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An Investigation of the Applicability of the Uses and Gratifications Theory for Providing Insight into e-Tourists' Use of Smartphones

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AN INVESTIGATION OF THE APPLICABILITY OF THE USES AND GRATIFICATIONS THEORY FOR PROVIDING INSIGHT INTO E-TOURISTS' USE OF SMARTPHONES

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ABSTRACT

Despite the previous smartphone research in the context of travel and tourism, there is limited research based on a strong theoretical background that seeks to understand how tourists are motivated and satisfied via smartphone use. This study extended previous studies by systematically investigating and quantitatively measuring how and to what extent tourists are gratified (satisfied) by the use of smartphones during their trips based on the Uses and Gratifications Theory.

According to this theory, individuals choose a media platform with the anticipation that it will aid them in realizing a specific intention, the satisfaction of this need being referred to as gratification (Green 2014; Logan, 2017; Stacks & Salwen, 2009). This study investigated four constructs in terms of antecedents (i.e., motivations of using smartphones by tourists) and consequences (i.e., satisfaction with smartphones use by tourists, satisfaction referred to as gratifications). This study adopted the Uses and Gratifications Theory as a theoretical framework to explore the use of smartphones by tourists and to measure quantitatively their touristic satisfaction. U&G motivations (Social Interaction, Entertainment, Convenience, and Information) and hypotheses were developed. The respondents of the main study were tourists traveling in downtown Greenville, South Carolina, who have experiences using smartphones at the destination.

To test the model for the study, a multilevel analysis (multilevel SEM) was employed to avoid statistical biases caused by common traits within group tourists and to measure potential group effects. This study also analyzed multilevel mediation in the structural equation model. It

was hypothesized that the attitude construct mediates the relationship between motivations of using smartphones by tourists (independent variable or predictors) and satisfactions with smartphones use by tourists (dependent variable) in the structural model. Moreover, the relationships among constructs were tested and examined based on the theoretical background developed through a review of the literature.

This study provides a classification of motivations of using smartphone use by tourists (U&G motivations) and a newly developed scale to measure satisfaction with smartphone use by tourists and their experiences, and thus it may enhance deeper our understanding of motivations of using smartphone by tourists, attitude toward the smartphone use by tourists and satisfactions with smartphone use by tourists. This study addressed specific aspects of tourism experiences.

The results suggest that U&G motivations have a significant effect on tourists' attitude toward smartphone use, which, in turn, significantly affects e-tourist satisfaction at the individual level. However, there was no group effect among U&G motivations, the attitude toward smartphone use and e-tourist satisfaction. Based on the results from this study, the most important reason that tourists used their smartphones was to obtain information during their trips to Greenville, SC. The results of this study provide practical and theoretical implications for e-tourism communication and tourism marketing.

Keywords: Uses and Gratifications Theory, e-Tourists, e-Tourist Satisfaction, Smartphone, Multilevel Structural Equation Modeling, Mediation

DEDICATION

This dissertation is dedicated to my father and my mother with love and respect and to my maternal grandmother who has passed away. They sacrificed to give me this opportunity to earn a Ph.D., and they have eagerly hoped for and anticipated my graduation. It is only because of their unlimited patience and tireless support that I was able to complete this degree.

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Almost six years ago, I embarked on a journey to pursue a Ph.D. thousands of miles from home. With little knowledge where this new path would lead me, I had great faith and hope in the final outcome. While I was told this path would not be a sprint but a marathon, it took much longer that I expected.

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A huge debt of gratitude goes to Dr. Dewayne Moore, who fostered my interest in multilevel SEM and has provided tireless support throughout the process of completing this study. He also helped me with the conceptual model and hypotheses. Special thanks to Drs. Kristopher Preacher and Barbara Byrne for answering my statistics questions and to Dr. John Leckenby, Professor Emeritus at the University of Texas at Austin, for discussing communication theories and issues with me although we have not met face to face.

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year later—February 19, 2020. I am extremely grateful for his guidance and help. Without him, this dissertation would never have been completed. I would also like to express my gratitude to Dr. Wayne Freimund, who wrote several letters supporting me to the International Services Office. Also, I would like to thank Mr. Will Young for allowing me to conduct my survey in downtown Greenville, SC. I was fortunate to work with Ms. Barbara Ramirez, who made productive and fruitful comments on my writing. She assisted me in improving my skills which allowed me to express my thoughts better in this dissertation.

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CHAPTER ONE

INTRODUCTION

Background

Smartphones combine the emergence of the ubiquitous internet with the advantages of portable telephones (Ling, 2012). Smartphone users frequently select "being online" as their default state, and as a result, "always on" media users view their smartphones as a unified environment of communication opportunities. Moreover, media users see them as polymedia, a product of social and technological interaction, that is conveniently linked with the wider communication sites frequently navigated. Their combination of conveniently packaged features and attributes, which enhance the users' ability to access numerous applications, facilitate switching between platforms (Humphrey, Pape & Karnowski, 2013; Madianou, 2014). Platforms refer to the online spaces in which media consumers or audiences communicate or interact with created content (Kim, 2016). Their choice of a platform conveys emotional intention and an indication of how they prioritize and respond to media users' connections. For instance, selecting a one-way platform like e-mail may transmit the desire to introduce some distance in a relationship (Madianou, 2014).

According to Neilson (2017), smartphone adoption is growing exponentially, with a 74% nationwide penetration rate in the U.S in 2017. One year later, a Pew Research Center survey (2018) found that 78.4 % of adults in the U.S. had a smartphone in early 2018, further pointing out that smartphones were almost universal among U.S. adults. Smartphones have become an indispensable part of our daily lives. Continuous network connectivity and multitude mobile applications on smartphones have allowed people to change the ways they work, find and share information, and enjoy their leisure time (Nielsen, 2014b; Oulasvirta, Rattenbury, Ma, & Raita,

2012). Those behavioral ramifications are ascribed to the key features and traits of mobility and connectivity. People can communicate, cooperate, manage, and work while on the move due to the ubiquitous of and easy access to networking (Tussyadish, 2016). Moreover, smartphones provide users situational information such as time and locations and, thus, help make spontaneous decisions.

According to emarketer.com, 4.6 billion people globally were using smartphones monthly at the end of 2018 (https://www.emarketer.com/topics/topic/smartphone-users). In response to this growth, tourist destinations and suppliers around the world have increased their use of mobile technology, specifically developing platforms for smartphones. For example, according to Wang, Li and Li (2013), platforms employed by Destination Marketing Organizations (DMOs) aid travelers in designing their own experience. Conventional DMOs use one-way communication such as brochure and local ads, while DMOs of smart tourism destinations adopt two-way and spontaneous communication with travelers. With this, travelers can share stories and pictures with other tourists to obtain comments and feedback via mobile technology such as smartphones (Werthner, Koo, Gretzel & Lamfus, 2015). Such mobile technology operated by local DMOs offer travelers extensive information on local accommodations and attractions as well as local-based services surrounding tourists. DMOs also serve as channels to solicit travelers' suggestions and comments as well as to provide information about the destination, the local community's policies, and travelers' experience and stories. Moreover, travelers can get immediate responses to their inquiries and concerns from the online agents of the local DMOs. As a result, travelers experience a "travel co-creation" (Wang et al., 2013, p.60) process through real-time and multi-directional communication services (service provider-tourist, tourist-tourist, tourist-service provider) that can be customized by local

DMOs, thus potentially enhancing touristic experiences as the local DMOs can ascertain tourists' wants and needs.

Wang et al. (2013) suggest that a smart tourism platform provides DMOs with a competitive advantage, and Lamsfus, Martin, Alzua-Sorzabal and Torres-Manzanera (2015) see the smart tourism destination (a dynamically interconnected and intelligent system) as technological platforms for obtaining and sharing information to enhance tourism experiences in real-time. Currently, a destination's competitive edge results not only from its resources but also from effective management and the capability of optimal resource distribution. Figure 1.1 below provides an illustration of a smart tourism eco-system.

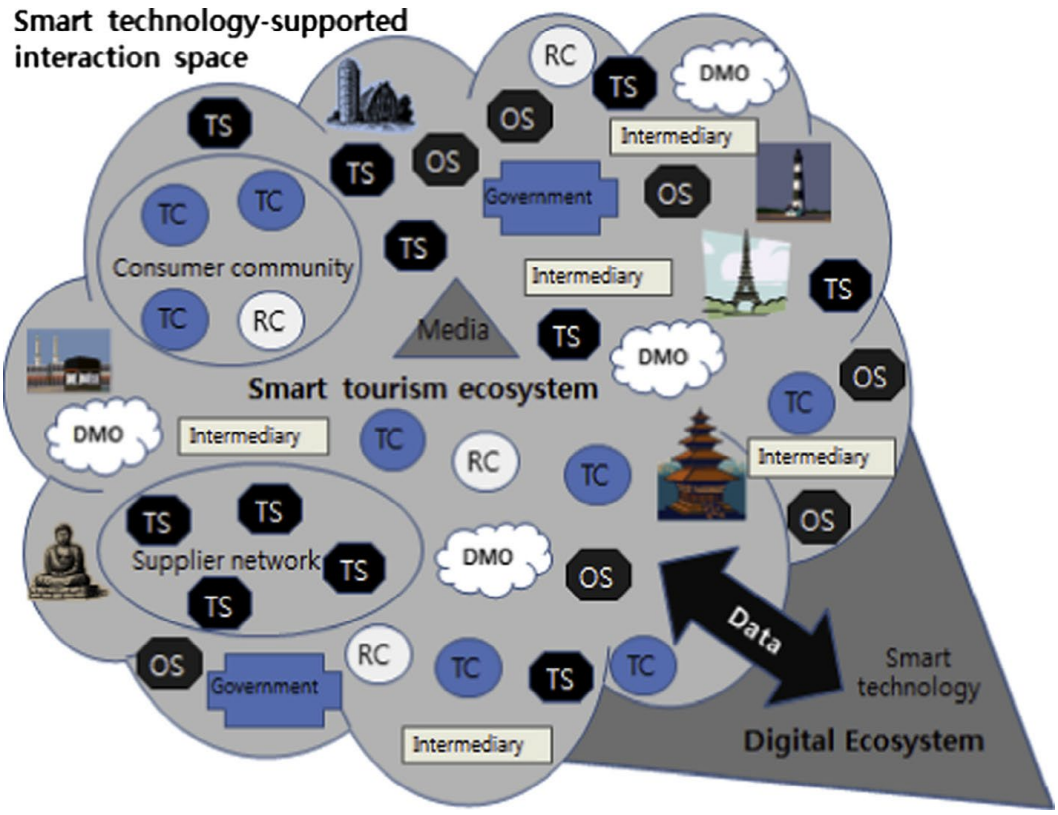


Figure 1.1 Smart Tourism Ecosystem.

Note: TC: Touristic Consumer; RC: Resident Consumer; TS: Tourism Supplier; OS: Other Industry Supplier; DMO: Destination Management Organization. (adapted from Gretzel, Werthner, Koo & Lamfus, 2015).

As this figure shows, touristic consumers (TC) can interact with residential consumers (RC), both generating data via social media and using data created through mobile technologies. Tourism suppliers (TS) offer new mobile services, connecting them with other business-oriented species (OS). This data and information function as the primary source for a smart tourism eco-system species that subsequently enhances tourism experiences. The DMO serves as the conventional information intermediary (Gretzel et al., 2015).

In this regard, tourist destinations and suppliers have increased their use of mobile technology, specifically developing platforms for smartphones (Kim & Law, 2015; Yu, Anaya, Miao, Lehto & Wong, 2017). Recent tourism studies have found that tourists used this technology in several ways, the primary one being to search for information about destinations both before and during trips (Wang, Xiang, & Fesenmaier 2014; Wang & Fesenmaier 2013). While smartphones have been found to provide a convenient and effective aid for tourists in decision-making (Lamsfus, Xiang, Alzua-Sorzabal & Martin 2013), there is limited research on the motivation for their use. These few studies, however, have found that a growing number of travelers use smartphones because they allow for direct communication with destinations to obtain information regarding travel (Wang & Fesenmaier 2013; No & Kim 2014; Dickinson, Ghali, Cherrett, Speed, Davies & Norgate, 2014). As a result, tourists have now become part of what Buhalis and Jun (2011) refer to as e-Tourism. e-Tourism maximizes the efficiency and effectiveness of tourism organizations through the use of technology, revolutionizing business processes and the value chain down to the stakeholder (Buhalis & Jun, 2011). In this sense, the

smartphone has become a new medium of communication, enhancing touristic experiences. As a result, a thorough understanding of this information and communication technology (ICT) in the tourism context has become essential (Lamsfus et al. 2013).

Gretzel, Fesenmaier, and O'Leary (2006) discussed the use of mobile technology within the three stages of travel: pre-consumption, on-site consumption, and post-consumption (See Figure 1.2). Their results highlighted the diverse information and communication needs of tourists. They maintained that mobile technology is utilized in the pre-consumption stage to gain the information for travel, to assess and choose travel products and services, and to communicate with the destinations and service providers. The functions offered by mobile technologies at the on-site consumption stage are linked to staying connected and acquiring specific information related to a location and moment. According to Gretzel et al. (2006), in the post-consumption stage, mobile technologies are employed not only to share and record travel experiences via storytelling but to create special relationships with the places and attractions.

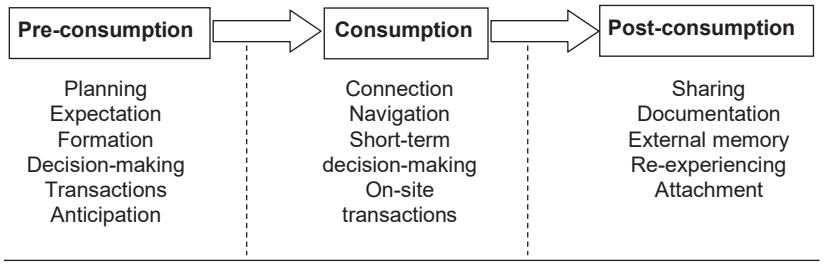


Figure 1.2 Three Phases of Tourism Consumption and Transformation by ICT

(Adapted from Gretzel, Fesenmaier & O'Leary, 2006, p.8)

These authors suggested that tourists generally need information and communication support at on-site destinations because of the uncertainty of new travel circumstances and unexpected changes in travel plans. Thus, smartphones with their connectivity, accessibility and

portability help facilitate tourists in various ways (Buhalis & Law, 2008), and are now regarded as a crucial tool for tourists for accessing information from multiple tourism suppliers. Thus, e-Tourists' use of smartphones is a critical area of research which deserves increased attention in the tourism field (Tussyadish, 2016; Dickinson et al., 2014).

Problem Statement

In recent years, the travel and tourism industry has relied on Information and Communication Technology (ICT) to communicate with tourists, as well as potential tourists, with research in this area focusing on tourists' use of this technology (Lamsfus, Xiang, Alzua-Sorzabal, and Martin, 2013; Dickinson, Ghali, Cherrett, Speed, Davies & Norgate, 2014; Wang, Xiang & Fesenmaier, 2016; Yu et al., 2017; Tussyadish, Jung & Dieck, 2018). Much of this research has examined tourist use of smartphones, however, few studies have been guided by theory (Wang, 2013; Kim & Law, 2015; Wang, Xiang & Fesenmaier, 2016). Moreover, while previous research has descriptively explored how smartphone use affects the travel experience through qualitative methods, some researchers have emphasized that quantitative research is necessary (Wang, 2013; Wang et al., 2016; Yu et al., 2017). In other words, quantitative methods can help advance knowledge and understanding in the travel and tourism field because they can test pre-specified concepts, constructs and hypotheses that derive from a theory. These are the major concerns in the previous research and the literature: the heavy reliance on qualitative research methods and little application of theories and conceptualizations.

Heavy Reliance on the Qualitative Research. The research conducted by Wang, Park and Fesenmaier (2012); Wang and Fesenmaier (2013); Wang, Xiang and and Fesenmaier (2014); and Wang, Xiang and Fesenmaier (2016) identified several critical weaknesses in the research conducted on smartphone use in the travel and tourism field, and they primarily stemmed from

the researchers' reliance on a qualitative research methods, the method typically used in studies in this field. Although this research contributed to the literature base by identifying concepts related to smartphone use by travelers, the generalization of the results is limited. For example, Wang and Fesenmaier's (2013) findings are based on conversations with 22 U.S. tourists, and thus, they do not typify the entire country's population. Wang, Xiang and Fesenmaier (2016) also used in-depth interviews to collect data in their investigation of the use of smartphones by tourists, and Tussyadiah and Wang's (2016) qualitative study involved younger respondents in their 20s in Hong Kong. Yu, Anaya, Miao, Lehto and Wong (2017) used in-depth semi-structured interviews to explore how family members understand the impacts of smartphone use during the family trip. However, they did not include a comprehensive and thorough list of questions used in these interviews, and their study involved 36 participants, meaning their results are not generalizable because of the small sample size and limited age variance.

As many researchers have relied on small sample sizes, thus limiting the wider generalizability of their findings, quantitative research needs to be conducted as a next step in smartphone research in the travel and tourism context. Such research will allow for the causal relationships among concepts and variables to be tested to measure the effectiveness of the theoretically informed research. Thus, this study builds on past research and overcomes some of the limitations of the previous studies.

Conceptualizations. Although most previous research has focused on developing conceptual foundations in ICT and social media in the context of tourism research, it was not based on theoretical frameworks with their corresponding appropriate constructs. These constructs and models are needed because they help systematically investigate the nature of the research body in a scientific manner.

Chun, Lee and Kim (2012) used the Technology Acceptance Model (TAM) as a conceptual model for smartphone adoption, their results demonstrating that social influences and positive self-image had an impact on users' attitudes and their adoption intentions. However, their two core concepts of perceived ease of use (PEOU) and perceived usefulness (PU) have not been used in their research. In other words, the TAM was not effective in their investigation. This study indicates a lack of theory development in social media and mobile technology, more specifically smartphones, highlighting the need for research on travelers' use of smartphones through a theoretical lens to help systematically investigate tourism and this phenomenon.

Some researchers such as Lee, Lee and Ham (2014) have investigated the relationship between tourists and social prestige in the context of smartphones, concluding that social prestige has an impact on the entertainment and escape experiences. They also reported a relationship between the levels of satisfaction of tourists and their touristic experiences accessed via a smartphone. They concluded that smartphone research in tourism is in its introductory stage, and much more research is needed to fully understand this phenomenon and its impact on the tourism area.

Some tourism scholars pointed to the need for more smartphone and tourism research focused on measuring constructs and the tourism experience based on a theoretical framework (Wang, 2013; Kim & Law, 2015; Wang, Xiang & Fesenmaier, 2016; Yu, Anaya, Miao, Lehto & Wong, 2017). To address this need, the research proposed here employs the Uses and Gratifications Theory to explore the motivations for utilizing a smartphone and satisfactions with the Information and Communications Technology (ICT) experience. The research proposed here adopts Buhalis's (2011) e-Tourism concept by defining e-Tourists as those who use ICT to fulfill their needs for information, convenience, social interaction, and entertainment. These four

constructs form the Uses and Gratifications Theory, a prominent framework for explaining media use in the journalism and communication areas (Larose, Mastro & Eastin 2001).

Overview of Uses and Gratifications Theory

While traditional media theories emphasize "what media do to people," the Uses and Gratifications Theory (UGT) focuses on "what people do with media" (Katz, 1959, p.47). This approach analyzes how audiences intentionally select media which will satisfy their needs (Severin & Tankard, 1997; McQuail, 2010). This means that it centers on individual use and choice, asserting that disparate audiences can employ the same media for different goals (Severin & Tankard, 1997). More specifically, this theory has been used to identify the psychological needs explaining which media people use in their daily lives and how and why they actively seek specific ones to satisfy their intrinsic needs (Rubin, 1994; Lin, 1999a).

According to the UGT, individuals choose a media platform with the anticipation that it will aid them in realizing a specific intention, the satisfaction of this need being referred to as gratification (Green 2014; Logan, 2017; Stacks & Salwen, 2009). This theory assumes that audiences are actively engaged in media use and are highly goal-directed (Larose et al. 2001); that is, they are motivated to obtain gratification from a specific media consumption or multiple media sources. While the Uses and Gratifications Theory has been widely employed in traditional media communication, more research on contemporary types of communication such as social media and the Internet will allow scholars to extend the Uses and Gratifications Theory to include technology such as smartphones (Browning & Sanderson, 2012).

Purpose of Study

This study extends previous research by systematically investigating and quantitatively measuring how and to what extent tourists are gratified (satisfied) using smartphones during their trips based on the Uses and Gratifications Theory. The purpose of this study is to develop a conceptual framework of Uses and Gratifications Theory and to investigate the causal relations among its four motivations (i.e., social interaction, entertainment, information and convenience) for using smartphones and how gratified (satisfied) tourists are with the use of this platform (smartphone) in the travel and tourism. This theory serves as the theoretical framework for this study because of its importance in representing human behavioral dimensions related to mediated communication (Lin, 1996; Ruggiero, 2000; Ko, Cho, & Roberts 2005). As such, the Uses and Gratifications Theory may offer tourism researchers an insightful lens into tourist behavior, although few studies have applied it in this context. This study adopts Multilevel Linear Modeling (MLM; Individual Level vs Group Level) as an appropriate statistical method because it examines smartphone use by tourists as a group while also considering the influence of each of its members, with respect to the travel behavior and travel decision-making process. Social media and IT including smartphones tend to be individualized in the communication context. Therefore, their use in the travel and tourism context needs to be investigated for group effects.

Conceptual Framework of Interactive e-Tourism Communication using the Uses and Gratifications Theory is presented in Figure 1.3.

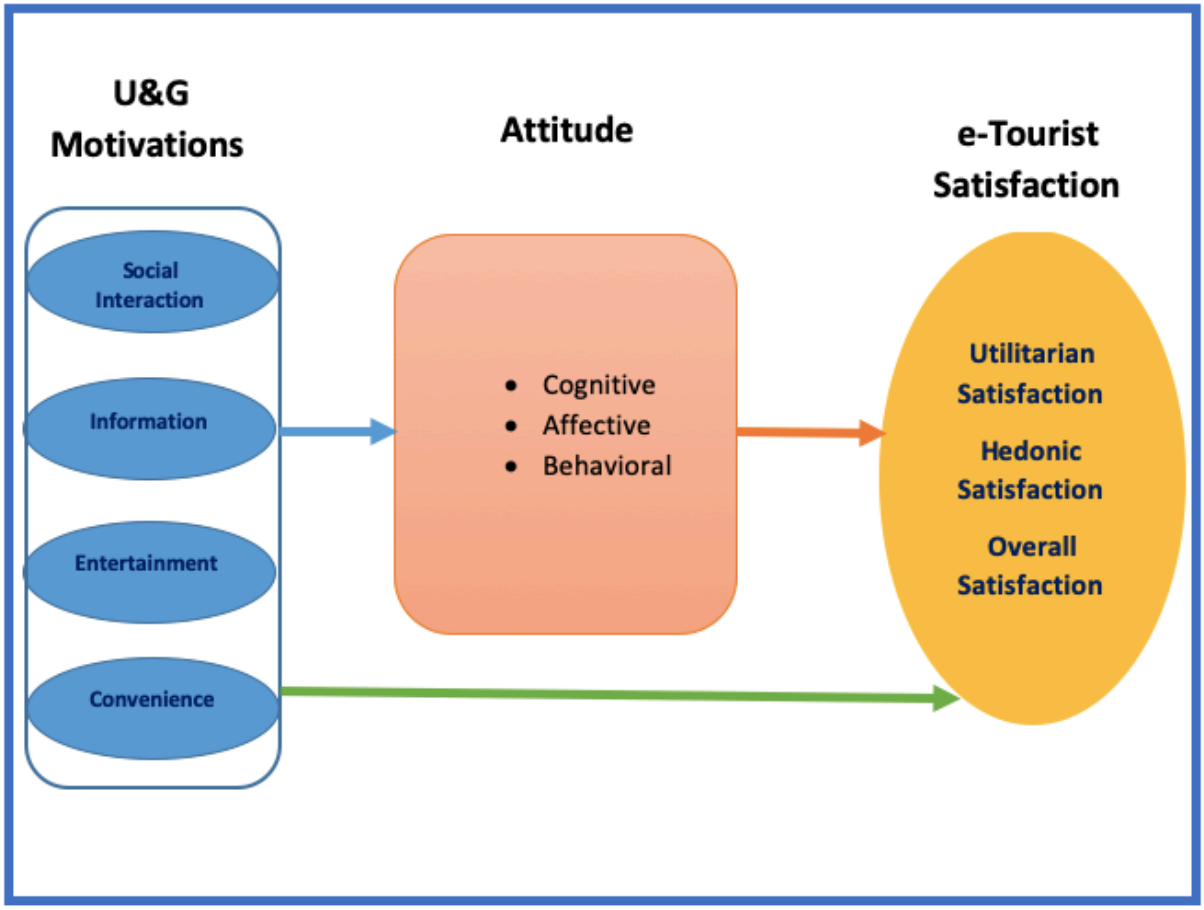


Figure 1.3 Conceptual Framework of Interactive e-Tourism Communication

Uses and Gratifications (U&G) motivations represent motivations of using smartphone by tourists; Attitudes involve attitudes towards smartphone use by tourists; e-Tourist Satisfaction refers to satisfaction with smartphone use by tourists. As this figure shows, the U&G motivations, for using a smartphone by tourists consist of four constructs (independent variables), social interaction, information, entertainment and convenience. Attitude toward smartphone use by tourists, which comprises affective, cognitive and behavioral attitude (mediating variables), is defined as "the level to which an individual has a favorable or

unfavorable appraisal or evaluation of a certain behavior" (Ajzen, 1991, p. 188). Fishbein (1967) defined attitude as "learned predispositions to respond to an object or class of objects in a favorable or unfavorable way" (p. 257). e-Tourist Satisfaction (dependent variables), satisfaction with smartphone use by tourists are classified into three components: utilitarian satisfaction, hedonic satisfaction and overall satisfaction, the satisfaction of this need being referred to as gratification (Green 2014; Logan, 2017; Stacks & Salwen, 2009).

According to Fishbein and Ajzen (1975), as the antecedent, motivation has the potential to affect attitude. This study explores the relationship among the four U&G motivations of social interaction, information, entertainment and convenience by investigating smartphone use by tourists and their attitude toward it. This study also explores the relationship between attitude toward the smartphone use by tourists and their satisfaction with its use. Their attitude, which include affective, cognitive and behavioral components, serves as the precursor of their satisfaction with this technology. Therefore, as Chon (1989) recommended, this study extends Uses and Gratifications Theory to travel and tourism area and this field needs to deal with these relationships.

Attitude has been affected by motivations and satisfactions have been influenced by attitude in previous research (Moutinho & Smith,2000; Luo, 2002; Ko, Cho & Roberts, 2005; Ko & Chiu, 2008; Tsung Hung Lee, 2009; Park & Lee, 2014). Thus, attitude serves as a mediator between motivations and satisfactions in this study and then needs to be tested whether it is significant. For Attitude, as a pre-existing expectation or evaluation, tourism marketer or destination organizations are advised to know if only motivation can potentially affect satisfaction or both motivation and attitude can affect satisfaction or motivation via attitude can affect satisfaction.

The Uses and Gratifications Theory has been applied to research in the field of new media communications, including Facebook, Twitter, the Internet, User Generated Media, online games, MP3 Player, Social Network Services (SNSs) and smartphones because its strengths and benefits are consistent with the nature of new media (Dhir, Chen & Chen, 2017; Lee & Oh, 2013; Sanderson, 2014; Park & Lee, 2014; Logan 2017; Zeng, 2011). In the new computer-mediated communication environment, especially in smartphone research in the field of travel and tourism context, tourists select smartphones on their own and use them. Unlike traditional media such as television and radio, smartphones are viewed with high selectivity in the travel and tourism context. Tourists actively utilize their smartphones, creating expectations and obtaining satisfactions (gratifications), meaning that media users are always active and rational in their media choice and consumption.

Specifically, this study addresses the following research questions derived from the Uses and Gratification Theory (UGT).

1. How are U&G Motivations and Attitudes related in the travel and tourism context?
2. What is the relationship between Attitudes and e-Tourist Satisfaction in the travel and tourism context?
3. What is the role of Attitudes in the relationship between U&G Motivations and e-Tourist Satisfaction in the context of travel and tourism?
4. What is the relationship between U&G Motivations and e-Tourist Satisfaction in the travel and tourism context?
5. Which factors of U&G Motivations have significant relationships with e-Tourist Satisfaction?

6. Which factors of U&G Motivations have significant relationships via Attitude with e-Tourist Satisfaction?

This analysis utilizes multilevel SEM to demonstrate how U&G motivations influence other constructs and mediating variables as well as dependent variables in both Individual Level (all variables indicated in the model) and Group Level (group size of tourists) models. Multilevel linear modeling (MLM) is an effective tool for examining hierarchically structured data (Julian, 2001; Raudenbush & Bryk, 2002) such as that found in the travel and tourism research. For instance, most tourists travel in a group, not individually, taking trips with family members, friends, organization or a combination. As travelers in groups may share common traits or features with their members, a situation which can be seen as the hierarchical structure because each person is probably nested or dependent within the group, such hierarchically structured data should be analyzed utilizing MLM because the single level approach may create biased statistical results due to the shared common traits and features within groups (Byrne, 2006; Bickel, 2012; Tabachnik & Fidel, 2013).

Multilevel Linear Modeling (Multilevel Analysis) involves an advanced statistical method for analyzing hierarchically structured data. This study adopts a two-level structure, Level One, the Individual Level, and Level Two, the Group Level (Bickel, 2012). MLM is a complex statistic in which several levels of nested data are considered in relation to one another. "By *nesting*, we mean that several observations are not independent of one another. For example, they may be multiple observations on the same individuals, such that these observations are not independent of one another (observations nested in individuals)" (Leech, Barrett & Morgan, 2011, p.223). MLM deals with group

effect in this study. Level One variables are all variables indicated above (e.g. information, entertainment, attitude, satisfaction). Level Two variable is only limited to group size (group membership) of tourists in this study.

Based on the conceptual framework and research questions forming this study, the following hypotheses are posited:

H1a: U&G Motivations have a positive effect on Attitude toward the smartphone use in the Individual Level (Level 1).

H1b: U&G Motivations have a positive effect on Attitude toward the smartphone use in the Group Level (Level 2).

H2a: Attitude toward the smartphone use has a positive effect on e-Tourist Satisfaction in the Individual Level (Level 1).

H2b: Attitude toward the smartphone use has a positive effect on e-Tourist Satisfaction in the Group Level (Level 2).

H3a: Attitudes toward the smartphone use positively mediate the relationship between U&G Motivations and e-Tourist Satisfaction in the Individual Level (Level 1).

H3b: Attitudes toward the smartphone use positively mediate the relationship between U&G Motivations and e-Tourist Satisfaction in the Group Level (Level 2).

H4a: U&G Motivations have a positive effect on e-Tourist Satisfaction in the Individual Level (Level 1).

H4b: U&G Motivations have a positive effect on e-Tourist Satisfaction in the Group Level (Level 2).

H5a: Each factor of U&G Motivations has a positive relation with e-Tourist Satisfaction in the Individual Level (Level 1).

H5b: Each factor of U&G Motivations has a positive relation with e-Tourist Satisfaction in the Group Level (Level 2).

H6a: Each factor of U&G Motivations has a positive relation via Attitude toward the smartphone use with e-Tourist Satisfaction in the Individual Level (Level 1).

H6b: Each factor of U&G Motivations has a positive relation via Attitude toward the smartphone use with e-Tourist Satisfaction in the Group Level (Level 2).

This study develops a categorization of U&G motivations in the travel and tourism, then based on this categorization, develops scale items for the four motivations of the conceptual model and conducts multilevel CFA (Confirmatory Factor Analysis) analyses to develop a U&G motivations scale for the use of smartphones while traveling. This study examines the validity and reliability of the scale through this process. Consequently, this work offers a theoretically and conceptually supported U&G motivations scales by comparing the classification of U&G motivations and the findings of the measurement model. The conceptual framework, which will be applied to address Research Questions One through Six, illustrates the relationship among U&G motivations (independent variables), Attitudes toward the smartphone use by tourists (mediating variables), and e-Tourist Satisfaction (dependent variables).

Study Contributions

This study is important in the travel and tourism context for several reasons. First, this study introduces and applies the Uses and Gratifications Theory to the travel and tourism system, and it proposes to develop a classification of U&G motivations (extant items) for this field. Ko

et al. (2005) suggested the classification of U&G motivations, and Luo (2002), Ko et al. (2005), and Logan (2017) developed motivations items based on it for the communication field. However, this scale is not appropriate for testing the U&G motivations in the field of travel and tourism because it has been tested and proved in the communication and advertising area. Therefore, this study proposes to develop a classification of U&G motivations for use of a smartphone while traveling and a new scale to measure e-Tourist Satisfaction and experiences to enhance the understanding of e-Tourists' motivations, behaviors and satisfactions.

Second, this study develops a conceptual framework of Uses and Gratifications Theory and investigate the causal relations among its four motivations for using smartphones while traveling and how gratified (satisfied) tourists are with the use of this platform (smartphone) in the travel and tourism. Third, the researcher proposes creating a new concept of e-Tourist and e-Tourist Satisfaction based on the extant tourism literature.

Fourth, previous research on smartphones and tourism has primarily depended on qualitative research; however, this study is a quantitative one using Multilevel SEM. Quantitative methods can help advance the knowledge and concepts in the travel and tourism field because they can test pre-specified concepts, constructs and hypotheses comprising a theory as well as being more generalizable than qualitative research methods. More specifically, the Multilevel SEM adopted for this study aids the researcher in testing and measuring causal relationships among concepts and variables and subsequently the effectiveness of theoretically informed research as well as in measuring group effects by examining hierarchically structured data. This study offers a discussion of multilevel measurement models and of multilevel structural models in the tourism context.

Definition of Terms

e-Tourists

Tourists who use Information and Communication Technology (ICT) to fulfill their needs for information, convenience, social interaction, and entertainment (Buhalis & Jun, 2011).

e-Tourist Satisfaction

The overall evaluation of the travel experience when tourists use ICT, specifically smartphones and are satisfied (gratified) by its use (Lee, Lee & Lee 2014).

Attitude

"Learned predispositions to respond to an object or class of objects in a favorable or unfavorable way" (Fishbein, 1967, p. 257).

Cognitive Attitude

Represents beliefs, opinion and thoughts. It is connected with the general knowledge of people (Crites, Fabrigar, & Petty, 1994).

Affective Attitude

Related to the feelings and emotions of people (Crites, Fabrigar, & Petty, 1994).

Behavioral Attitude

Involves an individual's propensity or inclination to act in a specific way about events or issues. It demonstrates the intention of an individual (Crites, Fabrigar, & Petty, 1994).

Uses and Gratifications Theory

An approach for understanding the psychological needs explaining which media people use in their daily lives and how and why they actively seek specific ones to satisfy their intrinsic needs (Rubin, 1994; Severin & Tankard,1997; Lin, 1999a).

Smartphones

The outcome of convergence in mobile technology and personal computing (Madianou, 2014)

Smart Tourism Destination

The concept of Smart Tourism Destinations is to center on travelers' wants and needs by integrating the Information and Communication Technology with culture and travel industry to facilitate tourism service quality, enhance tourism management and expand tourism business scale to a broader extent (Huang, Yuan & Shi, 2012; Buhalis & Amaranggana, 2014).

Utilitarian Value

"Resulting from some type of conscious pursuit of an intended consequence; thus, it is task-oriented and rational, and may be thought of as work" (Babin, Darden & Griffin, 1994, p.645). "Utilitarian evaluation is traditionally functional, instrumental and cognitive in nature" (Ryu, Han & Jang, 2010, p.419).

Hedonic Value

Being "more subjective and personal than its utilitarian counterpart and results more from fun and playfulness than from task completion" (Babin, Darden & Griffin, 1994, p.646). "Hedonic values are non-instrumental, experiential, and affective and often related to non-tangible retailer/product attributes" (Ryu, Han & Jang, 2010, p.419).

Structural Equation Modeling (SEM)

Multivariate statistics integrating characteristics and features of factor analysis and multiple regression. It allows scholars to simultaneously investigate many interrelated relationships among latent variables and observed variables (Kline, 2011; Hair, Black, Anderson & Tatham, 2006).

Measurement Model

"A part of SEM that (1) specifies the indicators for each construct, and (2) enables an assessment of construct validity" (Hair, Black, Anderson & Tatham, 2006, p. 709)

Structural Model

Demonstrates hypothesized causal relationships between theoretical variables (Kenny, 2011).

Mediating Effect

"Effect of a third variable/construct intervening between two other related constructs" (Hair, Black, Anderson & Tatham, 2006, p. 844)

Mediators

"Variables that stand sequence between a predictor and some variable on which it has an effect and that account, in whole or in part, for that effect" (Cohen, Cohen, West & Aiken, 2003, p. 676)".

Outline of Dissertation

The remainder of this dissertation consists of four chapters. Chapter Two, the review of the literature pertaining to this study, is divided into four sections. The first section deals with general tourism, which consists of definition of tourism and tourist, demand and supply in tourism, the interrelationship between tourism, recreation and leisure, travel and travel

experience, and major concepts in the tourism. The second section addresses mobile technology and social media environment and its influences on tourism. The third section deals with a theoretical discussion of various communications theories that have been applied to travel and tourism. The fourth section addresses the Uses and Gratifications Theory and its applications to smartphone research in tourism, including its historical development, major goals, basic assumptions, crucial concepts, applications to other social media, and its strengths and weaknesses. The five sections of Chapter Three detail the research methods of this study: the participants and sampling strategy, study site, survey instrumentation, scale development, survey instrumentation and an overview of the data analysis. Chapter Four presents results of the study, again consisting of four sections: the characteristics of the sample data, the data screening and the results of the descriptive statistics, the multilevel measurement model, and the multilevel structural model. Chapter Five, the concluding chapter of this study, discusses the findings concerning smartphone use by tourists via the Uses and Gratifications Theory as well as the multilevel measurement models, the multilevel structural models, the implications of this research, its limitations and the direction for future research.

CHAPTER TWO

LITERATURE REVIEW

General Tourism

Definition of Tourism and Tourist

The word *tour* is etymologically derived from the Latin *tornare* and the Greek *tornos*, meaning a circle or the movement in a circle around a central point of axis. In English, the suffix *-ism* is used to form nouns that denote action or practice, whereas the suffix *-ist* denotes one that performs a given action. When these suffixes are combined with the word tour, they suggest the action of movement around a circle, meaning that people travel from their usual environments to another place and go back to home (Theobald, 2005). Tourism, a unique phenomenon, is a complex concept that cannot be explained by a single dimension or a definition as it is based on the perspectives of researchers, tourists, government, tourism agencies and associations. In addition, a number of definitions of tourism have been proposed in the literature because this phenomenon is a multidisciplinary field. Each stakeholder in the tourism field defines tourism from his/her perspective representing his or her own perceptions and interests. For example, Jafari broadly defined tourism with a holistic perspective as "the study of man away from his usual habitat, of the industry which responds to his needs, and of the impacts that both he and the industry have on the host's sociocultural, economic, and physical environments" (Jafari, 1977, p. 8). He emphasized positive and negative impacts of tourism on host communities. Smith (1988, p.184), on the other hand, focused on tourism as an industry defining tourism as "the aggregate of all businesses that directly provides goods or services to facilitate business, pleasure and leisure activities away from the home environment."

From a system perspective, Leiper (1979, p. 403-404) defines tourism as a system involving discretionary travel and temporary stay of persons away from their usual place of residence for one or more nights. The elements of this system including tourists, the generating regions, the transit routes, the destination regions and the tourist industry, are connected in a spatial and functional relationship. As an open system, these five elements interact within the broader physical, cultural, social, economic, political and technological environments with which they interact. A definition was given and proposed by Gilbert (1990). The definition focuses on a social understanding of tourism: “Tourism is one part of recreation which involves travel to a less familiar destination or community, for a short-term period, in order to satisfy a consumer need for one or a combination of activities (p. 67)”. This definition places tourism in the context of recreation, retains the need for travel outside the normal place, and emphasizes the reasons for travel.

For an academic point of view, according to Mill and Morrison (2002, p.8), tourism is the term given to the activity that occurs when people travel, encompassing everything from the planning of the trip, the travel to the destination area, the stay itself, the return and the memories of it. This definition includes the activities the traveler undertakes as part of the trip, the purchases made, and the interactions that occur between host and guest in the destination area. It includes all the activities and impacts that occur when a visitor travel. The World Tourism Organization (UNWTO) (2008) defined tourism as "the tourism comprises the activities of persons traveling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes." These people are called visitors (which may be either tourists or excursionist) and tourism has to do with their activities, some of which imply tourism expenditure. Goeldner and Ritchie (2009, p.6) also defined tourism as “the processes, activities, and outcomes arising from the relationships and the interactions among tourists, tourism suppliers,

host governments, host communities, and surrounding environments that are involved in the attracting and hosting of visitors".

One of the early attempts to study tourism was by Ogilvie (1933), who studied tourism from an economic standpoint, and defined it as what tourists do, what is done for tourist and anything done with tourists. Ogilvie defined tourists as "all persons who satisfy two conditions, that they are away from home for any period of less than a year and, second, that while they are away they spend money in the place they visit without earning it there (Ogilvie, 1933, p.5-6)". Cohen (1974) defined tourist from a sociological point of view as a voluntary, temporary traveler, travelling in the expectation of pleasure from the novelty and change experienced on a relatively long and non-recurrent round trip. As previous analyses suggest, first, tourism includes journeys from normal area of residence to places referred to as the host destination. Second, the definition suggests that a number of industries support the needs of tourists while they are away from home. Third, it is clear from the definition the recognition of the impacts of this process on the destination communities' socio-cultural, economic and physical environment. Based on the previous literature, tourism refers to a sort of leisure activity of every individual away from a daily routine or an organized work. Tourism should be arranged within specific places and for a given period of time. Tourism industry responds to tourists' needs and wants and it has been concerned with cultural, political, social, economic, and environmental factors. As Ogilvie (1933) looked at tourism with a lens of economics, discussion on demand and supply in tourism is addressed.

Demand and Supply in Tourism

Tourism demand refers to a widely used terminology which handles the elements controlling the level of demand, the spatial traits and features of demand, disparate aspects of demand and the motivation for creating demands (Pyo, Uysal & McLellan, 1991). Cooper (2004,

p.76) defines demand as “a schedule of the amount of any product or service that people are willing and able to buy at each specific price in a set of possible prices during some specified period of time.” He suggested that travelers produced tourism demands at a specific location, the scope and extent of this demand varying with seasons and time. In addition, according to Middleton (2004), Major external factors affecting tourism demand include disposable income, time, demographic change and advanced technology. More specifically, tourism demand is influenced by market situations and economic environments, resulting in the creation of financial flows which have sociological, cultural, political and economic influences (Formica & Uysal, 2006).

This tourism demand, according to Gunn and Var (2002), is supplied by hospitality, transportation, accommodations, intermediaries, destinations and attractions or products. This goes on to the definition of these elements. Attractions consist of cultural, natural and man-made attractions, transportation involves air, water, rail and road, intermediaries is composed of 1) travel agent representing companies that sell tourism products and services to the final customers or prospective tourists; 2) tour operator meaning wholesaler of a bundle of tourism program who negotiates rates and prices with operating systems; 3) travelling wholesaler referring to individual or company which purchase large volume of products or services from producers and resells to retailers, destinations refer to coastal, rural and urban destinations, and accommodations include hotel, guest house, restaurants, café and other tourist facilities (theme park, casino, entertainment and shopping). Cooper (2004) pointed out that in tourism supply, there was a heavy reliance on natural or environmental resources and man-made resources like infrastructure when engaged in creating travel products. Tourism supply was involved in how different factors of the products are positioned at the disposal of travelers. Supply in tourism can

be illustrated via the distribution system, which makes tourism supply accessible and available to the demand sector.

The Interrelationship among Tourism, Recreation and Leisure

Even though previous research has addressed the interrelationship between tourism and leisure /recreation, the distinction between them remains fuzzy and vague. To address this issue, we need to establish what differentiates them and then determine the relationships conceptually and empirically. Mieczkowski (1981), who viewed tourism as part of recreation and leisure, suggested a Venn Diagram for describing the relationship between leisure, recreation, and tourism. According to this diagram, leisure encompasses all areas of recreation and a large portion of tourism except for business and other non-leisure travel. Further, areas of tourism overlap with recreation, in particular those including recreational activities occurring both outside the residence and while on vacation, and all recreation and a large portion of tourism are located within leisure based on the criteria of free time and state-of-mind as seen in the diagram below.

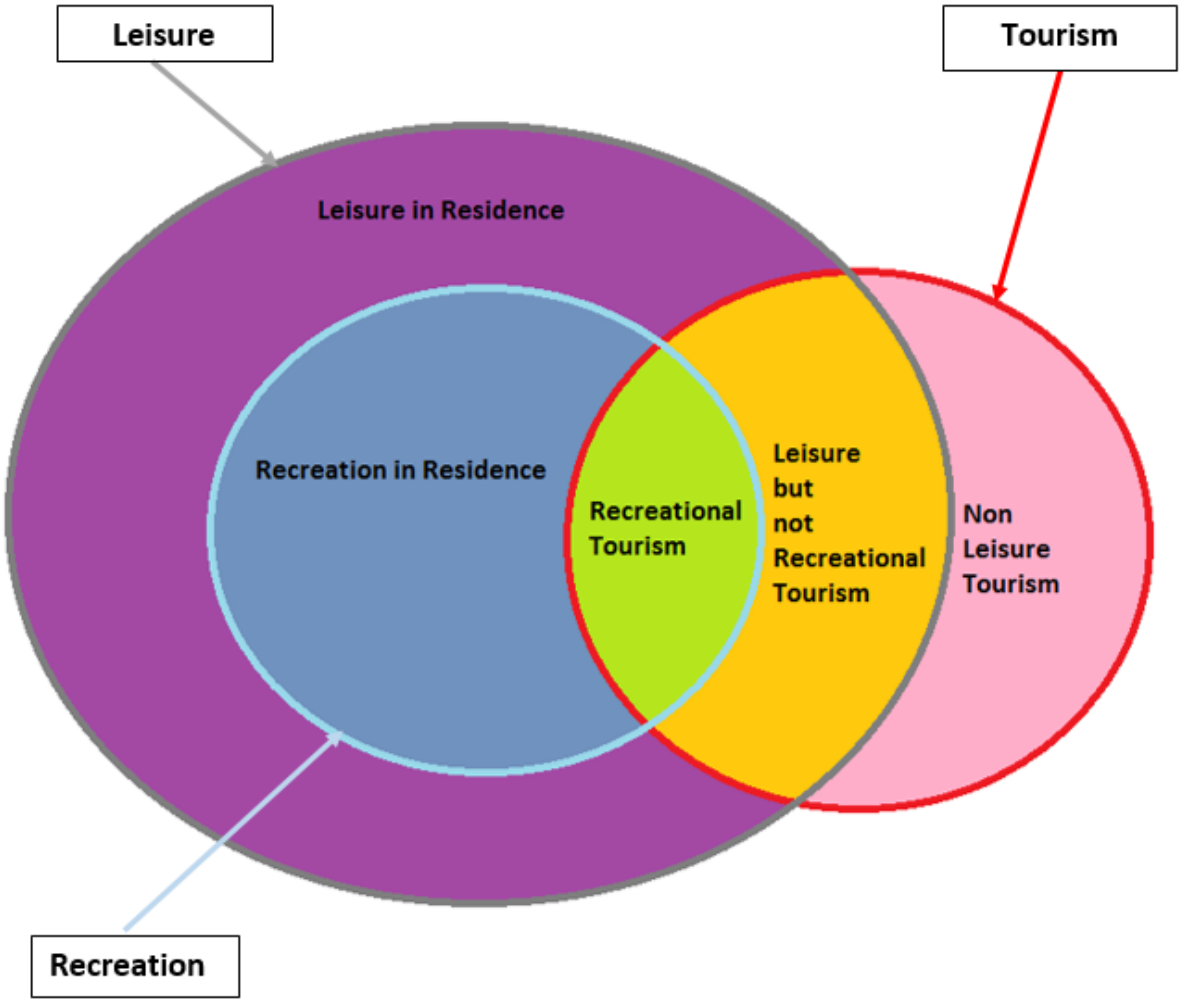


Fig. 2.1 Relation between Leisure, Recreation and Tourism: Adapted from (Meiczkowski, 1981)

However, many scholars see leisure/recreation and tourism as separate (Fedler, 1987), seeing no relationship between tourism and the leisure sciences. To them, the leisure experience is viewed as a part of daily life (Kelley, 1996), whereas tourism, which represents a journey away from home, is regarded as a special event (Graburn, 1983). Despite these two dimensions of leisure (daily life) and tourism (special event), Mannell and Iso-Ahola (1987) pointed out that when social psychologists began investigating tourism, they regarded it as a form of the leisure

experience. These researchers explored the leisure and tourist experience from three points of view. According to them, leisure scholars recognized several components such as enjoyment and intrinsic motivation in the definition of leisure, whereas researchers had not yet established a clear definition of tourism. These two researchers focused on two motivational forces: escapement from stressful circumstances and pursuit of recreational opportunities. More importantly, they suggested that tourism and leisure had psychological and behavioral features in common; however, they did not specify when and under what circumstances the tourist experience becomes a leisure experience.

Around 1990, recreation and leisure researchers began to become interested in tourism literature, with Smith and Godbey (1991) arguing that tourism and leisure/recreation were connected by the existential quest for meaning as well as by other commonalities that they shared. Ryan (1994) supported understanding trip or vacation experiences based on leisure theories and concepts, indicating that leisure experiences while on vacation differ from those during daily life due to the distinctiveness of the psychological and behavioral attributes of travel and the vacation setting. Leiper (1990), cited in Chang and Gibson (2011), suggested that tourism can be seen as a special, valuable leisure experiences since it has characteristics that are not part of daily life.

Moore, Cushman and Simmons (1995) asserted that tourism and leisure exhibited no large differences from behavioral perspectives, agreeing that the behavioral components motivating and constraining tourism and recreation/leisure appear to be similar. While they insisted that the two shared common areas that could be advantageous in the research process, they also believed that the two separate literature streams would result in different theoretical approaches. However, they suggested that researchers should investigate leisure and tourism in a

coherent manner since they are conceptually linked to each other. Currie (1997) assumed that leisure behaviors could affect tourism ones, arguing that people could view their free time as a regular routine for participating in activities. Similarly, people have a tendency to experience everyday leisure while on vacation in addition to pursuing interests entirely different from their daily lives, participating in activities during a trip that they do not experience in their daily lives.

In describing behavioral relationships between tourism and leisure, Chang and Gibson (2011) indicated that Carr (2002) emphasized such concepts as continuum, preferences, deep-rooted habits and personal motivations. He (2002) further suggested that leisure and tourism were interrelated as these concepts were interchangeable, but we could not recognize in which stage the tourism experience became a leisure experience, arguing that the concept of pleasure-oriented leisure was like the concept of tourism in terms of the deep-rooted habits and desires that tourists shared. According to Carr (2002), McKercher (1996) mentioned that the perceived differences between tourism and leisure appeared to reflect a continuum of experiences, an observation extended by Ryan (1997), as cited in Carr (2002), who suggested that tourism is one end of the leisure spectrum. Carr (2002) agreed with this idea of a continuum, maintaining the boundary between tourism and leisure was vague and fuzzy. Based on the resulting conceptual framework, the Leisure and Tourism Continuum, he explained the relationships between leisure and tourism: Leisure behavior is affected by the residual culture at one end of the continuum, while tourist behavior is shaped by the tourist culture at the other end, with the critical determinant between leisure and tourism involving personal motivation. The conceptual model Carr provided suggested that pleasure-oriented tourism and leisure shared common factors with each other. Thus, he concluded that tourism and leisure and are closely connected to each other.

Moreover, conceptual developments advanced in leisure sciences can be employed to help in the understanding of tourist behavior.

Poria, Butler, and Airley (2003) provided a new framework, the time-frame, for understanding tourism as a social phenomenon, introducing the relationships among leisure, recreation, and tourism based on time perception, their argument being related to the state of mind concept used to define leisure. With highly mobilized environments – geographically and socially--it may gradually become difficult to clearly identify differences among leisure, recreation, and tourism even though I agree each has a distinct nature. A major weakness of Poria et al.'s work is the difficulty in objectively quantifying their arguments for generalizability. Mair (2006) also argued that leisure and tourism experiences were closely integrated and that it was evident that each could add substantial and meaningful ideas to the discussion. Chang and Gibson (2011) pointed out that various scholars had applied leisure-based concepts such as leisure constraints and serious leisure to understand and support tourism literature. Consequently, tourism research should be a comprehensive and extensive area of study, one which incorporates appropriate leisure and recreation concepts. Tourism, recreation, and leisure studies, thus, share the challenge of creating new academic disciplines of study, and when they share theoretical and empirical issues, their research can become increasingly more productive and meaningful.

Travel and Travel Experience

Travel is a series of processes by which people leave where they reside to visit different places and interact with others, recording their own memories of the experience (Clawson 1963; Cohen 1979; Tussyadiah & Fesenmaire 2008; Wang, Park, & Fesenmaire 2012). People travel for various reasons, including to have a break from where they live and work, to engage in new activities and to visit interesting places that can make broaden their mind and provide them with

an opportunity for self-discovery (Krippendorf, 1987). Today, the travel experience is seen as being more complicated than in the past because of the blurred boundary between our daily lives and travel experiences due to globalization (MacKay & Vogt, 2012; Pearce & Gretzel, 2012; Wang, Xiang & Fesenmaier, 2014a, 2014b).

As tourists are typically involved in a variety of activities such as an information search, reservations, and sightseeing, the travel experience can further be defined as an activity-based process (Wang, Park, and Fesenmaire, 2012), with tourism researchers dividing this process into three phases: the anticipatory, the experiential, and the reflective phases (Clawson 1963; Graburn 1989; Craig-Smith & French 1994; Jennings 1997, 2006). Moreover, such travel stakeholders as local governments and tourism institutions also influence the travel experience throughout the entire process (Wang et al., 2012).

Urry (1990) and Uriely (2005) suggested that all tourists have different experiences, interpreting subjectively the destinations they visit, a conclusion further analyzed by Botterill and Crompton (1996), who maintained that the touristic experience needs to be understood in terms of the psychological processes as well as the emotional states of tourists. Supporting this perspective, Jennings and Weiler (2006) point out that tourists appreciate travel experiences through a comprehensive understanding and feeling of the destinations visited. More specifically, tourism scholars assert that the touristic experience should be regarded as a multidimensional construct because it is reflective and inherently personal (Holbrook & Hirschman 1982; Pine & Gilmore 1999; Wang et al., 2012).

Major Concepts in the tourism related to this study

Tourist Motivations

According to Botterill and Crompton (1996) and Uriely (2005), motivation has a significant impact on travel experiences and tourist satisfaction. A frequently used theory for exploring travelers' motivation is the Push and Pull Theory (Crompton, 1979; Yuan & McDonald, 1990; Klenosky, 2002; Park & Yoon, 2009). Push factors refer to the internal motives that explain why people must travel. They are intrinsic motivators concerned with the needs and wants of the tourists such as the desire for escape, prestige, relaxation and adventure. These push factors explain the desire to go on a vacation. On the other hand, pull factors represent the destination attributes that persuade travelers to visit a specific site. They explain the selection of the destination (Dann, 1977; Crompton, 1979; Park & Yoon, 2009). These pull factors are the destination attributes which match and strengthen the push motivations. More specifically, they refer to those features that tourists perceive as desirable in a certain destination, including natural and cultural attractions, recreation facilities and marketing images (Sangpigul, 2008; Assiourras, Skourtis, Koniordos & Ginnopoulos, 2015).

Tourist Attitude

According to Fishbein and Ajzen (1975), as the antecedent, motivation has the potential to affect attitude. Tourist attitude, which refers to the behavioral or psychological propensities demonstrated by the favorable or unfavorable assessment of travelers while involved in specific situations or behaviors (Ajzen, 1991; Schiffman & Kanuk, 1994), consists of the three components of cognitive, affective and behavioral attitude (Unger &Wandermman, 1985; Vincent & Thompson, 2002). The cognitive component represents the assessment process

involved in shaping an attitude. For example, a group of German tourists who visited the Great Wall of China last year believe that this destination is an important educational site for their children to learn about the history of a different country and culture. The affective component involves a psychological reaction indicating the inclination of a traveler for a thing or a being. For instance, grandparents who went to the Disney World found the trip enjoyable and pleasant way to spend time with their grandchildren. The behavioral response refers to a verbal sign or statement of the intention of a traveler to act or utilize a specific thing. For instance, travelers found that using their smartphone on the trip last year to Paris was an effective way to purchase a ticket for the site they want to visit. Thus, they plan to take their smartphones on the trip to Brazil in the upcoming spring. As these components and respective examples show, attitude permeates the entire scope of the attitude object (Gnoth, 1997; Hsu, Cai & Li, 2010), meaning attitude along with tourist motivation serves as an effective predictor of tourist satisfaction (Crompton & Love, 1995; Yoon & Uysal, 2005; Reisinger, 2010; Ragheb & Tate, 1993; Lee, 2009**).**

Tourist Satisfaction

Satisfaction, a subjective and multifaceted concept, is seen as an outcome of the comparison between expectations and experiences: if experiences are positively or negatively different from expectations, satisfaction or dissatisfaction results. In the travel and tourism context, satisfaction is regarded as "the result of the comparison between expectations about the destination and a tourist's experience at the destination visited" (Moutinho, 1987; Reisinger & Turner, 2003; Reisinger et al., 2003, p. 176). As such, it is crucial to successful tourism marketing since it affects the selection of the destination and the consumption of tourism products and services (Kozak & Rimmington, 2000).

When tourism products and services meet or exceed the expectations of travelers, they will be gratified and have a good memory of the destination. Thus, tourism scholars have tried to measure not only the levels of satisfaction with tourism experiences at specific tourism destinations but also satisfaction with particular features at the service encounter level (Foster, 2000; Haber & Lerner, 1999; Ekinci, Riley, & Chen, 2001; Yoon & Uysal, 2005). These criteria for tourist satisfaction include the service quality, the transportation, the attractions, the food, the price and the friendliness of the locals (Crompton & Love, 1995; Stevens, 1992; Yu & Goulden, 2006). Tourist satisfaction at a specific tourism destination thus covers all activities in which travelers are involved, their perceptions of the hospitality of the local people and the cost of tourism products and services (Augustyn & Ho, 1998; Yu et al., 2006; Noe & Uysal, 1997; Schofield, 2000; Yoon et al., 2005). Because all destinations have unique cultural attributes, and attitudes toward travelers as well as a variety of service encounters, tourism scholars have explored the comprehensive impression, and, thus the feeling of satisfaction created by the destination in the travelers. Tourism service providers are advised to consider tourists' levels of satisfaction and respond to the travelers' experiences as they market destinations.

Tourist Decision-Making

The basic concept of decision-making asserts that tourists gather and analyze information, and then choose an optimal solution from a wide range of options by assessing the strengths and weaknesses of each possible outcome and selecting the one best able to attain their desired goal. This decision is considered optimal, based on subjective anticipated utility (Smallman & Moore, 2010). The most important one of these concerns is "where to travel," or the selection of the tourism destination. Travelers can decide the specific destination they want to visit and then consider the types of experiences they want to enjoy during the trip (Obenour,

Langfelder, & Groves, 2005; Nuraeni, Arru, & Novani, 2015). Petrick, Li, and Park (2007) concluded that the decision of selecting a specific tourism destination includes stages which may alter depending on the specific features of the tourist product targeted by the consumer. In travel and tourism context, a decision-making process has been regarded as a critical factor for understanding tourist behavior.

Decision-making processes can be categorized by the source of information utilized and both socio-psychological and cultural features (Opperdijk van Veen, 1983; Bargeman & Timmermans, 2002; Bronner & de Hoog, 1982; Lysonski, Durvasula & Zotos, 1996). Considering the intrinsic uniqueness of the tourism product, decision-making in the tourism context is more distinctive and complicated than other decision-making processes. As a matter of fact, tourist decisions are frequently described as extended decision-making, which assumes a complex and involved learning process dependent on the assessment of a large amount of information that lead to confusion because of the number of choices. Moreover, travelers can also assess the quality of the characteristics or specific features of a destination; therefore, tourists' decisions are likely to depend on the brand image, price, and tangible components, and they are likely to minimize the perceived risks associated with the intangible elements (Bonera, 2008).

Mobile Technology and Social Media and Its Influences on Tourism

The Internet and Its Impact on Travel and Tourism

The Internet has permeated into every aspect of our daily lives since 1995 because according to Castells (2001), our society is "a networked economy with an electronic nervous system" (p. 65) influencing "all process of value creation, value exchange, and value distribution" (p. 66). As he explained, the Internet can be seen as a platform promoting

technological innovations, developing new business customs and models and thus transforming the competitive aspects of businesses. To comprehend its influence, it is assumed that it has impacted the technology, e-commerce, and the tourism industry, all of which have advanced and expanded over the last 20 years (Xiang, Wang, O'Leary & Fesenmaier, 2015).

Tourism industry has actively utilized the Internet as an effective distribution channel as well as communication tool since the mid-1990s. In the late 1990s, some online travel agencies such as Expedia and Priceline launched new businesses to offer immediate access to the travel services and products. Especially, TravelBids introduced a modern and progressive business model by integrating pricing flexibility and customer advocacy (Hagel & Singer, 1999). These intermediary agents supplied customers and businesses with comprehensive benefits since they decreased transaction costs and proliferated volume discounts for customers (Werthner & Klein, 1999). For instance, there were 71 million monthly users on Expedia as of February 2015, whereas Priceline was growing at a rapid speed as of September 2015 (Zachs Equity Research, February 8, 2015; *Fortune*, September 24, 2015). In 2014, Kayak.com had 10.51 million monthly users only in the US.

The Internet changed travel and tourism environment with tools such as search engines and online virtual communities. TripAdvisor started its business in 2000 and then developed a specific consumer base by aiding them in collecting information, reading and posting online reviews of travel services and products and then joining online travel forums (O'Connor, 2008). TripAdvisor has combined its functions with other social media and search engines to support its contents so far. For instance, TripAdvisor began Tripwatch, which is the first search engine in 2000 and help its customers to obtain pertinent information. From 2006 to 2008, it supplemented maps and video sharing functions to enhance the potential as an "ultimate web 2.0 travel

mashup" (see http://www.tripadvisor.com/PressCenter-i2300-c1-Press Releases.html). This innovative trend in the travel and tourism has been extensively adopted by customers. TripAdvisor had fast a growing number of users from 1.3 million in 2001 to 60 million in 2014. A growing number of travelers have used online travel agencies and have been engaged in online shopping and online travel products and services (Xiang et al., 2015).

Social Media and the Touristic Experience

Social media and travel experience have numerous common traits and characteristics since both are socio-culturally shaped and formed and both create meaning via communicating with other travelers (Kang & Schuett, 2013; Tussyadiah & Fesenmaier, 2009; Park, Ok & Chae, 2016). Therefore, people generally show various their travel behaviors (e.g. documenting, recording, searching, creating, participating and sharing, etc) throughout every phase of the travel experience, which leads to a unique travel-related decisions and experiences (Kah & Lee, 2014; Choe, Kim & Fesenmaier, 2017). Based on the literature, it is suggested that the influence of social media on the tourist experience can be conceived when we think the essence and character of the interplay between media and people (Kim et al., 2017). Especially, social psychologists mention a dialectical process, meaning that human relations are based upon individual experiences and memory, people gain insight and awareness in a human communication setting (DiMaggio, Hargittai, Neuman & Robinson, 2001; Vygotsky, 1978).

Some researchers argue that the travel experience need to be regarded as three interconnected phases comprising pre-trip, on site trip and post-trip phases (Gretzel, Fesenmaier, and O'Leary 2006). For instance, Volo (2010) maintains that tourists' activities before their travels are not only exerted to travel planning but furthers a desire for future trips while gathering information and communicating via social media. Social media has functioned as a critical agent

for personal travel story reviews, warnings, advice/tips, and recommendations that affect travel decision-makings and even destination impressions before trip phase. Shared travel experiences on social media are used for prospective tourists who seek unprejudiced and trustworthy information to plan their travels (Arsal, 2008; Litvin, Goldsmith & Pan, 2008; Kang & Schuett, 2013). According to eMarketer.com (2015), 58% of U.S. tourism scholars utilized ratings for their travel information; 49% of them read online reviews and referred to recommendations: 18% saw pictures, photos and others SNS sites; 12 % used travel blogs; 5 % watched videos.

Previous research points out that information and communication technologies (ICTs) have altered not only travel-related on-site experiences but also post-trip experiences (Buhalis & Law, 2008; Tussyadiah & Zach, 2012). Moreover, some scholars mention that social media (e.g. SNSs, online travel forum) can have impacts on travelers' perceptions and experiences of destinations, activities and other travelers (Jansson, 2007; Kang & Gretzel, 2012; Tussyadiah & Fesenmaier, 2009). White and White (2007) also maintain that social media have the potential to transform the travel experience throughout the entire trip. Furthermore, Tussyadiah et al. (2009) point out that social media allows tourists to interpret and re-interpret their travel experiences by strengthening the meaning of the travel. A comprehensive examination of the travel and tourism research reveals that social media integrated with growing use of mobile devices reconstruct how tourists enjoy the travel and ultimately, reshape and rebuild the whole travel experience (Kah & Lee, 2014; Xiang, Wang, O'Leary & Fesenmaier, 2015; Choe, Kim & Fesenmaier, 2017). Forrester Research (2008) indicates that numerous travelers share their experiences (e.g. stories, opinions, and complaints) with others via text, photos, audio or video podcasts. For instance, the number of Internet posting by travelers on TripAdvisor.com went up from 2 million in 2005 to 95 million in 2015 (TripAdvisor, 2015).

Because social media allow tourists to share their experiences and activities spontaneously, the tourism scholars are advised to regard social media as a critical agent which aids in co-creating the tourism experience (O'Dell & Billing, 2005; Munar & Jacobsen, 2014; Kim et al., 2017). Especially, a crucial function of social media involves sharing the experience and knowledge through online community and SNSs and then *savoring* his or her own experience (Tussyadiah & Fesenmaier, 2009; Volo, 2010; Mkono & Tribe, 2017). Therefore, expression of tourists' emotions within social media aids in reproducing spiritually mediated feedbacks and reactions on their past travel experiences (Barrett 2006; Jansson 2007; Goossens 2000; Kim & Fesenmaier, 2017).

Mobile Technology and Its Impact on Travel and Tourism

A crucial influence on touristic experiences in the 21st century is the impact of the Internet and mobile technology on the tourism domain. Mobile Information and Communication Technology (ICT) has become an important tool for many travelers, significantly affecting their experiences and activities and thereby changing the tourism landscape (Gretzel, Fesenmaier, Lee & Tussyadiah, 2011). Recent advances in mobile technologies have further increased the number of mobile media users among tourists, further mediating the touristic experience (Kim, Park & Morrison, 2008; Katsura & Sheldon, 2008; Oh et al., 2009; Wang, Park & Fesenmaier, 2012; Im & Hancer, 2014). Previous research has found that 79 million tourists used the Internet and mobile technology to obtain travel-related information in 2005, results supported by the Tourism Industry Association of America (2005), which pointed out that 65 million people made a reservation for at least one travel product or service using the Internet that year. The adoption of mobile technology has especially enhanced the on-site decision-making and en-route planning capabilities of travelers (Ling, 2004). According to Wi-Fi Alliances (2007), 70 % of mobile

technology users bring their mobile phones on their trips because of the availability of wireless networking.

This use of mobile technology has impacted the tourism industry in several ways, the primary one being that users can easily access large amounts of destination-related information (Katsura & Sheldon, 2008; Zhu & Morosan, 2014; Im & Hancer, 2014). For example, travelers use mobile technology to obtain information on-site for attractions or locations they wish to visit, to interact with other tourists, and to subsequently share these experiences with friends and family immediately regardless of time and location (Im et al., 2014). As a result, travelers can manage and make decisions throughout their trip, changing their agenda based on real-time information.

According to Lamsfus, Wang, Alzua-Sorzabal & Xiang (2015), travelers can change their behavior depending on contextual factors, and mobile technology can aid them in modifying their decision-making depending on the situation. Tourism decision-making generally consists of a hierarchical structure representing a number of decision elements (Park & Lutz, 1982; Moutinho, 1987; Woodside & MacDonald, 1994). In this structure, destination-level decisions are regarded as the foundation of the hierarchy, whereas others such as attractions and lodging are subordinate or minor ones. Research has found that tourists both traveling alone or in groups delay the decisions at the subordinate level (e.g. accommodations, restaurants, festivals) from before the trip stage to during the trip stage because of the availability of mobile technologies (Kramer et al., 2007). Moreover, the use of mobile devices allows tourists to gain an improved awareness and knowledge of their geographical and socio-cultural environments (Tussyadiah & Zach, 2012; Morosan, 2015), again suggesting that travelers on the move are more likely to be engaged in subordinate or secondary decisions.

Another impact of mobile technology on the travel and tourism domain according to Gretzel (2010) and Lamsfus et al. (2015) is that it can highlight potential travel experiences, implying that tourism sites and activities are becoming virtually oriented and interconnected. They suggest that mobile technology provides on-the-go tourist with the affordance of being able to physically and virtually travel, allowing them to reconfigure their perceptions and awareness of time and space (Leonardi, 2011; Germann Molz, 2010; Gretzel, 2010; White & White, 2007). Moreover, tourists can be present in multiple virtual augmented realities or involved in two different locations at the same time because of mobile-based networks (Sheller & Urry, 2006; Gutiérrez, Vexo & Thalmann, 2008; Guttentag, 2010).

In addition, because of the mobile technology environment, tourists have immediate access and connection, providing them with increased chances for on-site transactions, in part due to their interactions with fellow travelers (Germann Molz, 2010; Gretzel, 2011; Hwang & Fesenmaier, 2011). As a result, travelers can be involved in fluid and dynamic decision-making in the travel and tourism context (Lamsfus et al, 2015). Specifically, the on-the-go stage in the IT tourism context should be regarded as an open or a comprehensive system since the tourists carry over various features and perspectives from the pre-trip phase and their daily lives because of mobility (MacKay & Vogt, 2012; Tan, Foo, Goh & Theng, 2009; Turkle, 2011). For instance, travelers can carry their mobile identity from their daily lives to the mobile tourism setting (e.g. logging into Priceline.com). Therefore, travel and tourism intrinsically demonstrate the interconnectedness of different stages (time and space) of travel (Lamsfus et al, 2015).

Furthermore, travel decision-making during the en-route phase tends to be more flexible due to mobile technology because tourists can access new sources of information which they did not expect. Decision-making flexibility means the travelers can alter their travel plans depending

on unexpected circumstances (Hwang, 2010; Hwang et al, 2011; March & Woodside, 2005). Decision making during the trip is more dynamic since it embraces the interdependence of various decision processes, with the contexts of later decisions being dependent on the outcomes of previous ones (Hwang, 2010). Therefore, the use of mobile devices can alter the decision circumstances involving on-site decisions, specifically through the availability of search engines and social media (Xiang & Gretzel 2010; Xiang, Wöber, & Fesenmaier 2008). Unplanned behavior occurs when travel plans alter unexpectedly. Kramer, Modsching, Hagen and Gretzel (2007) pointed out that the use of mobile technology could lead to immediate and direct changes in trip plans.

Moreover, decision-making timing (e.g. instantaneous vs. long-term) serves as a critical predictor demonstrating travel intention and consumption patterns (Perdue, 1985; Iverson, 1997). Tourists used disparate time frames for making decisions concerning various kinds of services and products due to the multi-structured aspects of decision-making. Generally, it takes weeks or months for a tourist to decide the destination to visit. Unlike the pre-trip planning phase, the en-route phase is more likely to involve spontaneous and instantaneous decisions. Mobile technology can be regarded as effective and handy tool in this decision-making process (Hwang 2010; Morosan, 2015).

Consequently, Lamsfus et al. (2015) maintain that mobile technology enables travelers to feel hedonic from the perspective of information needs. Specifically, it has been discussed that the evolution in location-based services (LBS) is making locations more fascinating and immersive for tourists (Hannam, Butler & Paris, 2014). Geography-based technologies aid travelers in feeling fluid (Tussydiah & Zach, 2011). The evolution and development in mobile technology have reinforced and mediated travelers' awareness and understanding of place via

emotional, informational, enjoyable, and social engagement, enabling travelers to be enjoyable and creative (Gretzel & Jamal, 2009; Richards, 2011; Morosan, 2015).

Smartphone and Its Impact on Travel and Tourism

Currently, mobile technologies and devices include smartphones, which provide travelers with Internet access, thus enhancing the desire of travelers for mobility (Wang & Fesenmaier, 2013; Want, 2009). Smartphones basically differ from conventional phones due to their access to data networks, allowing people to use functions that previously could only be accessed utilizing a computer (Raento, Oulasvirta, & Eagle, 2009). A comprehensive computer, the smartphone, which has been found to be an efficient and useful tool for travelers, includes features such as high performance displays and multitouch screens on a small device that is easily carried (Rusu & Cureteanu, 2009). In addition, it provides various services, including text messaging, digital cameras, GPS navigation, email, and portable media players.

Smartphones have the potential to aid tourists by providing them the opportunity to access online information anytime and anywhere (Kim & Law, 2015). According to Liu and Law (2013), smartphones enhance the quality of customer service and assist tourists in searching for information and making reservations while on the move. Smartphones can be utilized to expedite theme and amusement park earning profits and revenues, enhancing customer loyalty, and maintaining good relationships with consumers (Liu et al., 2013). Technologies offer travelers more enjoyment as well as more flexibility (Brown & Chalmers, 2003; Schmidt-Belz, Nick, Poslad, & Zipf, 2002). Today smartphones enable tourists to book hotels and manage the services they desire in addition, making travel decisions during the trip becomes feasible and flexible (Liu et al., 2013; Kim et al., 2015). Thus, smartphones have had an impact on tourism experiences. Their increasing use has significantly affected travel behavior and decision-making

processes (Lamsfus, Xiang, Alzua-Sorzabal, & Martín, 2013; Tussyadish & Wang, 2016; Yu, Anaya, Miao, Lehto & Wong, 2017).

The influence of smartphones is increasing exponentially in relation to tourism behavior and travel decision-making (Gretzel, Fesenmaier, & O'Leary, 2006; Lagerkvist, 2008; Tussyadiah & Fesenmaier, 2009; Wang, Park, & Fesenmaier, 2012). For example, smartphones offer information services to enhance sophisticated information searches as well as basic travel activities, mediating touristic experiences in terms of behavioral and psychological aspects (Wang et al., 2012; Tussyadish, 2016). While time and location have been impacted by mobile technology, smartphones have further introduced instantaneous opportunities and resources, as tourists can pull a smartphone out of their purses or pockets and immediately obtain information on museums, restaurants or attractions. These opportunities are highly personalized and aid tourists in planning and/or changing travel plans (*Business Week*, 2010; Dickinson, Ghali, Cherrett, Speed, Davies & Norgate, 2014. Moreover, smartphones have aided tourists in maintaining social interactions with others, facilitating reflection and integrating new interpretations of travel experiences (Wang & Fesenmaier, 2013). Smartphones have transformed touristic behavior by offering personalized mobile services and customized information with location-based services (Portolan, Zubrinic, & Milicevic, 2011; Kim et al, 2015). For example, when a consumer buys a trip package, real-time weather forecasts and transportation information are provided by the time the tourist leaves home (Portolan et al., 2011). Smartphones considerably aid travelers in making instant and immediate decisions (Hwang, 2010). Wang, Park and Fesenmaier (2012) found several patterns where smartphones match the appropriate contexts of tourist in decision-making.

Furthermore, Lamfus, Xiang, Alzua-Sorzabal and Martin (2013) pointed out that tourists need information not only to meet their desire to stay connected to their online community but also as a critical source of decision-making. As such, smartphones help travelers stay connected to social networks. The context of smartphone use involves the fulfillment of information and communication as well as travel behavior and decision-making (Lamsfus et al., 2013; Verkasalo, 2009). As a result, smartphones function as an effective and robust channel through which to interact with other travelers (Kim et al., 2015; Tussyadish & Wang, 2016). Tourism destination organizations confront new challenges because the increasing use of smartphones can be a principal force shaping traveler behavior (Wang et al, 2012; Yu et al, 2017). Therefore, tourism scholars point out that destination organizations need to combine marketing tactics or skills and employ new types of business models which enhance the advantages of the mobile environment (Kim et al., 2015). Consequently, smartphones are considered a portable media platform for online travel community which can lead to spontaneous interactions among travelers and affect travel experiences (Kozinets, De Valck, Wojnicki, & Wilner, 2010; Tussyadish, 2016).

Recently, smartphones have become the focus of much tourism research (Lee, Lee, & Ham 2014). Some researchers such as Lee, Lee and Ham (2014) have investigated the relationship between tourists and the concept of presence in the context of smartphones, concluding that social presence has an impact on entertainment and escape experiences. They also reported a relationship between the levels of satisfaction of tourists and their touristic experiences accessed via a smartphone. However, as they concluded, smartphone research in tourism is in its initial stage, and much more is needed to fully understand this phenomenon and its impact on the tourism domain. To address this need, the research reported here uses the Uses and Gratifications Theory to explore the motivations and needs for utilizing a smartphone.

Theoretical Discussion

This section discusses two communication theories, Agenda Setting Theory and the Elaboration Likelihood Model and their application to the tourism field. In addition, it discusses a widely used IT theory, Technology Acceptance Model, and its application.

Agenda Setting Theory

Agenda Setting Theory explains how the media select which issues and topics they communicate to the public. It relies on two fundamental assumptions. It assumes that the media do not simply reflect reality but rather they filter and form it, meaning news is not reported chronologically but the news editors frame the coverage based on their audiences. Second, this theory also assumes that the more attention the media pay to certain topics or issues, the more likely people will believe they are the essential ones. To a certain extent, thus, "agenda setting doesn't necessarily tell people how they should think or feel about certain issues, but rather what issues they should think about (McQuail, 2010, p. 556)."

Agenda Setting Theory has its strengths. The more topics are spread by the media, the more explicitly they are remembered by the public. When the public is asked about the most critical stories of the day, they tend to answer by listing the top issues addressed in the news. However, Agenda Setting Theory has also its limitations. Primarily, people may not be as receptive as it assumes. The public may not be familiar with new information or involved in public issues. In fact, media users may not be interested in public affairs or may not care about the details. Thus, the impact of the media is reduced for those who have already made up their minds about an issue. Mass media may change the awareness and priorities of media users. This theory is vague especially in building causal relationship between public conspicuity and the

news media (Rogers, 1993; Roberts, Wanta, Dustin & Tzong, 2002; McComb, 2004; Stacks & Salwen, 2009; McQuail, 2010).

More recently, Gedikoglu (2016) introduced Agenda Setting Theory to the travel and tourism field. However, there are some limitations in her application of this theory, one being that it does not contribute much to the study of social media in the travel and tourism field. In addition, Agenda Setting Theory itself was not fully developed in her research, nor was it clear to the readers what role it played in her research. Third, no constructs were provided in her research, an issue because without them the connection between Agenda Setting Theory and her research is unclear. Fourth, according to her, "this study is looking for empirical evidence about the characteristics of agenda setters on social media" (p.81); however, the empirical evidence about the characteristics of agenda setters is not clearly nor fully developed. Ultimately, Agenda Setting Theory assumes that media users are passive receivers of information, while Uses and Gratifications Theory assumes that they are active participants in the media environment. Thus, Uses and Gratifications Theory is a more effective and helpful framework for investigating new media and the tourism domain.

Elaboration Likelihood Model

The Elaboration Likelihood Model is a mass communication theory describing various ways of treating stimuli, why they are utilized, and the disparate consequences about attitude change. This model postulates two principal routes to persuasion, the central route and the peripheral route. Central route processing deals with a systematic and high level of message elaboration, carefully processing and exploring the issues and arguments. Persuasion occurs when people carefully and attentively consider the information and the issues given based on the central route. Peripheral route processing involves the positive or negative cues in the stimulus

by which people assess the information or messages. These cues usually involve such aspects as the reliability and attractiveness of the messages. As a result, they are not rational responses. Thus, attitudes shaped under the central route are more durable and stable than those based on the peripheral ones.

ELM has some limitations. First, the distinction between the central route and peripheral route is vague. In other words, a cue can be seen as persuasive from the central route or the peripheral route depending on the situation. For example, Petty and Cacioppo (1986) assume that the attractiveness of spokesperson serves as a peripheral cue, but their experiment found that physical attractiveness functioned as a peripheral cue. Second, ELM assumes that central route and peripheral route are separate, but they actually interact with each other (Petty & Cacioppo, 1984; Petty, 1986; Petty & Cacioppo, 1986, Morris, Singh & Woo, 2005).

More recently, Cheng and Loi (2014) explored online customer reviews through the lens of ELM in the field of hospitality and tourism. The researchers investigated the effects of central route and peripheral route processing in online review responses. The ELM was fairly well developed in their research. The authors see strong argument and their quality as the central route and regard credible sources as the peripheral route. Their research findings indicated that the adoption of central route processing to deal with negative online consumer reviews positively affected customers' intention to purchase. However, more evidence of the distinction between central and peripheral route processing is needed in this study. In some cases, credible sources can be a central route, and a strong argument can serve as a peripheral route. And other factors can be added to both the central and peripheral route processing. Second, other variables such as personal emotion and other hospitality variables as the central route could be considered in this study. Third, this study assumed that the two routes function independently. The moderation

effect between central route processing and peripheral route processing needs to be explored in further research. Nevertheless, this study deserves attention because it introduced and applied ELM to the hospitality and tourism field.

Technology Acceptance Model (TAM)

The technology acceptance model (TAM) has been widely used as a conceptual framework for investigating technology adoption and use (Bagozzi, 2007). Focusing on the connections among perceived usefulness (PU), perceived ease of use (PEOU), and behavioral intention to use, TAM attempts to predict the relative significance of perceived usefulness and perceived ease of use, along with other predictors including intention to use (or actual use) (Davis, Bagozzi, & Warshaw,1989). Perceived usefulness is considered a potential user's subjective evaluation that utilizing a specific technology can enhance job performance, whereas perceived ease of use represents the extent to which the potential user expects using the technology reduces the effort required (Davis et al., 1989). The core concept of the TAM is that perceived ease of use (PEOU) influences perceived usefulness (PU) and perceived ease of use and perceived usefulness simultaneously impact behavioral intention to use a specific technology. Moreover, this technology model suggests other variables which can influence the two core variables to supplement and generalize it.

Several publications have applied TAM as a theoretical foundation in the domains of wireless phones (Park, 2010), e-learning (Park, Lee & Cheong, 2008), online communities (Gefen & Straub, 2010), wireless mobile data services (Lu, Wang &Yu, 2007), and travel and tourism domain (Kim, Park & Morrison, 2008; Oh, Lehto & Park, 2009). This research points out that TAM is a concise and effective model for describing the introduction and use of a variety of technologies.

Park, Kim, Shon and Shim (2013) explored the elements influencing South Koreans' use of smartphones through the lens of the TAM, verifying its concepts and hypotheses. This work also employed the psychological variables of motivation, innovativeness, the behavioral activation system and the locus of control. Whereas the motivation and innovativeness corroborated past research findings, the behavioral activation system and locus of control exhibit unique contributions for describing the use of smartphones. Chun, Lee and Kim (2012) suggested a conceptual model of smartphone adoption which combines not only hedonic and utilitarian attitudes but also social influences and perceived technicality through the lens of TAM. This model examined college students' perception and attitudes toward the intention for smartphone adoption. Results demonstrated that social influences and a positive self-image had an impact on user' attitude and adoption intention. These findings suggest that a smartphone serves as a symbolic product that can enhance the users' social status. The results indicate that hedonic value is as crucial as utilitarian value in predicting adoption intention. This study found that hedonic and utilitarian values are mediated by social influence, positive self-image, perceived technicality, and the intention to use. As a result, the researchers found that smartphones functioned as convergent media, regarded as both task-oriented and entertainment-oriented devices.

TAM has been widely utilized in the field of communications, smartphones and tourism. Benbasat and Barki (2007) pointed out that the intention to use technology may be formed by numerous elements, including previous use experiences and the attitudes and patterns of use along with other psychological predictors (e.g. individual traits, motivations) (Lamfus, Wang, Alzua-Sorzabal & Xiang, 2015). TAM regards two predictive variables -- perceived usefulness and ease of use as deterministic attributes of adoption -- but does not demonstrate the underlying

psychological processes which connect these components within an entire system. Thus, there is a need for TAM to combine additional components from other ICT acceptance models to enhance its specificity and explanatory utility (Mathieson, 1991; Szajna, 1996; Kim, Park & Morrison, 2008).

Uses and Gratifications Theory

The Uses and Gratifications Theory is a versatile and viable in the journalism and mass communication domains and thus it can potentially extend concepts to the travel and tourism area. This section reviews the Uses and Gratifications Theory, discussing why it is an appropriate for application to smartphone use in the study of travel and the tourism. In this section, this study addresses the historical development, basic assumptions, crucial concepts, and strengths and weaknesses (countermeasures) of the Uses and Gratifications Theory, its four constructs of information, convenience, social interaction and entertainment based on communication and advertising research and its applications to other social media. The Uses and Gratifications Theory serves as the theoretical framework for this study because of its importance in representing human behavioral dimensions related to mediated communication (Lin, 1996; Ruggiero, 2000; Ko, Cho, & Roberts 2005). As such, the Uses and Gratifications Theory may offer tourism researchers an insightful lens into tourist behavior although few studies have applied it in this context.

Historical Development

In the 1940s, Herta Herzog introduced the Uses and Gratifications Theory in her investigation of the motives for listening to the radio, finding the four motivations, or uses, of self-rating, competitive, sporting, and educational, leading to the three gratifications of emotional

release, wishful thinking, and advice (Herzog 1944). Extending this theory to print media, Berelson (1949) suggested that newspapers provided readers with the three motivations of a sense of security, shared topics of conversation and structure in daily routines. Further research conducted by Blumber and McQuail (1969) investigated audience motives for watching televised political programs during the 1964 election in England. And the results classified audiences' motives into four groups: diversion, personal relationships, personal identity and surveillance.

Extending this research to multiple media, Katz, Haas and Gurevitch (1973) explored the gratifications for radio, film, television, newspapers and books using 35 need statements, their results suggesting that television offered a wider range of gratifications than newspapers and film. This finding is logical because during the 1970s and 1980s, television had a broad audience, while radio and print were regarded as supplementary media. More recently, this theory has been applied in the investigation of various media uses (Stacks & Salwen, 2009), including new media and information technology domains such as video games, the Internet, and cell phones (Foregger 2008). As new media and information technology have advanced and mediated communication has expanded, the Uses and Gratifications Theory has become increasingly more crucial for laying a robust foundation in this area (Foregger, 2008). A fuller history of the application of this theory can be found in various review articles (Luo, 2002; Ko, Cho & Roberts, 2005; Foregger, 2008; Mahmoud, 2010; Logan, 2014; Green, 2014; Ha, Kim, Libaque-Saenz, Chang, Y. & Park, 2015; Logan, 2017).

Basic Assumptions

In contrast to other mass communication theories which regard audiences as passive receivers of information, the Uses and Gratifications Theory views them as active media users. While traditional media theories emphasize "what media do to people," the Uses and

Gratifications Theory focuses on "what people do with media" (Katz, 1959, p. 47). That is, this theory assumes 1) that users actively participate in the media environment; in the travel context, tourists actively utilize their smartphones to seek their intrinsic needs, the needs being referred to as four motivations (social interaction, entertainment, convenience and information), creating expectations and obtaining gratifications while they are traveling, 2) that they are goal-directed, purposive, and motivated. That is, traditional media users can watch TV and listen to the radio unconsciously and without thinking. But, in the context of UGT and tourism, media users (tourists) are purposive and motivated to use their smartphones for information, convenience, social interaction and entertainment, and 3) that they highly interact with communication media; in other words, because mobile technology is interactive in nature, the boundary between sender and receiver has been blurred, especially in the case of the smartphone use by tourists as the two (sender and receiver) interact with each another.

This theory analyzes how audiences intentionally select media which will satisfy their needs (Severin & Tankard 1997; McQuail, 2010), meaning that it centers on individual use and choice, asserting that disparate audiences can employ the same media for different goals (Severin & Tankard, 1997). More importantly, users recognize their needs and choose the appropriate media to gratify them. In other words, they take the initiative in choosing and utilizing communication vehicles to satisfy their specific needs (Katz, Blumler, & Gurevitch, 1974). Applied to the travel and tourism domain, tourists recognize their four motivations and choose smartphones to gratify them. For example, if we are visiting the Magic Kingdom in Disney World in Orlando, Florida, we have the option of two different entrance types: the fast pass or the regular pass. If we use the smartphone app on the location track and choose the fast pass, we do not have to wait in line for a long period of time; we can immediately get into the attraction

using our smartphones. Using a regular pass, however, means that we may wait for an hour or two to gain entrance to only one attraction. Smartphones can benefit tourists, in this case the motivation being convenience.

More specifically, the primary purpose of this theory is to identify the psychological needs explaining which media people use in their daily lives and how and why they actively seek specific ones to satisfy their intrinsic needs (Rubin, 1994; Lin, 1999a). In other words, in the travel and tourism context, the primary goal of this theory is to identify four motivations explaining smartphone use by tourists while traveling and how and why they actively seek smartphones to satisfy their four motivations. This choice is based on media features, individual or social and psychological traits, and perceived needs, i.e. the reasons why people use media to share experiences and realize gratification. According to this theory, individuals choose a media platform with the anticipation that it will aid them in realizing a specific intention, the satisfaction of this need being referred to as gratification (Green 2014; Logan, 2017; Stacks & Salwen, 2009).

According to Browning and Sanderson (2012), because the Uses and Gratifications Theory has been widely employed in traditional media communication, more contemporary types such as social media and the Internet allow us to extend our application of it to include such technology as smartphones. In the new computer-mediated communication environment, especially in smartphone research in the field of travel and tourism, tourists select smartphones on their own and use them. Unlike traditional media such as television and radio, smartphones are viewed with high selectivity in the travel and tourism context. People can listen to radio or watch television (traditional media) unconsciously, but they can select their own smartphones on

their own and use them intentionally and actively. Tourists actively utilize their smartphones, creating expectations and obtaining satisfactions (gratifications).

The application of this theory to new computer-mediated communication is possible because it is based on an active audience (Foregger, 2008; Logan, 2014). As Ruggerio (2000) pointed out, as mobile technology is interactive in nature, the boundary between sender and receiver has been blurred, especially in the case of the smartphone, as the two interact with each other. This interactivity substantially reinforces the core Uses and Gratification concept of active users since it has been defined as "the degree to which participants in the communication process have control over and can exchange roles in their mutual discourse" (Williams, Rice, & Rogers, 1988, p.10).

In the context of travel and tourism, interactivity can be described as sharing tourism experiences and providing comments, feedback, and/or tourism information to other travelers, through an online forum (Ko, Cho & Roberts, 2005; Ruggiero, 2009; Wang & Fesenmaier, 2013; Xiang & Fesenmaier, 2014; Dickinson et al., 2014). Therefore, interactivity may provide media users with the means to enhance their communication and significantly increase their communication activity (Ruggiero, 2009). Further travel information and feedback can be both provided and accessed immediately (Park, 2004; Tussyadiah, 2016). Based on the concept of interactivity, the media experience via smartphone will benefit the experience of and result in satisfaction for tourists.

Crucial Concepts

There are five fundamental concepts of the Uses and Gratifications Theory: 1) Active audience, 2) Social and psychological origins, 3) Strong motives of media use, 4) Expectancy

(Potential gratifications) 5) Gratifications (Stacks & Salwen, 2009; Mahmoud, 2010). First, "one of the fundamental assumptions of the Uses and Gratifications Theory has been that an active audience member makes conscious decisions about the consumption of media content" (Rayburn, 1996, p.156); therefore, the process of perception involves one of the most critical traits and characteristics of "active audiences." According to Carey and Kreiling (1974), perception is not a passive recording process but an active managing and organizing process, and, thus, it functions as one of the core concepts of Uses and Gratifications Theory. Audiences perceptions of media behavior and expectations are considered as these users select various types of media and how a specific message can be interpreted in a given situation (Swanson, 1979).

Second, audiences do not use the media as isolated individuals, but rather they use the media as members of groups and then participate in social situations (Johnstone, 1974). McQuail (1998) pointed out that media use is caused by the social or the psychological milieu to satisfy audiences needs such as information seeking and social learning. Third, motives of media use relate to audience activity since audience it serves as an essential element of the Uses and Gratifications Theory (Rubin, 2002). "Motives are general dispositions that influence people's actions taken to fulfill need or want" (Papacharissi & Rubin, 2000, p.179). For example, the reasons for watching television include (1) to pass time, (2) to forget, as a means of diversion, (3) to learn about things, (4) to learn about myself, (5) for arousal, (6) for relaxation, (7) for companionship, and (8) as a habit.

Fourth, the concept of expectancy points out that media users behave based upon a perceived likelihood that an action will have a specific outcome, and they evaluate and esteem the consequences in varying degrees (McQuail &Windahl, 1997). Finally, communication scholars have focused on exploring the gratifications of media users (Swank, 1979), specifically

two types: gratifications sought (GS) and gratifications obtained (GO). Greenberg (1974) pointed out that gratifications sought and obtained are not distinguishable. With Palmgreen, Wenner and Rayburn (1980) finding, a strong relationship between the two. Other communication scholars such as Blumler (1979), Rubin (2009) and Park and Lee (2014) have suggested that the concept of gratifications is vague and difficult to apply to research based on individual responses. According to some scholars, individuals choose a media platform with the anticipation that it will aid them in realizing a specific intention, the satisfaction of this need being referred to as gratification (Green 2014; Logan, 2017; Stacks & Salwen, 2009). They suggested that gratifications could interchangeably be used for satisfactions. Previous research mentioned in this study on the Uses and Gratifications Theory have used their own measurement scales of gratifications (satisfactions) depending on the nature of the research and the individual researcher (Luo, 2002; Ko, Cho & Roberts, 2005; Foregger, 2008; Mahmoud, 2010; Logan, 2014; Green, 2014; Ha, Kim, Libaque-Saenz, Chang, Y. & Park, 2015; Logan, 2017). Therefore, this study has created measurement items of attitude and satisfaction based on previous communication and advertising literature using the Uses and Gratifications Theory and then has applied them to the travel and tourism field.

Strengths and Weaknesses (countermeasures)

Uses and Gratifications Theory has its strengths and weaknesses. The strengths of this theory include 1) its focus on the individual in the communication process; 2) its respect for the ability of media users; 3) its analytical framework for how media users experience media content; 4) its effective and fruitful insight to the application of new media; 5) its aid to scholars in studying mediated communication situations through psychological motivations, needs, and gratifications within a specific context; and 6) its distinction between active media users (“what

people do with media") and more passive media users ("what media do to people") (Katz, Blumler & Gurevitch, 1974; Severin & Tankard, 1997; Luo, 2002; Ko, Cho & Roberts, 2005; Logan, 2014). Although the Uses and Gratifications Theory has several advantages, it also has some limitations. First, it does not recognize that the media can unconsciously affect the users' motivations and gratifications (Elliot,1974). Second, according to Swanson (1977) and Rubin (2002), the theory sometimes lacks precision and clarity in its constructs and dimensions (e.g. motives, uses, gratifications), thus confusing researchers.

While communication researchers have studied the motivations for the use of mobile phones, the approaches from the perspective of Uses and Gratifications Theory have been limited (Logan, 2014). However, since smartphones combine various types of media (voice calls, games, email, videos, texting, video calls, self-help apps), applying this theory to their use has the potential to enhance our understanding of the specific intrinsic needs they meet in various contexts (Logan, 2017), one of which is in the travel and tourism domain. While past research has found multiple constructs defining the reasons for media use, this study uses the dimensions of information, convenience, social interaction and entertainment based on previous communication and advertising research, as they are most applicable to the smartphone in the travel and tourism domain (Luo, 2002; Ko, Cho & Roberts, 2005; Foregger, 2008; Mahmoud, 2010; Logan, 2014; Green, 2014; Ha, Kim, Libaque-Saenz, Chang, Y. & Park, 2015; Logan 2017).

Four Constructs

Information

The information construct represents the extent to which media offers user convenient and resourceful information unrelated to space and time via the Internet and mobile technology

(Chen & Wells, 1999; Ducoff, 1995; Luo, 2002). As Hausman and Siekpe (2009) pointed out, the attitude of media users toward mobile technology is enhanced when it is informative. In addition, mobile communications serve as crucial channels for obtaining information that users need (Ha et al, 2015). During the trip, tourists use their mobile technologies to search for destinations, find accommodations, and check flight prices (Wang & Fesenmaier, 2013). Currently, most travelers have web access before and during their trips (MacKay & Vogt, 2012). Information delivery at any level through mobile communication functions as a critical factor in the tourism and travel context.

Smartphone apps can provide instant and insightful information from multiple sources. (Dickinson, Ghali, Cherrett, Speed, Davies & Norgate, 2014; Lamsfus, Xiang, Alzua-Sorzabal, & Martín, 2013), offering travelers real-time updates and customized information (MacKay & Vogt, 2012). The smartphone serves as a helpful interactive tool for finding information concerning attractions, transportation and accommodations. During a trip, travel planning can be flexible and less stressful with a smartphone (Wang & Fesenmaier, 2013; Tussyadish, 2016). For example, finding a restaurant during a trip becomes easy as travelers can use a mobile phone to check a location, a menu including daily specials, and the price (Xiang & Fesenmaier, 2014). In addition, they can keep track of when their friends will arrive to meet them.

Convenience

According to Gehrt and Yale (1993), convenience consists of the three levels of effort, time, and space. The concept of convenience in relation to smartphones in the current literature is defined as the ease or the facilitation of their use without the limitation of time and space (Yu, Zo, Choi & Ciganek, 2013; Ha et al., 2015). Since the travel and tourism industry is nomadic in nature, mobile technology supplies tourists with increased flexibility and functions as an

important information channel (Oh, Lehto & Park, 2009). A smartphone provides tourists with the flexibility to change their plans fairly quickly, its capability offering them "local knowledge," information not commonly found in tourist guides or on travel websites that can enhance the travel experience (Dickenson et al., 2014). As a result, tourists can quickly readjust their travel plans, transforming the traditional understanding of travel and tourism by creating a new paradigm and offering enhanced flexibility to travelers (Dickenson et al., 2014; Yu, Anaya, Miao, Lehto & Wong, 2017).

Smartphones facilitate rapid access to information via mobile convenience (Ha, Kim, Libaque-Saenz, Chang & Park, 2015), providing tourists access to a wealth of tourism information regardless of their location (Buhalis & Jun, 2011). For example, smartphones provide travel information and instant feedback on accommodations for tourists so that they can immediately change travel plans (Dickinson et al., 2014) as well as aid travelers in making online reservations, finding suitable accommodations, discovering attractions, purchasing tickets for transportation and festivals, tracking flights electronically, managing itineraries, checking weather conditions at destinations, navigating their tours, and comprehending geographic situations for safety (Buhalis & Jun 2011; Wang, 2013). In addition, they enhance interactivity, building relationships between tourists and travel authorities (Buhalis & Jun, 2011). Smartphones enable tourist to rearrange scheduling and offer them increased flexibility (Buhalis & Law, 2008; Dickenson et al., 2014; Tussyadish & Wang, 2016). This convenience is possible because smartphones are small and portable. Thus, tourists can easily check for updated tourist information while on the move. Smartphone use makes travel easier and more enjoyable because it requires little effort and transcends time and space.

Social Interaction

Social interaction is defined as the extent to which people feel connected and comfortable when involved in interpersonal communication activities. According to previous research, mobile technologies have increased user options of interactive platforms (Ha et al., 2015). Much of today's communication interactions involve sharing information with others (McKenna & Bargh, 1999). These interactions are enhanced because mobile phones and the Internet have transformed the ease and timing of social interactions and communication (Ha et al., 2015). Wei and Lo (2006) classified the two forms of social interaction through mobile phones as instrumental (i.e. safety and security) and expressive (i.e. self-presentation), suggesting that mobile phones help people maintain "psychological neighborhoods (p. 57)" as well as represent a symbolic community via immediate interaction.

Most tourists regard a smartphone as an effective communication tool because it aids them in linking with others via text messages, phone calls, emails and social media. For instance, even when away, tourists can address issues in their workplaces (Wang & Fesenmaier, 2013). This ongoing receipt of information provides tourists with strong ties and a sense of connection to their jobs (White & White, 2007). In addition, family members can worry when others are on a trip and cannot be reached. Writing about travel experiences on Facebook or Twitter helps reassure them of their loved one's safety as well as keeps them informed, making them part of the travel experience (Wang & Fesenmaier, 2013; Tussyadish, 2016).

While people are traveling, they can feel socially excluded. This feeling of social exclusion motivates tourists to socially affiliate or connect with friends, colleagues, and others (Green, 2014). Even though people travel to get away from everyday concerns, they still want to belong to a community or a group of colleagues so that they can feel comfortable and reassured.

Although tourists are physically separated, they want to be socially and emotionally connected with their current relationships (White & White, 2007). Tourists can experience this sense of social inclusion via frequent smartphone communication, which can create a "symbolic proximity" for tourists (White & White, 2007). The use of smartphones gives tourists a feeling of security as well as a sense of social inclusion (Wang, 2013; Green, 2014).

Entertainment

The entertainment construct of the Uses and Gratifications Theory has been defined in general by past research as the extent media are enjoyable and fun for users (Eighmey, 1997; Eighmey & McCord, 1998; Luo, 2002). More specifically, according to McQuail (1983), entertainment allows media users to fulfill their needs for emotional release, intrinsic or aesthetic enjoyment, relaxation and escape from their problems. As Bryant and Zillmann (1984) suggested, individuals seek these pleasant affective states, choosing specific media to attain one or more to relieve stress or to distract from its source. People who are involved in stressful situations can use media to escape from its source, choosing intentionally stimulating media content or they can choose something soothing to relieve the stress. Green (2014) argued that individuals used media to relieve not only stress but also boredom. Previous research indicates that higher entertainment value provides more valuable experiences for media users, motivating them to use these media frequently (Stern & Zaichowsky 1991).

Specific to the research proposed here, smartphones can enhance the intrinsic enjoyment of and escapism for travelers (Ha, Kim, Libaque-Saenz, Chang & Park, 2015). For example, visitors to Disney can use the online community in the smartphone app to meet and chat with others, sharing travel experiences with them and memories from their childhood. In this situation, the online community goes beyond a simple online discussion board by enriching their

experience of this destination (Wang, Park & Fesenmaier, 2011; Tussyadish, 2016). Tourists also use smartphones for such entertainment activities as playing games, reading digital books, and listening to music especially when no particular activities are scheduled (e.g. time waiting for the next program). Sometimes, when travelers may feel bored during a trip, they can watch a movie using smartphone, for example, as they wait for their next flight (e.g. during transit) (Wang, 2013). Moreover, travelers use smartphones to record their memories by taking photos and videos and sharing them with friends, both those at home and with them at the destination, via social media such as Twitter and Facebook (Wang & Fesenmaier, 2013). As this analysis suggests, the use of smartphones has changed the touristic experiences, making trips enjoyable and memorable (Wang, 2013; Yu et al., 2017).

Based on past research using the Uses and Gratifications Theory, this study reviews how this theory aids researchers in examining various types of social media and how it has been applied in these areas.

Application to Social Media

Applying Uses and Gratifications Theory to Facebook. First, the researcher will explore how this theory has been applied to study Facebook usage. Park and Lee (2014) assumed that the usage patterns of Facebook, which come from the different motivations that media users may have, can have a significant impact on understanding the degree to which people depend on Facebook as well as their psychological outcomes. Their study explored the associations among the motivations for Facebook use, their intensity, impression management, and their psychological outcomes, finding that the motivations for Facebook use influenced intensity, which led to psychological outcomes. Moreover, they maintained that users' concern about impression management was highly related to Facebook intensity and psychological outcomes

since online self-presentation functioned as a critical component in relationship maintenance and building. Their study identified that impression management was related to Facebook intensity; however, the influence of Facebook intensity on psychological outcomes was not as significant as that found by previous research. These researchers (2014) explored the Uses and Gratifications motivations for Facebook use, finding that they probably influenced the media users' attitudes toward or their perceived importance of Facebook. Further, they (2014) applied the theory to explore how various motivations of media users affected Facebook intensity. However, this study has two limitations. First, it relies on a cross-sectional survey, and, thus, its results should be considered with some caution. Even though two predictors, sense of belonging and satisfaction with life, were theoretically detached from Facebook use, their measurement could have been influenced by Facebook use. Longitudinal studies are suggested to address this issue. Second, even though this study used random sampling, the data were obtained from only one institution, limiting the generalizability of the results.

The Uses and Gratifications Theory is appropriate and useful for exploring photo-tagging on Facebook since it explores what people do with media, not what media does to people (Rubin, 2009). According to Palmgreen and Rayburn (1979), even though the psychological desires of media users are realistically cognitive and emotional, gratifications from media are goal-directed and utility-driven. Based on this conclusion, Leung (2014) suggested that utility-driven media use might be utilized to determine the motivations. To explore this idea more specifically, Dhir, Chen and Chen (2017) applied the Uses and Gratifications Theory in their study of the utility-driven and goal-oriented gratifications people communicate via photo-tagging on Facebook, thus extending Rubin's (2009) process gratifications obtained from the experience of utilizing media. The results from their study identify the gratifications media users fulfill when they tag

photographs; further, these researchers explored if these gratifications from photo-tagging overlapped with gratifications from other Facebook attributes. This paper seeks to empirically explain the gratifications related to Facebook photo-tagging.

Identifying how particular gratifications connect with attributes in new media is crucial to respond to the criticism that some previous Uses and Gratifications studies have been ambiguous (Ruggiero, 2000). Furthermore, this paper contributes to the growing body of UGT research investigating gratifications of particular Facebook attributes as well as attributes of new media platforms such as photo sharing and participation in groups (Back, Holton & Harp, 2011; Karnik, Oakley & Venkatanathan, 2013; Krause, North & Heritage, 2014). The survey instrument used in this study may aid in the investigation of the motives behind other forms of new media such as UGC and online communities. Moreover, methodology used can function as a cornerstone for communication scholars as they will develop valid and reliable survey instruments.

One limitation of this study was its sample, which included only Indian and Pakistan Facebook users. Thus, future research should include a more diverse population to enhance the validity and generalizability of the results. In addition, the adolescent Facebook users participated only in the qualitative essays because of financial and human resources difficulties, again a limitation to this study.

Applying Uses and Gratifications Theory to Twitter. The Uses and Gratifications Theory has provided a fruitful framework for Twitter usage and Internet study (Bumgarner, 2007; Chung & Kim, 2008; Hollenbaugh, 2010; Johnson & Yang, 2009; Joinson, 2008; Ko et al., 2005; LaRose & Eastin, 2004; Raacke & Bonds-Raacke, 2008; Wu et al., 2010) and for investigating the needs gratified via online communication and various types of social media. The interpersonal facet of social media makes the Uses and Gratifications Theory appropriate as

it focuses on the media users' psychological and behavioral needs, specifically on how a specific medium gratifies their needs and motivations to communicate (Rubin, 2009b). This theory assumes that numerous media compete for users' attention and active users choose the specific one that satisfies their needs (Tan, 1985). The key concept of this theory is that it studies what people do with media, not what the media does to people (Swanson, 1979). According to Chen (2011), this facet of the Uses and Gratifications Theory is especially important for Twitter since it describes how media users first choose this medium and then utilize it to satisfy their psychological and behavioral needs, focusing on examining the Uses and Gratifications rationale that people can gratify their needs by utilizing a specific medium.

The major objective of Chen's (2011)' research was to investigate how active users of Twitter satisfy a need for relationship with other Twitter users, an informal tie which originates in Maslow's (1987) need to belong and to affiliate. More importantly, this work seeks to investigate how actively people utilize Twitter to evaluate active media user' concept inherent in the Uses and Gratifications Theory. This work also attempted to quantify the users' level of satisfaction obtained by using a specific medium to address the need to create a link with others. To do so, the researchers explored how the use of specific Twitter functions mediate the relationship between real time on Twitter and satisfying a need to link to other audiences. Their most important finding was that spending a great deal of time on Twitter over a succession of months leads to increased gratification of the users' need to link to others on Twitter compared to spending only a couple of hours per day. The mediation role of tweets and replies was especially intriguing since tweets initiate a conversation on Twitter and replies indicate the beginning of that conversation. This work revealed that users who use Twitter extensively gratify a need to maintain relationships with other users on Twitter; however, this result does not explain which

type of users are on Twitter. A more detailed classification of user characteristics is needed as well as further research addressing why some people continue to use Twitter for a couple of months whereas other users stop after one or two attempts and the differences between the two. Finally, motivations for Twitter use and personal traits warrant study.

Applying this theory, scholars have investigated how individual psychological traits such as introversion and need for affection may influence the motivation for using Twitter (Hughes, Rowe, Batey, & Lee, 2012) and how disparate motivations are related to the specific features media users employ (Hwang & Shim, 2010). For example, Weaver (1980) and Matthes (2006) examined how media users' need to keep up with current information predisposes them toward Twitter differently from other media, affecting the degree to which they learn from it.

Extending this research, Lee and Oh (2013) delineated a more extensive picture of the uses and significances of Twitter. Lee et al. (2013) investigated the psychological origin of motivations for Twitter use, examining whether disparate motivations for its use generate different levels of knowledge through the lens of the Uses and Gratifications Theory. They found that high need orientation users tend to use Twitter more frequently to maintain relationships with the outside world, while the motivation for information did not enhance their gain of knowledge. Because the goal of this study was to investigate the reception side of news dissemination, it centered on how well media users were informed about current events on Twitter. Thus, it did not address the impact of Twitter as a news medium, which functions as the real-time diffusion of news. Furthermore, the special value of Twitter may originate in its capacity to permit annotations by numerous media users, meaning we should consider with some caution whether Twitter delivers well-balanced information and reflects adequate factual

knowledge of current affairs. Comprehensive measures need to be developed to investigate the social implications of Twitter as a news medium.

Applying the Uses and Gratifications Theory to online consumer behaviors, the Internet, UGM (User Generated Media), online game, and MP3 Player. Luo (2002) examined the impacts of information, entertainment, and irritation on a variety of online consumer behaviors, including attitude toward and customer satisfaction with WWW usage through the lens of the Uses and Gratifications Theory. The independent variables included information, entertainment, and irritation, and the dependent variables, web usage and satisfaction. The mediating variable was attitude toward the Web. The SEM results indicated that Uses and Gratifications Theory clearly accounted for consumer attitude toward the Web. Internet users who see the Web as entertaining and informative are likely to demonstrate a positive attitude toward the it, while those who regard the Web as irritating have a tendency to report a negative attitude toward the Web. Consequently, this work found that internet users with a positive attitude generally search on the Internet and feel satisfied.

Ko, Cho and Roberts (2005) explored the causal relations among motivations for utilizing the Internet and principal marketing and communication variables. The conceptual framework of this study is the Uses and Gratifications Theory since it has effectively provided insights describing the psychological and behavioral constructs pertaining to mediated communication. This study applied SEM to interactive advertising by connecting numerous motivations for visiting websites with marketing and communication variables, specifically interactivity, attitude toward the marketing website and the brand, and purchase intention. The independent variables included information, convenience, entertainment and social interaction, while dependent variables were purchase intention and advertising effectiveness and the mediating variables

included attitude toward the site and attitude toward the brand. This work validates the application of the U&G theory to the Internet from a theoretical point of view. According to Rubin, "the media uses, and effects process is a complex one that requires careful attention to antecedent, mediating, and consequent conditions" (1994, p. 432). Moreover, this study supports the assumption that media users are actively involved in the mediated communication environment. The key findings from this research indicate that media users who have a high information motivation tend to be involved in human-message interaction on a website, while those with a high social interaction motivation are more likely to be concerned with human-human interaction. Both human-message and human-human interactions positively influenced attitude toward the website, resulting in a positive attitude toward purchase intention.

User-generated media (UGM*)* such as YouTube and MySpace have gained popularity over the last 10 years. Shao (2009), who introduced user-generated media, explored how and why people use it as well as which elements make this type of media appealing using the Uses and Gratifications Theory. Shao (2009) argued that people use user-generated media in different ways for various reasons: people use the content to fulfill their need for information, entertainment, and mood management; they interact with media content as well as other media consumers to maintain social interactions and online communities; they also develop their own media content for self-expression and self-actualization. Moreover, this work suggests that two core attributes of user-generated media, "easy to use" and "let user control," allow users to engage in activities effectively so that people can experience gratification from their user-generated media use. Individual differences in socio-demographics and personality characteristics may play a critical role in predicting an individual's use of user-generated media.

Even though this study included those differences, it did not address them because of insufficient empirical data, an area future research can address.

According to Wu, Wang and Tsai (2010), little research had been conducted on users' reactions to game playing and how these reactions impact a player's behavior. These researchers explored players' multiple gratifications for playing and their experiences with the service mechanisms provided by online games using the lens of the Uses and Gratifications Theory. They examined the crucial antecedents of players' "stickiness" to a particular online game and investigated relationships among them, finding that the gratifications and service mechanisms influenced a player's continued motivation to play. The gratifications that they examined included achievement, enjoyment and social interaction. According to Wu et al. (2010), the analysis of online game selection and players' behavior using the frame of the Uses and Gratifications Theory indicated that the motivation of players to continue was influenced by these gratifications and service mechanisms and players' continuous motivation could predict proactive stickiness to a particular online game. Their results highlight that developers of games need to ensure that the online game community is well-equipped with a good support service and that an online game has the necessary functions to satisfy players' needs and wants. This work has two limitations. First, the data were collected only from an online game community in Taiwan, potentially limiting its generalizability. Another issue is that crucial variables which may influence users' interactive stickiness (e.g. plots or types of online games) were not included in the model developed in this study.

MP3 players have been extensively investigated for a variety of reasons. Zeng (2011) explored the uses and gratifications related to individuals' use of MP3 players, finding five gratification elements, entertainment, control, companionship, concentration, and status. The

control component represents a content gratification, while the remaining four refer to aspects of process gratification. Content gratification results from an individual's use of mediated content for its ''direct, substantive, intrinsic value,'' whereas process gratification results from the use of mediated content for ''extrinsic values that do not bear a direct link to particular substantive characteristics'' of the content (Cutler & Danowski, 1980, p. 269–270). Concentration involves a newly found gratification pertaining to multitasking with MP3 players. The results demonstrated that of the five gratifications, the concentration and entertainment constructs had a significant impact on the usage of these players, although these finding should be interpreted with caution because of the small convenience sample used. Other crucial predictors such as media formats and technology need to be considered for the future research to explain additional gratifications.

Applying the Uses and Gratifications Theory to Social Network Sites. Research on Social Network Sites (SNSs) has primarily explored individual motivations based on the Uses and Gratification Theory, finding several motivations underlying their use. For instance, Raacke and Bonds-Raacke (2008) and Park and Lee (2014) demonstrated that the gratification needs most frequently satisfied by SNSs included staying in touch with colleagues, making new friends, and posting pictures. According to Jung, Youn and McClung (2007) and Park and Lee (2014), the motivations for using the Korean SNS, Cyworld, included self-expression, passing time, entertainment, and professional career development. Furthermore, Park et al. (2014) indicate that SNSs extend the Uses and Gratifications Theory since they are evolving into combined online communities where media users participate in various activities whereas they began primarily as an online platform where media users could maintain social interactions. SNSs currently provide media users with a wide range of entertainment features, various

functions for joining groups based on mutual benefits, and a variety of communication channels (Park et al., 2014).

These aspects of SNSs are consistent with the assumption of the Uses and Gratifications Theory that users are goal-directed, purposeful, and motivated and that they highly interact with communication media. As Ruggiero (2000) concluded, new media and technologies offer people more options, and as a result, users can pay more attention to their motivations and gratifications. More specifically, he suggested that three features of new media--interactivity, demassification and asynchrony--extend the core concepts of the Uses and Gratifications Theory that active users take the initiative in choosing and utilizing communication vehicles to satisfy their specific needs (Katz, Blumler, & Gurevitch, 1974). In this sense, the Uses and Gratifications Theory serves as a robust framework for explaining the interactive and flexible nature of SNSs, with Facebook functioning one of the most commonly used SNSs. In their research categorizing people's motivations for using Facebook, Park and Lee (2014) found that the Uses and Gratifications Theory responded well to their research questions and served as a strong conceptual framework. Park and Lee (2014) found that Facebook intensity did not influence psychological consequences, a result different from previous research. Future research is needed to address and validate their connections in light of these contradictory results.

Urista, Donga and Day (2008) also explored the motivations for using SNSs such as MySpace and Facebook, focusing on young adults, using a Uses and Gratifications framework. These researchers posited that individuals utilized Social Network Sites to experience convenient, selective, and interactive relationships with others for their communication gratifications, a hypothesis consistent with the Uses and Gratifications Theory. Their study found that young adults were heavily dependent on Facebook and MySpace for both information and

entertainment. As their research indicates, the Uses and Gratifications Theory has improved the understanding of communication researchers on the impact of SNSs on media users by providing a strong conceptual framework for analyzing human communication phenomena. Ultimately, future research needs to explore the impact that online and offline media users have on self-presentation via Social Network Sites. This work is limited because although the researchers paid attention to organizing every focus group, some questions could be biased. In addition, using more coders would increase the reliability and validity of this study.

Applying the Uses and Gratifications Theory to smartphones. According to Logan (2017), communication researchers have attempted to understand why and how smartphones are utilized. Applying the U & G theory to media use enables researchers to investigate the psychological rationales that drive not only the links between media use and media effects but also lead to the use of a particular medium. Since smartphones integrate a number of disparate types of media, the U & G theory serves as a feasible means for examining the hierarchy of needs which drive the use of the various smartphone functions. Moreover, the U & G theory offers a perspective on why particular smartphone functions and applications could be useful and powerful advertising tools.

Logan's (2017) research investigated smartphone application use among young adults in the United States through the lens of the Uses and Gratifications Theory. This study examined the gratifications sought from smartphone apps to offer direction and instruction to advertising practitioners concerning the levels of involvement related to each type of application. According to Logan (2017), his work developed valid measurement scales for the gratifications sought by young adults and a categorization of smartphones applications. Further, he explored the relationships between gratification sought among young adults and gratifications obtained

from the use of different types of smartphone applications and attitudes toward advertising. The research findings imply that young adults have a tendency to search for gratifications for personal identity and personal relationships. In pursuing personal identity, the applications that offer the most gratification involve the music and video ones. However, the results found a negative relationship between pursuing personal identity and attitudes toward advertising in music and video applications, indicating that advertising in music and video applications fail to target the audience most likely to utilize the apps. This study has several limitations. First, scale development was not integrated into gratifications related to specific mobile applications. Further research is needed to address the unique traits and features applicable to mobile environments to deal with better and diverse applications. Second, the sample sizes were limited, 20 focus groups for the qualitative data and 155 for the quantitative data. Lastly, this study depends on self-reported data, which is less reliable and less valid. Future research could employ structural equation modeling, which can use a large sample size, and then investigate complex relationships among predictors.

Concluding Remarks

The study provides a basic review of the Uses and Gratifications Theory, including its historical development, basic assumptions, important concepts, and strengths and weaknesses. Despite its limitations, this work corroborated and substantiated the validity of this theory and its application to various types of social media. The Uses and Gratifications Theory is a versatile and viable one in the journalism and mass communication domain, and, thus, it can be extended to other academic disciplines.

CHAPTER THREE

RESEARCH METHODS

This chapter deals with a discussion of the methods to be employed within this study. More specifically, this chapter includes a discussion of the participants and sampling strategy, study sites, data analysis and pilot study, and survey instrument. Pilot tests were conducted in classroom setting and then based on them and previous literature in the field of communications and tourism, the survey instrument was created. Data analysis procedure addresses both multilevel linear modeling and structural equation modeling. Prior to conducting this study, a proposal was submitted to IRB (Institutional Review Board) at Clemson University (See Appendix A).

The purpose of this study was to develop a conceptual framework of Uses and Gratifications Theory and to investigate the causal relations among its four motivations for using smartphones and how gratified (satisfied) tourists are with the use of this platform (smartphone) in the travel and tourism. In addition, this study developed a classification of U&G motivations of the conceptual model and then tested the relationships among U&G motivations, attitude toward the smartphone use by tourists and e-Tourist satisfactions. The data was analyzed using Exploratory Factor Analysis (EFA), Multilevel Confirmatory Factor Analysis (CFA), and Multilevel Structural Equation Modeling (SEM).

Scale Development (Pilot Study)

"A pilot study refers to a mini-study in which the proposed questionnaire and all implementations procedures are tested on the survey population in an attempt to identify problems with the questionnaire and related implementation procedures. The goal is to determine

whether the proposed questionnaire and procedures are adequate for the large study" (Dillman, Smyth & Christian, 2009, p. 228).

To select a comprehensive and representative set of smartphone' use among tourists, the first pilot study was conducted using a sample of 57 undergraduate students (70.2% female, mean age=20.4) enrolled in two different tourism courses at a large southern university in the U.S. All students were given extra credit points as study participants. Data were collected on March 26, 2018. An initial version of the instrument was developed, with 81 questionnaire items being adapted from the literature review to elaborate upon the hypothetical interrelationships among the U&G four motivations, attitude towards smartphone use by tourists, utilitarian satisfaction, hedonic satisfaction and overall satisfaction. The participants were asked to rate use of smartphone during the trips on 5-point Likert scales and 6-point semantic differential scales (1=Strongly Disagree, 5=Strongly Agree; Unpleasant=1, Pleasant=6). Skewness values were found to be between -2 and 2, which is statistically good.

Correlations, Means, and SDs were checked. Standard deviations for most items were around 1 or less, indicating a restricted range of scores, meaning that most respondents chose 4 (agree) or 5 (strongly agree) on the 5-point Likert scales. SD should be 1.5 for a 5-point Likert scales. Second, mean scores of most items were approximately 4 or more for the 5-point Likert scales, indicating a ceiling effect and around 5 on the 6-point semantic differential scales. These values indicate that many respondents selected 4 (agree) or 5 (strongly agree) on the Likert scales and answered in a very positive way on the differential scales. Simply put, the mean scores were too high. Therefore, the researcher decided to change to 7-point Likert scales and to make stronger statements for the measurement items. In addition, the researcher updated the technology-related statements as this dissertation explores a cutting-edge topic.

The second pilot study was conducted with a sample of 37 undergraduate students taking the same classes as in the first pilot study. Data were collected on April 05, 2018. Sixty-nine items were revised and adopted from the first pilot study, with the participants being asked to rate uses of smartphones during trips on 7-point Likert scales and 6-point semantic differential scales. The researcher found one outlier, who was deleted, and the analyses were run again. The standard deviations for the scores of most of the items fell between 1.25 and 1.40, indicating an improved distribution of scores. Skewness was within +/-1, indicating a reasonably normal distribution. However, for the attitude construct, the minimum and maximum were 4 and 6, respectively, on a 6-point scale, indicating a restricted range of scores. Therefore, the researcher decided to change to 9-point semantic differential scales. The results showed that the information construct has two dimensions. Thus, the researcher selected only one dimension for the purpose of his study.

Third pilot study was conducted using a sample of 48 graduate students enrolled in a PRTM research seminar course at a large southern university in the U.S. All students were voluntary participants, and data were collected on April 12, 2018. The instrument from the second pilot study was revised, with the number of questionnaire items being reduced from 69 to 57. The standard deviations of most items were around 1.5, an acceptable range. In addition, the researcher updated the technology-related statements from the perspective of communication and information technology because this dissertation explores a cutting-edge topic. The researcher also found that the information construct still had two dimensions.

Thus, a fourth pilot study only on the information construct was conducted using a sample of 48 undergraduate students enrolled in a spring session class at a large southern university in the U.S. Data were collected on April 18, 2018. Three items were deleted from the information

construct because of low loadings, and four items were added to make this construct have one factor. In addition, one item was deleted from the entertainment construct because of low loadings, and one item was added to hedonic values. In the background information section, three items were removed, and five items were added.

In summary, this study conducted four pilot tests. From the results of the previous pilot studies, this study found nineteen items for U&G motivations, fourteen items for Attitude and twelve items for e-Tourist Satisfaction. All constructs showed acceptable reliability and validity. However, the sample size of previous pilot studies was small. Therefore, convergent validity and discriminant validity were reexamined with a large sample in the main study.

Participants and Sampling Strategy

The population of pilot studies consists of undergraduate students who have experience using smartphones when they travel. The respondents were university students studying Parks Recreation and Tourism Management at a large southern university in the United States. A convenience sampling technique was employed to collect the data in the pilot studies. This non-probability sampling technique includes reliance on available subjects, for example university students in a classroom (Babbie, 2010). This sampling method involved no specific or clear criteria, only a population that is available and agrees to participate. The advantages of this method are its cost effectiveness, its expedited data collection, its ease and its availability, while its primary disadvantage involves research bias (Wimmer & Dominick, 2006; Saunders, Lewis & Thornhill, 2012).

The respondents of the main survey questionnaire were tourists in downtown Greenville, South Carolina, who indicated they experienced using smartphones on their trips. In this study, an intercept survey method was used to collect data. An intercept survey is a survey method

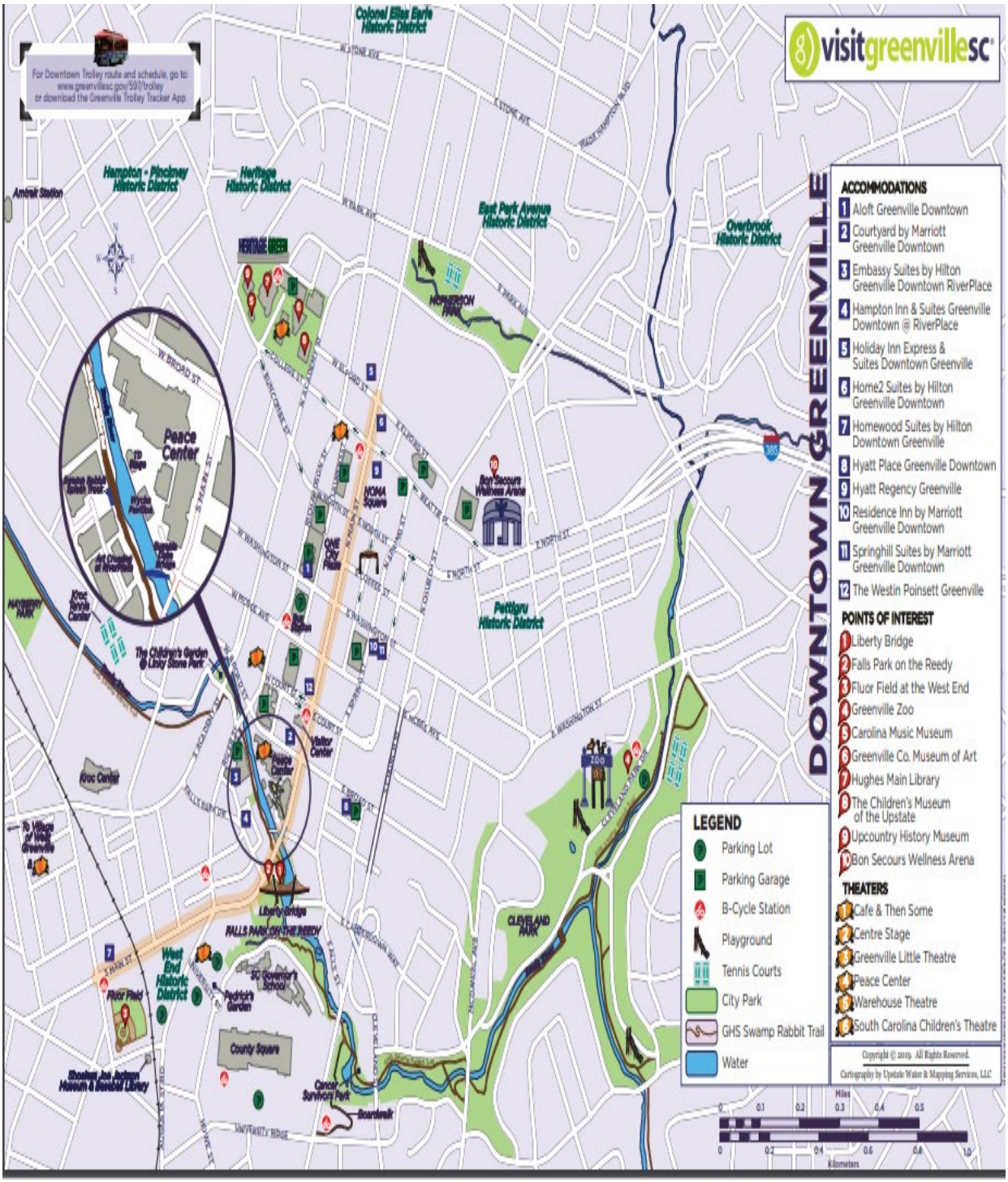
which is employed to obtain on-site feedback from respondents and is conducted in public places. Researchers approached potential respondents to ask them about their experiences at the specific location. The respondents could fill out the survey a questionnaire on paper or on a laptop (Dillman et al., 2009; Wimmer et al., 2006).

A research team of trained IRB approved members intercepted people in downtown Greenville (See Appendix B), asking four questions: 1) Are you visiting downtown Greenville from outside of Greenville county? 2) Are you using a smartphone during your trip? 3) Are you over 18 years old? 4) Will you please complete my questionnaire for this study? Individuals who answered "yes" to these four questions were invited to complete the questionnaire and if they agreed, the team members briefly explained the content of the study to each respondent. The response rate was calculated based on the responses that the research team received on the four screening questions.

In case a tourist group has non-smartphone users or a tourist group stays with residents, the research team did not distribute questionnaires to the group because non-smartphone users and residents could obstruct the measurement of group effect in a tourist group and then they could not be respondents for this study. The research team did not go into the restaurants or shopping mall or museum and it only asked people on the street of Downtown Greenville. If inclement weather occurs before data collection, the data collection would be cancelled for the day and restart it on the backup day as shown in the sampling schedule. If the inclement weather occurs during the data collection, the research team would stop collecting data and it would delay data collection. At that point the research team would seek shelter until the weather has passed and surveying could resume.

Due to the solicitation limitation at most of the attractions in downtown Greenville area, a permit was obtained from the City of Greenville to allow the research team to collect data in downtown area. According to the map of Downtown Greenville, there are 85 streets or intersections in the designated area. In order to make this sampling to be randomized, the research team used an online randomized generator to select 20 out of 85 streets or intersections randomly matching with the different two hours' time periods and different dates.

Before beginning the study, each team member completed the Collaborative Institutional Review Board Training Initiative (CITI) pertaining to research in the human and social sciences. By completing this training, every team member understood the data collection process and the pertinent regulations. Data collection for this study was conducted during the last two weeks of July and the first week of August in 2019: August 22 (Thursday), August 23 (Friday), August 24 (Saturday), August 25 (Sunday), August 26 (Monday), August 27 (Tuesday), August 28 (Wednesday), August 29 (Thursday), August 30 (Friday), August 31 (Saturday), September 01 (Sunday), September 02 (Monday), September 03 (Tuesday) and September 04 (Wednesday). The research team collected data on non-event days, wore Clemson T-shirts, and did not enter any restaurants or attractions during the surveys.



https://assets.simpleviewinc.com/simpleview/image/upload/v1/clients/greenville/2019_Downtown_Greenville_Map_FINAL_44aee62c-4280-4440-8678-018da007e97c.pdf

Figure 3.1 Downtown Greenville Map (Visitor Greenville SC, n.d.).

Study Site

Greenville is situated in the northwest corner of South Carolina in the United States. It is the largest city in the Greenville-Anderson-Mauldin Metropolitan Statistical Area ("Greenville", n.d.). According to the U.S. Bureau of Census (2018), the city of Greenville has earned a growing reputation in a variety of journals like *CNN Money*, which named it one of the Top 10 Fastest Growing cities in the United States, and *Bloomberg,* which ranked it the third strongest job market (Chritie, 2017). The City of Greenville was also ranked as one of the top 10 mid-sized cities where business is prospering by *Entrepreneur* (Klich, 2017), and its economic growth has been recognized by several other national journals.

A tourist zone and a hot spot for travelers, Downtown Greenville is well known for being a vibrant and dynamic area of the city (Schwietert, n.d.). As seen in Figure 5, it offers diverse entertainment, shopping areas, tourism attractions, art centers, restaurants, outdoor plazas and sport venues on the Main Street, thus providing travelers with various choices for a distinctive touristic experience (Visit Greenville SC, n.d.). Falls Park on the Reedy River is a unique tourism attraction including a 32-acre park with a 366-foot long bridge constructed along the Reedy River and its waterfall (Schwietert, n.d.). Situated on the South Main Street, Fluor Field is home to the Greenville Drive baseball team and a favorite spot of many sports fans. As tourists walk along Main Street, they can appreciate its many sculptures. In addition to dining, theaters, venues and attractions, Downtown Greenville also hosts several events and festivals every year (Visit Greenville SC, n.d.). Greenville has focused on creating a dynamic and sustainable downtown (Visit Greenville SC, n.d.), and with its street-side restaurants and comfortable sidewalks, it provides tourists and residents with a pedestrian-friendly environment (U.S. Census Bureau, 2018).

According to the S.C. Department of Parks, Recreation, and Tourism (SCPRT, 2018), tourism has grown at a rapid pace in Greenville county, attracting 4.5 million travelers, making it third in South Carolina with 16.8% of the total number of travelers visiting the state. Among these tourists, 3.6 million people were overnight travelers and 1.6 million-day trippers in 2018 (Visit Greenville SC, 2018**)**. According to the S.C. Department of Parks, Recreation, and Tourism in 2018, the Greenville county ranked fourth with $1.4 billion in direct travelers' expenditure, accounting for 13.8% of total for the state. This expenditure created 10.360 jobs, accounting for 15% of overall payroll salaries and 9.8 % of total jobs in South Carolina. Additionally, tourists to Greenville county were responsible for $53.2 million in state taxes (7.4% of the entire state taxes) and $ 21. 8 million in local taxes (5.2 % of the entire local taxes) (Visit Greenville SC, 2018).

The City of Greenville has an urban environment that has been bolstered by Information and Communication Technology (ICT) platforms and it can provide citizens and tourists with innovative services. The travel technology ecosystem of Greenville integrates its physical infrastructure into its ICT and socio-economic infrastructures to influence the convergent intelligence of the Greenville. For example, the cell service and WIFI are strong enough so that visitors can communicate with each other and Greenville specific travel websites are incorporated with ICT platforms such as Yelp and TripAdvisor (Gretzel, Werthner, Koo & Lamfus, 2015; Visit Greenville SC, n.d.).

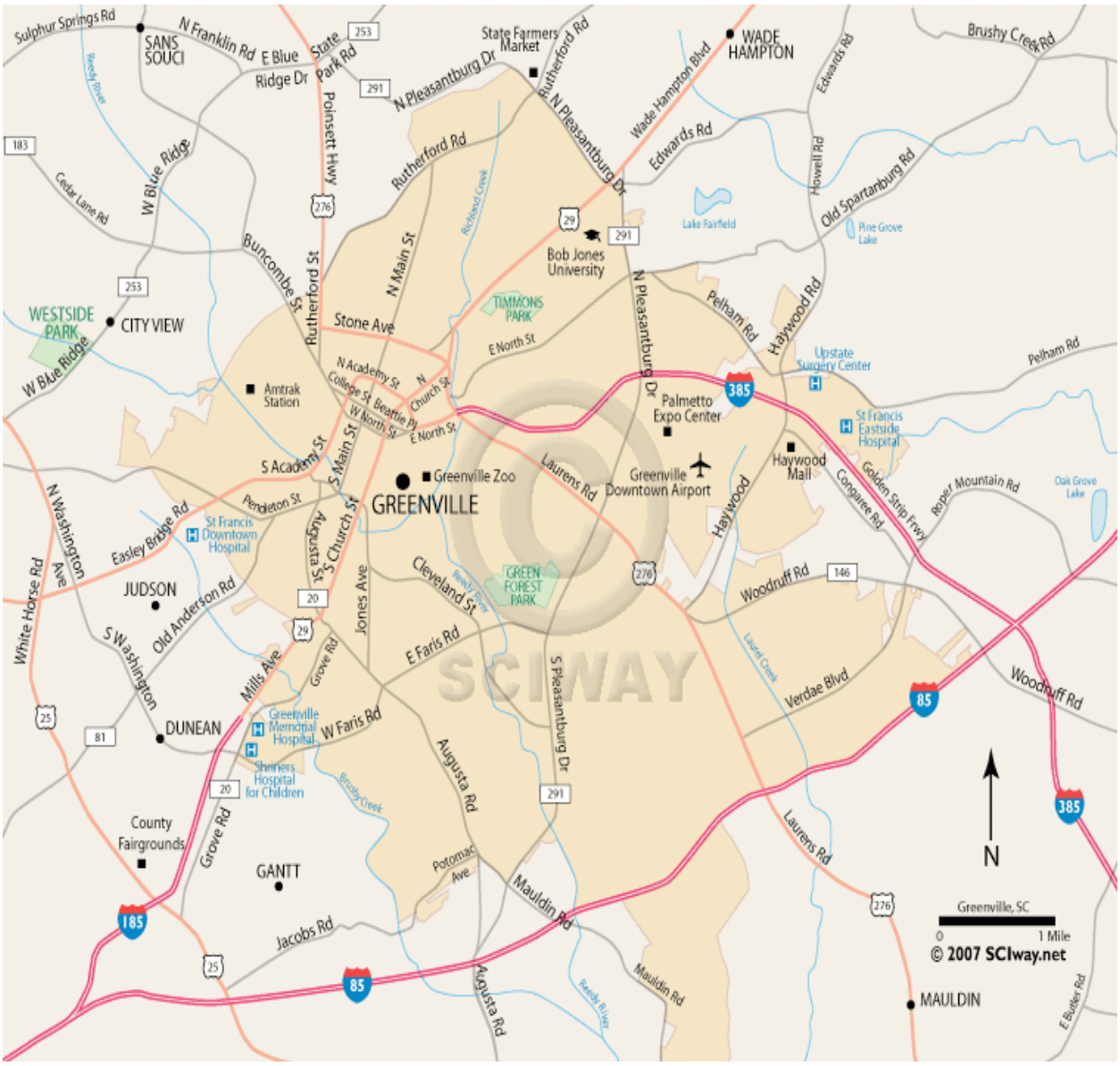


Figure 3.2 City of Greenville Map (City of Greenville, n.d.)

Survey Instrumentation

Based on the pilot studies, this survey instrument (See Appendix D) consists of 10 sections. All variables of the Uses and Gratifications Theory are measured with multiple items to improve reliability and validity by addressing diverse aspects of the constructs (Kline, 2011).

As seen in Table 3.1, *Social Interaction* is measured by four items, each using a seven-point Likert scale ranging from strongly disagree (1) to strongly agree (7) to assess responses.

Table 3.1: Items used to measure *Social Interaction (Independent Variable)*

During this trip, I use my smartphone……

SOI1	To share my experiences with others while I am in Greenville
SOI2	To give advice to other tourists while in Greenville
SOI3	To give my comments to others
SOI4	To participate in many discussions about Greenville

Sources: (Calder, Malthouse & Schaedel, 2009; Green, 2014; Foregger, 2008; Kang & Jung, 2014; Ko, Cho & Roberts, 2005; Leung and Wei, 2000; Sangwan, 2005; Tussyadiah, 2016; Wang, 2013; White & White, 2007)

As seen in Table 3.2, *Information* is measured by five items, each using a seven-point Likert scale ranging from strongly disagree (1) to strongly agree (7) to assess responses.

Table 3.2: Items used to measure *Information (Independent Variable)*

I use my smartphone during this trip……

INF1	To look for restaurant reviews from Yelp and Eater.
INF2	To arrange transportation (Uber and Lyft).
INF3	To look for interesting attractions to visit using TripAdvisor
INF4	To navigate around Greenville using Google map.
INF5	To keep up with events in Greenville.

Sources: (Calder et al., 2009; Green, 2014; Ko et al., 2005; Luo, 2002; Nambisan & Baron, 2007; Sangwan, 2005; Tussyadiah, 2016; Wang, 2013)

As seen in Table 3.3, *Entertainment* is measured by five items, each using a seven-point Likert scale ranging from strongly disagree (1) to strongly agree (7) to assess responses.

Table 3.3: Items used to measure *Entertainment (Independent Variable)*
I use my smartphone during this trip because…….

ENT1	I want to post pictures to social media.
ENT2	I want to record my memories by taking photos.
ENT3	I want to record my memories by taking videos.
ENT4	I want to share my trip photos.
ENT5	I want to share videos of my trips

Sources: (Foregger, 2008; Green, 2014; Luo, 2002; Okumus & Bilgihan, 2014; Nambisan et al., 2007; Tussyadiah, 2016; Wang, 2013; Wang & Fesenmaier, 2013)

As seen in Table 3.4, *Convenience* is measured by five items, each using a seven-point Likert scale, ranging from strongly disagree (1) to strongly agree (7) to assess responses.

Table 3.4: Items used to measure *Convenience (Independent Variable)*
During this trip, I use my smartphone……

CON1	To access information about my next destinations.
CON2	To get updated information about Greenville quickly.
CON3	To get updated information about Greenville easily.
CON4	To help facilitate changing travel plans fairly quickly in response to a given situation.
CON5	To have the flexibility to change travel plans fairly quickly.

Sources: (Buhalis & Jun, 2011; Chen, 2008; Dickinson, Ghali, Cherrett, Speed, Davies & Norgate, 2014; Ha, Kim, Libaque-Saenz, Chang & Park, 2015; Kim, Park & Morrison, 2008; Leung & Wei, 2000; No & Kim, 2014; Tussyadiah, 2016; Wang, 2013)

As seen in Table 3.5, *Affective Attitude* is measured by four items, each using a nine-point Likert scale ranging from strongly disagree (1) to strongly agree (9) to assess responses.

Table 3.5: Items used to measure *Affective Attitude (Mediating Variable)*

AA1	I think that using my smartphone is entertaining.
AA2	I think that using my smartphone is pleasant.
AA3	I think that using my smartphone is enjoyable.
AA4	I think that using my smartphone is appealing.

Sources: (Bearden, W., Netemeyer, R. & Haws, K.L., 2010; Cho, 2014; Bruner & Gordon, 2013; Gursory, Uysal, Ekinci & Baloglu, 2015; Ko et al, 2005; Luo 2002; Wang & Fesenmaier, 2013)

As seen in Table 3.6, *Cognitive Attitude* is measured by six items, each using a nine-point Likert scale ranging from strongly disagree (1) to strongly agree (9) to assess responses.

Table 3.6: Items used to measure *Cognitive Attitude (Mediating Variable)*

CA1	I think that using my smartphone is valuable.
CA2	I think that using my smartphone is effective.
CA3	I think that using my smartphone is practical.
CA4	I think that using my smartphone is beneficial.
CA5	I think that using my smartphone is helpful.
CA6	I think that using my smartphone is informative.

Sources: (Bearden, W. et al, 2010; Cho, 2014; Bruner et al., 2013; Gursory et al., 2015; Ko et al, 2005; Luo 2002; Wang & Fesenmaier, 2013)

As shown in Table 3.7, *Behavioral Attitude* is measured by four items, each using a nine-point Likert scale ranging from strongly disagree (1) to strongly agree (9) to assess responses.

Table 3.7: Items used to measure *Behavioral Attitude (Mediating Variable)*

BA1	I recommend smartphone use during this trip to other people.
BA2	I expect to use my smartphone during this trip.
BA3	I intend to use my smartphone during this trip.
BA4	I plan to use my smartphone during this trip.

Sources: (Bearden, W. et al, 2010; Cho, 2014; Bruner et al., 2013; Gursory et al., 2015; Kim et al., 2008; Ko et al, 2005; Luo 2002; Wang & Fesenmaier, 2013)

As shown in Table 3.8, *Utilitarian Satisfaction* is measured by four items, each using a seven-point Likert scale ranging from strongly disagree (1) to strongly agree (7) to assess responses.

Table 3.8: Items used to measure *Utilitarian Satisfaction (Dependent Variable)*

SAT (U)1	I am satisfied with the convenience to look for information on my smartphone.
SAT (U)2	I am sure that using a smartphone fits my travel style.
SAT (U)3	I am satisfied with the easy access to a wide selection of travel information via my smartphone.
SAT (U)4	I made the correct decision to use my smartphone to get information whenever I want.

Sources: (Bearden, W. et al, 2010; Chang & Park, 2015; Dickinson et al, 2014; Gursory et al., 2015; Ha et al., 2015; No et al., 2014: Lee, Lee & Lee, 2014; Dolnicar, Coltman & Sharma, 2015)

As shown in Table 3.9, *Hedonic Satisfaction* is measured by four items, each using a seven-point Likert scale ranging from strongly disagree (1) to strongly agree (7) to assess responses.

Table 3.9: Items used to measure *Hedonic Satisfaction (Dependent Variable)*

SAT(H)1	I have fun with my smartphone during this trip.
SAT(H)2	I find using my smartphone during this trip to be enjoyable.
SAT(H)3	I find using my smartphone during this trip to be exciting.
SAT(H)4	I feel comfortable using my smartphone during this trip.

Sources: (Bearden, W. et al, 2010; Green, 2014; Foregger, 2008; Gursory et al., 2015; Kang & Jung, 2014; Ko, Cho & Roberts, 2005; Okumus & Bilgihan, 2014; Nambisan et al., 2007; Wang & Fesenmaier, 2013; Lee, Lee & Lee, 2014; Dolnicar, Coltman & Sharma, 2015)

As shown in Table 3.10, *Overall Satisfaction* is measured by four items, each using a seven-point Likert scale ranging from strongly disagree (1) to strongly agree (7) to assess responses.

Table 3.10: Items used to measure *Overall Satisfaction (Dependent Variable)*

SAT(O)1	Using smartphones during this trip was an excellent idea.
SAT(O)2	I feel very good about the information and communication technology service on my smartphone.
SAT(O)3	Using a smartphone for this trip is very helpful.
SAT(O)4	Overall, I was pleased with my smartphone use during this trip.

Sources: (Bearden, W. et al, 2010; Gursory et al., 2015; Ha et al., 2015; Im & Hancer, 2014; Lee, Lee & Lee, 2014; Menor & Roth, 2007; No & Kim, 2014; Dolnicar, Coltman & Sharma, 2015)

Data Analysis

Multilevel Linear Modeling (MLM)

Multilevel Linear Modeling (MLM) is a statistical method well suited for analyzing the data obtained here because the primary goal of this study is to examine smartphone use by

tourists as a group while also considering the influence of each member of the groups, with respect to the travel behavior and travel decision-making process. According to Kashy and Kenny (2000), group membership needs to be examined via data analysis techniques identifying the interdependence of human behavior. Moreover, single level data analyses such as Multivariate Analysis of Variance (MANOVA) and Multiple Regression have several limitations. One of the conventional issues involves aggregation bias, which refers to incorrectly estimated standard errors and heterogeneity of regression. This bias is caused by disparate meanings of variables at various levels. For instance, academic performance can be affected differently by the same element at the individual level (student) and the group level (school). Multilevel Linear Modeling (MLM) addresses this problem by separating the relationships into within groups and between groups. The standard error will incorrectly be estimated if every individual case is regarded as independent as it is actually nested within the group membership (Bryk & Raudenbush, 1988). Consequently, the research design will be ineffective, demonstrating a lack of insight of the role of the nested variables (Sibthorp, Witter, Wells, Ellis & & Voelkl, 2004). Therefore, MLM employs the concept of inter-class correlation to address this issue.

MLM has frequently been utilized in the field of education research (Kim & Sax, 2011), primarily to evaluate academic performance at the individual level and at the group level (Snijders & Bosker, 2012). Early researchers tended to disregard the school as a sociological unit, leading to incorrect statistical inferences (Raudenbush & Bryk, 1986). MLM addresses this problem by permitting the parameters at one level to be the results for the following level. Lee (2000), for example, explored the influence of the features and traits of the formation and organization of secondary schools on students' academic achievement using MLM. At the first

stage, the dependent variables were estimated at the individual (student) level to obtain the interclass correlation (ICC), which refers to the between school variance/ the total variance (between school variance + within school variance). Next, individual student traits were examined at Level 1, whereas at the third stage, the outcome of the Level 1 Model was investigated as a functional component of school traits at Level 2. In more recent research**,** Kim and Sax (2011) explored the strength of the association between student–professor interaction and why and whether university majors influence student cognitive development. The dependent variables were measured at Level 1 (student) and Level 2 (department). The researchers could investigate the cross-level interaction, leading to a better outcome and more precise statistical estimations by employing MLM.

MLM is also a statistical method widely used in the business (marketing) and organizational behavior areas. According to Hofmann (1997), organizations generally comprise nested structures of three levels, the individual level, company level and situational level. Gavin and Hofmann (2002) explored the associations among task significance, leadership and resentment at the Individual Level (Level 1) and the Group Level (Level 2). In their research, task significance was measured at the Individual Level (Level 1), while leadership was measured at the Group Level (Level 2), task significance functioning as a Level 1 predictor, leadership as a Level 2 predictor and resentment as a Level 1 outcome. The findings pointed out that task significance significantly affected resentment at both levels and leadership significantly affected resentment at Level 2. These researchers also evaluated the cross-level interactions.

In the leisure and recreation context, Heo, Lee, McCormick and Pedersen (2010) explored how serious leisure and flow influenced subjective well-being among senior citizens. They argued that the benefit of utilizing MLM in their research lay in ascertaining and measuring

the individual differences in two predictors (flow and serious leisure). Demographic variables were estimated at Level 1, and serious leisure and flow at Level 2. MLM aided them in establishing more accurate relationships among the variables. More recently, in the travel and tourism context, Coskun (2015) explored the factors affecting the intention to buy local food by group travelers in Charleston, SC and addressed their decision-making processes by employing MLM. Attitude, gender, importance and intention were at Level 1, and group size was at Level 2 in her study. Moreover, Cho (2017) used MLM to measure group effects of sport tourists, developing a valid and reliable scale in sport tourists' nostalgia. In his research, attitude and nostalgia were Level 1 and group size was Level 2. Although MLM has been introduced and used in other academic disciplines, its application in travel and tourism has been limited.

The equations used in MLM differ from other linear regression models.

Specifically, the regression equation for the Level 1 Model is:

$$Yij = \beta 0j + \beta 1jXij + rij$$

where "Yij is the outcome measure for the individual in group j, Xij is the value on the predictor for individual i in group j, β0j and β1j are intercepts and slopes estimated separately for each group (as noted by the subscript j), and rij is the residual" (Hofmann, 1997, pp.727).

And the regression equation for the Level 2 Model is:

$$\beta 0j = \gamma 00 + \gamma 01Gj+U0j$$

$$\beta 1j = \gamma 10 + \gamma 11Gj+U1j$$

where "Gj is a group level variable, γ00 and γ10 are the second stage intercept terms, γ01 and γ11 are the slopes relating Gj to the intercept and slope terms from the level-l equation, and U0j

and U1j are the level-2 residuals. Depending on the pattern of variance in the level-l intercepts and slopes, different level-2 models would be required" (Hofmann, 1997, pp.728).

Multilevel Structural Equation Modeling

Data analysis for the main study is generally categorized into two parts: the measurement model and the structural model. Before analyzing these models, data screening is conducted to eliminate statistical outliers using Mahalanobis' Distance. Moreover, normality is assessed by verifying the z-score of skewness and kurtosis utilizing the Statistical Package for Social Science 21.0. This study checks multivariate normality using Mardia's coeffient, and Satorra-Bentler scaled statistic (S-B $x2$) and robust standard errors are helpful and effective for addressing non-normality in large samples (Bentler, 2005). Thus, they can be employed to construe the results of data analyses (Satorra & Bentler, 1994) when normal distribution is violated.

Measurement Model

Confirmatory factory analysis (CFA) was conducted on ten constructs employing EQS 6.3 to evaluate each measurement model in the main data analysis, and multilevel CFA was used to investigate the effects of group. Since single-level CFA cannot explain group effects, multilevel CFA needs to be conducted to examine group effects. Since most tourists travel with family members or friends rather than alone, they share common traits or features with the members of their group or team. This can be seen as a hierarchical structure because each person is likely to be nested or dependent within the group.

This hierarchically structured data need to be analyzed utilizing multilevel linear modeling (MLM) because the single level approach may create biased statistical results due to the shared common traits and features within groups (Byrne, 2006; Bickel, 2012; Tabachnik &

Fidel, 2013). To avoid statistical biases, multilevel CFA is used to consider differences among tourist groups and differences among individual tourists. That is, there are two observed variables: group tourists (travel group) and individual tourists (individual observation).

To analyze multilevel CFA, an Intra-class Correlation Coefficient (ICC) needs to be investigated to verify if multilevel CFA is required. The ICC is the result when the between group variances are divided by the total variances (sum of the between group variances and the within group variances) (Muthén, 1989, 1991) using the equation below:

$$ICC = \frac{\sigma_B^2}{\sigma_B^2 + \sigma_W^2}$$

Where:

σB 2 = between group variance

σW 2 = within group variance

Multilevel analysis is indicated if the ICC values are larger than 0.1. In addition, an ICC value of .05 is considered small; one of .10 is regarded as a medium value, and an ICC value of .20 is regarded as large (Muthén,1997; Preacher, Zhang & Zyphur, 2011).

The CFA for model estimation was conducted utilizing EQS 6.3 with robust maximum likelihood estimation. Absolute fit and comparative fit indices will be employed to assess goodness of fit. First, the chi-square ($x2$) statistic, which is evaluated to examine overall model fit for the absolute fit, is affected by sample size. It can be concluded that the observed and hypothesized model stay the same when the chi-square values accept the null hypothesis ($p>0.05$). This research employed the Root-Mean-Square Error of Approximation (RMSEA) and the Standardized Root Mean Squared Residual (SRMR). Hu and Bentler (1999) suggested that

RMSEA values of less than 0.06 could be considered a good fit, while Browne and Cudeck (1992) indicated that for a reasonable fit, the RMSEA value should be less than 0.08, while Hu et al. (1999) suggested the good fit of an SRMR value is less than 0.08. Second, Non-Normed Fit Indices (NNFI) and Comparative Fit Index (CFI) will be employed for the comparative fit indices in this study. According to Marsh and Hau (1996), NNFI and CFI values larger than 0.9 indicate an acceptable model fit.

This research conducted reliability and validity tests for multilevel CFA, assessing convergent validity and discriminant validity. Convergent validity is defined as "the extent to which indicators of a specific construct converge or share a high proportion of variance in common" (Hair, Black, Babin & Tatham, 2006, p.771). This research used AVE values and each indicator's coefficient on each construct to examine convergent validity. Discriminant validity is defined as "the extent to which a construct is truly distinct from other constructs" (Hair et al., 2006, p.771). AVEs of each construct and the squared correlations among each factor were used here to examine discriminant validity.

Structural Model

Based on the result from the CFA, this study examined the relationship among the Uses and Gratifications Motivations (motivation of using smartphone by tourists), Attitude toward smartphone use by tourists and e-Tourist Satisfaction (satisfaction with smartphone use by tourists) using EQS 6.3. The Uses and Gratifications Motivations, for using smartphone by tourists include the four motivations (constructs) of Social Interaction, Entertainment, Information and Convenience, while Attitude toward smartphone use by tourists represents three constructs: Cognitive, Affective, and Behavioral. Finally, e-Tourist Satisfaction includes three constructs: Utilitarian Satisfaction, Hedonic Satisfaction and Overall Satisfaction.

MLM was used here to examine the relationships among constructs utilizing EQS 6.3. because multilevel regression only illustrates the relationships between factors. According to Farmer (2002), structural equation models (SEM) and covariance structures cannot be investigated by multilevel regression. For this reason, this research employed multilevel SEM to examine the hypothesized model, meaning Level One (Individual Level) and Level Two (Group Level) models would be developed and examined in this study.

This study analyzed a multilevel mediation in the structural equation model: the Attitude construct mediates the relationship between U&G Motivations (independent variable or predictors) and e-Tourist Satisfaction (dependent variable) in the structural model. Moreover, the relationships among constructs was tested and examined based on the theoretical background discussed in the literature review. Mediators are defined as "variables that stand sequence between a predictor and some variable on which it has an effect and that account, in whole or in part, for that effect" (Cohen, Cohen, West & Aiken, 2003, p. 676)". Mediation is a hypothesized causal chain in which one variable affects a second variable that, in turn, affects a third variable. Furthermore, according to Hair, Black, Anderson and Tatham (2006), a mediating effect refers to the "effect of a third variable/construct intervening between two other related constructs (p. 844)." The mediation effect is the same as an indirect effect. The Sobel test was employed in this study to test for mediation.

The multilevel analysis in this study demonstrates two separate statistical results and simultaneous estimates at an Individual Level (Level 1) and a Group Level (Level 2). Level-1 effects refer to individual differences concerning group means, while Level-2 effects are grounded in variation in the group means. Estimates of error can be explained by the variation of individuals within groups at Level 1, whereas they can be illustrated by the variation between

groups at Level 2. Thus, hierarchically structured data need to be examined utilizing multilevel analysis, and researchers are advised to interpret results at the Individual Level and Group Level separately to avoid biased estimates (regression coefficients and standard errors) (Bickel, 2012; Tabachnik & Fidel, 2013).

CHAPTER FOUR

RESULTS

This chapter discusses the findings from the statistical analyses of this study, beginning with the descriptive statistics followed by multilevel Confirmatory Factor Analysis (measurement model) and concluding with the multilevel structural equation model (path analysis).

Characteristics of the Sample Data and Data Screening

As seen in Table 4.1, the research team spent three weeks collecting data at seventeen locations over different time periods in downtown Greenville, SC. On May 31, the researcher and his supervisor selected and checked the final candidate sampling locations. The researcher then spent one day with the remaining team members explaining the data collection protocol and manual to them in downtown Greenville. The researchers documented the following items--participation, ineligibility, and refusal – and set up a visible line for each sampling zone. The researchers then selected the right or left side of the street and approached potential respondents for a specified time period before moving to the other side of the street to collect data, thus ensuring a randomized, systematic collection process.

The survey was self-administered. The researchers made eye contact with and courteously approached the people; they did not approach those wearing uniforms or delivering food because they could be employees rather than visitors, nor did they approach people walking across the street to ensure a systematic process. The researchers waited until a participant had completed a questionnaire before distributing another one. If a number of people declined to participate in the survey, the researcher took a short break before resuming the data collection process. All respondents appeared to understand the content of the questionnaire; thus, the

researchers believe all of the items provided information appropriate for the study. In addition, the research team made attempts to balance the proportion of weekdays and weekend days and provided each respondent with a ball-point pen as an incentive. The questionnaires were distributed only to the groups that included tourists in order to ascertain their opinions—both comments and complaints—concerning downtown Greenville.

The research team collected 425 responses from individuals travelling alone and in groups from 17 locations in downtown Greenville for a response rate of 84.5% (See Table 4.1). As it is difficult for one individual to represent an entire group, the research team attempted to collect data from more than one person in a group. Of the 185 groups surveyed, 60 were represented by one member and 125 by more than one person in the travel party.

Of 425 responses collected, thirty-three were not complete and, thus, were not used in the data analysis; neither were the five responses determined to be extreme outliers based on the results of Mahalanobis distance analysis. The remaining 387 responses were examined to test the research models.

Table. 4.1 Results of Data Collection

Date Time Conducted	Locations	Number Intercepted/ Number Refused	Not eligible/ Number of Respondents
Aug 22 (Thursday) 2:00 pm-6:30 pm	Caviar & Banana Anthropologie	26/6	2/ 18
Aug 23 (Friday) 3:00 pm-8:00 pm	City Hall The Westin Hotel	34/9	0/ 25
Aug 24 (Saturday) 10:00 am-3:00 pm	Spill-The-Bean Pavilion	31/5	0/ 26
Aug 25 (Sunday) 4:00 pm-9:00 pm	Falls Park on the Reedy (Bistro) Falls Park on the Reedy (Ground)	35/3	2/ 30
Aug 26 (Monday) 2:00 pm-6:30 pm	Spill-The-Bean Starbucks	21/2	0/ 19
Aug 27 (Tuesday) 10:00 am-3:00 pm	Hyatt Hotel Coffee & Brown Street	25/5	0/ 20
Aug 28 (Wednesday) 10:30 am-3:00 pm	The Westin Hotel Peace Art Center	25/3	1/ 21
Aug 29 (Thursday) 5:30 pm-9:00 pm	Cooks Station & Smoke Fountain	25/4	0/ 21
Aug 30 (Friday) 4:00 pm-8:00 pm	Fluor Field Bridge	38/4	0/ 34
Aug 31 (Saturday) 2:00 pm-7:00 pm	Falls Park on the Reedy (Ground) Falls Park on the Reedy (Bridge)	57/8	2/ 47
Sep 01 (Sunday) 1:00 pm-6:00 pm	Starbucks Falls Park on the Reedy (Bistro)	52/7	0/ 45
Sep 02 (Monday) 10:30 am-2:30 pm	Caviar & Banana Anthropologie	46/4	0/ 42
Sep 03 (Tuesday) 12:00 pm-4:30 pm	Fluor Field Peace Art Center	40/5	0/ 35
Sep 04 (Wednesday) 1:00 pm-5:30 pm	Hyatt Hotel Coffee & Brown Street	48/6	0/ 42
Total	17 locations	503 Intercepted/ 71 Refused	7 N.E. people/425 respondents (84.5%)

Note: Research team collected the data at two different locations each day.
"Not Eligible" includes tourists who were not using a smartphone on this trip or who were younger than18 years old; 425*100/503 of the respondents who were potentially eligible and agreed to complete the questionnaires did so for a response rate of 84.5%

Descriptive Statistics

Of the 387 respondents, 47.5% were male and 52.5% female as shown in Table 4.2. As can be seen in Table 4.3, the ages ranged from 18 to 20 (23.5%), 21 to 30 (23.0%), 31 to 40 (18.4%), 41 to 50 (18.1%), 51 to 60 (11.9%), 61 to 70 (3.9%), 71 to 80 (1.1 %) and over 80 (0 %).

Table 4.2 Frequency Distribution of Smartphone Use by Tourists by Gender

Gender	N	Percent
Male	184	47.5
Female	203	52.5
No response	0	0
Total	387	100.0

Table 4.3 Frequency Distribution of Smartphone Use by Tourists by Age

Age	N	Percent	Cumulative Percent
18-20	91	23.5	23.5
21-30	89	23.0	46.5
31-40	71	18.4	64.9
41-50	70	18.1	83.0
51-60	46	11.9	94.9
61-70	14	3.9	98.8
71-80	4	1.1	99.9
Over 80	0	0	99.9
No response	2	0.3	100.0
Total	387	100.0	100.0

As for race (Table 4.4), White/ Caucasian reported the highest percentage (79.5%), followed by Black/African American (13.4%), Asian (2.8%) and Hispanic/Latino (2.3%). Based on the purpose of the trip (Table 4.5), leisure and recreational travelers comprised 77.0%, business tourists 12.4% and tourists with multiple purposes 9.8%.

Table 4.4 Frequency Distribution of Smartphone Use by Tourists (Respondents) by Race

Race	N	Percent
White/Caucasian	308	79.5
Black/African American	52	13.4
Asian	11	2.8
Hispanic/Latino	9	2.3
American Indian/Native American	0	0
Native Hawaiian and Other Pacific Islander	0	0
Other	0	0
No Response	7	1.9
Total	387	100.0

Table 4.5 Frequency Distribution of Smartphone Use by Tourists by Purpose of Trip

Purpose of Trip	N	Percent
Leisure Vacation/Recreation	298	77.0
Business Trip	48	12.4
Combination	38	9.8
No response	3	0.8
Total	387	100.0

As shown in Table 4.6, most tourists stayed in downtown Greenville for three days, with day trippers reporting the highest percentage at 27.4%, followed by those staying two nights at 23.7%, one night (21.2%), three nights (15.2%) and four nights or more (12.4%).

Table 4.6 Frequency Distribution of Smartphone Use by Tourists by Length of Stay at the Destination

Duration of Stay at the Destination	N	Percent	Cumulative Percent
Day Trip	106	27.4	27.4
2 days (1 overnight)	82	21.2	48.6
3 days (2 overnight)	92	23.7	72.3
4 days (3 overnight)	59	15.2	87.5
5-7 days (4-6 overnight)	36	9.3	96.8
Longer than a week	9	2.3	99.1
No response	3	0.9	99.9
Total	387	100.0	100.0

The data collected from the respondents are classified by the number of people in their groups. Of the 185 groups, 60 were comprised of one person (15.5%), 83 of two people (42.8%), 24 of three people (18.6%), 12 of four people (12.4%), 4 of five people (5.2%), 1 of six people (1.6%) and 1 of 15 people (3.9%) as seen in Table 4.7.

Table 4.7 Frequency Distribution of Smartphone Use by Tourists by Group Size

Group Size	Number of Group/Individual	Percent (Individual)
1	60/60	15.5
2	83/166	42.8
3	24/72	18.6
4	12/48	12.4
5	4/20	5.2
6	1/6	1.6
15	1/15	3.9
No response	0	0
Total	185/387	100.0

Note: The group size refers to the number of people (tourists) in the group when the researchers approached them at a specific location.

Most respondents who participated the survey were traveling in groups, such as family (33.0%), friends (26.1%), family and friends (20.4%) and others (4.9%), while 15.5% of respondents made the trip alone (Table 4.8). Table 4.9 shows that first-time visitors comprised 31.5 % of the respondents, while repeat visitors comprised 68.0 %. The highest percentage of smartphone users were respondents who had used them for 7 to 8 years at 33.9%, followed by those with 5 to 6 years of use at 20.9 %, 9 to10 years of use at 16.8 %, 11 years of user at 15.2% and less than 4 years of user at 13.2% (Table 4.10).

Table 4.8 Frequency Distribution of Smartphone Use by Tourists by Description of Travel Group

Description of Travel Group	N	Percent
Family	128	33.0
Friends	101	26.1
Family and Friends	79	20.4
Solo	60	15.5
Others	19	4.9
No response	0	0
Total	387	100.0

Table 4.9 Frequency Distribution of Smartphone Use by Tourists by Previous Visit

First-Time Visit/Repeat	N	Percent
First Time	122	31.5
Repeat	263	68.0
No response	2	0.5
Total	387	100.0

Table 4.10 Frequency Distribution of Smartphone Use by Tourists by Years of Use

Years of Smartphone Use	N	Percent	Cumulative Percent
Less than 3 years	8	2.1	2.1
3-4 years	43	11.1	13.2
5-6 years	81	20.9	34.1
7-8 years	131	33.9	68.0
9-10 years	65	16.8	84.8
11 years or more	59	15.2	100.0
No response	0	0	100.0
Total	387	100.0	100.0
Mean	7.5	Mode	7.5
Median	7.5	Std. Deviation	1.2

As shown in Table 4.11, almost half of the respondents reported the highest level of skill in smartphone use (47.8 %), followed by the second skill level (21.1%), the third skill level (18.8%) and the fourth skill level and others (11%). These results indicate that most of the respondents (87.7%) were familiar with smartphones and they were proficient in their use. As can be seen in Table 4.12, 58% of the respondents answered that they felt most comfortable using their smartphones on this trip (58.1 %), followed by the second level of comfort (23.5 %), the third level (10.3 %) and the last remaining level (8%). These results suggest most of the respondents (91.9%) felt comfortable using their smartphones on this trip. As can be seen in Table 4.13, 68% of the respondents answered that they would strongly recommend revisiting this destination, followed by 18.6 %, and followed by 7.0%. These results indicate that most of the respondents (94.4%) strongly recommended revisiting downtown Greenville.

Table 4.11 Frequency Distribution of Smartphone Use by Tourists by Level of Skill of Smartphone Use

Level of Skill	N	Percent	Cumulative Percent
1 (Least Skilled)	1	0.3	0.3
2	1	0.3	0.6
3	3	0.8	1.4
4	3	0.8	2.2
5 (Neutral)	13	3.4	5.6
6	24	6.2	11.8
7	73	18.8	30.6
8	82	21.1	51.7
9 (Most Skilled)	185	47.8	99.5
No response	2	0.5	100.0
Total	387	100.0	100.0
Mean	8.0	Mode	9.0
Median	8.0	Std. Deviation	1.3

Table 4.12 Frequency Distribution of Smartphone Use by Tourists by Comfortability of Smartphone Use

Level of Comfortability	N	Percent	Cumulative Percent
1 (Least Comfortable)	2	0.5	0.5
2	1	0.3	0.8
3	1	0.3	1.1
4	3	0.8	1.9
5 (Neutral)	10	2.6	4.5
6	13	3.4	7.9
7	40	10.3	18.2
8	91	23.5	41.7
9 (Most Comfortable)	225	58.1	99.7
No response	1	0.3	100.0
Total	387	100.0	100.0
Mean	8.2	Mode	9.0
Median	9.0	Std. Deviation	1.2

Table 4.13 Frequency Distribution of Smartphone Use by Tourists by Recommendation of Destination

Recommendation	N	Percent	Cumulative Percent
1 (Do Not Recommend)	1	0.3	0.3
2	1	0.3	0.6
3	1	0.3	0.9
4	5	1.4	2.3
5 (Neutral)	6	1.6	3.9
6	7	1.8	5.7
7	27	7.0	12.7
8	73	18.6	31.3
9 (Strongly Recommend)	266	68.7	100.0
No response	0	0.0	100.0
Total	387	100.0	100.0
Mean	8.46	Mode	9.0
Median	9.0	Std. Deviation	1.1

Before this study analyzes multilevel SEM, it provides readers with latent factors and individual items (labels) which are used in the following analysis process (Table 4.14). Also, Table 4.15 demonstrates descriptive statistics for scaled variables.

Table 4.14 Latent Factors and Items

Latent Factors and Item Labels		Item Descriptions
Social Interaction (F1)	SOI1	During this trip, I use my smartphone to share my experiences with others while I am in Greenville.
	SOI2	During this trip, I use my smartphone to give advice to other tourists while in Greenville.
	SOI3	During this trip, I use my smartphone to give comments to others.
	SOI4	During this trip, I use my smartphone to participate in many discussions about Greenville.
Information (F2)	INF1	I use my smartphone during this trip to look for restaurant reviews on Yelp and Eater.
	INF2	I use my smartphone during this trip to arrange transportation (Uber and Lyft).
	INF3	I use my smartphone during this trip to look for interesting attractions to visit using TripAdvisor.
	INF4	I use my smartphone during this trip to navigate around Greenville using Google Maps.
	INF5	I use my smartphone during this trip to keep up with events in Greenville.
Entertainment (F3)	ENT1	I use my smartphone during this trip because I want to post pictures to social media.
	ENT2	I use my smartphone during this trip because I want to record my memories by taking photos.
	ENT3	I use my smartphone during this trip because I want to record my memories by taking videos.
	ENT4	I use my smartphone during this trip because I want to share my trip photos.
	ENT5	I use my smartphone during this trip because I want to share videos of my trip.
Convenience (F4)	CON1	During this trip, I use my smartphone to access information about my next destinations.
	CON2	During this trip, I use my smartphone to obtain updated information about Greenville quickly.
	CON3	During this trip, I use my smartphone to obtain updated information about Greenville easily.

	CON4	During this trip, I use my smartphone to help facilitate changing travel plans fairly quickly in response to a given situation.
	CON5	During this trip, I use my smartphone to have the flexibility to change travel plans fairly quickly.
Affective Attitude (F5)	AA1	I think that using my smartphone during this trip is entertaining.
	AA2	I think that using my smartphone during this trip is pleasant.
	AA3	I think that using my smartphone during this trip is enjoyable.
	AA4	I think that using my smartphone during this trip is appealing.
Cognitive Attitude (F6)	CA1	I think that using my smartphone during this trip is valuable.
	CA2	I think that using my smartphone during this trip is effective.
	CA3	I think that using my smartphone during this trip is practical.
	CA4	I think that using my smartphone during this trip is beneficial.
	CA5	I think that using my smartphone during this trip is helpful.
	CA6	I think that using my smartphone during this trip is informative.
Behavioral Attitude (F7)	BA1	I recommend smartphone use during this trip to other people.
	BA2	I expect to use my smartphone during this trip.
	BA3	I intend to use my smartphone during this trip.
	BA4	I plan to use my smartphone during this trip.
Utilitarian Satisfaction (F8)	UTIL1	During this trip, I am satisfied with the convenience to look for information on my smartphone.
	UTIL2	I am sure that using a smartphone during this trip fits my travel style.
	UTIL3	During this trip, I am satisfied with the easy access to a wide selection of travel information via my smartphone.
	UTIL4	During this trip, I made the correct decision to use my smartphone to get information whenever I want.
Hedonic Satisfaction (F9)	HED1	I have fun with my smartphone during this trip.
	HED2	I find using my smartphone during this trip to be enjoyable.
	HED3	I find using my smartphone during this trip to be exciting.
	HED4	I feel comfortable using my smartphone during this trip.

Overall Satisfaction (F10)	SAT1	Using smartphones during this trip was an excellent idea.
	SAT2	I feel very good about the information and communication technology service on my smartphone.
	SAT3	Using a smartphone for this trip is very helpful.
	SAT4	Overall, I was pleased with my smartphone use during this trip.

Descriptive Statistics for Scaled Variables are shown in Table 4.15.

Table 4.15 Means and Standard Deviations of Items

Item Label	Mean	Std. Deviation	Item Label	Mean	Std. Deviation
SOI1	5.42	1.54	CA1	7.67	1.68
SOI2	4.07	1.27	CA2	7.69	1.58
SOI3	4.57	1.42	CA3	7.61	1.38
SOI4	4.16	1.50	CA4	7.78	1.66
INF1	6.07	1.39	CA5	7.79	1.56
INF2	5.07	1.51	CA6	7.78	1.45
INF3	5.99	1.41	BA1	7.38	1.53
INF4	6.27	1.10	BA2	7.49	0.95
INF5	5.14	1.56	BA3	7.37	1.22
ENT1	5.37	1.67	BA4	7.75	1.17
ENT2	6.20	1.34	UTIL1	6.10	1.09
ENT3	5.43	1.52	UTIL2	5.90	1.44
ENT4	5.70	1.65	UTIL3	6.03	1.17
ENT5	5.12	1.67	UTIL4	6.02	1.19
CON1	5.47	1.50	HED1	5.73	1.32
CON2	5.46	1.54	HED2	5.69	1.31
CON3	5.56	1.43	HED3	5.20	1.42
CON4	5.38	1.50	HED4	5.82	1.32
CON5	5.40	1.55	SAT1	5.96	1.04
AA1	7.18	1.28	SAT2	6.07	1.04
AA2	7.19	1.47	SAT3	6.14	0.96
AA3	7.21	1.67	SAT4	6.05	1.07
AA4	7.03	1.59			

Note: Three attitude constructs (AA, CA and BA) are measured, each using a nine-point Likert scale ranging from strongly disagree (1) to strongly agree (9) to assess responses, while other constructs are measured, each using a seven-point Likert scale ranging from strongly disagree (1) to strongly agree (7) to assess responses.

Multilevel Measurement Model

To conduct multilevel CFA, Model-based Intraclass correlations (ICC) values are examined to identify significant nesting at the group level and to detect the interdependency of group responses (Kashy & Kenny 2000; Kenny, Kashy & Cook, 2006). Table 4.16, which lists the results for the model-based Intraclass Correlations, shows that the ICC values of most variables are larger than 0.1, indicating substantial group nesting (Muthén 1997). Thus, the data in the model need to be analyzed at both the individual (Level 1) and group level (Level 2). The ICC value of SOI1 is relatively low while the ICC values of SOI2, SOI3, and SOI4 are very high, meaning that the group marginally affected the individual responses to SOI1, whereas the group substantially influenced the individual responses to SOI2, SOI3, and SOI4.

Table 4.16 Intraclass Correlation Values of All Variables

Model-Based Intraclass Correlations		
SOI1 0.072	AA1 0.194	UTIL1 0.125
SOI2 0.289	AA2 0.193	UTIL2 0.193
SOI3 0.278	AA3 0.229	UTIL3 0.138
SOI4 0.324	AA4 0.231	UTIL4 0.092
INF1 0.146	CA1 0.182	HED1 0.206
INF2 0.217	CA2 0.164	HED2 0.317
INF3 0.123	CA3 0.146	HED3 0.375
INF4 0.085	CA4 0.176	HED4 0.195
INF5 0.122	CA5 0.161	SAT1 0.195
ENT1 0.075	CA6 0.161	SAT2 0.137
ENT2 0.055	BA1 0.131	SAT3 0.089
ENT3 0.122	BA2 0.089	SAT4 0.146
ENT4 0.092	BA3 0.120	CON1 0.183
ENT5 0.154	BA4 0.102	CON2 0.095
		CON3 0.151
		CON4 0.154
		CON5 0.170

Note. SOI: Social Interaction; INF: Information; ENT: Entertainment; CON: Convenience; AA: Affective Attitude; CA: Cognitive Affective; BA: Behavioral Attitude; UTIL: Utilitarian Satisfaction; HED: Hedonic Satisfaction; SAT: Overall Satisfaction

This study checked multivariate normality based on Mardia's (1985) multivariate kurtosis coefficients using the software EQS 6.3. According to the normality test, the data were not normally distributed, and thus, the Satorra-Bentler scaled statistic (S-B $x2$) (Satorra & Bentler, 1994) and robust standard errors (Bentler & Dijkstra, 1985) were used to interpret the results of Structural Equation Model analyses.

Results of the initial multilevel CFA to check model fit indices, the goodness of fit statistics for the initial CFA model (Table 4.17) indicated a good fit (i.e. RMSEA=0.057, SRMR=0.042, CFI=0.932, NNFI= 0.925). Lagrange Multiplier (LM) tests were used to identify and address misfit in the model, with the LM test statistics indicating that the researcher needed to add four error covariance in the initial model because they were more correlated than what the factors reflected and then reduced the model fit because of their extra relationships. The four error covariance included CON5 & CON4, CA6 & CA5, ENT5 & ENT3, and ENT3 & ENT2. The model was modified accordingly, and the review of the goodness of fit statistics of the modified CFA model (Table 4) demonstrated a better fit (i.e. RMSEA=0.041, SRMR=0.041, CFI=0.965, NNFI= 0.961).

However, the researcher discovered a source of misfit (poor discriminant validity) in the second order factor model. The relationship between F7 and F13 (Behavioral Attitude and e-Tourist Satisfaction) was stronger than the relationship between F12 and F13 (Overall Attitude and e-Tourist Satisfaction). Therefore, the researcher decided to omit F7 (Behavioral Attitude) because it was highly cross- loaded. After doing so, the results indicated that second order factor model across Level 1 and Level 2 did not harm the model fit (Table 4.17).

Table 4.17 Initial and Modified Models Fit Indices of Multilevel Confirmatory Factor Analyses

	Fit Indices				
	x^2 (df)	RMSEA	SRMR	CFI	NNFI
Initial Model Value	2746.758 (1800)	0.057	0.042	0.932	0.925
Modified Model Value	2286.358 (1796)	0.041	0.041	0.965	0.961
Second Order Model	2593.644 (1860)	0.049	0.059	0.947	0.944
Modified Second Order Model (Omit F7)	2065.815 (1530)	0.046	0.052	0.956	0.952

This study tested the convergent validity, discriminant validity, and internal consistency at both Level 1 and Level 2, the result indicating that all factor loadings are statistically significant as can be seen in Table 4.18, which displays the model's factor loadings, α coefficients, Rho values, and Average Variances Extracted (AVEs). Cronbach's α values range from 0.804 for SOI to 0.981 for CA at Level 1 and from 0.879 for ENT to 0.993 for CA at Level 2, indicating satisfactory internal consistency for all factors (α >.70) (Fornell & Larcker, 1981; Hair, Black, Babin & Anderson, 2010). Moreover, the Rho coefficients remain the same or are similar to the Cronbach's α. Cronbach's alpha relies on the average loading between the latent construct and the items, assuming all load the same, unlike composite reliability (Rho), which does not assume loading equality (Hair et al., 2010). The AVE values range from 0.520 for SOI to 0.895 for CA at Level 1 and from 0.621 for ENT to 0.962 for CA at Level 2. All AVEs for factors at Level 1 and Level 2 are higher than 0.5, and most AVEs at both levels are higher than 0.7., indicating satisfactory convergent validity (Fornell et al.,1981; Hair et al., 2010). Most of the values for Cronbach's α and Composite Reliability (Rho) at Level 2 are higher than those at Level 1 except for SOI1, ENT1, and ENT2, whose factor loadings at Level 2 are lower than those at Level 1. This difference means that SOI1, ENT1and ENT2 are less reliable at the group level.

Table 4.18 Factor Loadings, Reliability Coefficients and AVEs of Modified Multilevel Model

		Level 1				Level 2			
		Loading	Alpha	Rho	AVE	Loading	Alpha	Rho	AVE
Social Interaction	SOI1	.823	.804	.810	.520	.514	.880	.901	.811
	SOI2	.570				.929			
	SOI3	.752				.972			
	SOI4	.716				.963			
Information	INF1	.793	.860	.896	.550	.935	.931	.949	.739
	INF2	.779				.938			
	INF3	.803				.904			
	INF4	.729				.664			
	INF5	.602				.827			
Entertainment	ENT1	.776	.888	.890	.621	.581	.879	.887	.621
	ENT2	.746				.562			
	ENT3	.654				.868			
	ENT4	.937				.839			
	ENT5	.800				.999			
Convenience	CON1	.656	.852	.859	.560	.927	.975	.975	.888
	CON2	.933				.919			
	CON3	.911				.960			
	CON4	.582				.959			
	CON5	.576				.946			
Affective Attitude	AA1	.814	.942	.942	.804	.960	.989	.989	.949
	AA2	.924				.974			
	AA3	.953				.989			
	AA4	.890				.973			
Cognitive Attitude	CA1	.912	.981	.981	.895	.971	.993	.993	.962
	CA2	.962				.968			
	CA3	.937				.977			
	CA4	.983				.988			
	CA5	.955				.994			
	CA6	.928				.987			
Behavioral Attitude	BA1	.699	.933	.936	.789	.930	.978	.978	.918
	BA2	.889				.939			
	BA3	.966				.982			
	BA4	.972				.981			
Utilitarian Satisfaction	UTIL1	.725	.863	.864	.614	.886	.964	.964	.871
	UTIL2	.759				.979			
	UTIL3	.873				.932			
	UTIL4	.770				.933			
Hedonic Satisfaction	HED1	.876	.894	.896	.686	.963	.970	.970	.890
	HED2	.918				.995			
	HED3	.815				.936			
	HED4	.684				.877			

Overall Satisfaction	SAT1	.816	.903	.904	.703	.951	.972	.972	.897
	SAT2	.769				.935			
	SAT3	.914				.921			
	SAT4	.847				.981			

This study also tested the convergent validity, discriminant validity, and internal consistency of the second order model. A careful analysis indicated that all factor loadings were statistically significant (Table 4.19). The factor loadings, α coefficients, Rho values, and Average Variances Extracted (AVEs) of the model are shown in Table 4.19. Cronbach's α values range from 0.756 for Attitude to 0.852 for e-Tourist Satisfaction at Level 1 and from 0.814 for U&G Motivations to 0.918 for e-Tourist Satisfaction at Level 2, indicating satisfactory internal consistency for all factors (α>.70). Furthermore, the Rho coefficients almost remain the same or are similar to the Cronbach's α. Cronbach's alpha relies on the average loading of the latent construct and the items, assuming all load the same, unlike the composite reliability (Rho), which does not assume loading equality (Hair et al., 2010). The AVE values range from 0.530 for U&G Motivations to 0.658 for e-Tourist Satisfaction at Level 1 and from 0.546 for U&G Motivations to 0.790 for e-Tourist Satisfaction at Level 2. The AVEs for all factors at Level 1 and Level 2 are over 0.5, and most AVEs at both levels are over 0.65., indicating satisfactory convergent validity. All values for Cronbach's α and Composite Reliability (Rho) at Level 2 are higher than those at Level 1. For the Attitude construct and e-Tourist Satisfaction construct, all variables at Level 2 are more reliable than those at Level 1 as evidenced by their higher values (loadings). For the U&G Motivations construct, INF and CON are more reliable contributors at Level 1 to U&G Motivations than at Level 2, while SOI and ENT are more reliable contributors at Level 2 to the U&G Motivations construct than at Level 1.

Table 4.19 Factor Loadings, Reliability Coefficients and AVEs of Second Order Factor Model

		Level 1				Level 2			
		Loading	Alpha	Rho	AVE	Loading	Alpha	Rho	AVE
Uses and Gratifications Motivations	SOI	.606	.809	.813	.530	.855	.814	.820	.546
	INF	.866				.601			
	ENT	.632				.864			
	CON	.765				.572			
Attitude	AA	.891	.756	.762	.620	.995	.838	.934	.742
	CA	.668				.703			
e-Tourist Satisfaction	UTIL	.807	.852	.853	.658	.891	.918	.918	.790
	HED	.794				.932			
	SAT	.833				.841			

To assess convergent validity and discriminant validity, the AVEs for each factor were calculated at both the individual and the group level (Table 4.20 and Table 4.21). Comparing the diagonal elements in the Level 1 model with those in the Level 2 indicates that the variables in the Level 2 (the group level) are more highly correlated with one another than those in the Level 1 (individual level). Even though the variables at Level 1 exhibit good convergent validity, the variables at Level 2 exhibit better convergent validity (diagonal elements) except for F3 (See Table 4.20 and 4.21). Variables at Level 2 exhibit weaker discriminant validity (off-diagonal elements) than variables at Level 1 except for F1 and F3 (the smaller the number, the better the discriminant validity and the larger the number, the better for convergent validity). Table 4.20 and Table 4.21 show that the correlations among factors are less than the square root of the AVEs in both the Level 1 and Level 2 models, indicating satisfactory convergent validity and discriminant validity.

Table 4.20 Correlations Among All Constructs: Level 1 Model

	AVE	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10
F1	.520	.721									
F2	.550	.470	.741								
F3	.621	.633	.440	.788							
F4	.560	.334	.656	.309	.748						
F5	.804	.377	.180	.400	.178	.897					
F6	.895	.223	.264	.223	.226	.590	.946				
F7	.789	.300	.240	.347	.255	.336	.281	.888			
F8	.614	.308	.309	.359	.290	.388	.303	.633	.784		
F9	.686	.485	.201	.490	.204	.598	.273	.543	.618	.828	
F10	.703	.344	.332	.372	.350	.433	.349	.548	.677	.643	.838

Table 4.21 Correlations Among All Constructs: Level 2 Model

	AVE	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10
F1	.811	.900									
F2	.739	.306	.860								
F3	.621	.646	.453	.788							
F4	.888	.163	.855	.494	.942						
F5	.949	.534	.451	.541	.456	.974					
F6	.962	.196	.066	.101	.269	.648	.981				
F7	.918	-.036	.208	.198	.453	.682	.751	.958			
F8	.871	.091	.474	.275	.630	.751	.737	.886	.933		
F9	.890	.384	.419	.452	.436	.833	.512	.644	.698	.943	
F10	.897	.171	.517	.419	.605	.709	.603	.753	.807	.693	.947

Note 1. F1: SOI: Social Interaction; F2: INF: Information; F3: ENT: Entertainment; F4: CON: Convenience; F5: AA: Affective Attitude; F6: CA: Cognitive Affective; F7: BA: Behavioral Attitude; F8: UTIL: Utilitarian Satisfaction; F9: HED: Hedonic Satisfaction; F10: SAT: Overall Satisfaction; "F" indicates Latent Factor.

Note 2. The diagonal elements are the square root of the Average Variance Extracted (AVE) (the shared variance between the factors and their items). The off-diagonal elements are the correlations between factors.

To evaluate convergent validity and discriminant validity, the AVEs for each factor in the second order model were calculated at both the individual and group levels (Table 4.22).

Comparing the diagonal elements in the Level 1 model with those in the Level 2 indicates that the variables in the latter (the group level) are more highly correlated with one another than those in the Level 1(individual level). As can be seen in Table 4.22, the correlations among factors are lower than the square root of the AVEs in the Level 1 model, indicating satisfactory convergent validity and discriminant validity. However, Table 4.22 also indicates that the correlations among factors are larger than the square root of the AVEs in the Level 2, indicating poor convergent validity and discriminant validity. In summary, the second order factor correlations table (Table 4.22) indicates that the model worked well at the individual level but not at the group level, suggesting that smartphone use in the tourism context can be more highly correlated at the individual level than at the group level. As a next step, the structural model will examine causal relationships among variables at the individual and group level and determine at which level the model works well.

Table 4.22 Second Order Factor Correlations Among All Constructs: Level 1 and Level 2

	Level 1				Level 2			
	AVE	F11	F12	F13	AVE	F11	F12	F13
F11	.530	.728			.546	.739		
F12	.620	.374	.787		.742	.796	.861	
F13	.658	.548	.623	.811	.790	.763	.969	.888

Note. F11: Uses and Gratifications Motivations, F12: Attitude, F13: e-Tourist Satisfaction; "F" indicates Latent Factor.

Multilevel Structural Equation Model

The hypothesized model (Modified Second Order Model) was tested using the multilevel structural equation model, simultaneously measured at the Individual Level (Level 1) and Group Level (Level 2) as depicted in Figure 4.1 and Figure 4.2, respectively. The model has good fit: x^2 (*df*) =2065. 815 (1530), RMSEA=0.046, SRMR=0.052, CFI= 0.956, NNFI=0.952. An examination of the z-statistics was conducted to determine if the hypotheses could be accepted or rejected (Table 4.23). First, the results from the regression and mediation in the Level 1 model demonstrate that the unstandardized path coefficient from the second order factor U&G Motivations to the second order factor Attitude is significant (B=.461, z=6.003), supporting H_{1a} (H_{1a} : U&G Motivations have a positive effect on Attitude toward the smartphone use in the Individual Level.). The second order factor Attitude positively affects the second order factor e-Tourist Satisfaction (B=.222, z=6.037), supporting H_{2a} (H_{2a}: Attitude toward the smartphone use has a positive effect on e-Tourists' Satisfaction in the Individual Level.). The results from the indirect effect of the Level 1 mediation model demonstrate that the second order factor U&G Motivations has an indirect effect on the second order factor e-Tourist Satisfaction (B=.102, z=4.266), supporting H_{3a} (H_{3a}: Attitudes toward the smartphone use positively mediate the relationship between U&G Motivations and e-Tourists' Satisfaction in the Individual Level.). The second order factor U&G Motivations has a significant direct effect on the second order factor e-Tourist Satisfaction (B=.204, z=5.945), indicating partial mediation and, thus, supporting H_{4a} (H_{4a}: U&G Motivations have a positive effect on e-Tourists' Satisfaction in the Individual Level.). The significance of the indirect effect (H_{3a}) and the direct effect (H_{4a}) results in partial mediation.

Table 4.23 Results from the Regression and Mediation Analyses for the Level 1 Model

Path	Unstandardized Regression Coefficient	Standardized Regression Coefficient	Observed z-value
Path 1: U&G Motivations (IV) →Attitude (DV)	.461	.380	6.003*
Path 2: Attitude (IV)→ e-Tourist Satisfaction (DV)	.222	.486	6.037*
Path 3: U&G Motivations (IV) →Attitude (MV)→e-Tourist Satisfaction (DV)	.102	.185	4.266*
Path 4: U&G Motivations (IV) → e-Tourist Satisfaction (DV)	.204	.369	5.945*

Note. IV: Independent Variable; DV: Dependent Variable; MV: Mediating Variable

* p-value is significant at the 0.05 level (2-tailed)

For the level 1 model, this study examined the relationship (two path relationship) among each sub-component of U&G Motivations and e-Tourist Satisfaction in the Level 1 model. U&G Motivation for a Social Interaction (B=.1157, z=4.68), U&G Motivation for an Information (B=.1836, z=5.62), U&G Motivation for an Entertainment (B=.1444, z=5.24), and U&G Motivation for a Convenience (B=.1554, z=5.43) have a significant effect on e-Tourist Satisfaction, exhibiting a value larger than a cutoff criterion (z-value>1.96), thus supporting H_{5a} (H_{5a}: Each factor of U&G Motivations has a positive relation with e-Tourists' Satisfaction in the Individual Level.). These results mean that there are significant two path relationships among four sub-components of U&G Motivation and e-Tourist Satisfaction in the Level 1 model (Table 4.24).

Table 4.24 Results from the Two Path Relations for the Level 1 Model

Path	Unstandardized Regression Coefficient	Standardized Regression Coefficient	Observed z-value
Path 1: Social Interaction─ U&G Motivations→ e-Tourist Satisfaction	.1157	.2232	4.68*
Path 2: Information─ U&G Motivations→e-Tourist Satisfaction	.1836	.3203	5.62*
Path 3: Entertainment─ U&G Motivations→e-Tourist Satisfaction	.1444	.2343	5.24*
Path 4: Convenience─ U&G Motivations→e-Tourist Satisfaction	.1554	.2841	5.43*

Note. P-value is significant at the 0.05 level (2-tailed)

For the Level 1 model, this study also examined the indirect relationship (three path relationship) among each sub-component of U&G Motivations and e-Tourist Satisfaction via Attitude in the Level 1 mediation model. U&G Motivation for a Social Interaction (B=.0580, z=3.96), U&G Motivation for an Information (B=.0921, z=4.37), U&G Motivation for an Entertainment (B=.0725, z=2.92), and U&G Motivation for a Convenience (B=.0779, z=2.98) have a significant effect on e-Tourist Satisfaction, exhibiting a value larger than the cutoff criterion (z-value>1.96), thus supporting H_{6a} (H_{6a}: Each factor of U&G Motivations has a positive relation via Attitude toward smartphone use with e-Tourists' Satisfaction in the Individual Level.). These results mean that there are significant relationships among four sub-components of U&G Motivations and e-Tourist Satisfaction via Attitude in the Level 1 model (Table 4.25).

Table 4.25 Results from the Three Path Relations for the Level 1 Mediation Model

Path	Unstandardized Regression Coefficient	Standardized Regression Coefficient	Observed z-value
Path 1: Social Interaction─ U&G Motivations→Attitude→ e-Tourist Satisfaction	.0580	.1117	3.96*
Path 2: Information─ U&G Motivations→Attitude→ e-Tourist Satisfaction	.0921	.1603	4.37*
Path 3: Entertainment─ U&G Motivations→Attitude→ e-Tourist Satisfaction	.0725	.1173	2.92*
Path 4: Convenience─ U&G Motivations→Attitude→ e-Tourist Satisfaction	.0779	.1422	2.98*

Note. P-value is significant at the 0.05 level (2-tailed)

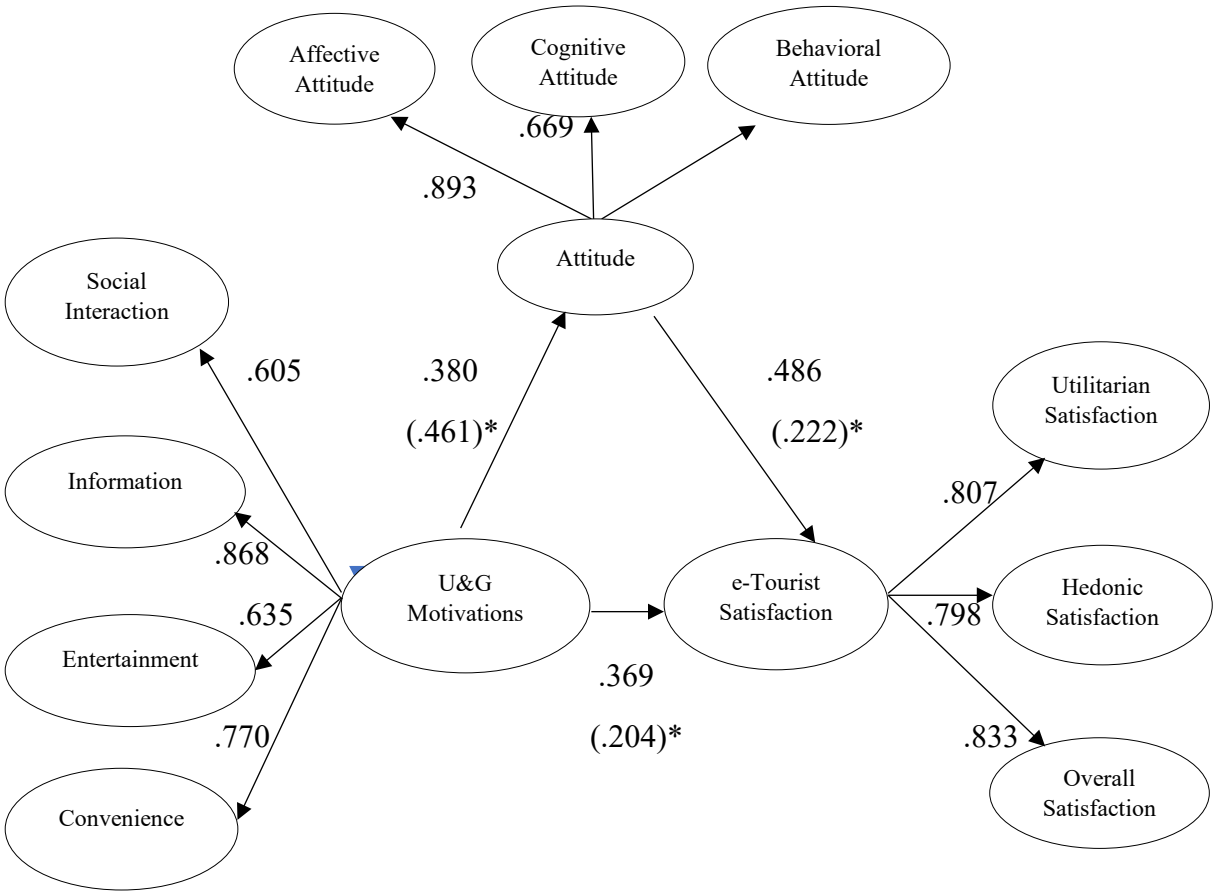


Figure 4.1 Standardized and Unstandardized Coefficients of the Level 1 Structural Equation Model

Note: Unstandardized coefficients in parentheses,

*P-value is significant at the 0.05 level

An examination of the z-statistics was conducted to determine if H_{1b}, H_{2b}, H_{3b} H_{4b}, H_{5b} and H_{6b} could be accepted or rejected in the Level 2 regression and mediation model (Table 4.26). First, the results from regression and mediation in the Level 2 model demonstrate that the second order factor UGT Motivations has a positive effect on the second order factor Attitude. The unstandardized path coefficient from U&G Motivations to Attitude is significant (B=.704, z=5.049). The value of the z-score is larger than the critical z-score of 1.96, indicating a significant relationship between the second order factor U&G Motivations and the second order factor Attitude, supporting H_{1b} (H_{1b} : U&G Motivations have a positive effect on Attitude toward the smartphone use in the Group Level.). Second, the second order factor Attitude was not found to affect the second order factor e-Tourist Satisfaction at the group level (B=.232, z=1.248), rejecting H_{2b} (H_{2b}: Attitude toward the smartphone use has a positive effect on e-Tourists' Satisfaction in the Group Level.). In terms of indirect effects, Attitude was hypothesized to mediate the relationship between U&G Motivations and e-Tourist Satisfaction at the group level. The results of the indirect effect of the Level 2 mediation model demonstrate that the second order factor U&G Motivations does not have an indirect effect on the second order factor e-Tourist Satisfaction (B=.163, z=1.211), rejecting H_{3b} (H_{3a}: Attitudes toward the smartphone use positively mediate the relationship between U&G Motivations and e-Tourists' Satisfaction in the Group Level.). Lastly, the direct effect of the second order factor U&G Motivations on the second order factor e-Tourist Satisfaction is not significant (B=-.011, z=-0.089), rejecting H_{4b} (H_{4b}: U&G Motivations have a positive effect on e-Tourists' Satisfaction in the Group Level.). No indirect effect (H_{3b}) and no direct effect (H_{4b}) were found.

Table 4.26 Results from the Regression and Mediation Analyses for the Level 2 Model

Path	Unstandardized Regression Coefficient	Standardized Regression Coefficient	Observed z-value
Path 1: U&G Motivations (IV)→Attitude (DV)	.704	.791	5.049*
Path 2: Attitude (IV)→ e-Tourist Satisfaction (DV)	.232	.992	1.248
Path 3: U&G Motivations (IV) →Attitude (MV)→ e-Tourist Satisfaction (DV)	.163	.785	1.211
Path 4: U&G Motivations (IV) → e-Tourist Satisfaction (DV)	-.011	-.056	-.089

Note. IV: Independent Variable; DV: Dependent Variable; MV: Mediating Variable

p-value is significant at the 0.05 level (2-tailed)

This study examined the relationship (two path relationship) between each sub-component of U&G Motivations and e-Tourist Satisfaction in the level 2 model. U&G Motivation for a Social Interaction (B=-.0059, z=.0860), U&G Motivation for an Information (B=-.0015, z=.0858), U&G Motivation for an Entertainment (B=-.0068, z=.0859), and U&G Motivation for a Convenience (B=-.0017, z=.0858) exhibit z-scores smaller than the critical z-score of 1.96, meaning that there are no significant relationships between these four sub-components of U&G Motivations and e-Tourist Satisfaction, rejecting H_{5b} (H_{5b}: Each factor of U&G Motivations has a positive relation with e-Tourists' Satisfaction in the Group Level.). (Table 4.27)

Table 4.27 Results from the Two Path Relations for the Level 2 Model

Path	Unstandardized Regression Coefficient	Standardized Regression Coefficient	Observed z-value
Path 1: Social Interaction─ U&G Motivations→ e-Tourist Satisfaction	-.0059	-.0477	.0860
Path 2: Information─ U&G Motivations →e-Tourist Satisfaction	-.0015	-.0338	.0858
Path 3: Entertainment─ U&G Motivations→e-Tourist Satisfaction	-.0068	-.0484	.0859
Path 4: Convenience─ U&G Motivations→e-Tourist Satisfaction	-.0017	-.0323	.0858

Note. P-value is significant at the 0.05 level (2-tailed)

This study also tested the indirect relationship (three path relationship) between each sub-component of U&G Motivations and e-Tourist Satisfaction via Attitude for the level 2 mediation model. U&G Motivation for a Social Interaction (B=.089, z=1.16), U&G Motivation for an Information (B=.022, z=.98), U&G Motivation for an Entertainment (B=.102, z=1.18), and U&G Motivation for a Convenience (B=.025, z=.98) exhibit z-score values smaller than the critical z-score of 1.96. These results mean that there are no significant relationships between these four sub-components of U&G Motivations and e-Tourist Satisfaction via Attitude, rejecting H_{6b} (H_{6a}: Each factor of U&G Motivations has a positive relation via Attitude toward smartphone use with e-Tourists' Satisfaction in the Group Level.). (Table 4.28)

Table 4.28 Results from the Three Path Relations for the Level 2 Mediation Model

Path	Unstandardized Regression Coefficient	Standardized Regression Coefficient	Observed z-value
Path 1: Social Interaction─ U&G Motivations→Attitude→ e-Tourist Satisfaction	.089	.668	1.16
Path 2: Information─ U&G Motivations→Attitude→ e-Tourist Satisfaction	.022	.474	.98
Path 3: Entertainment─ U&G Motivations→Attitude→ e-Tourist Satisfaction	.102	.678	1.18
Path 4: Convenience─ U&G Motivations→Attitude→ e-Tourist Satisfaction	.025	.452	.98

Note. P-value is significant at the 0.05 level (2-tailed)

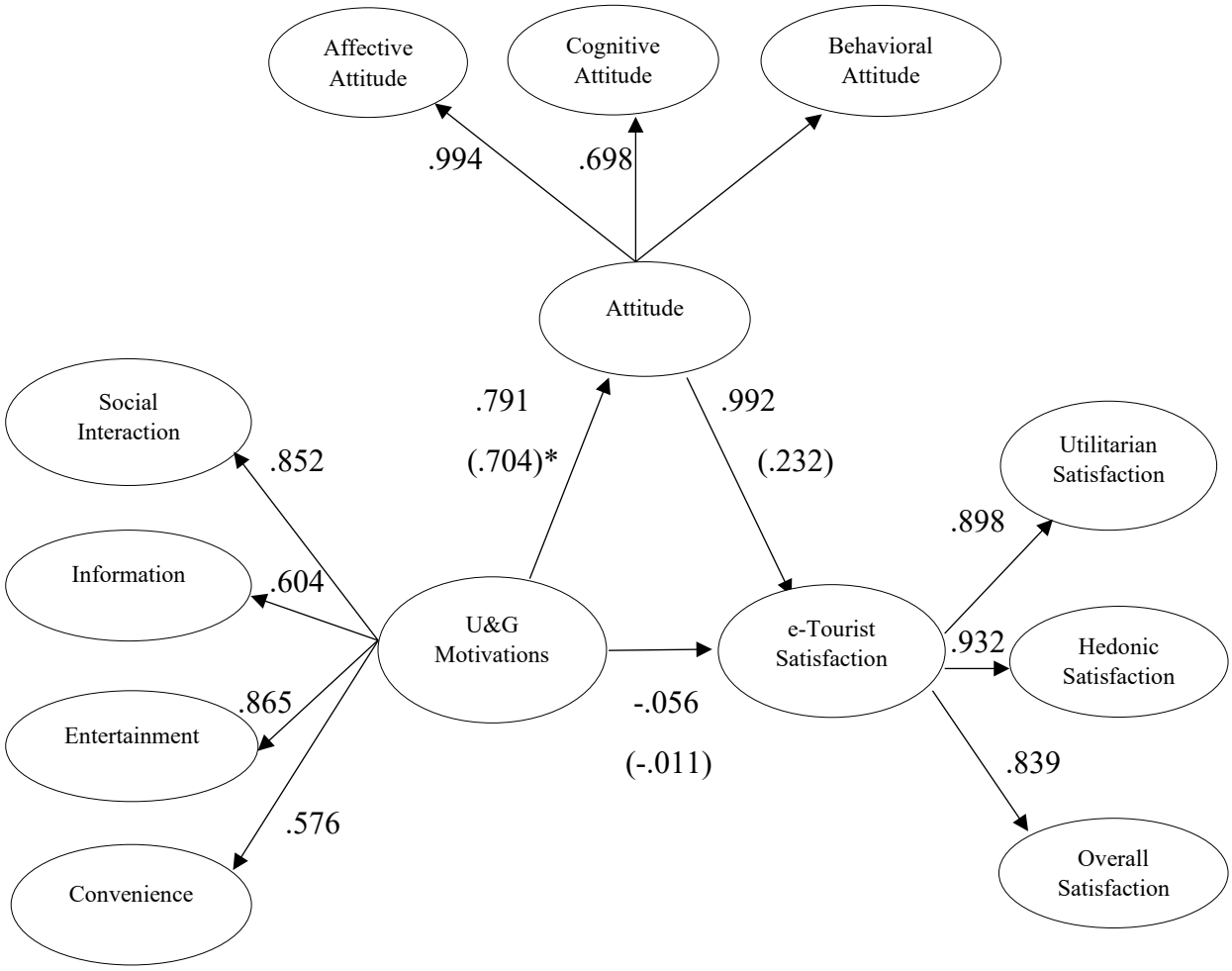


Figure 4.2 Standardized and Unstandardized Coefficients of the Level 2 Structural Equation Model

Note: Unstandardized coefficients in parentheses,

*P-value is significant at the 0.05 level

Review of Analysis

This study, which adopted Multilevel Structural Equation Modeling assuming group effects, found that the attitude construct served as a partial mediator between U&G Motivations and e-Tourist Satisfaction in the Level 1 model (significant direct effect and significant indirect effect); on the other hand, it did not function as a mediator between U&G Motivations and e-Tourist Satisfaction in the Level 2 model (no direct effect and no indirect effect).

The Level 1 model demonstrated that an individual tourist's U&G Motivations within a group had a positive impact on an individual tourist's attitudes toward smartphone use, which in turn positively affected individual e-Tourist Satisfaction. In addition, individual tourist's U&G Motivations directly influenced individual e-Tourist Satisfaction. In other words, the individual motivations of tourists predicted the individual attitudes toward the smartphone use by tourists, which in turn predicted the individual satisfaction of tourists. The individual motivations of tourists directly predicted the individual satisfaction of tourists.

On the other hand, the results from the Level 2 model, which is based on group means, demonstrated that group U&G Motivations of tourists exhibited an effect on group attitudes toward smartphone use by tourists. However, group attitudes toward smartphone use by tourists did not influence group e-Tourist Satisfaction. Group U&G Motivations also did not influence group e-tourist satisfaction. That is, group U&G Motivations of tourists predicted group attitudes. However, group attitudes toward smartphone use by tourists did not predict group tourist satisfaction, and group tourist Motivations did not predict group tourist satisfaction. The results found that smartphone issues in the travel and tourism context were more highly correlated at the individual level than at the group level. Moreover, smartphone issues in the travel and tourism setting, group tourist motivations and group tourist attitudes toward

smartphone use did not affect e-tourist satisfaction. Group tourist motivations were not related to e-Tourist Satisfaction.

Considering simultaneously unstandardized and standardized regression coefficients in the Level 1 model, the largest coefficient was found Information Construct, the second largest the Convenience Construct, followed by the Entertainment Construct, with the smallest coefficient representing the Social Interaction Construct. In this study Information and Convenience are considered as part of the Utilitarian Experience and Entertainment and Social Interaction part of the Hedonic Experience. Consequently, e-Tourist satisfaction is influenced more by Utilitarian Experience than Hedonic Experience. This study found that the most critical reason for smartphones use by tourists was to obtain information during their trip to Greenville, SC. Table 4.29 provides an overview of the 12 hypotheses tested. All hypotheses were supported at the individual level (H_{1a}, H_{2a}, H_{3a}, H_{4a}, H_{5a}, H_{6a}). However, only hypothesis H_{1b} (the relationship between U&G Motivations and Attitude at the group level) was supported at the group level. The remaining five hypotheses were rejected at the group level (H_{2b}, H_{3b}, H_{4b}, H_{5b}, H_{6b}).

Table 4.29 Summary of Hypotheses Testing

	Hypotheses	Results
H1a	U&G Motivations have a positive effect on Attitude toward the smartphone use in the Individual Level.	Supported
H1b	U&G Motivations have a positive effect on Attitude toward the smartphone use in the Group Level.	Supported
H2a	Attitude toward the smartphone use has a positive effect on e-Tourists' Satisfaction in the Individual Level.	Supported
H2b	Attitude toward the smartphone use has a positive effect on e-Tourists' Satisfaction in the Group Level.	Rejected
H3a	Attitudes toward the smartphone use positively mediate the relationship between U&G Motivations and e-Tourists' Satisfaction in the Individual Level.	Supported
H3b	Attitudes toward the smartphone use positively mediate the relationship between U&G Motivations and e-Tourists' Satisfaction in the Group Level.	Rejected
H4a	U&G Motivations have a positive effect on e-Tourists' Satisfaction in the Individual Level.	Supported
H4b	U&G Motivations have a positive effect on e-Tourists' Satisfaction in the Group Level.	Rejected
H5a	Each factor of U&G Motivations has a positive relation with e-Tourists' Satisfaction in the Individual Level.	Supported
H5b	Each factor of U&G Motivations has a positive relation with e-Tourists' Satisfaction in the Group Level.	Rejected
H6a	Each factor of U&G Motivations has a positive relation via Attitude toward smartphone use with e-Tourists' Satisfaction in the Individual Level.	Supported
H6b	Each factor of U&G Motivations has a positive relation via Attitude toward smartphone use with e-Tourists' Satisfaction in the Group Level.	Rejected

CHAPTER FIVE

CONCLUSION

This dissertation extends previous research by systematically investigating and quantitatively measuring how and to what extent tourists are gratified (satisfied) using smartphones during their trips based on the Uses and Gratifications Theory. More specifically, the purpose of this study was to develop a conceptual framework of the Uses and Gratifications Theory (UGT) and to investigate the causal relations among its four motivations (i.e. social interaction, information, entertainment and convenience) for using smartphones and how gratified (satisfied) tourists are with the use of this platform in the travel and tourism context. This dissertation adopts Multilevel Linear Modeling (MLM; Individual Level vs Group Level) as a statistical method because a second goal of this study was to examine smartphone use by tourists as a group while also considering the influence of each member as an individual within the group with respect to the travel behavior and travel decision-making process. This chapter discusses the results of the hypotheses testing using Multilevel SEM, followed by a discussion of the theoretical (conceptual), methodological and practical (managerial) implications of this study for the travel and tourism domain. Lastly, the limitations of the study and directions for future research are addressed.

Hypotheses and Discussion

This dissertation used multilevel structural equation modeling, which allows researchers to analyze the data by assuming group effects, something that single level SEM cannot measure. This study demonstrates that multilevel structural equation modeling can control group effects, providing more useful and significant information concerning the statistical results than single-level structural equation modeling. Using structural equation modeling, the purpose of this study

was to investigate following questions: (1) How are U&G motivations and attitudes related in the travel and tourism context? (2) What is the relationship between attitudes and e-tourist satisfaction in the travel and tourism context? (3) What is the role of attitudes in the relationship between U&G motivations and e-tourist satisfaction in the context of travel and tourism? (4) What is the relationship between U&G motivations and e-tourist satisfaction in the travel and tourism context? (5) Which factors of U&G motivations exhibit significant relationships with e-tourist satisfactions? (6) Which factors of U&G motivations exhibit significant relationships via attitudes with e-tourist satisfaction?

To address the first question, this study analyzed the relationship among U&G motivations and attitude. Based on the results, the regression coefficient (γ) of U&G motivations-attitude at Level One was 0.380 and the regression coefficient (γ) of U&G motivations-attitude at Level Two was 0.791. Thus, the hypotheses at both levels were supported. This study supports Fishbein's (1967) definition of attitude, which he defined attitude as "learned predispositions to respond to an object or class of objects in a favorable or unfavorable way" (p. 257). The results from this study found that U&G motivations have a positive relationship with attitude, results consistent with previous research, meaning that U&G motivations positively influenced attitude (Luo, 2002; Ko et al., 2005; Huang, 2008; Curras et al., 2014). In other words, tourists who seek information, convenience, entertainment and social interaction have favorable attitudes toward smartphone use while traveling at Level One and Two.

Second, this study measured the relationship between attitude and e-tourist satisfaction, finding a regression coefficient (γ) of attitude and e-tourist satisfactions at Level One of 0.486 and a regression coefficient (γ) of attitude and e-tourist satisfaction at Level Two of 0.992. The

hypothesis was supported at Level One, but the one at Level Two was rejected. Luo (2002) found that satisfaction was influenced by attitude toward the Internet in the UGT context. Moreover, Park and Lee (2014) found that satisfaction with campus life were influenced by attitude toward Facebook use in the UGT context as well. In addition, Moutino and Smith (2000) and Wu and Chang (2007) argued that customer satisfaction was affected by brand attitude and risk attitude. The study reported here found similar results to those from previous research exploring the relationship between attitude and satisfaction. Based on the results from this study, a favorable attitude toward smartphone use can lead to utilitarian satisfaction, hedonic satisfaction and overall satisfaction in tourists during trips at Level One; On the other hand, attitude was not found to influence e-tourist satisfaction while traveling at Level Two. That is, there was no group effect found between attitude toward smartphone use and e-tourist satisfaction. Tourists' attitude toward smartphone use is likely to be individualized by their media usage, meaning their attitude toward it tends to influence individual satisfaction, not group satisfaction. Thus, tourists' individual smartphone choices do not affect the group satisfaction of travelers.

The third question addresses the indirect effect in the relationship between U&G motivations, attitude and e-tourist satisfaction in the mediation model. Based on the results, the regression coefficient of U&G motivations, attitude and e-tourist satisfactions at Level One was 0.185, and the regression coefficient of U&G motivations, attitude and e-tourist satisfaction at Level Two was 0.785. Thus, the hypothesis was supported at Level One, but the one at Level Two was rejected. Attitude significantly mediated an indirect effect of U&G motivations on e-tourist satisfactions at Level One but not at Level Two. The results from this study are consistent with Luo's (2002) and Lee's (2009) models which examined motivations, attitude and

satisfactions. Luo (2002) examined the impact of the three motivations on a variety of consumer behaviors, including attitude toward Internet usage and customer satisfaction using the UGT. Luo's model explained that U&G motivations directly affect attitude, and attitude significantly influences satisfaction. Lee (2009) also investigated a conceptual model of tourism utilizing the variables of destination image, attitude, motivation, satisfaction and future travel behavior. This study confirmed that motivation directly affects attitude, which, in turn, directly influences tourist satisfaction, meaning motivation indirectly influences tourist satisfaction.

Scholars in other academic disciplines (i.e. psychology, advertising, business and management) as well as in the tourism domain (Chon, 1989; Gnoth, 1997; Hsu, Cai & Li, 2010; Lee, 2009) have conducted research on the relationship among motivation, attitude and satisfaction. Park and Lee (2014) also found that U&G motivations had an indirect effect on satisfaction with campus life through the attitudes towards Facebook. To summarize, tourists who desired social interaction, information, entertainment and convenience during their trips had favorable attitudes toward smartphone use and this attitude toward it influenced their utilitarian satisfaction, hedonic satisfaction and overall satisfaction at Level One. On the other hand, the group motivations of tourists did not influence group attitude, which, in turn, did not affect the group satisfaction of tourists. That is, there was no group effect among U&G motivations, the attitude toward smartphone use and e-tourist satisfaction. Tourists' motivations for using smartphones are likely to be socially and psychologically individualized by their media usage and these motivations influence the attitude toward smartphone use of individual tourists (not group of tourists), which in turn, influences the utilitarian satisfaction, hedonic satisfaction and overall satisfaction of individual tourists. These phenomena originate in the individualized and customized media environment.

To address the fourth question, this study measured the relationship among UGT motivations and e-tourist satisfaction. Based on the results, the regression coefficient (γ) of UGT motivations and e-tourist satisfactions at Level One was 0.369, and the regression coefficient (γ) of UGT motivations and e-tourist satisfaction at Level Two was -0.056. Thus, the hypothesis at Level One was supported, but the one at Level Two was rejected. Yoon and Uysal (2005) argued that tourist satisfactions were influenced by travel motivations using a hypothetical model. Shin (2011) also maintained that U&G motivations affected satisfactions (gratifications). The results from this study support those from previous research examining the relationship between motivations and satisfaction. Based on the results found here, tourists seeking social interaction, convenience, information and entertainment during their trips felt satisfied with smartphone use at Level One. However, the group motivations of tourists did not influence their group satisfaction. This difference in our findings results from the personalized and customized traits of social media and IT including the smartphone. Travelers tend to seek specific satisfactions to fulfill their individual needs and wants.

Fifth, to clarify which sub-factors of U&G motivations influence e-tourist satisfactions, this study analyzed two path relationships (each sub-factor of U&G motivations and e-tourist satisfaction) in the model. At Level One, U&G motivation measured as information and UGT motivation measured as convenience demonstrated large effects on e-tourist satisfactions, followed by U&G motivation measured as entertainment and U&G motivation measured as social interaction. U&G motivations, which measure information, convenience, entertainment and social interaction, had a significant impact on e-tourist satisfaction at the individual level, meaning that tourists who desire these factors felt satisfied with smartphone use during their trips at this level. At the group level, however, each sub-factor of U&G motivations did not have a

significant relationship with e-tourist satisfaction. In other words, there were no group effects, meaning that tourists actively participate in the personalized media environment. These specific motivations and the resulting satisfaction are caused by individual socio-psychological attributes, not the group unit. This study found similar results as those from previous research exploring the relationship among these four U&G motivations and satisfaction with Facebook use in the hotel industry (Choi, Fowler, Goh & Yuan, 2016). Information and convenience motivations influenced satisfaction with Facebook use, while entertainment and social interaction did not affect satisfaction with it in Choi, Fowler, Goh and Yuan's (2016) research.

Sixth, to clarify which sub-factors of U&G motivations via attitude influence e-tourist satisfactions, this study also analyzed three path relationships (each sub-factor of U&G motivations, attitude and e-tourist satisfaction) in the mediation model. At Level One, U&G motivation measured as information and U&G motivation measured as convenience via attitude showed a substantial impact on e-tourist satisfaction, followed by U&G motivation measured as entertainment and U&G motivation measured as social interaction. U&G motivations, measured as information, convenience, entertainment and social interaction, via attitude had a significant impact on e-tourist satisfaction in the individual level, meaning that tourists seeking these factors had a favorable attitude toward smartphone use, which, in turn, led to satisfaction with smartphone use by tourists during their trips at Level One. At the group level, however, each sub-factor of U&G motivations via attitude did not have a significant relationship with e-tourist satisfaction. In other words, there were no group effects among them. This study supports previous research examining the relationship among the three U&G motivations, attitude toward the Internet and customer satisfaction (Luo, 2002). In Luo's (2002) research, Internet users who saw the web as entertaining and informative tended to demonstrate a positive attitude toward it,

while those who regarded it as irritating reported a negative attitude, meaning the former tended to search the Internet and felt satisfied with their searches.

In summary, the Level 1 model demonstrated that individual U&G motivations of tourists within groups had a positive impact on individuals' attitudes toward smartphone use, which, in turn, positively affected individual e-tourist satisfactions. In addition, the individual U&G motivations of tourists directly influenced individual e-tourist satisfactions. In other words, individual motivations of tourists predicted individual attitudes toward smartphone use, which, in turn, predicted individual satisfactions of tourists. Individual motivations of tourists directly predicted their individual satisfactions.

On the other hand, the Level 2 model demonstrated that group U&G motivations of tourists influenced group attitudes toward smartphone use. However, group attitudes toward their smartphone use did not influence group e-tourist satisfactions, nor did Group U&G motivations influence group e-tourist satisfactions. That is, group U&G motivations of tourists only significantly predicted group attitudes towards it. However, group attitudes toward smartphone use did not predict group tourist satisfactions, nor did group tourist motivations predict group tourist satisfactions.

The results indicate that that smartphone issues in the travel and tourism context were more important at the individual level than at the group level. This finding is consistent with the assumptions and crucial concepts of Uses and Gratifications Theory, which focus on individual motivations and individual use when actively selecting specific media choices and features. This theory assumes that users actively participate in the media environment and that they are goal-directed in their media usage. More critically, media users (tourists are referred to as media users here) seek specific gratifications (satisfactions) to fulfill their individual needs and wants

(referred to as the four U&G motivations here). These needs and gratifications stem from individual psychological and sociological characteristics and traits (Katz, Blumler & Gurevitch, 1974; Orchard, Fullwood & Galbraith, 2014).

Considering simultaneously unstandardized and standardized regression coefficients at Level 1, the largest coefficient represents information motivation, the second largest one involves convenience motivation, followed by entertainment motivation and social interaction motivation with the smallest coefficient. In this study, information and convenience are related to utilitarian satisfaction, while entertainment and social interaction are concerned with hedonic satisfaction. Consequently, e-tourist satisfaction is influenced more by utilitarian experience than by hedonic experience. Based on the results from this study, the most important reason that tourists used their smartphones was to obtain information during their trips to Greenville, SC.

Implications of the Research

Conceptual and Theoretical Implications

Despite the previous smartphone research in the context of travel and tourism, there is limited research based on a strong theoretical background that seeks to understand how tourists are motivated and satisfied via smartphone use. This study extends previous studies by systematically investigating and quantitatively measuring how and to what extent tourists are gratified (satisfied) using smartphones during their trips based on the Uses and Gratifications Theory. This study provides several theoretical contributions. It found four motivations for using smartphones by tourists, referred to U&G motivations, specifically social interaction, information, entertainment and convenience. The results suggest that these four motivations have a significant effect on tourists' attitude toward smartphone use, which, in turn, significantly affects e-tourist satisfaction at the individual level.

This result demonstrates that the Uses and Gratifications Theory can serve as a useful and effective conceptual framework for aiding tourism researchers in gaining a better understanding of tourism phenomena. It can also lead us to a fuller understanding of the application of this theory to the new media and tourism, offering the possibility of investigating the issues of social media and IT in travel and tourism through the lens of this theory. This study also confirmed the relationships among U&G motivations, attitude toward the smartphone use by tourists and e-tourist satisfactions as predicted. Although these relationships have been explored in advertising, communications, marketing and management areas using Uses and Gratifications Theory, this study further extends the extant literature to the smartphone in travel and tourism including examining whether these relationships are valid in this context.

In addition, this dissertation provides a classification of U&G motivations and a conceptual model of interactive e-tourism communication. This study represents the first development of a classification and conceptual model of Uses and Gratifications Theory in the field of travel and tourism. Thus, this study introduced and applied the Uses and Gratifications Theory to the travel and tourism area in addition to developing a classification of U&G motivations for this field. While Ko et al. (2005) suggested the classification of U&G motivations and Luo (2002), Ko et al. (2005), and Logan (2017) developed motivations items based on it for the communication field, this scale was not suitable for testing the U&G motivations in the field of travel and tourism because it had been applied only to the new media and communications fields. The classification of U&G motivations for the use of a smartphone while traveling and the new scale for measuring e-tourist satisfaction and experiences to enhance the understanding of e-tourists' motivations, behaviors and satisfaction proposed here consists of four constructs: social interaction, information, entertainment and convenience motivations. E-

tourist satisfactions are classified into three categories: utilitarian satisfactions, hedonic satisfactions and overall satisfactions.

This study also extended the theoretical framework of Uses and Gratifications Theory by examining the causal relations among its four motivations and smartphone use while traveling and the level of satisfaction of tourists experienced using this platform in the tourism context. Moreover, this study created a new concept of e-Tourist and e-Tourist Satisfaction based on the extant tourism literature. Based on the unique characteristics of communication, this study explored conceptual knowledge by considering communication, consumer behavior and tourism within the e-tourism context. The development of the classification of U&G motivations and the conceptual model of e-tourism communication provides tourism researchers with a deeper understanding of the reasons why tourists use smartphones during their trips and the construct of U&G motivations and e-Tourist Satisfactions.

While previous scholars have investigated U&G motivations and satisfactions in the field of new media and communications (Luo, 2002; Ko, Cho & Roberts, 2005; Foregger, 2008; Mahmoud, 2010; Logan, 2014; Green, 2014; Ha, Kim, Libaque-Saenz, Chang, Y. & Park, 2015; Logan, 2017), there is little empirical investigation of the relationships between U&G motivations and other constructs in the e-tourism area. This dissertation empirically tested relationships among U&G motivations, attitude toward the smartphone use by tourists and e-tourist satisfactions, analyzing how the motivations influenced attitude toward it and e-tourists' satisfactions. More specifically, this study found that each U&G motivation factor serves as a significant predictor of e-tourist satisfactions at the individual level. The empirical findings from this study contribute to our knowledge of how gratified (satisfied) tourists are with the use of this platform (smartphone) in the travel and tourism context.

Methodological and Statistical Implications

The scale of U&G motivations and e-tourist satisfactions was developed from the perspective of the unique features and traits of e-tourism communication to provide a theoretical basis through expert review, an extensive literature review and four pilot studies. This scale demonstrated convergent validity, discriminant validity and internal consistency through four pilot studies and confirmatory factor analysis. As a result, the scale items developed in this study are expected to contribute to future research applying the Uses and Gratifications Theory to tourism. However, these items need to be examined in different e-tourism communication contexts to further support their reliability.

Previous research on smartphones and tourism has primarily depended on qualitative research; however, this study is a quantitative one using Multilevel SEM. Quantitative methods can help advance the knowledge and concepts in the travel and tourism field because they can test pre-specified concepts, constructs and hypotheses comprising a theory as well as being more generalizable than qualitative research methods. More specifically, the Multilevel SEM adopted for this study aids the researcher in testing and measuring causal relationships among concepts and variables in measuring group effects by examining hierarchically structured data. MLM was the appropriate method for analyzing the data obtained in this study as it addresses such problems as uneven group numbers and small numbers per group (Sibthorp & Arthur-Banning, 2004). This study offered a discussion of multilevel measurement models and of multilevel structural models in the tourism context.

One of the goals of this dissertation is to provide a better understanding of motivation for using smartphones by tourists and their satisfaction with this platform using multilevel linear modeling (MLM) as a data analyzing technique. Many scholars have emphasized the advantages

of MLM, one of which is its ability to provide an accurate estimation of errors due to the consideration of the interdependency of each case (Bryk & Raudenbush, 1988). The difference between the single-level model and the multi-level model shows that error estimations in the latter are more accurate. While this study found that U&G motivations had a significant influence on e-tourist satisfactions at the individual level, no significance was found in the group level model. Consequently, multilevel linear modeling offered more accurate hypothesis testing results.

High inter-class correlation between variables means that the cases in this study were dependent on one another. For example, U&G motivations had significant influences on e-tourist satisfactions at the individual level but was not significant at the group level, meaning that individual motivation of tourists significantly affected e-tourist satisfactions, but group motivation of tourists did not. This study differentiates itself from previous research because it collected data only from tourists travelling in groups and analyzing the data by considering the interdependency of their responses. Consequently, using MLM in this study was an effective method for analyzing these data and to test if there were groups effects among travel groups.

Practical and Managerial Implications

In addition to its conceptual and methodological contributions, there are several managerial implications. Tourism marketers can enhance the information motivation for using smartphones by travelers by disseminating up-to-date and useful information concerning tourism destinations. For example, some information on restaurant reviews from Yelp and Eater can generate positive eWOM for specific tourism destinations and providing information on transportation such as Uber and Lyft or navigating around the destination using Google maps also can trigger value co-creation (See-To & Ho, 2014). Information on interesting attractions or

special events at the destinations can attract more travelers, and tourism practitioners can improve the social interaction motivation for using smartphones by connecting tourists with travelers at the destination. Much of today's communication interactions involve sharing information with others (McKenna & Bargh, 1999). These interactions are enhanced because mobile phones and the Internet have transformed the ease and convenience of social interactions and communication (Ha et al, 2015). For instance, Destination Marketing Organizations (DMOs) and smartphone companies can join to develop a platform hosting discussion about destinations. Sharing of travel experiences and providing tips and comments to other tourists can fulfill the social interaction motivations of travelers.

Tourism marketing practitioners can trigger the entertainment motivation of travelers for using smartphones by offering various smartphone applications that can generate a positive attitude toward smartphone use, leading to a high level of entertainment and satisfaction at destinations. For example, travelers use smartphones to record their memories by taking photos and videos and sharing them with friends, both those at home and those with them at the destination, via social media such as Twitter and Facebook (Wang & Fesenmaire, 2013). Tourism marketers can increase the convenience motivation of using smartphones by travelers via rapid and easy access to information. Thus, they can help tourists efficiently check for updated tourist information while on the move. Doing so makes travel easier and more enjoyable because of the minimal effort required to transcend time and space. For instance, DMOs can provide travelers with real-time and customized information via smartphones, leading to flexible responses to a given situation (Buhalis & Jun 2011; Dickenson et al 2014). One managerial implication from this study is the need for DMOs and tourist attractions to integrate customized and effective Social Networking Services (SNS)s strategies into their marketing communication

mix. Currently, many travelers depend on the information provided in smartphones applications, and this type of promotional effort can generate a favorable image of a destination.

The findings from this study validate the significance of interactive tourism communication. For instance, tourists can then make or change plans anytime and anywhere they wish, emphasizing the importance of making tourism destination information available on smartphones. In addition, tourists can facilitate the decision-making process regardless of location and time during their trips to address unexpected circumstances, indicating the significance of location-based services (LBS), the services provided via smartphones that consider the users' geographical locations. LBS generally offers information and entertainment (Okazaki, 2012). For example, the LBS, smartphones applications Yelp and Eater are frequently accessed for finding restaurants or attractions (Wang, 2013). Moreover, ubiquitous tourism communication reinforces the influence of social media and IT, specifically in smartphones, since tourists rely on them for information, convenience, entertainment and effective decisions making during their trips. Furthermore, this study provides tourism researchers with an insightful lens into smartphones platforms and travel products and services. In other words, it is crucial to take into account the specific situations when tourism services and products are needed, and how smartphones can help (Tussyadish, 2016) as tourists are likely to plan their travel activities at the destinations and make on-site decisions. DMOs and tourism marketers are advised to develop special programs to promote tourism consumption.

Tourists use smartphones to obtain information on-site for attractions or other locations they want to visit, to communicate with other travelers and to share their experiences with friends or family spontaneously regardless of time and location. Therefore, tourists can manage their schedules and make decisions throughout their trips, altering their travel agenda based on

real-time information. Furthermore, smartphones provide travelers with immediate access and connection anytime and anywhere and increased opportunities for real-time transactions at the destinations. Thus, travelers can have favorable attitude toward the smartphone use, and, thus, feel more satisfied with it in the travel and tourism context (Gretzel, 2011; Hwang & Fesenmaier, 2011; Lamsfus et al, 2015; Kim & Law, 2015). Consequently, smartphones are considered a portable media platform for the online travel community, one which can lead to spontaneous interactions among travelers and affect tourist satisfaction and travel experiences (Kozinets, De Valck, Wojnicki, & Wilner, 2010; Tussyadish, 2016). Destination Management Organizations (DMO) are advised to integrate marketing tactics and develop new types of tourism business models that upgrade the competitive edge of the smartphone environment. In addition, because of the mobile technology environment, tourists have immediate access and connection, providing them with increased chances for on-site transactions, in part due to their interactions with fellow travelers (Germann Molz, 2010; Gretzel, 2011; Hwang & Fesenmaier, 2011). As a result, travelers can be involved in fluid and dynamic decision-making in the travel and tourism context (Lamsfus et al, 2015).

Smartphones have the potential to aid tourists by providing them the opportunity to access online information anytime and anywhere (Kim & Law, 2015). Thus, smartphones have had an impact on tourism experiences. Their increasing use has significantly affected travel behavior and decision-making processes (Lamsfus, Xiang, Alzua-Sorzabal, & Martín, 2013; Tussyadish & Wang, 2016; Yu, Anaya, Miao, Lehto & Wong, 2017). Smartphones have transformed touristic behavior by offering personalized mobile services and customized information with location-based services (Portolan, Zubrinic, & Milicevic, 2011; Kim et al, 2015). For example, when a consumer buys a trip package, real-time weather forecasts and

transportation information are provided by the time the tourist leaves home (Portolan et al., 2011). Smartphones considerably aid travelers in making instant and immediate decisions (Hwang, 2010).

Therefore, tourism scholars point out that destination organizations need to combine marketing tactics or skills and employ new types of business models which leverage the advantages of the mobile environment (Kim et al., 2015). Consequently, smartphones are considered a portable media platform for the online travel community which can lead to spontaneous interactions among travelers and affect travel experiences (Kozinets, De Valck, Wojnicki, & Wilner, 2010; Tussyadish, 2016).

As a new communication channel for travel-related products and services, smartphones can serve as an effective tool to satisfy tourists' information motivation regarding travel activities as well as to enhance their convenience motivation. Tourists who have been satisfied with the use of smartphones are expected to utilize them in their next travel plans. Thus, Destination Marketing or Management Organizations are to supply tourists with customized and updated information for flexibility and immediacy at a specific location and time. Recently, smartphones have enabled tourists to be more involved and innovative in creating or savoring their own travel experiences (Tussyadiah, 2015; Wang et al., 2012, 2014a). In addition, these new media offer DMOs the tools that satisfy, or gratify, the U&G motivations of tourists so that DMOs can successfully address the changing interests of travelers. These functions of customer-oriented smartphones ultimately increase e-tourist satisfactions by recalling or reshaping tourists' experiences during their trips (Choe, Kim & Fesenmaier, 2017).

Study Limitations and Recommendations for Future Research

Despite the contributions of this study, it has several limitations that can offer opportunities for future research. One of the limitations is that this study did not use moderating variables such as gender and age. It would be more meaningful to measure and explain e-tourist satisfactions if future research can address this issue. In addition, this study was conducted at only one destination, Greenville, South Carolina, not across the entire U.S. nor in other countries. The duration of data collection was limited to three weeks during the summer, a limitation although it attempted to balance between weekdays and weekend across three different time periods (morning, afternoon and evening). It would be more interesting and more generalizable to test the model proposed in this study using samples from different regions and different time periods of data collection.

The results demonstrate that smartphone use by tourists is dynamic, meaning the nature of this technology use can substantially change during trips. This finding substantiates the affordances of smartphone, and since the nature of the tourism experience may change and differ across the three stages (pre-trip, on-site trip and post-trip) of the trip experience, further research is needed to address three different stages individually. Specifically, 46.5% of the respondents in this study were members of the younger generation (under 30 years old), and they used their smartphones during this trip, meaning they are generally more open to adopting a new media technology to acquire a wide range of information channels during their trips. Thus, DMOs and tourism marketers are advised to target and customize their offerings to younger tourists who bring and use smartphones when they travel, and then they need to segment by generation.

APPENDICES

Appendix A

IRB Approval Letter

Dear Dr. Norman,

The Clemson University Office of Research Compliance reviewed the protocol titled **"An Investigation of the Applicability of the Uses and Gratifications Theory for Providing Insight into e-Tourists' use of smartphones"** and a determination was made on August 20, 2019 that the proposed activities involving human participants qualify as **Exempt under category 2** in accordance with federal regulations 45 CFR 46.104(d), http://media.clemson.edu/research/compliance/irb/new_exempt_categories.pdf.

No further action, amendments, or IRB oversight of the protocol is required except in the following situations:

1. Substantial changes made to the protocol that could potentially change the review level. Researchers who modify the study purpose, study sample, or research methods and instruments in ways not covered by the exempt categories will need to submit an expedited or full board review application.
2. Occurrence of unanticipated problem or adverse event; any unanticipated problems involving risk to subjects, complications, and/or adverse events must be reported to the Office of Research Compliance immediately.
3. Change in Principal Investigator (PI)

All research involving human participants must maintain an ethically appropriate standard, which serves to protect the rights and welfare of the participants. This involves obtaining informed consent and maintaining confidentiality of data. Research related records should be retained for a minimum of three (3) years after completion of the study.

The Clemson University IRB is committed to facilitating ethical research and protecting the rights of human subjects. Please contact us if you have any questions and use the IRB number and title when referencing the study in future correspondence.

All the best,
Nalinee

Nalinee Patin, CIP
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IRB E-mail: irb@clemson.edu (send all new requests to IRB inbox)

Appendix B

Letter from the City of Greenville

Will Young <wyoung@greenvillesc.gov> Fri, May 17, 2019 at 10:53 AM
To: Jang-Won Moon <jangwom@g.clemson.edu>

Dear Jang-Won Moon,
The City of Greenville agrees to allow you to survey travelers in downtown Greenville for the current research study you are conducting about tourism through Clemson University. Per our agreement, you will provide us with a technical report based on the results of the study in return for having access to travelers in downtown Greenville.

Will Young
Special Event Manager/ Public Information & Events Division
wyoung@greenvillesc.gov | www.greenvillesc.gov Phone: 864-467-4485, Fax: 864-467-5757

Appendix C

Informed Consent Verbal Script for the Main Study

Dear Sir/Madam:

I am a Ph.D. student at Clemson University studying Travel and Tourism Management. I am looking to collect survey data for my dissertation at tourist sites in downtown Greenville this summer. The purpose of this study is to develop a conceptual framework of the Uses and Gratifications Theory (UGT) and to investigate the causal relations among its four motivations for using smartphones and how gratified (satisfied) tourists are with this platform in the travel and tourism context. Your participation in this study is voluntary, and it will take between 10-15 minutes to complete the survey. The information provided will remain strictly confidential, and you will not be identified by your answers. You may choose not to participate and/or to withdraw at any point.

Your cooperation and participation in this study are greatly appreciated. If you have any question and/or comments concerning the study, please do not hesitate to contact me at 864-643-9400 or to email me at jangwom@g.clemson.edu. Also, you can contact my advisor, Dr. William C. Norman, at wnorman@clemson.edu. If you have any questions or concerns about your rights in this research study, please contact the Clemson University Office for Research Compliance (ORC) at 864-656-6460. Thank you for your assistance.

Kind regards,
Jang-Won Moon
Ph.D. Candidate
Department of Parks, Recreation and Tourism Management
Clemson University

Appendix D

Examining Tourist's' Uses of Smartphone Technology

This survey will take approximately 10 minutes to complete. Participation is completely voluntary. Your responses will be confidential, and you will not be identifiable by your answers. You may stop or withdraw from this survey at any point you wish.

This questionnaire consists of ten sections. The first four sections are related to reasons why you might use smartphone: Social Interaction, Information, Entertainment, and Convenience; the next three are concerned with your attitudes towards smartphone use, and the last three are concerned with Satisfactions with smartphone use. For each following question, **please think about your smartphone use during this trip to Greenville, South Carolina.**

Remember that there are no right or wrong answers. But your responses are important to the survey. Please mark your answers in the boxes.

1. For each of the items listed below, please indicate your level of agreement by checking the appropriate box.

ID	During this trip, I use my smartphone….	Strongly Disagree			Neutral			Strongly Agree
SOI1	to share my experiences with others while I am in Greenville.	1	2	3	4	5	6	7
SOI2	to give advice to other tourists while in Greenville.	1	2	3	4	5	6	7
SOI3	to give my comments to others.	1	2	3	4	5	6	7
SOI4	to participate in many discussions about Greenville.	1	2	3	4	5	6	7

2. For each of the items listed below, please indicate your level of agreement by checking the appropriate box.

ID	I use my smartphone during this trip…	Strongly Disagree			Neutral			Strongly Agree
INF1	to look for restaurant reviews from Yelp and Eater.	1	2	3	4	5	6	7
INF2	to arrange transportation (Uber and Lyft).	1	2	3	4	5	6	7
INF3	to look for interesting attractions to visit using TripAdvisor.	1	2	3	4	5	6	7
INF4	to navigate around Greenville using Google map.	1	2	3	4	5	6	7
INF5	to keep up with events in Greenville.	1	2	3	4	5	6	7

3. For each of the items listed below, please indicate your level of agreement by checking the appropriate box.

ID	I use my smartphone during this trip because....	Strongly Disagree			Neutral			Strongly Agree
ENT1	I want to post pictures to social media.	1	2	3	4	5	6	7
ENT2	I want to record my memories by taking photos.	1	2	3	4	5	6	7
ENT3	I want to record my memories by taking videos.	1	2	3	4	5	6	7
ENT4	I want to share my trip photos.	1	2	3	4	5	6	7
ENT5	I want to share videos of my trip.	1	2	3	4	5	6	7

4. For each of the items listed below, please indicate your level of agreement by checking the appropriate box.

ID	During this trip, I use my smartphone….	Strongly Disagree			Neutral			Strongly Agree
CON1	to access information about the next destinations.	1	2	3	4	5	6	7
CON2	to get updated information about Greenville quickly.	1	2	3	4	5	6	7
CON3	to get updated information about Greenville easily.	1	2	3	4	5	6	7
CON4	to help facilitate changing travel plans fairly quickly in response to a given situation.	1	2	3	4	5	6	7
CON5	to have the flexibility to change travel plans fairly quickly.	1	2	3	4	5	6	7

5. For each of the items listed below, please indicate your level of agreement by checking the appropriate box.

ID		Strongly Disagree				Neutral				Strongly Agree
AA1	I think that using my smartphone during this trip is entertaining.	1	2	3	4	5	6	7	8	9
AA2	I think that using my smartphone during this trip is pleasant.	1	2	3	4	5	6	7	8	9
AA3	I think that using my smartphone during this trip is enjoyable.	1	2	3	4	5	6	7	8	9
AA4	I think that using my smartphone during this trip is appealing.	1	2	3	4	5	6	7	8	9

6. For each of the items listed below, please indicate your level of agreement by checking the appropriate box.

ID		Strongly Disagree				Neutral				Strongly Agree
CA1	I think that using my smartphone during this trip is valuable.	1	2	3	4	5	6	7	8	9
CA2	I think that using my smartphone during this trip is effective.	1	2	3	4	5	6	7	8	9
CA3	I think that using my smartphone during this trip is practical.	1	2	3	4	5	6	7	8	9
CA4	I think that using my smartphone during this trip is beneficial.	1	2	3	4	5	6	7	8	9
CA5	I think that using my smartphone during this trip is helpful.	1	2	3	4	5	6	7	8	9
CA6	I think that using my smartphone during this trip is informative.	1	2	3	4	5	6	7	8	9

7. For each of the items listed below, please indicate your level of agreement by checking the appropriate box.

ID		Strongly Disagree				Neutral				Strongly Agree
BA1	I recommend smartphone use during this trip to other people.	1	2	3	4	5	6	7	8	9
BA2	I expect to use my smartphone during this trip.	1	2	3	4	5	6	7	8	9
BA3	I intend to use my smartphone during this trip.	1	2	3	4	5	6	7	8	9
BA4	I plan to use my smartphone during this trip.	1	2	3	4	5	6	7	8	9

8. For each of the items listed below, please indicate your level of agreement by checking the appropriate box.

ID		Strongly Disagree			Neutral			Strongly Agree
UTIL1	During this trip, I am satisfied with the convenience to look for information on my smartphone.	1	2	3	4	5	6	7
UTIL2	I am sure that using a smartphone during this trip fits my travel style.	1	2	3	4	5	6	7
UTIL3	During this trip, I am satisfied with the easy access to a wide selection of travel information via my smartphone.	1	2	3	4	5	6	7
UTIL4	During this trip, I made the correct decision to use my smartphone to get information whenever I want.	1	2	3	4	5	6	7

9. For each of the items listed below, please indicate your level of agreement by checking the appropriate box.

ID		Strongly Disagree			Neutral			Strongly Agree
HED1	I have fun with my smartphone during this trip.	1	2	3	4	5	6	7
HED2	I find using my smartphone during this trip to be enjoyable.	1	2	3	4	5	6	7
HED3	I find using my smartphone during this trip to be exciting.	1	2	3	4	5	6	7
HED4	I feel comfortable using my smartphone during this trip.	1	2	3	4	5	6	7

10. For each of the items listed below, please indicate your level of agreement by checking the appropriate box.

ID		Strongly Disagree			Neutral			Strongly Agree
SAT1	Using smartphones during this trip was an excellent idea.	1	2	3	4	5	6	7
SAT2	I feel very good about information and communication technology service on my smartphone.	1	2	3	4	5	6	7
SAT3	Using a smartphone for this trip is very helpful.	1	2	3	4	5	6	7
SAT4	Overall, I was pleased with my smartphone use during this trip.	1	2	3	4	5	6	7

Background Information

The following items ask you to describe yourself in a general way. Your responses will be held confidential. Moreover, you may skip items you would prefer not to answer.

1. My gender is:
   - □ Male
   - □ Female

2. What is your age?
   - □ 18-20 □ 21-30 □ 31-40 □ 41-50
   - □ 51-60 □ 61-70 □ 71-80 □ Over 80

3. What is your race?
   - □ White/ Caucasian □ American Indian/ Native American
   - □ Black/ African American □ Asian
   - □ Hispanic/ Latino □ Native Hawaiian and other Pacific Islander □ Other

4. Where do you live? City :_____
   State: _____ Zip Code: _____

5. What is the primary purpose of trip?
   - □ Leisure
   - □ Business
   - □ Combination

6. How long are you staying at this destination?
   - □ One day (day trip) □ 2 days (1 overnight)
   - □ 3 days (2 overnights) □ 4 days (3 overnights)
   - □ 5-7 days (4-6 overnights) □ Longer than a week

7. How many people are in your travel group including yourself?

   _____ Persons

8. Which of the following best describes your travel group that you referred for most recent trip? Please check one.

   □ Solo □ Family □ Friends □ Family and Friends □ Other

9. Are you a first time visitor or repeat visitor?

   □ First time visitor □ Repeat visitor

10. How many years have you used a smartphone?

    □ Less than 3 years □ 3-4 years □ 5-6 years □ 7-8 years □ 9-10 years
    □ 11 years or more

11. In my opinion, I am very skilled at using my smartphone.

Strongly Disagree				Neutral				Strongly Agree
1	2	3	4	5	6	7	8	9

12. How comfortable are you using a smartphone during this trip? (check one).

Strongly Disagree				Neutral				Strongly Agree
1	2	3	4	5	6	7	8	9

13. I would recommend this destination.

Strongly Disagree				Neutral				Strongly Agree
1	2	3	4	5	6	7	8	9

14. Any other comments? (Please share your thoughts and comment on anything relating to the topic that would be helpful for this study).

Thank you for your help with my research!

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