention | 0.04 | 0.735 | No |
| *** significant at $p < 0.001$ | | | |

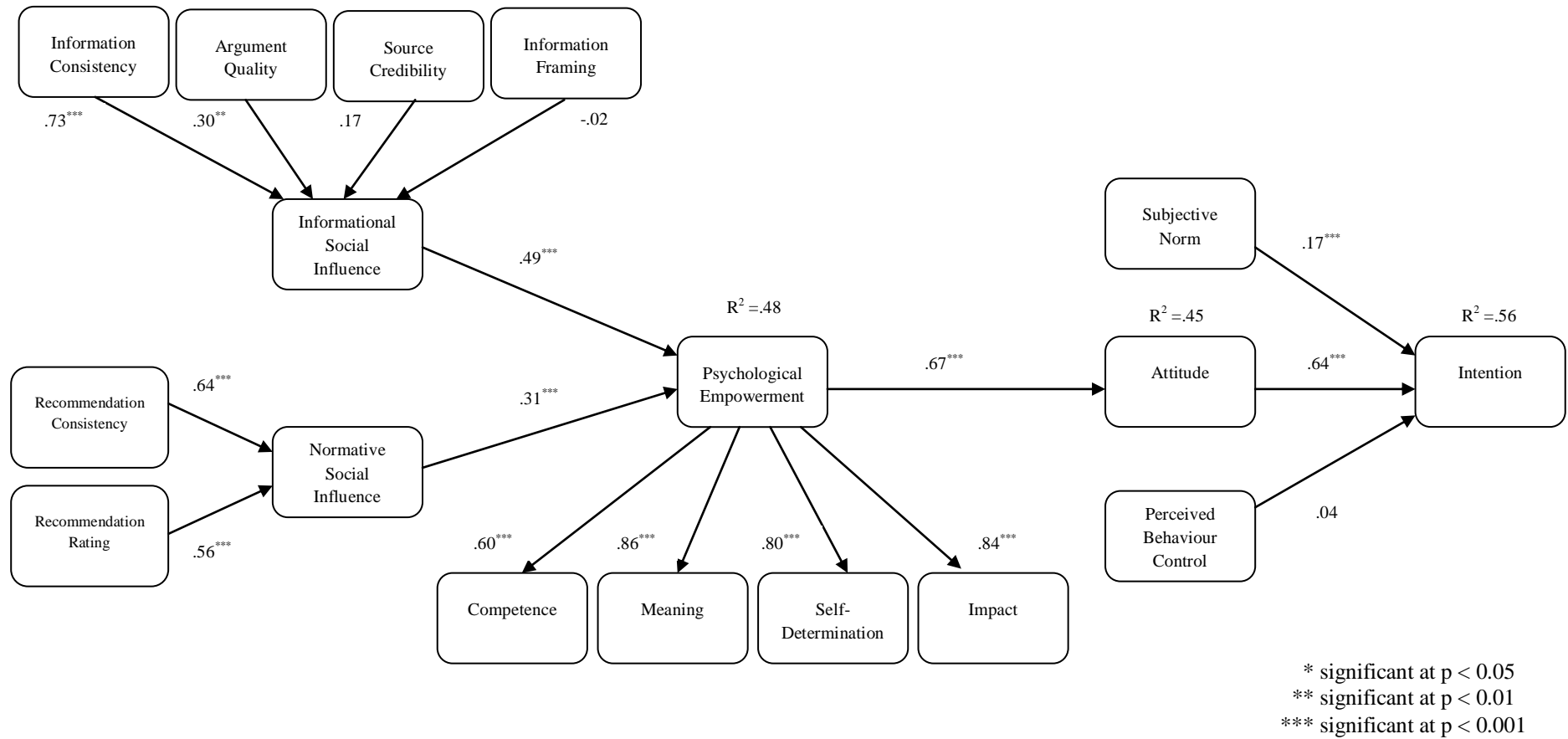


Figure 22. Research Model Results

5.4.2 Research Model's Goodness of Fit

Existing goodness-of-fit measures are related to the ability of the research model to account for the sample co-variances (Chin, 1998a). Structural equation modeling (SEM) techniques which use covariance-based (e.g., LISREL, AMOS) are more established approached with well-recognized goodness-of-fit metrics, offering indices with corresponding significance tests to analyze the quality of the structural model (Urbach & Ahlemann, 2010). However, SEM techniques which use component-based analysis (e.g., PLS-PC, PLS-GRAPH) and allow for formative measures are not be able to provide such fit measures (Chin, 1998a). Thus, there is no proper overall goodness-of-fit index in PLS path modeling (Henseler et al., 2009; Pavlou & Chai, 2002; Urbach & Ahlemann, 2010).

Advances in evaluating path modeling results involve the development of global goodness-of-fit criteria (Henseler et al., 2009). In 2004, a global goodness-of-fit criteria for PLS SEM was proposed by Tenenhaus, Amato and Esposito Vinzi (1978). The goodness-of-fit index proposed is calculated using the geometric mean of the average communality index and the average R^2 value (Bailey, 1978). The intent of this goodness-of-fit index is to account for the PLS model performance at both the measurement and the structural model with a focus on the overall performance of the model (Chin, 2010b). However, this goodness-of-fit index has not been systematically analyzed in simulation studies, and may be subject to systematic improvement by means of path model modifications (Henseler et al., 2009). In addition, the goodness-of-fit index proposed by Tenenhaus et al. (1978) is restricted to reflective measurement models (Henseler et al., 2009; Pavlou & Chai, 2002). Due to the reasons mentioned above and the fact that the current study has both reflective and formative measurement models, Tenenhaus et al.'s (1978) goodness-of-fit index was not used for this study.

According to the Hulland (1999), several researchers who have used PLS reported R^2 as a measurement of their models' goodness-of-fit. The research model of this study obtained fairly high R^2 values. For instance, the research model explains 56% of variance in travelers' intention to use UGC when making travel plans, 45% of variance in travelers' attitude toward using UGC when making travel plans, and 48% of variance

in travelers' perception of PE. In conclusion, given the results obtained, the research model of this study has demonstrated satisfactory goodness of fit.

5.5 Chapter Summary

PLS was used to investigate how UGC empowers travelers and influences their attitude and behavioral intentions when making travel plans. A number of observations can be made from the results of the structural model analysis.

First, all item loadings on their respective first-order constructs were highly significant ($p < 0.001$) as were all item loadings for the second-order construct of PE were significant. Second, all item weights for the second-order factors of NSI were significant, whereas two out of four item weights for the second-order factors of ISI were significant. Third, all the values of R^2 were fairly high. For instance, the model was significant in that it explains 56% of variance in travelers' intention to use UGC when making travel plans. Lastly, five of the six paths in the model were significant and in the direction proposed supporting five of the six hypothesized relationships.

The next chapter provides a summary of the main findings and the discussion of the theoretical constructs used in this thesis in connection with the results obtained.

CHAPTER 6: DISCUSSION OF RESULTS

6.1 Chapter Overview

After the three research questions of this study were developed in Chapter 2, a set of six hypotheses was presented in Chapter 3. The research methodology was discussed in Chapter 4, and the findings from the partial least squares (PLS) analysis were presented in Chapter 5. Chapter 6 provides a summary of the hypotheses and test results as relate to each of the three research questions. Consistency and inconsistency with previous studies and new findings are reported throughout the chapter.

6.1.1 Chapter Outline

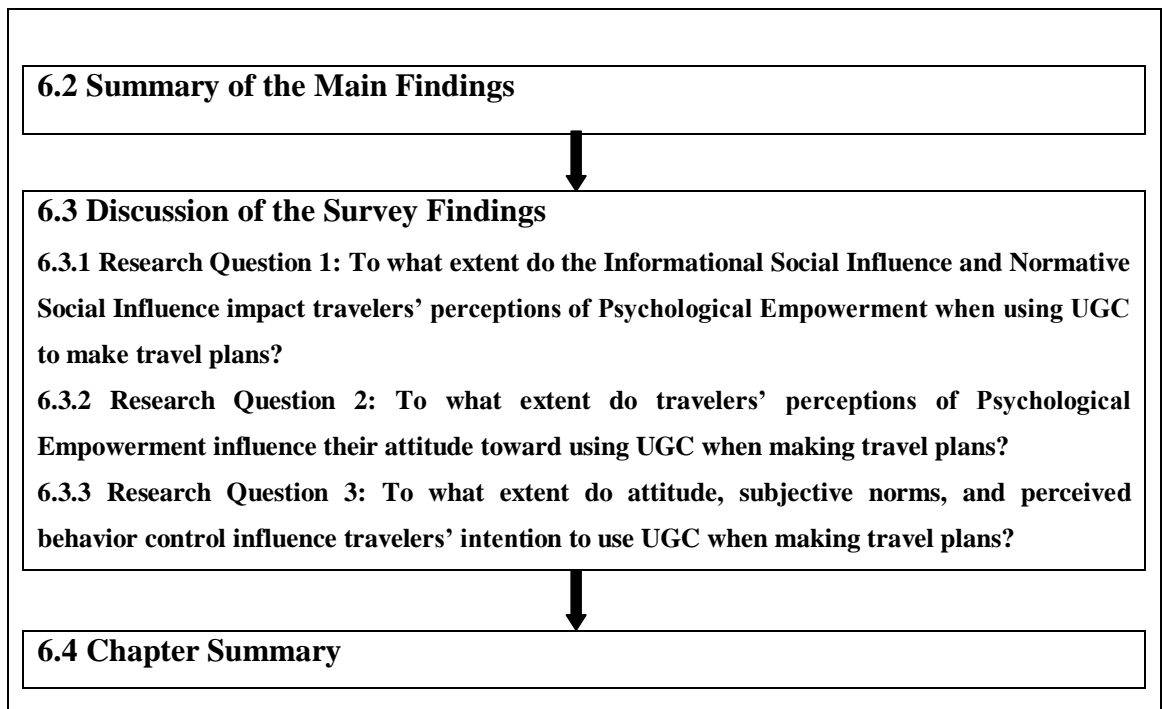


Figure 23. Chapter 6 Outline

6.2 Summary of the Main Findings

The empirical results of the final survey led to several significant findings. For instance, the theory of planned behavior (TPB) was applied to examine how attitude, subjective norm, and perceived behavioral control (PBC) influence the intention to use user-generated content (UGC) when making travel plans. This study's findings explained a significant amount of variation in the dependent variable - intention to use UGC when making travel plans. In addition, travelers' perception of psychological empowerment (PE) significantly influenced their attitude toward using UGC when making travel plans. Finally, PE was shown to be affected by informational social influence (ISI) and normative social influence (NSI) from the Dual-Process Theory (DPT). Figure 24 illustrates the research model and the significant hypotheses.

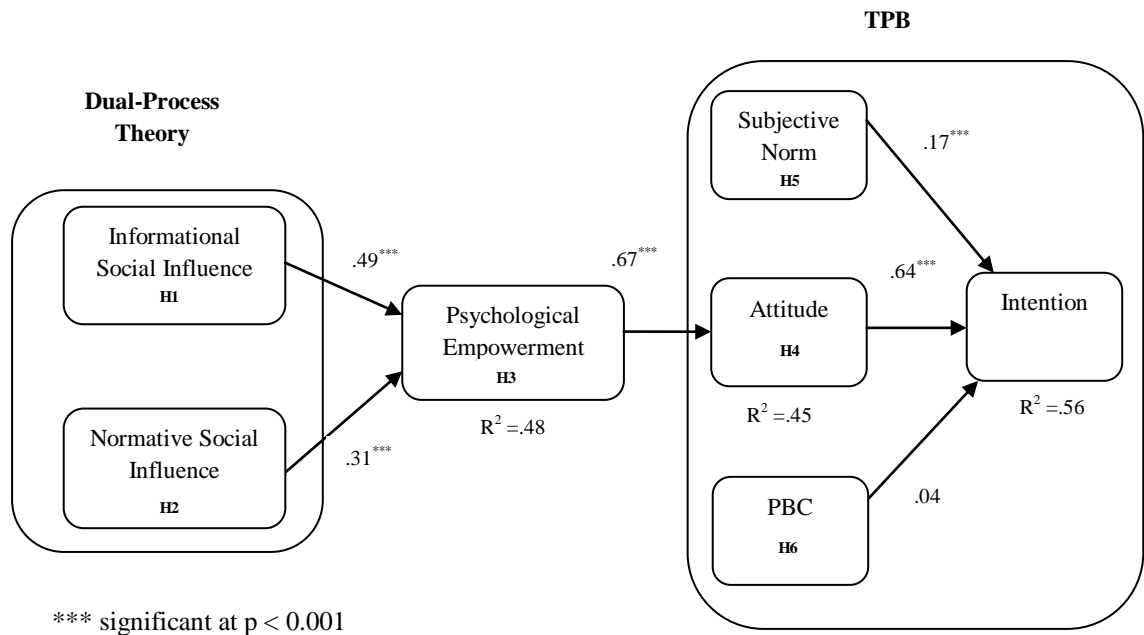


Figure 24. Research Model and Significant Hypotheses

In Table 26, a summary of the hypotheses and test results is provided under the heading of each research question. Whereas five research hypotheses were supported by the empirical testing (i.e., H1, H2, H3, H4 and H5), only one research hypothesis was not supported (i.e., H6).

Table 26. Summary of the Research Questions and Hypotheses

| | | |
|------------|---|------------|
| Hypothesis | Research Question 1 To what extent do the informational social Influence and normative social influence impact travelers' perceptions of psychological empowerment when using UGC to make travel plans? | Supported |
| H1 | Informational social influence positively affects travelers' perceptions of psychological empowerment when using UGC to make travel plans | Yes |
| H2 | Normative social influence positively affects travelers' perceptions of psychological empowerment when using UGC to make travel plans | Yes |
| | | |
| | Research Question 2 To what extent do travelers' perceptions of psychological empowerment influence their attitude toward using UGC when making travel plans? | |
| H3 | Travelers' perception of psychological empowerment positively influences their attitude toward using UGC when making travel plans | Yes |
| | | |
| | Research Question 3 To what extent do attitude, subjective norms, and perceived behavior control influence travelers' intention to use UGC when making travel plans? | |
| H4 | Travelers' attitude toward using UGC positively influences their intention to use UGC when making travel plans | Yes |
| H5 | Subjective norm about using UGC positively influences travelers' intention to use UGC when making travel plans. | Yes |
| H6 | Perceived behavioral control over using UGC positively influences travelers' intention to use UGC when making travel plans. | No |

6.3 Discussion of the Survey Findings

The findings of the final survey are presented in relation to the underlying research questions. These results are then discussed and the findings compared with previous research, including that which is related to DPT, PE, and TPB (discussed in Chapter 3 - Research Model and Hypotheses).

6.3.1 Research Question 1: To what extent do informational social influence and normative social influence impact travelers' perceptions of psychological empowerment when using UGC to make travel plans?

This study looked at how the use of the “information” generated by travelers is empowering other travelers when making their travel plans. By reading UGC travelers can have direct access to the information they need to help make their travel decisions and by doing so they are further empowered to create and distribute their own content (Sigala, 2011). For this study, UGC refers to the received information from other travelers when travelers are making travel plans. DPT (Deutsch & Gerard, 1955) suggests there are two key types of influence that impact the persuasiveness of received information: informational social influence (ISI) and normative social influence (NSI).

The literature suggest that UGC affects consumer behavior through ISI and NSI (Park & Lee, 2008b). When travelers process the information in the UGC environment, they not only consider traditional informational factors (e.g., argument quality, source credibility, information framing, and information consistency) as important criteria for judging the quality of the information and making travel plans, but also use the normative cues (such as recommendation consistency and recommendation rating) that are now accessible in an on-line context (Cheung et al., 2009).

The literature further suggests that beliefs about PE are affected by ISI and NSI (Spreitzer, 1995a, 1995b, 1996). The ISI (argument quality, source credibility, information framing, and information consistency) and NSI (recommendation consistency and recommendation rating) as described in DPT (Deutsch & Gerard, 1955) were examined to determine the extent to which these two types of influences affect travelers' perceptions of PE when using UGC to make travel plans.

The findings of this study show that ISI and NSI together explain a significant portion of the variation in PE ($R^2 = 0.48$). This is consistent with previous research. For instance, Spreitzer (1995a; 1995b; 1996) examined access to information as an antecedent of PE, and found that information was a key factor associated with empowerment. Spreitzer (1996) stated that people who have a high level of access to information tend to report a higher level of empowerment than those who have less access to information.

Hypotheses H1 and H2 were supported by the results of the study since ISI and NSI were both found to have direct and significant effect on PE respectively. The results show that ISI ($\beta = 0.49$, $t = 8.650$, $p < 0.001$) is a stronger predictor of PE than NSI ($\beta = 0.31$, $t = 5.594$, $p < 0.001$). A possible explanation for the dominant importance of ISI is that perceptions of PE when travelers use UGC to make travel plans are influenced by informational factors (i.e., argument quality, source credibility, information framing, and information consistency) as the travelers seek information related to their travel intentions.

The results of this study suggest that travelers are more likely to believe in opinions that are supported by valid and strong arguments. Argument quality is important when travelers read UGC to make travel plans. This is consistent with the literature involving argument quality of UGC in other contexts (Cheung et al., 2009; Zhang et al., 2010; Zhang & Watts, 2003; Zhang & Watts, 2008). When the received information is perceived to have valid arguments, receivers will develop a positive attitude toward the information (Cheung et al., 2009). The more relevant and helpful the information embedded in the argument is, the higher quality members will perceive the content-based arguments to be (Sussman & Siegal, 2003).

The findings suggest that travelers are more willing to accept information that is consistent with their prior beliefs. This is supported by the literature on information consistency of UGC in travel forums (Zhang & Watts, 2003) and online consumer discussion forums (Cheung et al., 2009). If an UGC is consistent with the traveler's prior beliefs (i.e., information consistency), the traveler has more confidence in the

received information and consequently s/he will tend to use it for purchase decisions (Alloy & Naomi, 1984; Zhang & Watts, 2003).

The results of this study showed that source credibility ($\beta = 0.17$, $t = 1.646$) and information framing ($\beta = -0.20$, $t = 0.231$) were not significantly related to ISI. Source credibility and information framing were not dropped however since they contribute conceptually to the second-order model of ISI (Roberts & Thatcher, 2009). One possible reason that source credibility was not significant in this study is that when travelers are reading UGC from online travel review websites (such as TripAdvisor.com), they may not have adequate information about the profile or reputation of the person who posted the review. Consequently, travelers may not be able to evaluate the credibility of the source of the UGC they are using to make travel plans. In previous studies involving online consumer discussion forums where consumers looked at the profile or reputation of the person who posted the review, source credibility was significant related to the latent variable (Cheung et al., 2009; Zhang & Watts, 2003; Zhang & Watts, 2008). Consumers prefer to read UGC from reviewers with better quality reputations since this UGC is more trustworthy, credible, and reliable (Hu et al., 2008).

The findings showed that information framing was not significant in the UGC context in the travel industry. These findings are consistent with Cheung et al. (2009), where information framing was not significant for an online consumer discussion forum context. The insignificant findings on information framing might be because only positively framed UGC were considered for this study's analysis, since positive UGC has a much larger impact on consumer behavior in the travel industry than negative UGC (Vermeulen & Seegers, 2009). The reason for not using both positively and negatively framed UGC was to avoid potentially biasing the respondents (Angst & Agarwal, 2009).

In addition to the importance of the informational factors (e.g., argument quality, source credibility, information framing, and information consistency) in forming perceptions of PE when travelers use UGC to make travel plans, normative factors (e.g., recommendation consistency and recommendation rating) were found to have a significant effect on PE as well. Recommendation consistency and recommendation

rating provide views/opinions that are evaluated by others and may act as normative cues for an individual's own information evaluation (Cheung et al., 2009).

The results of this study suggest that travelers are more likely to follow opinions (i.e., UGC) which are similar to other travelers' opinions reported on online travel websites. This is consistent with the literature involving recommendation consistency of UGC in online Chinese discussion forums (Cheung et al., 2009). Consistency with other travel reviews (i.e. recommendation consistency) is an important aspect when travelers are making their travel plans (Gretzel et al., 2007). If many online consumers recommend a product, other consumers in conformity with the view of others, are likely to believe the recommendations and have a favorable attitude toward the product (Park et al., 2007).

The findings suggest that travelers are more willing to read UGC, which has been rated well by other travelers. This is supported by a study of online consumer discussion forums (Cheung et al., 2009), where recommendation rating was found to be significant. Most of travelers will believe the content of a message, when the majority of other travelers give a high-level rating to a message (i.e., recommendation rating). Frequent online travel review readers are also more likely to consider other travelers' ratings when evaluating UGC for making their travel plans (Gretzel et al., 2007).

The results supported the second-order formative measurement model of NSI in the UGC context in the travel industry formed by recommendation consistency and recommendation rating. Although source credibility and information framing were not significant, the second-order formative measurement model of Informational Social Influence formed by argument quality, source credibility, information framing, and information consistency was supported by the literature (Cheung et al., 2009; Deutsch & Gerard, 1955; Hovland et al., 1953). Furthermore, ISI and NSI were found to have direct and significant effect on PE. Hence, this study confirmed that the ISI and NSI (from the DPT) affect travelers' perceptions of PE when using UGC to make travel plans.

6.3.2 Research Question 2: To what extent do travelers' perceptions of psychological empowerment influence their attitude toward using UGC when making travel plans?

A traveler who feels empowered by UGC is more likely to have positive attitudes toward using UGC when making travel plans. The literature suggests that beliefs about empowerment inform traveler attitude toward using UGC when making travel plans (Malhotra et al., 2008). This research is investigating the four dimensions which jointly reflect an existing overall individual PE construct (Spreitzer, 1995b): self-determination, competence, meaning, and impact.

The structural model explains 45% of the variance of travelers' attitude toward to use UGC when making travel plans ($R^2 = 0.45$). This finding is consistent with previous studies on PE (and its dimensions) influencing attitude (Bock & Kim, 2002; Deci & Ryan, 2000; Fuchs & Schreier, 2011; Gagné, 2009; Malhotra et al., 2008; Psoinos et al., 2000). For instance, Gagné (2009) suggests that psychological needs (i.e., self-determination and competence) predict attitude toward sharing knowledge. Bock and Kim (2002) discovered that expectations to increase competence led to more positive attitudes toward sharing knowledge. Malhotra et al. (2008) found that perceived autonomy (self-determination) to use a web-based educational platform was related to attitude toward such use.

Hence, hypothesis H3 was supported by the results of the study since travelers' perception of PE significantly influences their attitude toward using UGC when making travel plans ($\beta = 0.67$, $t = 18.329$, $p < 0.001$). The findings also corroborated the four dimensions of PE (i.e., self-determination, competence, meaning, and impact) proposed by Spreitzer (1995b).

The findings suggest that travelers are psychologically empowered when they perceive themselves as having choices (self-determination) in how they make their travel plans using UGC. This is consistent with previous studies on self-determination. For instance, Thomas and Velthouse (1990) found that an empowered person would perceive having autonomy (self-determination) when performing his/her tasks. When a user perceives the usage environment as having enabling opportunities, one is more likely to take the

initiative to more fully use IS in tasks (Gagné & Deci, 2005). Hence, the use of UGC is an enabling activity for travelers to exercise choice (self-determination) when making travel plans.

The results of this study suggest that travelers are psychologically empowered when they have confidence in their ability (i.e., competence) to be successful in using UGC when making travel plans. This is supported by the literature on competence. For example, Thomas and Velthouse (1990) claim that an individual who perceives themselves to be competent develops a feeling of being in control of a particular situation. When travelers perceive they have competence in using the UGC to accomplish tasks, s/he will be able to maximize its usage (Bandura, 1997). An empowered traveler is a person who feels confident, without much intellectual effort, to make a travel decision (Hjalager, 2001). If a traveler is using UGC to help make a travel plan, s/he will feel more confident about making the right decision.

The results of this study suggest that travelers are psychologically empowered when they believe that using UGC to make their travel plans has inherent value (i.e., meaning). This is consistent with other research on meaning. For instance, according to Hunton and Price (1997), when a user perceives system usage to be meaningful, s/he will engage to use the IS to accomplish tasks. If a user perceives the value in system usage to be in accordance with his/her personal needs, s/he will perceive such use as being personally important (Baroudi et al., 1986; Jackson et al., 1997). Hence, the use of UGC is an enabling activity for travelers to strengthen the value of their experience when making travel plans.

The findings suggest that travelers are psychologically empowered when they perceive that using UGC will have a positive impact on their travel plans. This is supported by other research on impact. For instance, when an individual feels empowered, his/her use of IS will have a significant influence (impact) over his/her tasks (Ashforth, 1989; Spreitzer et al., 1997). Thus, the use of UGC is an enabling activity for travelers to enhance their perceptions of UGC impact on their travel plans.

Altogether the four dimensions: self-determination, competence, meaning, and impact, were validated and conceptualized as dimensions of PE in the UGC context.

Furthermore, travelers' perception of PE was found to significantly influence their attitude toward using UGC when making travel plans. Thus, this study confirms that travelers feel empowered by using UGC when making their travel plans.

6.3.3 Research Question 3: To what extent do attitude, subjective norms, and perceived behavior control influence travelers' intention to use UGC when making travel plans?

This research is not only investigating how travelers are empowered by UGC influencing their attitude, but also how attitude, subjective norm, and perceived behavioral control (PBC) in turn influence their behavioral intention when making travel plans. The TPB is expected to better explain online consumer behavior (Pavlou & Fygenson, 2006). TPB has three independent determinants of intention: attitude toward behavior, subjective norm (the perceived social pressure to perform or not to perform the behavior), and PBC (the perceived ease or difficulty of performing the behavior) (Ajzen, 1991).

This study applied TPB to examine how its dimensions (i.e., attitude, subjective norm, and PBC) influence the intention to use UGC when making travel plans. The structural model explained 56% of the variance of intention to use UGC when making travel plans ($R^2 = 0.56$).

The total variance explained in intention in the UGC context (56%) is comparable to that in prior research in other IS study contexts. For instance, 52% in Bhattacharjee (2000), 55% and 59% in Pavlou and Fygenson (2006), 60% in Taylor and Todd (1995b), and 62% in Mathieson (1991). However, the relative contribution of attitudes, subjective norm, and PBC was somewhat different. In this study, significant relations were found between attitude and intention, and between subjective norm and intention. No such association was observed between PBC and intention.

Attitude and subjective norm were significant predictors of intention, accounting for 56% of the variance in intention to use UGC when making travel plans ($R^2 = 0.56$). It can be noted that attitude had a stronger impact on intention ($\beta = 0.64$, $t = 11.191$, $p < 0.001$) than subjective norm ($\beta = 0.17$, $t = 3.666$, $p < 0.001$), which validated hypotheses

H4 and H5. However, the relationship between PBC and intention was not significant ($\beta = 0.04$, $t = 0.735$), rejecting Hypothesis H6. These findings are in accordance with earlier TPB research that consistently finds that attitude is more powerful predictor of intention than subjective norm and PBC (Ajzen, 2008).

The findings suggest that travelers' attitude toward using UGC positively influences their intention to use UGC when making travel plans. Hypothesis H4 is therefore supported. Other TPB studies show support for the role of attitude on intentions. For example, Hsu and Huang (2011) found that attitude had a positive impact on behavioral intention when visiting an international travel destination. Lam and Hsu (2006) showed attitude was related to the behavioral intention of Chinese visiting Hong Kong, while Pavlou and Fygenon (2006) found that attitude was related to online consumers' behavioral intention to purchase a product and to get information from a web vendor. Taylor and Todd (1995b) findings' indicated that attitude was an important predictor of IT usage intention.

The results of this study suggest that subjective norm about using UGC positively influences people's intention to use UGC when making travel plans. Hypothesis H5 is then supported. Previous studies show a significant relationship between subjective norm and intentions. For instance, Hsu and Huang (2011) showed that subjective norm was related to travelers' intention to visit an international travel destination. Subjective norm was an important predictor of intention to use online brokerage services in Bhattacharjee's research (2000). Karahanna, Straub and Chervany (1999) meanwhile discovered that top management, supervisors, and peers influenced adoption intention for both potential technology adopters and actual users. Morris and Venkatesh (2000) analyzed age differences in adoption intentions and continued use of information technology, and showed that workers were strongly influenced by subjective norm.

The findings shows that the effect of PBC on intention to use UGC when making travel plans was not significant ($\beta = 0.04$, $t = 0.735$). Thus, contrary to expectations, Hypothesis H6 was not supported by the results of the study. This finding is consistent with previous studies (Shih & Fang, 2004; Taylor & Todd, 1995a), but it did not concur with others in which PBC is significantly related to intention (Mathieson, 1991; Pavlou & Fygenon, 2006; Sparks & Pan, 2009).

There are two possible explanations for this result. The first is that Internet services (such as UGC) are very simple to use, widely available, and fairly inexpensive, which results in higher levels of self-efficacy and facilitating conditions (i.e., PBC) across the Internet users (Bhattacharjee, 2000). Thus, high control beliefs imply that Internet users may take PBC for granted, so that presence of PBC is not factored into their behavioral choices (Bhattacharjee, 2000).

Another possible explanation may be the fact that this research examines intentions, not actual behavior. PBC has a direct effect on actual behavior (Ajzen, 1991). By not examining actual behavior, this potentially considerable effect remains unclear (Pavlou & Chai, 2002). Therefore, this research may not have captured the entire effect of PBC on intention to use UGC when making travel plans.

This study empirically tested all three factors (i.e., attitude, subjective norm, and PBC) influencing the intention to use UGC when making travel plans. The results indicated that intention was found to be significantly affected by attitude and subjective norm, whereas the relationship between PBC and intention was not significant in this study.

6.4 Chapter Summary

This chapter discussed the findings presented in Chapter 5. All three research questions were answered and the six hypotheses were discussed in the light of the prior research. Hypotheses H1 and H2 were supported by the results of the study since ISI and NSI were both found to have a direct and significant effect on PE. Travelers' perception of PE significantly influences their attitude toward using UGC when making travel plans, which validated hypothesis H3. Attitude and subjective norm were significant predictors of intention to use UGC when making travel plans, validating hypotheses respectively H4 and H5. However, the relationship between PBC and intention to use UGC when making travel plans was not significant, and Hypothesis H6 was therefore rejected. In the next chapter, an overall summary of the research study and concluding remarks are presented.

CHAPTER 7: CONCLUSIONS

7.1 Chapter Overview

In this chapter, a summary of each of the preceding six chapters is provided, the findings are stated and the research questions answered. The main academic contributions and contributions to practice are presented next. The chapter also highlights the limitations of this research, and then makes suggestions and provides guidelines for future work. Finally, the concluding remarks of the thesis are presented in the last section.

7.1.1 Chapter Outline

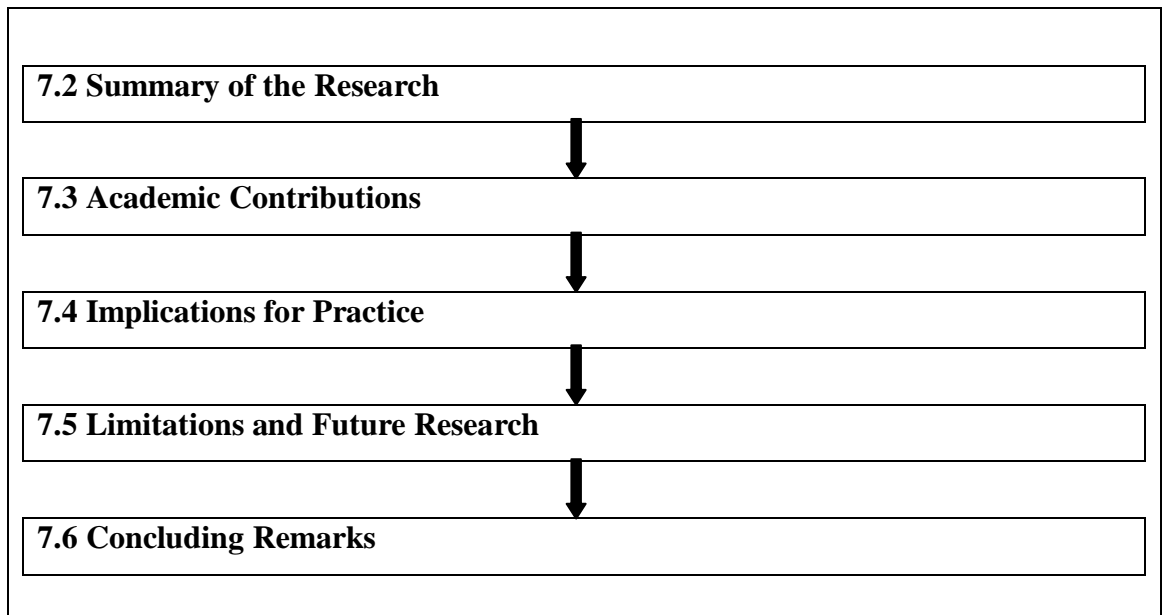


Figure 25. Chapter 7 Outline

7.2 Summary of the Research

The first chapter provided the foundation for the study. Firstly, this study aimed to provide a mechanism for understanding how user-generated content (UGC) empowers online consumers when making travel plans. It surveyed international backpackers visiting New Zealand who had used UGC (specifically online travel review [OTR]) when making travel plans. This study was motivated by the call for more empirical research on the role that UGC plays in the users' travel behavior and decision making processes (Cox et al., 2009; Vermeulen & Seegers, 2009). The second motivation of this study was the lack of empirical research that focuses on how UGC empowers travelers to make their own decisions. Therefore, the aim of this research was to identify and evaluate the factors that empower travelers when making travel decisions. To address this aim this study investigated, in the context of travelers' use of UGC: (1) the role of informational social influence (ISI) and normative social influence (NSI) and their impact on perceived empowerment when using UGC to help make their travel plan decisions; (2) the extent to which perceived empowerment impacts attitude towards using UGC when making travel plans; and (3) the impact of attitude, subjective norm, and perceived behavioral control (PBC) on intention to use UGC when making travel plans.

Chapter 1 discussed how the use of the "information" generated by travelers is empowering other travelers when making their travel plans. There are two types of influence on the persuasiveness of received messages: ISI and NSI (Deutsch & Gerard, 1955). The roles of ISI (argument quality, source credibility, information framing, and information consistency) and NSI (recommendation consistency and recommendation rating) proposed by Deutsch and Gerard's (1955) dual-process theory (DPT) were examined to determine the extent to which these two types of influence affect travelers' perceptions of psychological empowerment (PE) when using UGC to make travel plans. This study also suggested that PE (Spreitzer, 1995b) influences online consumer behavior in the UGC context, which in turn was modeled in this research using the theory of planned behavior (TPB) (Ajzen, 1991).

The purpose of Chapter 2 was to critically review the existing literature in order to develop a clear understanding of how UGC empowers travelers and influences their attitude and behavioral intention when making travel plans. Literature relating to the underlying theories of DPT, PE, and TPB was reviewed, as well as current research on UGC and its impacts on decision-making and on empowering travelers' decision-making. Information Systems (IS) studies focused on empowerment were also summarized. From the literature review, the importance of UGC in empowering travelers when making travel plans was identified. Prior research on UGC was discussed and a gap in the literature identified, that is, more research was needed on how UGC empowers travelers and influences their attitude and behavioral intentions when making travel plans. Three research questions were derived from this knowledge gap: (1) To what extent do ISI and NSI impact travelers' perceptions of PE when using UGC to make travel plans? (2) To what extent do travelers' perceptions of PE influence their attitude toward using UGC when making travel plans? (3) To what extent do attitude, subjective norm, and PBC influence travelers' intention to use UGC when making travel plans?

The aim of Chapter 3 was to develop a research model based on the three research questions set out in the Chapter 2. This study also set out to empirically test a research model aimed at identifying and evaluating the factors that empower travelers when making their travel decisions. DPT, PE, and TPB were the theories used to develop the theoretical foundations underlying the research model. A set of six hypotheses corresponding to the three research questions was also developed (see Table 26).

Chapter 4 described the research design employed in this study, and provided a detailed description of the survey procedures. The survey method was adopted to gather field information from international backpackers staying at backpackers hostels in Auckland, New Zealand. The survey asked backpackers about their views about OTR they had read from websites (e.g., HostelWorld.com, HostelBookers.com, TripAdvisor.com, Booking.com, etc) when making their travel plans. The chapter also introduced the Structural Equation Modeling (SEM) technique used to analyze the data, identified the measurement items, described the questionnaire design and administration, and reported the demographics of the final survey.

In Chapter 5, the model and its specified hypotheses were tested using the research methodology described in Chapter 4. A summary of the participants' backgrounds was presented followed by an analysis of the survey data. The findings were presented in terms of the measurement model and then the structural model was discussed.

Chapter 6 discussed the results of this research and provided a summary and discussion of the theoretical constructs used in relation to the results obtained. The empirical results of the final survey led to several significant findings. For instance, TPB was used to model how attitude, subjective norm, and PBC influence intention to use UGC when making travel plans. This study's findings explained a significant amount of variance in the dependent variable, i.e., intention to use UGC when making travel plans. In addition, travelers' perception of PE significantly influenced their attitude toward using UGC when making travel plans. Finally, the results also showed that PE was found to be affected by ISI and NSI.

In Chapter 6, a summary of the hypotheses and test results was provided for each research question. The summary is presented below. Whereas five research hypotheses were supported from the empirical test (i.e., H1, H2, H3, H4 and H5), only one was not supported (i.e., H6).

Research Question 1: To what extent do Informational Social Influence and Normative Social Influence impact travelers' perceptions of Psychological Empowerment when using UGC to make travel plans?

The findings showed that ISI and NSI together explained a significant amount of variation in PE ($R^2 = 0.48$). Hypotheses H1 and H2 were supported by the results, which confirmed that the ISI and NSI affect travelers' perceptions of PE when using UGC to make travel plans. The results showed that ISI ($\beta = 0.49$, $t = 8.650$, $p < 0.001$) is a stronger predictor of PE than NSI ($\beta = 0.31$, $t = 5.594$, $p < 0.001$). A possible explanation for the dominant importance of ISI is that perceptions of PE when travelers use UGC to make travel plans are influenced by informational factors (i.e., argument quality, information consistency, source credibility, and information framing) as the travelers seek information.

Research Question 2: To what extent do travelers' perceptions of Psychological Empowerment influence their attitude toward using UGC when making travel plans?

The structural model explained 45% of the variance of travelers' attitude toward to use UGC when making travel plans ($R^2 = 0.45$). This finding is consistent with previous studies (Bock & Kim, 2002; Deci & Ryan, 2000; Fuchs & Schreier, 2011; Gagné, 2009; Malhotra et al., 2008; Psoinos et al., 2000). Hence, hypothesis H3 was supported by the results of the study since travelers' perception of PE significantly influences their attitude toward using UGC when making travel plans ($\beta = 0.67$, $t = 18.329$, $p < 0.001$).

The findings also corroborated the four dimensions of PE (i.e., self-determination, competence, meaning, and impact) proposed by Spreitzer (1995b). Altogether the four dimensions were validated and conceptualized as the dimensions of PE in the UGC context. Furthermore, travelers' perception of PE was found to significantly influence their attitude toward using UGC when making travel plans. Thus, this study confirms that travelers feel empowered by using UGC when making their travel plans.

Research Question 3: To what extent do attitude, subjective norm, and perceived behavioral influence travelers' intention to use UGC when making travel plans?

This study used the TPB to examine how its dimensions (i.e., attitude, subjective norm, and PBC) influence the intention to use UGC when making travel plans. The structural model explained 56% of the variance of intention to use UGC when making travel plans ($R^2 = 0.56$).

Attitude and subjective norm were significant predictors of intention, accounting for 0.56 of the variance in intention to use UGC when making travel plans. Attitude had a stronger impact on intention ($\beta = 0.64$, $t = 11.191$, $p < 0.001$) than subjective norm ($\beta = 0.17$, $t = 3.666$, $p < 0.001$), which validated both hypotheses H4 and H5. However, the effect of PBC on intention to use UGC when making travel plans was not significant ($\beta = 0.04$, $t = 0.735$). Thus, contrary to expectations, Hypothesis H6 was not supported by the results of this study. The results are in accordance with earlier TPB research that consistently finds that attitude is more powerful predictor of intention than subjective norm and PBC (Ajzen, 2008).

7.3 Academic Contributions

This thesis has made significant contributions to research on understanding how UGC empowers travelers and influences their attitude and behavioral intention when making travel plans. The academic contributions are presented below.

Academic Contribution 1

A main contribution is the specification, justification, and empirical validation of a set of interrelationships between important factors that tend to be associated with consumer behavior in making travel plans in UGC context. Three theories have provided a theoretical foundation for the model constructs presented in this research: DPT (Deutsch & Gerard, 1955), PE (Spreitzer, 1995b), and TPB (Ajzen, 1991). Thus, this study is one of the first to unite these three theories models into one in order to clarify consumer behavior in making travel plans in the UGC context.

Academic Contribution 2

This study suggested that the determinants of DPT (i.e., ISI and NSI) as antecedents of PE can help explain how travelers are empowered by user-generated content. This study fills this gap in the context of UGC, since no other study has explored the role of UGC as an enabler of travelers' PE in the travel industry. This study found that ISI and NSI as proposed by DPT (Deutsch & Gerard, 1955) had a direct and significant effect on PE (Spreitzer, 1995b). This is the first research to bring together social influence derived from DPT and PE to explain how UGC enable travelers to make their travel plans. Thus, this research provided a mechanism for developing a better understanding of the types of social influence (i.e. informational and normative) in the UGC context that can empower travelers to make travel plans.

Academic Contribution 3

In this study, the results supported the nomological validation of the formative ISI measure in the UGC context in the travel industry. The second-order formative measurement model of ISI was formed by argument quality, source credibility, information framing, and information consistency.

The IS literature often deals with the dimensions of ISI (argument quality, source credibility, information framing, and information consistency) as separate phenomena rather than as facets of a single ISI gestalt (Cheung et al., 2009; Zhang et al., 2010; Zhang & Watts, 2003; Zhang & Watts, 2008). This research suggests that these dimensions share a common variance labeled herein as “Informational Social Influence”. This argument for a multidimensional gestalt or second-order factor is consistent with the literature. For example, the Yale model (Hovland et al., 1953; Hovland, 1957; Hovland & Janis, 1959) was used to conceptually link the four dimensions of ISI (i.e., argument quality, source credibility, information framing, and information consistency) in the UGC context, and treat them as a higher-order construct.

It should be noted that source credibility and information framing in forming ISI construct emerged as not significant. Although the results of the current study suggest that these two constructs were not significantly related to the latent variable, they were not dropped from the research model since they contributed conceptually to the second-order model of ISI (Roberts & Thatcher, 2009). Thus, all four dimensions were retained in order to ensure sufficient breadth of coverage for capturing the content of the ISI construct and comparability with other research.

Academic Contribution 4

Likewise, the results supported the nomological validation of the formative NSI measure in the UGC context in the travel industry. The second-order formative measurement model of NSI was formed by recommendation consistency and recommendation rating.

The IS literature often deals with recommendation consistency and recommendation rating dimensions as separate phenomena rather than as facets of a single NSI gestalt (Chen et al., 2004; Cheung et al., 2009; Duan et al., 2008). This research suggests that recommendation consistency and recommendation rating share a common variance labeled herein as “Normative Social Influence”. This argument for a multidimensional gestalt or second-order factor is consistent with the literature. For example, the Attribution theory (Kelley, 1967) was used to link conceptually the two dimensions of NSI (i.e., recommendation consistency and recommendation rating) in the UGC context, and these were treated as a higher-order construct.

Academic Contribution 5

Most existing IS research on PE is largely concentrated on “employee” empowerment (e.g., Doll & Deng, 2010; Ng & Kim, 2009), and PE focusing on the “consumer” remained relatively unexplored. This study contributes to the literature on empowerment by exploring the role of UGC as an enabler of PE and provides explanations for how consumers (i.e., travelers) feel empowered when making travel plans. In addition, no other study has looked at the role of empowerment in the UGC context in the travel industry. Given its importance in online consumer behavior (Pavlou & Fygenson, 2006) in making travel plans, this study contributes to the literature in IS, marketing and tourism.

Academic Contribution 6

Consistent with the management literature (Spreitzer, 1995b, 1996; Spreitzer et al., 1997) and IS literature (Doll & Deng, 2010), this research supported the validation of the second-order reflective measurement model of PE in the UGC context in the travel industry with four first-order factors: meaning, impact, self-determination, and competence. All four first-order factors may be necessary to reflect an overall gestalt of the experience of PE (Doll & Deng, 2010).

Academic Contribution 7

This research contributes to the extension of TPB since it is a pioneering attempt to examine how the dimensions of PE influence behavioral beliefs, i.e., specifically attitude towards intention to use UGC in travel planning. This research revealed that travelers’ perception of PE (Spreitzer, 1995b) significantly influences their attitude toward using UGC when making travel plans. Thus, integrating PE into TPB essentially links a new variable with the TPB, providing a substantial foundation for the fundamental role of empowerment in UGC context (i.e., consumer decision-making specifically in the tourism context related to travel planning) and for future work.

Academic Contribution 8

This research contributes to discovering which dimensions of the TPB (i.e., attitude, subjective norm, and PBC) influence the use of UGC when travelers make travel plans. This study was aimed at getting a better understanding of how attitude, subjective norm,

and PBC work together to determine online consumer behavior. Consistent with other studies (Bhattacharjee, 2000; Hsu & Huang, 2011; Karahanna et al., 1999; Lam & Hsu, 2004), this study found the intention to use UGC was influenced by attitude toward using UGC and subjective norm about using UGC when making travel plans. Since more and more studies of Internet consumer behavior are being conducted within the TPB framework (George, 2004), this research contributes to the further development of a robust theory of Internet consumer behavior by confirming which dimensions are most important. This study also follows Pavlou and Fygenson (2006) and contributes to the emerging role of IS as a reference discipline for online consumer behavior.

7.4 Implications for Practice

In addition to the contributions made to academic research, this study has provided a more in-depth understanding of how UGC empowers online consumers, and makes suggestions on how travel service providers could respond to these trends and use this to their benefit. Travel service providers (TSP) will be interested in the implications of this research for gaining a clearer and better understanding of the role of UGC in empowering travelers when making their travel plans. Without this knowledge TSP's effort will not be as effective as it could be; in other words it is important for TSP to know how travelers actually perceive and evaluate the UGC, and to respond accordingly. As UGC expands with more travelers uploading and referencing content, this study can provide important guidance to service providers in the accommodation/travel sectors. Below are the practice contributions made by this thesis that will benefit TSP.

Practice Contribution 1

The research model developed in this study can help TSP understand how the characteristics of UGC (e.g. argument quality, source credibility, information consistency) ultimately empower travelers to make decisions. For instance, travelers are more willing to accept information that is consistent with their own prior beliefs. If an item of UGC is consistent with the traveler's prior beliefs (i.e., information consistency), the traveler has more confidence in the received information and consequently s/he will use it for purchase decisions (Alloy & Naomi, 1984; Zhang & Watts, 2003).

Argument quality was found to be one of the most significant influences on travelers when making travel plans. Travelers believe more in UGC that is supported by explanations, valid evidences, and strong arguments. Low levels of argument quality are less likely to lead to empower consumer, and consequently have less impact on intention to use UGC to make travel plans. Therefore, a system could be developed to help consumers report UGC with a low level of argument quality or inappropriate content. This system could also assist consumers in recognizing the source credibility of the UGC. For example, the system could initiate reward schemes to recognize reputable

contributors who consistently post high-quality UGC (Cheung et al., 2009). This will attract more travelers to the travel website when making travel plans.

The rising importance of UGC has enormous implications for web design and for TSP (Yoo & Gretzel, 2008). Businesses (e.g., TSP) need to consider more carefully designing the UGC component of their sites (Awad & Ragowsky, 2008). TSP should encourage travel reviewers to give more reasons to support their opinions. For example, travel reviewers could include some information on their travel experience such as the date, time and location of their experiences. TSP could also provide guidelines to readers on how to contribute good UGC in terms of the service provided by accommodation. This will help improve the argument quality of the UGC. This study can therefore be valuable to web researchers and travel practitioners interested in optimizing the design of their websites.

Travelers are more likely to follow travel reviews that are similar to other travelers' reviews reported on other online travel websites. Thus, consistency with other travel reviews (i.e. recommendation consistency) is an important aspect when travelers are using UGC when making their travel plans (Gretzel et al., 2007). Moreover, more travelers believe the content of a message when most travelers give a high-level rating to a message (i.e., recommendation rating). Frequent online travel review readers are more likely to consider other travelers' ratings when evaluating an UGC for making their travel plans (Gretzel et al., 2007).

On the other hand, travelers are often unable to evaluate the credibility of the source of the UGC they are using to make the travel plan if they cannot view the profile and/or assess the reputation of the one who posted the review. This is important because consumers prefer to read UGC from reviewers with better quality reputations since this UGC is more trustworthy, credible, and reliable (Hu et al., 2008). TSP should encourage travel reviewers to provide adequate information about their profile when they post the review.

Practice Contribution 2

The research model provides a mechanism for understanding the impacts of UGC on consumer empowerment. Travelers feel empowered by using UGC when making their

travel plans. The results of the study found that travelers' perception of PE significantly influences their attitude toward using UGC when making travel plans. The findings corroborated the four dimensions of PE (i.e., self-determination, competence, meaning, and impact) proposed by Spreitzer (1995b).

This study can be used to understand how each PE dimension as an enabling activity can be leveraged by TSP to achieve their objectives. For example, the use of UGC is an enabling activity for travelers to exercise choice (self-determination) when making travel plans. The use of UGC facilitates travelers to evaluate trip alternatives during decision-making processes on the Internet (O'Connor, 2008). If a traveler is using UGC to help make a travel plan, s/he will feel more confident about making the right decision. Reading other travelers' UGC increases confidence in decisions (Gretzel et al., 2007). The use of UGC is also an enabling activity for travelers to strengthen the value of their experience when making travel plans. When a user perceives system usage to be meaningful, s/he would engage to use the IS to accomplish tasks (Hunton & Price, 1997). Finally, the use of UGC is an enabling activity for travelers to enhance their perceptions of UGC impact on their travel plans. UGC is having a considerable influence on travelers' plans and impacting the competitive reality of the tourism sector as a whole (Papathanassis & Knolle, 2011).

Practice Contribution 3

The findings of this study provide a better understanding of travelers' behavior when using UGC to make travel plans. From the practical perspective, TSP and other decision-makers in the travel industry need information about how their travelers act and react. Thus, by knowing travelers and their behaviors, TSP are able to acquire a better understanding and build a stronger relationship with them.

In tourism marketing and planning, service providers need to understand which factors influence individuals' travel decisions, how attitudes are formed, and how various reference groups affect travel behaviors (Moutinho, 1987). This study applied the TPB to examine how its dimensions (i.e., attitude, subjective norm, and PBC) influence the intention to use UGC when making travel plans. The results indicated that intention was significantly affected by attitude and subjective norm.

TSP should facilitate the development of a positive attitude toward using UGC when making travel plans among travelers who have never used UGC to make travel plans. Subjective norm was also found to be an important predictor of behavior intention. TSP should emphasize to potential travelers that most people who are important to them may be using UGC when making travel plans.

Practice Contribution 4

Understanding consumers' interactions with and perceptions of UGC is relevant for travel and other business sectors as well (Papathanassis & Knolle, 2011). For instance, TSP can have their image damaged by negative UGC (Hills & Cairncross, 2011). It is important to monitor UGC daily in order to ensure that any negative UGC is responded to by the service provider. In fact, a good suggestion for service providers would be to include an UGC facility on their websites which allows consumers to post their opinion and receive feedback from the service providers about the issue presented. UGC can also affect brand perceptions and customer relations (Papathanassis & Knolle, 2011). A survey undertaken by RateGain and Revenue by Design to track ongoing adoption of social media by hotels discovered that over 90% of hotels see a need to constantly monitor UGC, but only 13% have invested in a brand reputation reporting platform (HotelMarketing, 2011a). Thus, it is important to manage UGC by identifying relevant conversations and consequently taking care of service provider brand reputation. Organizations can utilize UGC to improve their understanding of the market's reaction to their offering (Dellarocas, 2003).

Finally, and more specific to the context in which the research model was assessed, this study shows the importance of UGC in empowering backpackers when making travel plans. The backpacker industry is an important component of tourism earnings in New Zealand (Newlands, 2004). Building an understanding of convergence of technology and backpacking is one of the top items on a recent agenda developed by tourism researchers and business leaders (Pearce, Murphy, & Brymer, 2009). This research explained the role of UGC when backpackers make travel plans which has a considerable impact on the competitive reality of the tourism industry as a whole (Papathanassis & Knolle, 2011). Thus, from a practical standpoint, these findings could help improve the competitiveness of the accommodation sector, which is a cornerstone of broader tourism development, and support the growth of tourism in New Zealand.

7.5 Limitations and Future Research

The current study does have a number of theoretical and empirical limitations, the outlining of which suggests some directions for future research.

First, this study was cross-sectional nature and therefore represents only a slice of time. Thus, it was not possible to assess the temporal ordering of the research constructs. For instance, this study did not show how travelers' attitude toward using UGC and actual behavior may change over time. Furthermore, the relationship between intention and actual behavior was not measured. By not examining actual behavior to use UGC when making travel plans, this potential effect remains unclear. Hence, examining actual behavior to use UGC may reveal interesting aspects of using UGC. According to Azjen (1991), having measures of both intention and actual behavior strengthen the results of almost any TPB-based study. Future research should include measures of actual behavior and employ a longitudinal study to check if the variables and their relationships are consistent over time, or to monitor the impact of changes over time on key constructs such as psychological empowerment, attitude or behavioral intentions.

Second, the participants (i.e., backpackers) for this research were selected based on convenience and accessibility sampling since information could then be collected quickly within a short period of time. However, using a convenience sample is probably the least reliable of all sampling methods because the findings cannot be generalized (Cavana et al., 2001). Thus, future research could use a probability sampling rather than the non-probability sampling (e.g., convenience sampling) used in this study. It is possible to generalize findings derived from a sample to the population using a probability sampling (Bryman & Bell, 2007).

Third, these study's findings are necessarily limited by the choice of sample studied (i.e., backpackers). For example, while the effect of PBC on backpackers' intention to use UGC when making travel plans was not significant, this effect could become significant when using other types of sample (e.g., coach tourists, tourists visiting friends and relative, auto tourists, campers, and comfort travelers). Thus, future research might target other tourist types to examine the robustness of findings cross a wide range of samples and contexts.

Fourth, the analysis used in this study relied heavily on a statistical technique (i.e., PLS). Making use of qualitative research may provide an in-depth analysis of the relationships among the constructs, which could not be quantified by a quantitative research. Thus, future research might use a qualitative research (e.g., case studies) to observe the relationships among the constructs, and help identify other constructs.

Fifth, when analyzing the measurement model of the second-order construct of PE, the 'competence' dimension had a loading of less than 0.700. According to Chin (1998a), most of the loadings should be at least 0.600, and preferably at 0.700. Given the low loadings returned for competence, future research might reassess competence using other samples and contexts.

Sixth, this research proposed a second-order formative measurement model of ISI in the UGC context in the travel industry. However, source credibility and information framing in forming ISI construct emerged as not significant. They were not dropped from the research model however since they contribute conceptually to the second-order model of ISI (Roberts & Thatcher, 2009). Future research should test the ISI construct across other contexts to verify the construct measures.

Seventh, future research should also aim to enhance the predictive power of the research model developed in this study, while eliminating unnecessary constructs that compromise its parsimony. For example, this study considered only one antecedent to attitude toward using UGC when making travel plans (i.e., travelers' perception of PE). There may well be other constructs that could be added to the research model as antecedent to attitude toward using UGC, such as perceived usefulness and perceived ease of use from the technology acceptance model (TAM) (Davis, Bagozzi, & Warshaw, 1989). Thus, future research should extend this study by confirming the importance of other constructs to the research model.

7.6 Concluding Remarks

This research identified and evaluated the factors that empower travelers when making travel plans. To achieve this objective, an extensive survey was adopted to gather field information from international backpackers staying at hostels in Auckland, New Zealand.

The study conducted a comprehensive literature review and a thorough examination of the research context (i.e., UGC in the travel industry) before integrating different theoretical perspectives (i.e., DPT, PE, and TPB) with the literature from IS, marketing and tourism.

The research model is significant in that it explains 56% of variance in travelers' intention to use UGC when making travel plans, 45% of variance in travelers' attitude toward using UGC when making travel plans, and 48% of variance in travelers' perception of PE. Furthermore, five out of six paths in the model were found to be significant and in the direction proposed by this study's supporting five hypothesized relationships.

Hypotheses H1 and H2 were supported by the results, and confirmed that the ISI and NSI affect travelers' perceptions of PE when using UGC to make travel plans. Hypothesis H3 was also supported by the results of the study since travelers' perception of PE significantly influences their attitude toward using UGC when making travel plans. Attitude and subjective norm were significant predictors of intention to use UGC when making travel plans, which validated hypotheses H4 and H5. However, the effect of PBC on intention to use UGC when making travel plans was not significant. Thus, contrary to expectations, Hypothesis H6 was not supported by the results of the study.

Given the fairly high explanatory power of model findings, this thesis has significant theoretical and practical implications. From a theoretical viewpoint, this study provides a theoretical framework to explain how UGC empowers online consumer on making travel plans. The theoretical contribution lies in demonstrating the use of three theories

(i.e., DPT, PE and TPB) to model and reason about the impact of online travel reviews on consumer behavior.

From a practical viewpoint, this study provides important guidance to TSP in the accommodation/travel sectors. These findings can help enhance the competitiveness of the accommodation sector, which is a cornerstone of broader tourism development, and supports the growth of tourism in New Zealand.

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APPENDIX A – Ethics Application Approval



MEMORANDUM

Auckland University of Technology Ethics Committee (AUTEC)

To: Felix Tan
From: **Madeline Banda** Executive Secretary, AUTEC
Date: 11 June 2009
Subject: Ethics Application Number 09/115 **Understanding how User-Generated Content (UGC) empowers online consumer behaviour in the travel industry: an extension of the Theory of Planned Behaviour.**

Dear Felix

Thank you for providing written evidence as requested. I am pleased to advise that it satisfies the points raised by a subcommittee of the Auckland University of Technology Ethics Committee (AUTEC) at their meeting on 21 May 2009 and that I have approved your ethics application. This delegated approval is made in accordance with section 5.3.2.3 of AUTEC's *Applying for Ethics Approval: Guidelines and Procedures* and is subject to endorsement at AUTEC's meeting on 13 July 2009.

Your ethics application is approved for a period of three years until 11 June 2012.

I advise that as part of the ethics approval process, you are required to submit the following to AUTEC:

- A brief annual progress report using form EA2, which is available online through <http://www.aut.ac.nz/about/ethics>. When necessary this form may also be used to request an extension of the approval at least one month prior to its expiry on 11 June 2012;
- A brief report on the status of the project using form EA3, which is available online through <http://www.aut.ac.nz/about/ethics>. This report is to be submitted either when the approval expires on 11 June 2012 or on completion of the project, whichever comes sooner;

It is a condition of approval that AUTEC is notified of any adverse events or if the research does not commence. AUTEC approval needs to be sought for any alteration to the research, including any alteration of or addition to any documents that are provided to participants. You are reminded that, as applicant, you are responsible for ensuring that research undertaken under this approval occurs within the parameters outlined in the approved application.

Please note that AUTEC grants ethical approval only. If you require management approval from an institution or organisation for your research, then you will need to make the arrangements necessary to obtain this. Also, if your research is undertaken within a jurisdiction outside New Zealand, you will need to make the arrangements necessary to meet the legal and ethical requirements that apply within that jurisdiction.

When communicating with us about this application, we ask that you use the application number and study title to enable us to provide you with prompt service. Should you have any further enquiries regarding this matter, you are welcome to contact Charles Grinter, Ethics Coordinator, by email at charles.grinter@aut.ac.nz or by telephone on 921 9999 at extension 8860.

On behalf of the AUTEK and myself, I wish you success with your research and look forward to reading about it in your reports.

Yours sincerely

A handwritten signature in black ink, appearing to read 'M. Banda'.

Madeline Banda
Executive Secretary
Auckland University of Technology Ethics Committee

APPENDIX B – Consent Form for the Focus Group

Consent Form



Project title: “Understanding how User-Generated Content (UGC) empowers online consumer behavior in the travel industry”

Project Supervisor: Professor Felix Tan

Researcher: Luiz Mendes

- ☐ I have read and understood the information provided about this research project in the Information Sheet dated 19 June 2009.
- ☐ I have had an opportunity to ask questions and to have them answered.
- ☐ I understand that identity of my fellow participants and our discussions in the focus group is confidential to the group and I agree to keep this information confidential.
- ☐ I understand that notes will be taken during the focus group and that it will also be audio-taped and transcribed.
- ☐ I understand that I may withdraw myself or any information that I have provided for this project at any time prior to completion of data collection, without being disadvantaged in any way.
- ☐ If I withdraw, I understand that while it may not be possible to destroy all records of the focus group discussion of which I was part, the relevant information about myself including tapes and transcripts, or parts thereof, will not be used.
- ☐ I agree to take part in this research.
- ☐ I wish to receive a copy of the report from the research (please tick one): Yes ☐ No ☐

Participant's signature:

.....

Participant's name:

.....

Participant's Contact Details (if appropriate):

.....

Date:

*Approved by the Auckland University of Technology Ethics Committee on 11 June 2009
AUTEC Reference number 09/115*

Note: The Participant should retain a copy of this form.

APPENDIX C – Participant Information Sheet for the Focus Group

Participant Information Sheet



Date Information Sheet Produced:

19 June 2009

Project Title

Understanding how User-Generated Content (UGC) empowers online consumer behavior in the travel industry

An Invitation

My name is Luiz Mendes. I am a doctoral student at Auckland University of Technology. This research is part of the requirement of the award of my PhD (Doctor of Philosophy). I invite you to participate in this research on backpacker use of consumer-generated web content in booking accommodation. Your participation is entirely voluntary and you may withdraw from this research at any time.

What is the purpose of this research?

The purpose of this research is to understand how international backpackers use consumer-generated content on the Internet to help them to book accommodation. This research is required for the PhD that the researcher is undertaking. The research findings will be published in the form of a doctoral thesis.

How was I chosen for this invitation?

As an international backpacker staying at Auckland YHA, aged 20 years of age or older, and speak sufficient English to communicate properly.

What will happen in this research?

You are invited to participate in the focus group, which will take you approximately one hour. The group will be asked to discuss how backpackers use consumer-generated content on the Internet to help them to book accommodation. No questions will be directed to you individually, but instead will be posed to the group. You may choose to respond or not respond at any point during the discussion. The focus group discussion will be recorded using audiotape.

What are the discomforts and risks?

Minimal discomfort or risk is anticipated for any participant. Opinions may differ within the group which may cause discomfort.

How will these discomforts and risks be alleviated?

All the information which is collected about participants will be kept strictly confidential.

What are the benefits?

This research will provide valuable information on backpacker use of consumer-generated web content in booking accommodation.

How will my privacy be protected?

Your name will **not** be audiotaped.

What are the costs of participating in this research?

The only cost of participating in this research is the time you give to participating in the focus group.

What opportunity do I have to consider this invitation?

You are under no obligation to participate in the focus group.

How do I agree to participate in this research?

By filling up a consent form that is given along with this sheet.

Will I receive feedback on the results of this research?

You are welcome to email Luiz Mendes, if you wish to receive a copy of the results of the research.

What do I do if I have concerns about this research?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor, Professor Felix Tan, *felix.tan@aut.ac.nz*

Concerns regarding the conduct of the research should be notified to the Executive Secretary, AUTECH, Madeline Banda, *madeline.banda@aut.ac.nz* , 921 9999 ext 8044.

Whom do I contact for further information about this research?

Researcher Contact Details:

Luiz Mendes, *luiz.mendesfilho@aut.ac.nz*

Project Supervisor Contact Details:

Professor Felix Tan, *felix.tan@aut.ac.nz*

**Approved by the Auckland University of Technology Ethics Committee on 11 June 2009,
AUTECH Reference number 09/115.**

APPENDIX D – Questionnaire

Questionnaire on backpacker use of Online Travel Review (OTR)



Purpose of this questionnaire

The purpose of this survey is to understand how backpackers use Online Travel Reviews (OTR) when making travel plans. Participation will only take about 10 minutes. All responses from the survey are anonymous and will be kept strictly confidential. Completion of the questionnaire is deemed to be consent to participation in the research.

Definition of Online Travel Review (OTR)

An Online Travel Review (OTR) refers to a review written/posted on the Internet by someone who has experienced the travel destination, product or service that the review is (or the comments) about. Examples of Online Travel Review websites are: HostelWorld.com, Hostelbookers.com, and TripAdvisor.com.

Instructions: **For each question, please tick your response.**

1. Have you ever used **Online Travel Reviews (OTR)** when making your travel plans?

- ☐ Yes ☐ No

If you said “NO” to question 1, you are NOT required to answer the questions below. Otherwise, please continue.

2. **How many times** do you use **Online Travel Reviews (OTR)** when making your travel plans?

- ☐ Not at all ☐ 1-5 times ☐ 6-10 times ☐ 11-15 times
☐ 16-20 times ☐ 21-25 times ☐ More than 25 times

3. **How often** do you use **Online Travel Reviews (OTR)** when making your travel plans?

- ☐ Not at all ☐ Rarely ☐ Occasionally ☐ Sometimes
☐ Often ☐ Very often ☐ Every time I plan a trip

4. For the average trip, **how much time** do you use **Online Travel Reviews (OTR)** when making your travel plans?

- ☐ Not at all ☐ Almost never ☐ Less than ½ hour ☐ From ½ hour to 1 hour
☐ From 1 to 2 hours ☐ From 2 to 3 hours ☐ More than 3 hours

5. On **which website** have you used **Online Travel Reviews** when making your travel plans?

(Tick as MANY as apply)

- | | | | |
|---|--|--|---|
| <input type="checkbox"/> lonelyplanet.com | <input type="checkbox"/> tripadvisor.com | <input type="checkbox"/> hostelworld.com | <input type="checkbox"/> hostelbookers.com |
| <input type="checkbox"/> realtravel.com | <input type="checkbox"/> travelocity.com | <input type="checkbox"/> travelpost.com | <input type="checkbox"/> mytravelguide.com |
| <input type="checkbox"/> booking.com | <input type="checkbox"/> yelp.com | <input type="checkbox"/> blogspot.com | <input type="checkbox"/> virtualtourist.com |
| <input type="checkbox"/> gusto.com | <input type="checkbox"/> meetup.com | <input type="checkbox"/> igougo.com | <input type="checkbox"/> fodors.com |
| <input type="checkbox"/> Other(Please name) _____ | | | |

6. **How often** do you post/write **Online Travel Reviews (OTR)**?

- ☐ Not at all ☐ Rarely ☐ Occasionally ☐ Sometimes
☐ Often ☐ Very often ☐ Every time I plan a trip

The following questions refer to Online Travel Reviews (OTR) in general, that you have read when making travel plans.

| Instruction: Please circle your response from 1 to 7, where 1 indicates "Strongly Disagree", and 7 indicates "Strongly Agree" | | Strongly Disagree | Strongly Disagree | Disagree | Somewhat Disagree | Neutral | Somewhat Agree | Agree | Strongly Agree |
|---|--|-------------------|-------------------|----------|-------------------|---------|----------------|-------|----------------|
| 7. OTR reinforced my confidence in making my travel plans | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 8. OTR supported the actions in my then existing travel plans | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 9. OTR verified my assumptions for my travel plans | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 10. The information provided in the OTR was... | | | | | | | | | |
| ... informative | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| ... helpful | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| ... valuable | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 11. The person providing the OTR was... | | | | | | | | | |
| ... trustworthy | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| ... credible | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| ... reliable | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 12. Overall, the OTR emphasize... | | | | | | | | | |
| ... positive comments about the discussed product/service | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| ... encouraging comments about the discussed product/service | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| ... a favorable assessment of the discussed product/service | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 13. I am confident about my ability to use OTR when I make my travel plans | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 14. I believe in my capabilities to use OTR when I make my travel plans | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 15. I have mastered the skills necessary for using OTR when I make my travel plans | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 16. Using OTR to make my travel plans is very important to me | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 17. Using OTR when I make my travel plan activities is significant to me | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 18. Using OTR to make my travel plans is meaningful to me | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 19. Using OTR, I can decide on my own how to go about making my travel plans | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 20. Using OTR, I have considerable opportunity for independence in how I make my travel plans | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 21. Using OTR, I have considerable opportunity for freedom in how I make my travel plans | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 22. Using OTR, I have significant autonomy in determining how I make my travel plans | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |

| Instruction: Please circle your response from 1 to 7, where 1 indicates "Strongly Disagree", and 7 indicates "Strongly Agree" | | | | | | | |
|--|-------------------|-------------------|----------|-------------------|---------|----------------|----------------|
| | Strongly Disagree | Strongly Disagree | Disagree | Somewhat Disagree | Neutral | Somewhat Agree | Strongly Agree |
| 23. My use of OTR has significant influence over my travel plans | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 24. My use of OTR has a large effect on my travel plans | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 25. The impact of using OTR on my travel plans is large | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 26. The OTR were... | | | | | | | |
| ... consistent with other online travel reviews | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| ... comparable with other online travel reviews | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| ... similar to other online travel reviews | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 27. Based on the review rating, the OTR were... | | | | | | | |
| ... found to be favorable by other online travellers | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| ... highly rated by other online travellers | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| ... rated well by other online travellers | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 28. I would be able to use OTR when I make my travel plans | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 29. I have the resources, knowledge, and ability to use OTR when I make my travel plans | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 30. Using OTR is entirely under my control when I make my travel plans | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 31. Most people who are important to me think that I should use OTR when I make my travel plans | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 32. The people who influence my decisions think that I should use OTR when I make my travel plans | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 33. People whose opinions I value think I should use OTR when I make my travel plans | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 34. Using OTR when I make my travel plans is a good idea | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 35. Using OTR when I make my travel plans is a wise idea | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 36. I like the idea of using OTR when I make my travel plans | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 37. I intend to use OTR the next time I make my travel plans | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 38. I intend to use OTR whenever I need to make my travel plans | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 39. I plan to use OTR whenever I make my travel plans | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Please provide information about your background by answering the following questions.

For each question, please tick only one.

40. **Gender** ☐ Male ☐ Female

41. **Age (years)** ☐ 18-25 ☐ 26-34 ☐ 35-49 ☐ 50-64 ☐ 65 or above

42. **Highest education** ☐ Primary school ☐ Secondary school
☐ Undergraduate degree ☐ Postgraduate degree

43. **Internet experience** ☐ 1 year or less ☐ 2-4 years ☐ 5-7 years
 ☐ 8-10 years ☐ 11 years or more

44. **What is your nationality? (*Please tick only one*)**

- | | | | | | |
|---|--------------------------------------|-----------------------------------|---------------------------------------|--------------------------------|------------------------------------|
| <input type="checkbox"/> England | <input type="checkbox"/> Ireland | <input type="checkbox"/> Scotland | <input type="checkbox"/> Canada | <input type="checkbox"/> USA | <input type="checkbox"/> Australia |
| <input type="checkbox"/> Germany | <input type="checkbox"/> Netherlands | <input type="checkbox"/> France | <input type="checkbox"/> Switzerland | <input type="checkbox"/> Italy | <input type="checkbox"/> Sweden |
| <input type="checkbox"/> China | <input type="checkbox"/> Malaysia | <input type="checkbox"/> Israel | <input type="checkbox"/> South Africa | <input type="checkbox"/> Chile | <input type="checkbox"/> Brazil |
| <input type="checkbox"/> Other (<i>Please name</i>) _____ | | | | | |

Thank you for completing this survey.
Your responses will be kept confidential.