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UNDERSTANDING CASINO VISITORS' DECISION-MAKING PROCESSES WITHIN THE PERSPECTIVE OF RESPONSIBLE GAMBLING: AN APPLICATION OF THE MODEL OF GOAL-DIRECTED BEHAVIOR

Hakjun Song
Clemson University, bloodia00@hotmail.com

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UNDERSTANDING CASINO VISITORS' DECISION-MAKING PROCESSES
WITHIN THE PERSPECTIVE OF RESPONSIBLE GAMBLING: AN APPLICATION
OF THE MODEL OF GOAL-DIRECTED BEHAVIOR

A Dissertation
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy
Parks, Recreation and Tourism Management

by
HakJun Song
August 2010

Accepted by:
Dr. William C. Norman, Committee Chair
Dr. Francis A. McGuire
Dr. Kenneth F. Backman
Dr. DeWayne D. Moore
Dr. Choong-Ki Lee

ABSTRACT

There has been relatively little theory-based research focusing on casino visitors' behavior. The Theory of Planned Behavior (TPB) has been criticized for not considering the effect of past behavior and for not incorporating emotional factors in its theoretical frame. In this regard, the purpose of this study was to examine casino visitors' behavioral intention for casino gambling using the Model of Goal-directed Behavior (MGB) as a new theoretical framework to understand visitors' behavioral intentions to gamble in casinos. This study also aimed to not only compare the Extended MGB (EMGB) with the original MGB, TPB, and Theory of Reasoned Action (TRA), but also to examine the role of responsible gambling strategy in the casino visitors' decision-making processes for casino gambling by adding the concept to the original MGB. An onsite survey of casino visitors was conducted at Kangwon Land Casino in South Korea. Structural equation modeling was employed to identify the structural relationships between latent variables. The results of the EMGB indicated that "desire" had the strongest relationship with casino visitors' intentions to gamble, followed by positive anticipated emotion, perceived behavioral control, perceptions of a responsible gambling strategy, negative anticipated emotion, and attitude. The perception of a responsible gambling strategy was also a significant (direct) predictor of both desire and behavioral intention, as casino visitors had positive perceptions of casinos that implemented responsible gambling strategies. Casino managers should consider a responsible gambling strategy as an important long-term business activity to increase casino visitors' intentions to gamble.

DEDICATION

This dissertation has benefited from the many people who have come across my long and tough Ph.D. program. No words of thanks can completely convey my gratitude for my supporters' valuable time and kind help that made the completion of my Ph.D. program possible. First and foremost, my very special thanks go to my advisor Dr. William C. Norman for guiding me through this dissertation and for advising me during the past three years. His leadership will take me a long way in my career in academia. I also thank to Dr. Choong-Ki Lee for his never-ending care and concern throughout my Ph.D. program. From observing the way he interacts, I learned what professionalism is and how to become a professional. I feel grateful and honored to have him as my life-long mentor and role model. I am deeply grateful to other committee members for their constructive comments and criticisms. Dr. Francis A. Mcguire has been another great source of guidance and support during my Ph.D. program. Dr. Kenneth F. Backman has been extremely generous with his time and provided insightful comments. My special thanks also go to Dr. DeWayne D. Moore for his support and encouragement. My committee members' precious time and valuable feedback enabled this dissertation to be more polished. They both showed genuine interest in my success and encouraged me to achieve my academic goals. It was also my honor and pleasure to meet some of the greatest people, my colleagues in PRTM. Although graduate school could be a very lonely journey, people in G15 made the journey more fun and pleasant. In addition, the support that I received from my friends (JunChul Lee, YoungTaek Kim, JaeWoong Hur, YoungJu Ahn, Jinwon Kim, YoungJun Choi, ChoongBum Choi, and JaeSeok Lee)

enabled me to finish my Ph.D. program. Their influence has helped me get to where I am.

Lastly, my family deserves a special note of thanks. My parents made sure to always let me know that I have their endless support and love. Without their support, I would not have finished my Ph.D. program. I also have the greatest younger brother and sisters who encouraged, loved, and trusted me. Thank you and I love you all.

TABLE OF CONTENTS

Table of Contents (Continued)

LIST OF TABLES

List of Tables (Continued)

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Background

The gambling industry has developed with dramatic speed due to its potential economic, social, and cultural impacts (Lee, Lee, Bernhard, & Yoon, 2006). In modern society, the gambling industry tends to be larger and more popular because it can contribute to revitalizing a local economy, satisfying tourists, and increasing employment and tax revenues (Lee, Kang, Long, & Reisinger, 2010). Because of these reasons, the importance of the gambling industry has increased in the field of leisure and tourism in the 21st century. In particular, the casino industry as a subset of the gambling industry has expanded rapidly around the world. Some of top 10 tourism countries, including the United States, France, Germany, United Kingdom, Canada, and Spain, have added casinos as an important component of the tourism product. According to the American Gaming Association (2006), 80.0 % of American adults were found to perceive casinos as a socially acceptable leisure activity and as a valuable part of their community's entertainment and tourism opportunities. As a result, many people enjoy casino gambling as an activity similar to other leisure and recreational activities (Cook, 1992).

As casinos have been legalized rapidly worldwide, research on casino gambling has also increased. Casino gambling research has been mainly conducted on residents' attitudes toward casino development in communities (Caneday & Zeiger, 1991; Perdue, Long, & Kang, 1995; Pizam & Pokela, 1985), economic impact of a casino (Lee & Kwon,

1997), casino service-quality (Brady & Cronin, 2001), and segmenting casino gamblers (Lee, Lee, Bernhard, & Youn, 2006). However, little research has been conducted on the behavior of casino visitors from a theoretical perspective. Understanding the behavior of casino visitors is imperative to the development of effective casino marketing strategies that might answer the following questions: "Why do visitors want to gamble in casinos?" and "Which decision-making process do they go through for casino gambling?"

However, understanding the decision-making processes of casino visitors and identifying imperative factors that affect their gambling behavior is not a simple task since their decision-making processes tend to be performed through intricate and multifaceted situations (Oh & Hsu, 2001). In the field of consumer behavior, internal factors such as motivation, involvement, information processing, learning and memory, personality, and attitude may influence gambling behavior while external factors influencing gambling behavior might include culture, social class, family, and reference group (Assael, 2004). Psychological factors (i.e., attitude, motivation, involvement, and learning) and social factors (i.e., family, social class, social group, and reference) might also be considered imperative factors which have an effect on gambling behavior in the context of tourism (Mayo & Jarvis, 1981).

Some researchers have tried to understand and predict tourists' behavior using important factors such as motivation (Formica & Uysal, 1996; Crompton & McKay, 1997; Formica & Uysal, 1998) and involvement (Dimanche, Havitz, & Howard, 1993). However, they are limited because they failed to examine which factors are relatively more important to tourists' behavior by considering other important factors at the same

time. Although it is not easy to understand the complex decision-making processes of tourists, Lam and Hsu (2004, 2006) asserted that the behavioral intention of tourists becomes an important clue to understanding their decision-making processes by developing models that incorporate variables of influencing tourists' behavior such as attitude, subjective norm, and perceived behavioral control. A tourist's behavioral intention is made through his/her own thinking process, and derived intention plays an important role to lead actual visiting behaviors (Han, Hsu, & Sheu, 2010). The importance of behavioral intention as an important clue for understanding tourists' behaviors in the field of tourism could also be applied to the gambling behavior of casino visitors. The research on behavioral intention, a theoretically valuable and highly applicable construct, can provide casino researchers and practitioners with academic and practical implications for the development of the casino industry.

In order to theoretically understand and predict the human's behavioral intention and actual behavior, a process-oriented approach like the Theory of Reasoned Action (TRA) (Ajzen & Fishbein, 1980; Cumming & Corney, 1987) and Theory of Planned Behavior (TPB) (Ajzen, 1991) have been considered (Oh & Hsu, 2001). Although the TRA has been used at first to understand human behaviors, the TPB has been mainly employed to explain human behaviors since the 1990s because the TRA cannot explain some human behaviors where external or internal impediments exist to prevent undertaking those human behaviors (Zint, 2002). Compared to the TRA, the TPB is a more-advanced model in that it introduces the concept of perceived behavioral control to explain external influences which affect the behavioral intention (Cheng, Lam, & Hsu,

2006). However, the TPB has some limitations. One limitation is that the model does not consider the effect of past behavior. Also, since the TPB is mainly focused on cognitive factors, it is likely to ignore emotional factors which might affect behavioral intention (Conner & Armitage, 1998). In order to address these limitations of the TPB, Perugini and Bagozzi (2001) suggested the Model of Goal-directed Behavior (MGB). The MGB is an alternative approach to the TPB and TRA. In the MGB, the role of all original constructs in the TPB is redefined to affect behavioral intention indirectly through desire although the model contains all original constructs of the TPB such as attitude, subjective norm, and perceived behavioral control.

In addition, in order to consider the effect of past behavior and emotional factors for behavioral intention, positive anticipated emotion, negative anticipated emotion, frequency of past behavior, and recency of past behavior are introduced to the MGB. Through introducing these new concepts, it was found that the explanation power of the MGB was highly enhanced (Bagozzi & Dholakia 2006; Perugini & Bagozzi, 2001). In this regard, the MGB is employed in this study as a new theoretical framework to explain visitors' behavioral intention to gamble in casinos. This recently developed model is able to address some important questions for casino gambling behavior: "Where does the casino gambling intention come from?", "Which factors influence visitors' casino gambling intentions?", and "Which theories and models are more proper to predict visitors' casino gambling intentions and behaviors?" In addition, this study develops an Extended MGB (EMGB) with respect to the decision-making processes of casino visitors by examining the perception of a responsible gambling strategy. Currently, many casino

companies are encouraging responsible gambling through various marketing and management strategies 1) to prevent and reduce harm associated with excessive gambling behaviors and 2) to achieve sustainable development for the casino industry (Blaszczynski, Ladouceur, & Shaffer, 2004; Hing, 2003; Monaghan, 2009). A responsible gambling strategy would be more likely to benefit the casino industry—as well as society—and it is able to contribute to the development of the casino industry by minimizing social problems associated with excessive gambling behaviors.

Specifically, a responsible gambling strategy encourages a person to consider casino gambling as one of many general leisure activities by establishing a responsible gambling culture. In addition, it is believed that a responsible gambling strategy is able to attract more recreational gamblers—including tourists—and achieve the economic development of the casino industry because the strategy may enhance peoples' attitudes toward gambling. In this regard, a responsible gambling strategy as a long-term marketing goal could be a good way for sustainable development of casinos throughout the world (Hing, 2003). In spite of the increased importance of the responsible gambling strategy there is little research on examining how it influences casino visitors' decision-making processes. Therefore, the current study proposes a model that expands the MGB of Perugini and Bagozzi (2001) by examining the role of a responsible gambling strategy on the casino visitors' decision-making processes (Hing, 2003; Monaghan, 2009).

Problem Statement

In spite of the growing popularity of casino gambling, there has been relatively little theory-based research focusing on the casino visitors' behavior. A few studies have demonstrated some efforts to identify casino visitors' gambling behavior; however, these are mostly based on observational and descriptive reports (Cotte, 1997; Loroz, 2004). The MGB has never been applied in studying casino gambling behavior although the TPB was employed by Oh and Hsu (2001) in understanding casino visitors' gambling behavior. Although it was shown that the TPB was useful to understand casino visitors' gambling behavior in the study of Oh and Hsu (2001), their study did not include motivational and emotional factors to improve the explanatory power of the model significantly.

In other words, the study was limited to understand gambling behaviors without considering the effect of motivation and emotion in the TPB (Bagozzi, Dholakia, & Pearo, 2007). Because gambling behaviors are performed due to the high expectation to win money (Platz & Millar, 2001), casino visitors' gambling behavior is likely to be mainly performed through habitual, motivational, and emotional factors, including cognitive factors. Therefore, a more advanced model like the MGB is necessary to consider these various factors such as past behavior, motivation, and emotion to help researchers and managers better understand casino visitors' gambling behavior. In addition, empirical evidence of the impact of a responsible gambling strategy on gambling behaviors and behavioral intention seems to be lacking in the field of casinos and gambling. Research to examine whether or not a responsible gambling strategy has a direct impact on gambling

behavior would be important for the sustainable development of the casino industry. In other words, more research is needed to investigate how the casino visitors' gambling behavior is formed and to learn what factors are influential on gambling behaviors by applying a robust theoretical framework in the perspective of responsible gambling.

Purpose of Study

The purpose of this study is to examine casino visitors' behavioral intention for casino gambling using the EMGB which adds the new construct of the perception of a responsible gambling strategy to the original MGB. This study also aims to not only compare the original MGB with the TPB and TRA but also compare the EMGB with the original MGB in order to confirm that the EMGB is an appropriate theoretical framework to understand casino a visitors' gambling behavior. In addition, this study examines the role of a responsible gambling strategy in the casino visitors' decision-making. This framework will allow for an in-depth examination of the goal-directed behavior of casino visitors while also considering the influence of a responsible gambling strategy on casino visitors' decision-making processes. This study focuses specifically on Korean winter visitors to the Kangwon Land Casino.

Research Questions

Clearly comprehending the decision-making processes of casino visitors in regards to the perception of a responsible gambling strategy is important to build successful marketing strategies for the sustainable development of the casino industry.

Therefore, the overarching research question of this study is, "What is the psychological decision-making processes of people who want to gamble in casinos within the perspective of responsible gambling?" There are five specific research questions for the study.

The first research question is related to testing the original MGB in the context of casino gambling. It can be stated as, "Can the original MGB be applied to predict behavioral intention of casino visitors?"

The second research question is about investigating the distinction between intention and desires concerning the role of desires as a mediator of the effects of attitude, subjective norm, positive anticipated emotion, and negative anticipated emotion on the desire to gamble in casinos. It can be expressed as, "What is the role of desire in the MGB for the decision-making process?" Although there are some past studies supporting this distinction, it is still essential to deliver additional evidence due to the novelty of this distinction and the lack of concord among researchers (Perugini & Bagozzi, 2004). In the case of casino gambling, desires are expected to play a powerful meditational role because behavioral intention to gamble in casinos cannot arise without desire derived from attitude, subjective norm, perceived behavioral control, and anticipated emotions in the MGB. However, the mediation may not be fully mediated, and some constructs may also have direct effects on intentions unmediated by desires.

The third research question is about comparing three competing model: the original MGB, TPB, and TRA. It is stated as, "Does the original MGB, which added desire, two anticipated emotions, and past behavior as new constructs to the TPB,

perform significantly better than the TRA and the TPB?"

The fourth research question is related to a test of the EMGB adding a new construct of the perception of a responsible gambling strategy which indicates casino operators' interest in making casino gambling a more socially acceptable leisure activity to an original MGB. It can be stated as, "Can the EMGB developed by including a new construct—perception of a responsible gambling strategy—to the original MGB be applied to predict behavioral intention of casino visitors?" This research question is about exploring the usefulness of the EMGB in explaining casino visitors' gambling behavior. The fifth research question is to compare two competing models, the EMGB and the original MGB. It is stated as, "Is the EMGB the best model to explain casino visitors' gambling behavior within the perspective of responsible gambling?"

According to Ajzen (1991), a social psychological model like the TPB is still open to modification and the inclusion of additional variable(s) in order to explain more variance of intention and behavior. Based on this idea, the original MGB is also modified and expanded by introducing the new construct of casino visitors' perception of a responsible gambling strategy in this study.

Scope of Study

Winter visitors to Kangwon Land Casino in South Korea are the target population for the current study. Kangwon Land Casino opened in 2000 to enhance the economic and social status of a run-down former mining area in the Gangwon province. It is the only casino resort which allows the casino gambling of native Koreans, providing various

leisure and tourism facilities such as a hotel, golf course, and ski resort (Lee et al., 2010). The survey participants in this study are selected using a convenience sampling process (O'Leary, 2004). The research method utilizes self-administered questionnaires to collect the research data. The casino visitors are asked to answer questions about their attitude, subjective norm, perceived behavioral control, anticipated emotions, desire, behavioral intention, past behavior, perception of responsible gambling strategy, and socio-demographic characteristics. Interrelationship among these variables is analyzed through exploratory factor analysis, confirmatory factor analysis, and structural equation modeling (SEM) using SPSS (SPSS 2001) and EQS (Bentler & Wu, 1995).

Significance of Study

Because the issues of the casino industry; socio psychological theory, such as TRA, TPB, and original MGB; and the concept of responsible gambling have been studied separately, none of the research has focused on the relationship between casino gambling, responsible gambling, and behavioral intention. As a result, this study may assist future researchers on the decision-making processes of casino gambling by presenting specific theoretical frameworks to understand casino visitors' gambling behavior.

Moreover, the findings from this study will provide useful information for casino managers and operators to promote more socially acceptable casino gambling environments when attracting more casino visitors. Lastly, this study will make a contribution to provide important information for casino operators to develop proper

strategic methods for attracting casino visitors and satisfying them within the perspective of responsible gambling.

<div align="center">Definitions of Terms</div>

The following terms related to gambling and casinos are defined as they are used in the current study:

-*Casino gambling:* All gambling activities in fully licensed casino facilities.

-*Casino industry:* A business related to operating gambling facilities including table games, slot machines, and amenities marketed toward customers seeking gambling activities and entertainment (Eade, 1997).

-*Commercial casino:* Profit-making casino businesses owned by individuals, private companies, or large public corporations.

-*Gambling:* The act of playing for stakes in the hope of winning. One of the human activities relative to wagering, while the term "gaming" is employed as a business and academic term (Clark, 1987).

-*Responsible gambling strategy:* The provision of gambling services in a way that seeks to minimize the harm to customers and the community associated with gambling (Hing, 2003).

The following terms related to human behavior and theories are defined as they are used in the current study:

-*Anticipated emotion:* Anticipate affective reactions to the hope of success and the fear of failure to perform a specific behavior in the situation of uncertain

future. Positive anticipated emotion results in progress towards goal attainment, and negative anticipated emotion results in movement away from goal attainment (Gleicher et al., 1995).

-*Attitude towards a behavior:* Based on an individual's pre-existing beliefs, individual judgment about whether a specific behavior is desirable or not (Ajzen & Fishbein, 1980).

-*Behavior:* Behaviors are observable acts of study objects in the social psychological theories like Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB), and the Method of Goal-directed Behavior (MGB).

-*Behavioral intention:* The indication of how much of an effort an individual is planning to exert to perform a specific behavior (Ajzen & Driver, 1991).

-*Desire:* The direct momentum for intentions. Desire transforms the motivational, cognitive, and emotional contents to be implanted in attitude, subjective norm, perceived behavioral control, positive anticipated emotion, negative anticipated emotion, and past behavior on intentions in the Model of Goal-directed Behavior (MGB).

-*Model of Goal-directed Behavior (MGB):* An extension of the Theory of Planned Behavior (TPB). In the MGB, all variables of the TPB are still included, but the role of them is redefined. Desire, positive anticipated emotion, negative anticipated emotion, and two concepts of past behavior are newly employed in the MGB (Perugini & Bagozzi, 2001).

-*Perceived behavioral control:* The individual's perception of the ease or difficulty to undertake a specific behavior (Ajzen, 1985).

-*Subjective norms:* The specific behavioral norms that an individual sets for him/herself; what an individual believes that he/she should do (Ajzen & Fishbein, 1980).

-*Theory of Planned Behavior (TPB):* An extension of the Theory of Reasoned Action (TRA). The difference between the TRA and the TPB is that the TPB can consider non-volitional situation by adding the new construct of perceived behavioral control to the TRA (Ajzen, 1985).

-*Theory of Reasoned Action (TRA):* An expectancy value model to predict and understand an individual's specific behavior. According to the theory, it assumes that human beings are rational, an individual's behavior is decided by one's intention to perform the behavior, and the intention is, in turn, a function of one's attitude toward the behavior and subjective norm (Ajzen & Fishbein, 1980).

Organization of Dissertation

This dissertation is organized in the following way to provide a roadmap for this inquiry into casino visitors' decision-making processes for casino gambling: Chapter I - Introduction; Chapter II - Literature Review; Chapter III - Theoretical Framework and Conceptual Model; Chapter IV - Methodology; Chapter V - Results; and Chapter VI - Conclusion. The introduction chapter presents a brief preface to the topic of gambling,

specifically casino gambling, and explains the focus of prior research into gambling behaviors. Chapter I also specifies research purpose, research questions to be addressed by this study, the scope of study, the significance of this particular inquiry, and a comprehensive list of relevant terms.

The literature review in Chapter II highlights prior research into gambling as a leisure activity, casino gambling, casino development in the world, responsible gambling strategy, and consumer behavior theories based on social psychological theories such as TRA, TPB, and MGB. The key section of the review of literature specifically discusses casino gambling behavior based on social psychological theories.

Chapter III is organized by a discussion of the theoretical frameworks for the current study and their hypothetical relationship.

Chapter IV specifies the methodology of the study. This includes site selection, the selection of subjects, data collection procedures, variable measurement, and data analysis procedures.

Chapter V, the result chapter of the study, begins with a description of the results of descriptive statistics of research variables and preliminary analyses of the research data. In the second part of the chapter, the analyses of structural equation models depicting casino visitors' decision-making processes for casino gambling are conducted.

Chapter VI summarizes research results. The chapter also suggests implications from the study, research limitations, and recommendations for future research.

CHAPTER II

LITERATURE REVIEW

This chapter of the literature review contains several sections. The first section presents gambling behavior, research on gambling, and gambling as a leisure activity. The second section consists of casino development in the world and casino studies in the social sciences. The third section covers sustainable development of casinos, including responsible gambling. The last section is an overview of related literature research regarding consumer behavior models based on social psychological theories.

Gambling Behaviors

Evidence of gambling has been discovered in most ancient cultures including Egypt, Athens, India, China, and Rome (Petry, 2005). This indicates that the culture of gambling as a social activity has been maintained for more than 4,000 years. Asian and Arabian peoples gambled with tokens or coins while Egyptians and Athenians enjoyed dice and board games (McMillen, 1996). In modern society, gambling is generally regarded as an activity related to winning something of value by betting money or belongings on events or activities with unknown outcomes (Abbott & Volberg, 2000; Bernstein, 1996).

Shaffer and Korn (2002) stated that the prevalence of gambling among adults in the United States increased from 67% to 85%, and gambling expenditure increased from 0.3% to 0.74% of personal income between 1975 and 1999. In addition, they claimed that

all forms of gambling (table games, slot machines, lotteries, and sports betting) have increased in recent years. Gambling behavior can be considered on a continuum ranging from a recreational gambling without gambling related problems to pathological gambling (Derevensky & Gupta, 2000). The clarification of this continuum from recreational gambling to pathological gambling is important since it may assist to understand the depths of gambling behaviors. Although problem, compulsive, and pathological gambling are all viewed as negative, recreational gambling is generally considered as positive, or at least neutral.

The first level of negative gambling behavior is commonly called "problem gambling." Lesieur and Rosenthal (1991) stated that problem gambling indicates a substantial portion of gambling behavior where the gambling behavior causes some negative consequences for gamblers. As gambling behavior escalates, the negative outcomes begin to outweigh any potential benefits (Korn & Shaffer, 1999). Examples of these negative side effects include accumulation of debt, damaged family, and personal relationship breakdown. Problem gambling is also related to negative health consequences including high rates of hypertension, insomnia, heart disease, stomach problems, and psychosomatic symptoms (Delfabbro, 2008).

The second level of negative gambling behavior is termed "compulsive gambling" and is usually used to explain an advanced level of negative gambling behavior (Wynne, Smith, & Volberg, 1994). Ciarrocchi and Richardson (1989) stated that there are some characteristics of compulsive behavior present in a compulsive gambler: 1) habitually taking chances, 2) participation in gambling precluding all other interests, 3) being full of

16

optimism and never learning from defeat, 4) never stopping when winning, 5) eventually risking large sums of money, and 6) the thrill of gambling is experienced between the time of wager and the outcome of the bet.

The last level of negative gambling behavior is pathological gambling. Pathological gambling is a chronic and progressive disorder that includes an obsession over gambling, irrational thinking, and a continuous participation in gambling despite negative consequences (Rosenthal, 1992). This definition is most commonly used by psychological researchers and mental health professionals to explain extreme gambling behavior. Some researchers have tried to find a link between sensation seeking, impulsivity, and disordered gambling behavior since pathological gambling is defined as an impulse disorder. Powell, Hardoon, Derevensky, and Gupta (1999) found that risk taking and sensation seeking distinguished pathological gamblers from non-problem gamblers based on a sample of college students.

Korn and Shaffer (1999) stated that an increase in gambling prevalence and opportunities to gamble in recent years are potentially problematic to families as well as communities, so they claimed that adoption of a public health perspective toward gambling is required for debating health, social, and economic costs and benefits of gambling. Many researchers have utilized analytic methods and developed some gambling behavior screens (McMillen & Wenzel, 2006; Stinchfield, 2002). The United States, Canada, Australia, the United Kingdom, and Macau have already completed some problem gambling prevalence studies that focused on different groups using several gambling behavior screens, including South Oaks Gambling Screen (SOGS), Canadian

17

Problem Gambling Index (CPGI), and Q-sorts (Derevensky & Gupta, 2000; Ellenbogen, Gupta, & Derevensky, 2007; Gill, Grande, & Taylor, 2006; Olason, Sigurdardottir, & Smari, 2006; Welte, Barness, Tidwell, & Hoffan, 2008). With regard to positive gambling behavior, recreational gambling generally refers to gambling as a leisure activity, not a compulsive disorder or occupation. Recreational gamblers are defined as individuals who participate in gambling with no adverse consequences (Barker & Britz, 2000). Dumont and Ladouceur (1990) stated that individuals recreationally gamble mainly for excitement, thrill, and winning money. Based on these perspectives, recreational gambling is generally accepted as a positive form of gambling behavior.

Platz and Millar (2001) stated that the top motives for recreational gamblers are that they enjoy being with friends and being with similar people. They also found that other motivational rationales for recreational gamblers were not so dissimilar from pathological or problem gamblers: autonomy, being with friends, escaping daily routine, excitement, exploration, risk, and winning, but the pathological gamblers assigned higher mean values of importance to these attributes. The differences appeared where pathological gamblers believed that these motives were more important in their enjoyment of gambling than recreational gamblers. These four categories of gambling are able to help to define a gambler's participation level and potential treatment protocols; however, these definitions do not identify the large variety of types of legal and illegal gambling opportunities available to all levels of gamblers.

Research on Gambling

Neighbors, Lostutter, Larimer, and Takushi (2002) stated that research on gambling is a relatively new field of inquiry. Scholars within their particular discipline have undertaken gambling research with different perspectives for gambling behavior, so a variety of gambling studies have been performed to understand gambling behavior: 1) regulations and taxation, 2) management and marketing, 3) gambling impacts on the community and residents' perception, 4) gambling behaviors, 5) video and internet gambling, and 6) others.

Regulations and taxation are important research topics in the gambling studies from the beginning of gambling studies (Kwon & Back, 2009). Gambling research in regulation and taxation mainly based on political science has emphasized policy making, political processes, and institutions with various issues such as government-business relations, decision-making by state governments, policy outcomes, and interest-group politics (McMillen, 1996). For example, Prum and Bybee (1999) overviewed the role and practices of the Casino Licensing Section (CLS) in New Jersey. Ivancevish and Fried (1996) discussed gambling taxation and regulations by interviewing several key stakeholders to find out important tax issues facing the gambling industry. They also emphasized that the federal government continuously showed great interest in the gambling industry, and the industry needed to be prepared for refinements in gambling taxation and regulation.

Gambling research in management and marketing covered various managerial matters: gambling promotion, business relations, and gambling technology (Jolley,

Mizerski, & Olaru, 2006; Loroz, 2004). For example, Mayer and Johnson (2003) identified the elements of casino atmospherics from the perspective of customers in Las Vegas. They stated that floor layout and theme were the most significant factors impacting customers' perceptions, upholding the long-standing belief held in the gambling industry. Recently, Breen, Buultjens, and Hing (2005) asserted that more thorough information about their communities enabled them to identify gamblers' gambling behavior and gambling practices.

With regard to gambling impacts on the community and residents' perception, although early phase of research focused mainly on the impact of Native American gambling on communities (Thin & Hsu, 1994; Spears & Boger, 2002), the scope of research has recently been broadened to include other states and countries (Back & Lee, 2005; Vong, 2008). In particular, social exchange theory was frequently employed to examine local residents' perceptions. Back and Lee (2005) found that social and economic benefits were the most significant determining factors for the level of support for casino development based on the social exchange theory. Recently, social exchange theory was supported by Vong (2008). He stated that the social exchange theory played a role in shaping perceptions of gambling impacts among the residents of Macau.

Although research on gamblers' attitudes, characteristics, and gambling behavior based on psychology and sociology were of little interest to researchers at the beginning of gambling research, this has become a popular topic of researchers since 1999 (Kwon & Back, 2009). This research topic includes accounting for attitudes and motivations, as well as behaviors of individuals for gambling. For example, Titz, Andrus, and Miller

(2001) examined the hedonic factors of gamblers to investigate differences between mechanical game players and table game players. They stated that table game players were more involved and tended to be more aware of the intricacies of the gambling. In addition, table game players tended to be less impulsive and more controlled than slot players. Moufakkir, Singh, Moufakkir-Van der Woud, and Holecel (2004) divided tourists into light, medium, and heavy-spending tourists based on spending per person, per day, excluding gambling. They stated that heavy-spending tourists were more interested in the destination's tourism products besides gambling. The gambling behavior of local residents was also explored linking local residents' gambling behaviors to their relationship with visiting friends and family (Shinnar, Young, & Corsun, 2004). Hu, Borden, Harris, and Maynard (2008) claimed that an individual's residence, workplace, and other demographic characteristics were useful to predict gambling behaviors by exploring local residents' gambling activities in the mid-Colorado River communities of Laughlin, Nevada, and Bullhead City, Arizona.

In the last ten years, as technological innovation played a critical role in customer behaviors and marketing strategies, research topics of gambling have been varied. Kale (2006) tried to understand how to reduce cultural distance between an e-gaming provider and its audience by applying Hofstede's five dimensions of culture. Warren (2006) discussed internet casinos in Nevada in terms of regulatory issues aroused by the Department of Justice.

Furthermore, Rose (2006) analyzed the Unlawful Internet Gambling Enforcement Act of 2006, which impacts internet service providers, and on-line transactions. The

author recommended operators consider the risks of operating internet gambling websites. Besides the significant themes mentioned above, numerous topics were discussed in other articles, such as education, human resources, technology and security, and so on. Among various topics for gambling studies, one of the most interesting topics is the concept of responsible gambling. A conceptual framework of responsible provisions of gambling was developed, which integrates central constructs from corporate social performance literature, focusing on principles, processes and practices (Hing, 2003), and challenges in the responsible provision of gambling (Hing & Mackellar, 2004).

Gambling as a Leisure Activity

Despite the dark age of the gambling industry since anti-gambling legislation of Nevada in 1910, some historical events such as legalization of gambling in Nevada in 1931, the revival of horse racing wagering in the 1930's, and the resurgence of state lotteries in the 1960's have encouraged a gambling industry in the United States and started a trend that the gambling industry has continued today (McMillen, 1996).

In other words, the gambling industry in the United States has showed an exceptional increase in the availability of both legal and illegal gambling (Breen & Zuckerman, 1999; McDaniel & Zuckerman, 2003; Welte, Barnes, Wieczorek, & Parker, 2002). Recently, the gambling industry became a multi-billion dollar industry with raised popularity of gambling due to the deterioration of Protestant work ethic, legitimate governmental support, and the availability of new technologies such as the internet (Claussen & Miller, 2001). According to Clotfelter, Cook, Edell, and Moore (1999), 28

states have legalized casinos, 47 states have lotteries, and 43 states have permitted horse and dog racing, while Hawaii and Utah have not legalized some form of commercial gambling in the United States.

These developments in the gambling industry also can be confirmed in the consumption data of gambling. The expenditure on gambling activity occupies more than one of every ten dollars spent on leisure and recreation activities (Platz & Millar, 2001). Morse and Goss (2007) also stated estimated spending on gambling in the United States ranged from $72 billion to as much as $100 billion. Gambling is now one of the most representative leisure activities in the United States (Dunstan, 1997; McMillen, 1996).

Over the last few decades, gambling estimated at total revenue of $73 billion in 2003 has developed into a large and pervasive industry in the United States. Furthermore, it seems that this heightened popularity of gambling is a worldwide phenomenon. Gambling, as a leisure activity, has increased popularity in the United Kingdom (Johnson & Bruce, 1997), Australia (Dickerson, Walker, England, & Hinchy, 1990), and South Korea (Back & Lee, 2005). Moreover, information technology, like the internet, has encouraged the popularity and accessibility of gambling at a rapid rate.

The most important issue stated in the gambling related research is whether or not gambling belongs in the category of leisure activity. Supporters who agree that gambling belongs in the category of a leisure activity have asserted that gambling can offer various benefits: entertainment for tourists, additional job creation, and tax revenues (Walker, 2007). However, opponents of gambling have stressed undesirable phenomena like increased addition to gambling and criminal rate (Hing & Breen, 2001). In a nutshell,

23

gambling can be one of many leisure activities that provide several leisure benefits. Gambling should be thought of as a leisure activity only when it is derived from intrinsic motivation based on pure gambling experiences rather than extrinsic motivation for specific benefit like winning money (Chantal, Vallerand, & Vallières, 1995). In other words, participating in gambling with self-determination and fun as intrinsic compensations for a gambling experience can be a true leisure activity (Neighbors, Lewis, Fossos, & Grossbard, 2007). Many people, however, have a tendency to seek more financial compensation. This tendency gets worse under the circumstances of losing money. In this case, it is not a leisure activity, but just gambling. Therefore, because of both positive and negative perspectives of gambling, gambling research and management to maximize advantages and minimize disadvantages of gambling are required.

Some past studies more heavily emphasized the positive effect of gambling and considered gambling as a more favorable leisure activity (Filby & Harvey, 1989; Abt, McGurrin, & Smith, 1984). This phenomenon is most obvious in the literature that focuses on the leisure and recreational aspects of gambling. For example, because of its economic, social, and recreational benefits, some scholars have maintained that communities are still supportive of the gambling industry in spite of latent problems with gambling (Aasved & Laundergan, 1993; Abbott & Cramer, 1993). Filby and Harvey (1989) asserted that gambling behavior should be considered being leisure and recreational activity rather than common conceptualizations which view gamblers as deviants. Abt, McGurrin, and Smith (1984) argued that gambling is organized along the same lines as society more generally rather than being a deviant activity.

Development of the Casino Industry

Lee et al. (2006) stated that the gambling industry is growing at a rapid pace, and gambling opportunities are increasing, although gambling is still controversial in many countries. Development of casinos, among the gambling industry, is remarkable. It indicates that casino gambling has transformed into a mainstream activity, and many people see it as fundamentally similar to many other recreational activities (Cook, 1992). In modern society, "casino" indicates some facilities that provide and accommodate certain types of gambling activities. Historically, the casino was started as a means of social intercourse at the aristocratic society of Western Europe from the Middle Ages.

The beginning of the modern style casino was begun from the establishment of small casinos in many places throughout Europe through the 17th and 18th centuries. Since the 19th century, club-style casino (membership) has appeared in European countries, and the casino began to spread to the world. By the early 20th century, the region of Western Europe was the center of club-style casino.

However, the commercial casino began to develop in the United States after 1931 according to the state of Nevada which promoted casinos for economic policy in order to overcome the effect of Great Depression and for leisure activity for mining workers. Speaking of the status of the casino industry in modern society, the importance of the casino industry, as a high value-added industry, has been well recognized in major tourism-developed countries because it becomes an important source of tourism receipts, income, employment, and tax revenue. Las Vegas, the most developed casino city in the United States and world, has led a new way to advance to multi-purpose amusement

areas in order to attract more general visitors—including family tourists—beyond the table-game-based management style. Moreover, according to ASTA's (American Society of Travel Agents) 2010 hot spots for summer survey, Las Vegas is still popular as the number two spot for summer vacations in the United States (Travelpulse, 2010). In the case of the United Kingdom, the government introduced new regulations for internet gambling and allowed for a new generation of big casinos: one super, eight large, and eight small casinos. The Independent Casino Advisory Panel announced that the city of Manchester would host the UK's first super casino city on January 30, 2007 (Mailonline, 2010).

These changes indicate that the casino industry has seen hot issues emerging as a major competitive industry between countries in the world. Today, tourism-developed countries have fostered the casino industry with various purposes, such as the development economy and diversification of tourism facilities. Moreover, they have considered the casino industry as a leisure industry—instead of just gambling—which can provide people with various leisure activities and opportunities.

In summary, casinos in the world have been changed from small club-style casinos, like European casinos, to large-scale commercial casinos, like Las Vegas and Macau's casinos. The form of casinos has expanded from casino operations on land to casino operations on cruise ships. Moreover, locations for casinos expanded to the internet space due to the development of information technology and the widespread dissemination of personal computers.

<center>The Relationship between Casinos and Tourism</center>

There is an increasingly close relationship between casinos and tourism throughout the world as developers, community officials, and governments seek additional revenue, expenditures, and tax revenues associated with gambling (Lee & Kwon, 1997). The proliferation of the casinos in modern society means the tourism aspect of a casino has been highlighted beyond the old casino role as a place to gamble (Lee & Back, 2006). Casinos have been developed as one of the major tourism products in modern society by providing tourists with satisfying leisure experiences that are not available or illegal in their home community (Hsu, 2006). Recently, casinos have changed their operations from a focus on gambling to a focus on a resort-type destination, targeting the general tourists (Lee & Kwon, 1997). As shown in Figure 2.1, the casino of the 21st century now provides tourists with various tourism facilities. Many casinos have built entertainment centers, convention centers, or theme parks for casino visitors and tourists with various machine games (Casinosmack, 2010). Zagorsek and Jaklic (2007) stated that resort-type casinos have big potential for the development of the tourism industry. In terms of resort-type casinos in the world, Las Vegas was the first to introduce and successfully develop resort-type casinos (Eadington, 1999). In Asia, Genting Highlands in Malaysia has leaded the development of resort-type casinos (Hsu, 2006).

Recently, Macau has developed into the Las Vegas of Asia by providing casino companies such as Wynn Casino Resort, Galaxy Casino, and MGM Mirage in Las Vegas with the permissions of casino operations in Macau (Gu, 2004). Japan, which has prohibited casino gambling activities, has also considered the legalization of resort-type

<center>27</center>

casinos for the development of local economy (Hsu, 2006). Even Singapore, known as a conservative country in Asia, built two casinos in the Marina Bay Sands and Sentosa Island to attract more tourists and realize economic development (Casinosmack, 2010).
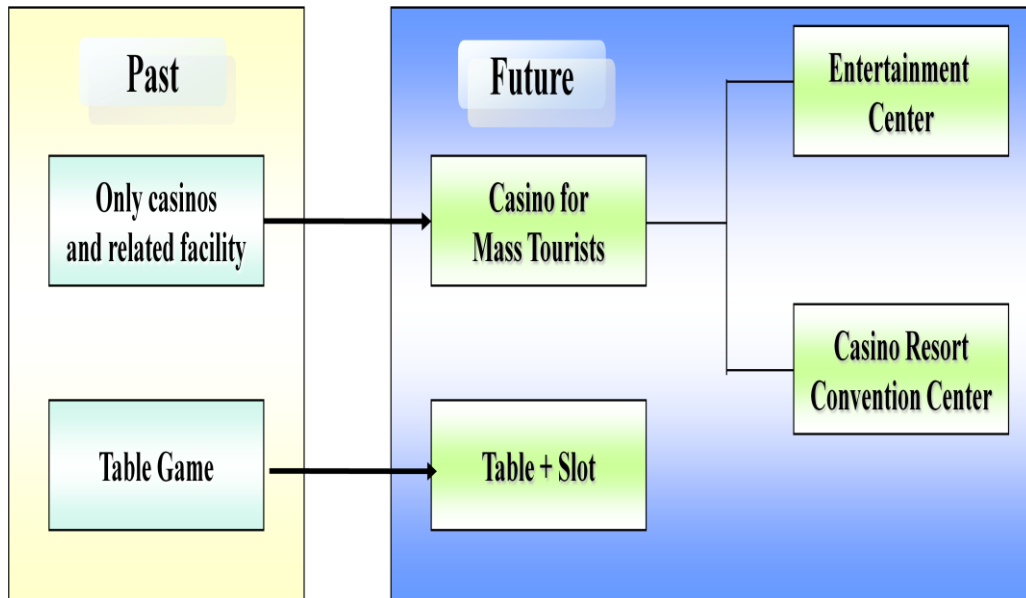
Figure 2.1: Past and future of casino industry

In summary, casinos in modern society succeed in changing peoples' perceptions of gaming from just gambling to a tourism activity by expanding the scope of casino visitors from professional gamblers to recreational gamblers or general tourists. Casinos also have contributed to the activation of casino-related industries as an important alternative tourism resource in regions and countries lacking in natural and cultural tourism resources. Since the 1980s, some communist countries, including China which generally prohibited people from gambling, have been interested in the legalization of the

casino industry. This implies there is a high potential for the casino industry to be both a cultural and tourism product beyond regional boundaries and ideology (Eadington, 1999).

Casino Studies in the Social Sciences

In terms of literature on casino studies, research has flourished due to the widespread legalization of casino gambling in the United States since the late 1980s (Oh & Hsu, 2001). Casino-related research can be divided into two categories: positive and negative aspects of casinos. While casino research with positive aspects has focused on casinos' economic and industrial roles and their relationship, casino research with negative aspects has emphasized casinos' negative social impacts such as gambling addiction severity and illusion of control.

With regard to casino research with negative aspects, researchers stated that casinos are related to increased organized crime, domestic violence, political corruption, bankruptcy, and the number of pathological gamblers (Hing & Breen, 2001; Lepage, Ladouceur, & Jacques, 2000; Unwin, Davis, & de Leeuw, 2000). Some researchers have linked casino gambling to drug and alcohol abuse and risky or illicit sexual behavior, especially prostitution (Piscitelli & Albanese, 2000; Petry, 2005). Long (1996) tried to identify residents' perception of negative impacts of casinos on their community life. Research on undesirable lag effects associated with the early stages of casino gambling town development was also performed (Stokowski, 1993).

In terms of casino research with positive aspects, researchers have stated that casinos have increased local economic development, employment, and tax revenues since

29

gambling has become an increasingly accepted leisure and tourism activity (Lee & Back, 2006; Piscitelli & Albanese, 2000). Existing studies also included the economic effects of casinos on local communities (Braunlich, 1996; Lee & Kwon, 1997) and suggestions of the components necessary for casinos for tourism development (Smith & Hinch, 1996).

Particularly, most casino studies have stressed the economic and social impacts of casinos in specific locales: Native American reservations, riverboat communities, and rural mining towns (Carmichael, Peppard, & Boudreau, 1996; Chadbourne, Walker, & Wolfe, 1997; Stephenson, 1996; Stokowski, 1996). However, it seems that these studies of casinos regularly lacked theoretical frameworks, as well as reliable and valid research instruments to figure out the behavior of casino visitors because they were explanatory in nature (Oh & Hsu, 2001). However, the number of research studies on casino visitors has gradually increased these days. Specifically, recent research on casinos has tried to identify motivations with a broader variety of gamblers and to seek specific reasons why general people choose a casino to gamble (Lee et al., 2006). Furthermore, market segmentation on casino tourists has been studied in order to identify groups with similar needs and to develop practical marketing strategies (Cotte, 1997; Lee et al., 2006).

Sustainable Development of Casinos and Responsible Gambling Strategy

Casinos have been controversial in many countries for a long time. While the casino is a recreational activity for many people, for some people it sometimes leads to serious negative consequences, including financial and personal losses (Lee et al., 2009). In other words, casinos have very distinctive characteristics, generating both positive and

negative outcomes. For the sustainable development of the casino industry, many local governments and casino companies in the world have tried to reduce the risk and severity of adverse consequences through various activities (Hing, 2003). With regard to efforts of governments for sustainable development of the casino industry, gaming control boards or local governments have the authority to approve licenses, regulate policies, and supervise casino operations.

Casino operators should keep guidelines set by the Gaming Control Board to minimize adverse impacts, such as a problem gambling. For example, the Alberta Alcohol Drug Abuse Commission (AADAC) in Canada has been established to help people recover from the harmful effects of alcohol, drugs, and gambling. The AADAC provides counseling, day treatment, and residential treatment including short-term and long-term for adult and adolescent problem gamblers (AADAC, 2009). The AADC also developed education and promotion programs aimed at preventing problem gambling.

The most remarkable strategic sustainability activity in the world's casino industry is a responsible gambling strategy. A responsible gambling strategy incorporates a diverse range of interventions to promote consumer protection, community/consumer awareness and education, and access to efficacious treatment. Hing (2003) stated that a responsible gambling strategy usually means the provision of gambling services in a way that seeks to minimize the harm to customers and the community associated with gambling. The primary long-term objective of a responsible gambling strategy is to prevent and reduce harm associated with excessive gambling behaviors. Even though some benefits such as increased jobs and tax revenues can contribute to the development

of a casino while in the short-term, it can generate critical costs which far exceed the short-term benefits for the individual gambler, the community, and the casino itself.

Before the concept of responsible gambling, the gambling industry had not been responsible for diagnosing or clinically treating individuals with gambling-related harms. However, an increasing number of researchers, interested community members, and consumers have begun to seek a better understanding of gambling and gambling-related problems. Since many people consider gambling-related problems as public health concerns, a need has emerged for key stakeholders in the casino industry to join together to address gambling-related problems. This indicates that the gambling industry should implement a responsible gambling policy to protect their customers.

Responsible gambling strategy has been implemented extensively in Canada and Australia. In order to minimize the impacts from problem gambling and to encourage more responsible gambling, governments and gambling providers in these countries have introduced responsible gambling strategy. For example, the province of Ontario in Canada has the Responsible Gambling Council for the prevention of problem gambling through research, information, and awareness. The main purposes of the council are 1) to establish a council service center and network for responsible gambling, 2) to share information about responsible gambling through seminars, workshops, and forums, and 3) to develop and distribute problem gambling prevention programs. Through research, information and awareness, the Responsible Gambling Council in Ontario continues its commitment to problem gambling prevention (Responsible Gambling Council, 2010).

The province of British Columbia in Canada also formed a partnership involving the local government, the lottery corporation, and British Columbia's gambling service providers for responsible gambling. In addition, the province has developed a comprehensive responsible gambling strategy to help reduce the harmful impacts of excessive gambling and encourage responsible gambling. Specifically, the Three Year Plan of responsible gambling strategy has been performed since 2005. The province suggested three key elements of responsible gambling strategy: 1) reducing the incidence of problem gambling, 2) reducing harmful impacts of excessive gambling, and 3) ensuring the delivery of gambling in a manner that encourages responsible gambling and healthy choices (British Columbia partnership for responsible gambling, 2010). The Queensland Government in Australia introduced its Responsible Gambling Code of Practice in May 2002. The code was based on six practice areas related to the provision of information, interaction with customers and community, exclusion provisions, physical environments, financial transactions, and advertising and promotions (Breen et al., 2005).

Breen et al. (2005) stated three principles associated with responsible gambling and responsible provision of gambling: 1) harm minimization, 2) informed consent, and 3) social responsibility and responsiveness. The goal of harm minimization is to reduce the risk and severity of adverse consequences associated with gambling (Plant, Single, & Stockwell, 1997). Plant, Single, and Stockwell (1997) stated that the goal of harm minimization is not to achieve some ideal usage level, but to execute preventative measures that reduce the chances of adverse outcomes.

In addition to harm minimization, responsible gambling has also been interpreted to include informed consent for consumer protection. Responsible gambling needs to ensure that gamblers can be informed about all the relevant processes involved in the form of gambling, make a genuine choice, with other options available to them, and not make the decision to gamble due to strong emotion or personal crisis (Breen et al., 2005). Responsible gambling strategy also implies that gambling should be provided in a socially responsible way, which is responsive to community concerns and expectations. Responsible gambling strategy has to provide gambling in a manner that meets a community's economic, legal, ethical, and philanthropic expectations at a given point in time (Hing, 2003).

In summary, casino managers worldwide have begun to embrace this responsible gambling approach because this approach appears to represent a sound strategy for long-term sustainable development. A responsible gambling strategy would be more likely to benefit the casino industry, as well as society. Therefore, responsible gambling strategy, as a long-term marketing goal, is being considered for the sustainable development of casinos throughout the world (Hing, 2003). Despite the importance of a responsible gambling strategy, no empirical research has been conducted to examine whether a responsible gambling strategy influences the decision-making processes of casino visitors. Thus, this study explores the effect of a responsible gambling strategy on casino visitors' decision-making processes.

<center>Overview of Consumer Behavior Theories</center>

Studies to explain and predict individual behavior are multifaceted in the field of consumer behavior research. In order to understand a specific consumer behavior, various theories have been employed. Among them, the construct of attitude has played an important role. Attitude has been considered the most influential construct representing learned individual tendency for a specific target or behavior based on personal evaluations (Fishbein & Ajzen, 1975). Specifically, certain elements of consumer behavior have been explained through the use of social psychological attitude-behavior theories; the basic attitude model (Rosenberg, 1960a; 1960b), Fishbein's original model of attitude (Fishbein, 1967), the TRA (Ajzen & Fishbein, 1973), and the TPB (Ajzen, 1985, 1991). In this section, the MGB as a new alternative model will be introduced after representative models are reviewed.

<center>Theory of Reasoned Action (TRA)</center>

As a theoretical framework based on social cognitive theory, the TRA is estimated to have an advantage relatively simple and parsimonious to predict and understand human behavior (Ajzen & Fishbein, 1980). In the TRA, the individual is considered to behave depending on conscious intention. According to the TRA, individuals think rationally about the result of their behaviors when determining acceptance or rejection of actual behaviors, and they are more likely to perform the behavior as the result of a specific behavior which is expected to bring positive consequences. Based on this logic of the TRA, as shown in Figure 2.2, Ajzen (1988)

<center>35</center>

maintained that specified behavior is undertaken from both a direct function of behavioral intentions and indirect functions of attitude toward target behavior and subjective norm through intention (Ajzen & Fishbein, 1973; Ajzen & Fishbein, 1980; Hankins, French, & Horne, 2000).

The behavioral intention derived from attitude and subjective norm is the only and direct determinant to cause actual behavior (Ajzen & Fishbein, 1980). Therefore, a direct path from attitude and subjective norm to a specific behavior is not hypothesized in this theory, and intention becomes a mediator between the influences of attitudinal and social related variables between behaviors.
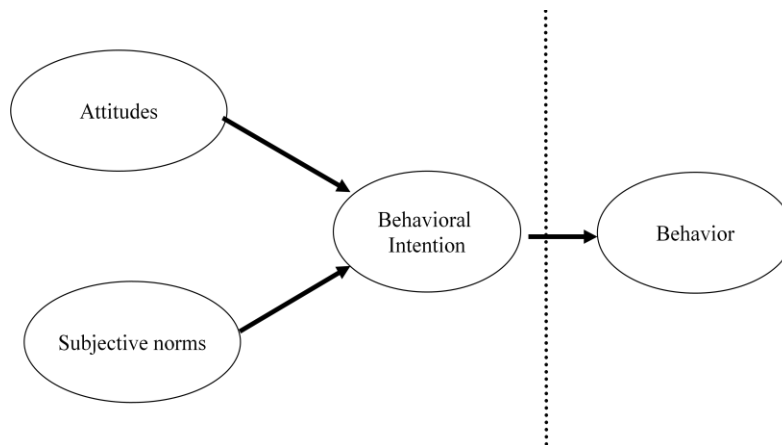
Figure 2.2: Fishbein and Ajzen's Theory of Reasoned Action (TRA)

Many researchers have confirmed that the TRA has been successfully applied to the prediction of intentions and behavior in various fields: dental care (Hoogstraten, De Haan, & Ter Horst, 1985), moral behavior (Vallerand, Deshaies, Cuerrier, Pelletier, & Mongeau, 1992), seat belt usage (Stasson & Fishbein, 1990), university class attendance

(Fredricks & Dossett, 1983), and weight loss (Bagozzi & Warshaw, 1992). The TRA is a general model to explain attitude-behavior relationships by using attitude and subjective norm based on cognitive information (Ajzen, 1988). In this model, it is assumed that all possible external influences on intentions and behavior are completely mediated by information processing of attitude and subjective norms (Ajzen & Fishbein, 1980). In other words, the TRA is supposed to be self-contained and entails no additional variables or relationships for the explanation of behavior. Because of this assumption, the theory is applied only to behaviors where no external or internal impediments exist to prevent performance of a behavior (Fishbein & Ajzen, 1975).

Theory of Planned Behavior (TPB)

In the TPB, as shown in Figure 2.3, behavioral intention is still the important determinant of behavior and is derived from attitude, subjective norms, and perceived behavioral control, which is additionally introduced to the TPB comparing to TRA (Conner, Povey, Sparks, James, & Shepherd, 2003; Zint, 2002). In fact, the TRA has a limitation not to explain the behavior not controlled by volition because the theory is based on the assumption that an individual uses available information rationally, and individual behavior can be controlled totally by volition.

In other words, the complete volitional control of the TRA would be too restrictive an assumption due to difficulties of applying it to most everyday acts (Ajzen, 1988; Ajzen & Fishbein, 1980). The situation of complete volitional control indicates that an individual is in a situation which does not need any special skills, resources, or

37

supports to perform a specified behavior (Zint, 2002). The TRA could be much less significant to predict behavior if an individual is in a situation of incomplete volitional control (Ajzen, 1985, 1988, 1991; Zint, 2002). In order to address this limitation of the TRA, Ajzen (1985) and Ajzen and Madden (1986) introduced new concept which can explain the non-volitional part of behavior. The new concept called perceived behavioral control is defined as the perception of how difficult or easy a behavior is to perform for a given situation (Hankins et al., 2000; Ajzen, 1988).
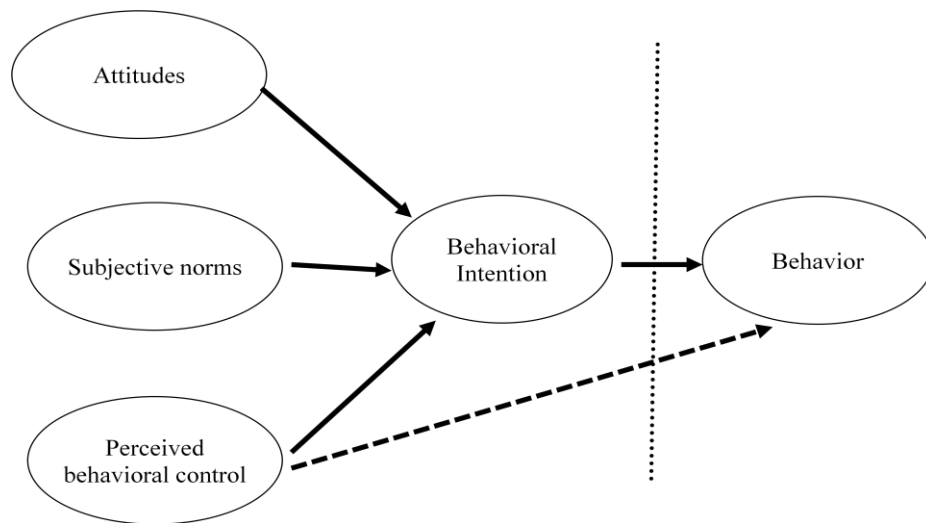
Figure 2.3: Ajzen's Theory of Planned Behavior (TPB)

Perceived behavioral control is regarded as a similar construct to the concept of perceived self-efficacy related to convictions that an individual is able to successfully perform behaviors (Bandura, 1982; Zint, 2002). In the TPB, it is hypothesized that perceived behavioral control has a direct effect on both behavioral intention and actual behavior (Ajzen, 1985; Zint, 2002). As perceived behavioral control is larger, the

influence of behavioral intention on the performance of behavior is increased. By adding the construct of perceived behavioral control to make up for the limitation of the TRA, the TPB has been more widely applied to predict behavioral intention and behavior while considering the situation of incomplete volitional control (Conner et al., 2003) in various research fields: class attendance and academic achievement (Ajzen & Madden, 1986), dishonest behavior (Beck & Ajzen, 1991), weight loss (Bagozzi & Kimmel, 1995), sleeping, listening to an album, and taking vitamins (Madden, Ellen, & Ajzen, 1992).

The Role of Attitude in the TPB

According to the TPB, attitude, subjective norm, and perceived behavioral control are antecedents of behavioral intention. The first important predictor of behavioral intention is attitude, explained as "the level to which an individual has a favorable or unfavorable appraisal or evaluation of a certain behavior" (Ajzen, 1991, p.188). Attitude is considered to be a function of an individual's salient beliefs (i.e., behavioral beliefs) which reveal the perceived consequences of the behavior and the individual's evaluation for consequences toward such a behavior (i.e., outcome evaluation) (Eagly & Chaiken, 1993). According to Ajzen and Fishbein (1980) behavioral beliefs are comprised of the individual's subjective probability that performing a behavior will lead to specific consequences. When deciding whether to perform a specific behavior, an individual is likely to assess the benefits and the costs resulting from the behavior (Cheng et al., 2006). An individual tends to have a favorable attitude toward a certain behavior when the outcomes are positively evaluated; therefore,

the person is likely to be strengthened by his/her attitude to perform such a behavior (Ajzen, 1991; Cheng et al., 2006).

The Role of Subjective Norm in the TPB

In the TPB, the subjective norm is suggested as a second determinant of behavioral intention. Ajzen (1991) defined subjective norm as "the perceived social pressure to perform or not to perform the behavior" (p.188). In other words, subjective norm is an individual's perceived opinions of other people who are familiar or important to the person and who influence the person's decision-making—like relatives, close friends, co-workers/colleagues, or business partners (Hee, 2000).

Subjective norm is explained as a function of a person's normative beliefs about what significant referents think an individual has or doesn't have to do and one's motivation to comply with those referents (Ajzen & Fishbein, 1980). Eagly and Chaiken (1993) depicted normative beliefs as "the perceptions of significant others' preferences about whether one should perform a certain behavior" (p. 171). In other words, it is related to the probability of whether significant referents would agree or disagree with the behavior. Some researchers have emphasized the important role of a subjective norm as a determinant of behavioral intention in various contexts in marketing and consumer behavior (Baker, Al-Gahtani, & Hubona, 2007; Cheng et al., 2006; East, 2000; Laroche, Bergeron, & Barbaro-Forleo, 2001).

The Role of Perceived Behavioral Control in the TPB

Perceived behavioral control is the third determinant of behavioral intention in the TPB. This determinant can be explained as "the perceived ease or difficulty of performing the behavior" (Ajzen, 1991, p. 188). Specifically, perceived behavioral control appraises the perception of how well one can control factors that may facilitate or constrain behaviors. Perceived behavioral control is composed of control beliefs that refer to an individual's perception of the presence or absence of resources or opportunities needed to perform a certain behavior and perceived power indicating one's evaluation of the level of importance of such resources or opportunities for the accomplishment of outcomes (Ajzen & Madden, 1986; Chang, 1998).

A number of studies have demonstrated that an individual's self-confidence or ability to perform specific behavior positively influence one's intention or behavior (Baker et al., 2007; Cheng et al., 2006; Conner & Abraham, 2001; Taylor & Todd, 1995). They stated that if an individual has little control over performing a certain behavior due to insufficient required resources (e.g., costs or time), one's behavioral intention will be lower under the situation of high positive attitude and subjective norm.

Past Studies of the TPB in Leisure and Tourism

By adding the construct of perceived behavioral control, the TPB has been more widely applied to the social-psychological model to predict behavioral intentions and behavior since it can consider the situation of incomplete volitional control (Conner et al., 2003). The TPB has also been employed as a comprehensive framework for

understanding various leisure and tourism behaviors: outdoor recreational activities (Ajzen & Driver, 1991), hunting (Hrubes, Ajzen, & Daigle, 2001; Rossi & Armstrong, 1999), choosing a travel destination (Lam & Hsu, 2004, 2006; Sparks, 2007), travel intention (Sparks & Pan, 2009), and meeting participation (Lee & Back, 2007).

More specifically, Ajzen and Driver (1991) applied the TPB to college student samples in five leisure behavioral settings: spending time at the beach, jogging, mountain climbing, boating, and biking. Rossi and Armstrong (1999) tested whether the TPB was a better model for predicting behavioral intention related to hunting, not entirely volitional behavior. Similarly, Hrubes et al. (2001) applied the TPB to the prediction and explanation of hunting using a mail survey. The results of hierarchical regression indicated that hunting intentions, in turn, were strongly influenced by attitudes, subjective norms, and perceived behavioral control.

Lam & Hsu (2004) tested the fit of the TPB with a sample of potential travelers from Mainland China to Hong Kong. They stated that data fit the TPB moderately well and explained respondents' traveling intention. Attitude, perceived behavioral control, and past behavior were found to be related to respondents' travel intention. They also attempted to test the applicability of the Extended TPB using original constructs of the TPB, and past behavior to choose a travel destination for potential Taiwanese travelers to Hong Kong (Lam & Hsu, 2006). It was found that attitude, perceived behavioral control, and past behavior were related to behavioral intention of choosing a travel destination in the study.

Sparks (2007) investigated potential wine tourists' intentions to take a wine-based vacation using the TPB. In the study, wine/food involvement, normative influences, perceived control, and attitude toward past wine holidays were important variables to predict intentions to take a vacation to a wine region. Lee and Back (2007) developed and tested three competing models of conference participation based on the TPB by additionally incorporating destination image and past behavior. The results of structural equation modeling indicated that all three models provided theoretical bases for understanding meeting participation behavior, and subjective norm among variables of the Extended TPB was the most powerful variable to influence conference participation.

Sparks and Pan (2009) examined potential Chinese outbound tourists' intention to travel in terms of destination attributes, as well as attitudes toward international travel using the TPB. Social normative influences and perceived levels of personal control constraints were most influential to understanding potential Chinese outbound tourists' intention based on TPB.

Very recently, Han et al. (2010) explained the formation of hotel customers' intentions to visit a green hotel using structural equation analysis through a comparison of the TRA, TPB, and Modified TPB with a causal path from subjective norm to attitude. The results of structural equation analysis showed attitude, subjective norm, and perceived behavioral control positively affected intention to stay at a green hotel, and an additional path from subjective norm to attitude showed a stronger explanatory power of intention. Moreover, they stated that the relationships between these antecedents of the TPB and intention did not statistically differ between customers who actively practice

eco-friendly activities and those who are not often engaged in environmentally conscious behaviors. Quintal, Lee, and Soutar (2010) examined the relationships between perceived risk and uncertainty and the constructs of the TPB with the sample of South Korean, Chinese, and Japanese. They stated that perceived risk and uncertainty were distinct constructs that affect travel's intention although influences were different between nationalities. They also claimed that subjective norms and perceived behavioral control significantly impacted intentions in all country samples.

Applications of the TRA and TPB in Gambling Research

A few gambling studies have adopted the TRA and TPB. Cummings and Corney (1987) introduced TRA to gambling studies by stating that gambling behavior can be explained in terms of gambling attitudes and subjective norms. They also stated that TRA can integrate other external variables (e.g., demographics and personality) to explain gambling behavioral intention. Moore and Ohtsuka (1997) evaluated the adequacy of TRA for predicting adolescent gambling frequency and problem gambling. Specifically, their model comprised a combination of the TRA, personality variables, and cognitive bias variables derived from Weinstein's (1980) propositions concerning unrealistic optimism about future life events. Adolescent gambling behavior was accounted for by intentions, attitudes, and subjective norms. In addition, personality factors were significant for the prediction of gambling. Similarly, Moore and Ohtsuka (1999) examined whether gambling behavior (as measured by its frequency) and problem gambling (as measured by its negative social effects on an individual) could be predicted

44

by TRA among a sample of adults and university students between the ages of 17 and 55. They stated that both attitude and social norm predicted gambling intentions, and intentions predicted gambling behaviors. They also stated that males who intended to gamble were more likely to be classified as problem gamblers.

Oh and Hsu (2001) examined the predictors for gambling behavior by extending the TPB with the inclusion of the effect of past behavior in understanding actual behavior of gamblers for Iowa residents. It was shown that previous gambling activity was a predictor of future gambling intention and behavior. They also found that attitude directly affects intention but does not directly affect actual behavior. Past behavior, however, directly affects both intentions and actual behavior. Subjective norm, perceived resources (gambling skill level), and opportunities (time availability) exhibited a positive and significant relationship with gambling intentions, but not with self controllability. Evans (2003) discussed relevancy of the TRA and TPB as a theoretical foundation for developing prevention programs for adolescent problem gambling. He argued that when utilizing the TRA as a framework for excessive gambling prevention programs, careful consideration is required since not all levels of gambling behavior are either completely volitional or non-volitional. The authors stated that the TPB is useful to understand the behaviors of gamblers by claiming that gambling behavior is more volitional to recreational gamblers than to pathological gamblers.

Wood and Griffiths (2004) examined the relationship between attitudes and behavior in relation to participation in the National Lottery and scratch cards by applying the TPB for adolescents between the ages of 11 and 15 years. They stated that young

people's attitudes are accurate to predict their gambling behavior, and the TPB provides an explanation of how these attitudes may develop.

 Walker, Courneya, and Deng (2006) tried to explain why some people play the lottery through the TPB and tried to examine how the TPB's variables and variable relationships differ due to ethnicity, gender, or their interaction for Chinese/Canadians and British/Canadians. They claimed that instrumental attitude and descriptive norm were important predictors for British/Canadian males while affective attitude was an important predictor for all four groups by using the regression model having six independent variables (affective attitude, instrumental attitude, injunctive norm, descriptive norm, self-efficacy, and controllability).

Limitations of the TRA and TPB

Both the TRA (Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980) and TPB (Ajzen, 1985; Ajzen & Madden, 1986) are the most broadly applied models of attitude-behavior relationship in a wide range of behavioral domains, especially on the grounds that these theories are simple, parsimonious, and easy to operationalize (Chaiken & Stangor, 1987; Eagly & Chaiken, 1993; Leone, Perugine, & Ercolani, 1999; Olson & Zanna, 1993; Tesser & Shaffer, 1990). The TPB is superior to the other social psychological theories to predict intentions and behaviors in that it can account for more variance in intentions and behaviors (Armitage & Conner, 2001).

However, both the TRA and TPB have some limitations. First, they do not contain the influence on past behavior; although, past behavior may have a meaningful effect on

intentions and behavior (Bentler & Speckart, 1979, 1981; Bagozzi, 1981; Bagozzi & Warshaw, 1990, 1992; Fredricks & Dossett, 1983; Leone et al., 1999). In terms of the TRA, Bentler and Speckart (1979, 1981) argued the assumptions of sufficiency and internal completeness by suggesting some questions: 1) a direct effect of past behavior on intentions and behavior and 2) direct paths from attitudes to behavior. Specifically, the authors tested their augmented model in the behaviors of using drugs and alcohol, dating, studying, and exercising. They found a significant direct influence of past behavior on intentions and behavior while direct paths from attitude to behavior were not significant once the effects of intentions had been controlled. Bagozzi (1981) and Fredricks and Dossett (1983) also compared the TRA and the augmented Bentler and Speckart's models. Although Bagozzi (1981) could not find an obvious relationship between attitude and behavior, he confirmed the direct influence of past behavior in the study of blood donation. Similar results were found by Fredricks and Dossett (1983) in their study of class attendance. To put it briefly, because of these studies showing the influence of past behavior, the sufficiency of the TRA or TPB cannot be claimed to have been established.

Second, one of the criticisms to both the TRA and TPB leveled by researchers or theorists is that these theories mainly focus on cognitive variables and do not elicit affective beliefs or outcomes associated with performing or not performing a behavior (Conner & Armitage, 1998; Van der Pligt & De Vries, 1998). It is considered that affective or emotional variables are important in the decision-making processes of human beings. Recent research has suggested that affects or emotions influence intentions and behaviors. For instance, Bagozzi, Baumgartner, and Pieters (1998) maintained that

anticipated emotions have been found to shape behavioral intentions and actual behavior in terms of weight regulation. However, these affective variables have only recently been included in the TPB research (Conner & Abraham, 2001; Conner & Armitage, 1998).

Lastly, some relevant variables still seem to be excluded from the processes leading to intention formation and behavior performance in the TRA and TPB (Bagozzi, 1982, 1984, 1992; Evans, 1991; Miniard & Cohen, 1981). Despite the wide applicability and impressive proportions to explain intention or behavior of the TRA and TPB, the sufficiency of both theories has been repeatedly questioned. In the result of the meta-analysis of Armitage and Conner (2001), the TPB respectively explained 39% of the variance in intentions and 29% of the variance in behaviors.

As shown in these results, the TPB usually tends to predict behavioral intention better than behavior itself (Armitage & Conner, 2001; Sheeran, 2002). Like these results, the TRA is criticized for not clearly explaining other proportions of behavior and intention, about 60-70%, due to its relatively low explanation power (Armitage & Conner, 2001; Conner & Armitage, 1998; Rivis & Sheeran, 2003).

In order to enhance both the TRA and TPB and integrate motivational, cognitive, emotional, and volitional factors of complex human behavior, Perugini and Bagozzi (2001) proposed the Model of Goal-directed Behavior (MGB) to expand the TRA and TPB. They claimed that motivational processes should be included in the model so that intentions are to be fully understood. To reflect this assertion, desire as a motivational based determinant is included in the MGB, and Perugini and Bagozzi (2001) also introduced positive and negative anticipated emotions of goal success and failure.

Model of Goal-directed Behavior (MGB)

In order to enhance the capacity of the TPB, Perugini and Bagozzi (2001) proposed the MGB. In the MGB, as shown in Figure 2.4, all the variables of the TPB are still included, while the role of them is redefined to influence behavioral intention indirectly under the new construct of desire. In addition, positive anticipated emotion, negative anticipated emotions, and two concepts of past behavior (recency of past behavior and frequency of past behavior) besides desire are also newly employed in the MGB. Perugini and Bagozzi (2001) claimed that motivational and affective processes should be included in the social psychological model to understand human behavior more specifically.

Specifically, Perugini and Bagozzi (2001) stated that desire can provide the direct momentum for intention and transform the motivational, cognitive, and emotional contents to be implanted in attitude, subjective norm, perceived behavioral control, positive anticipated emotion, negative anticipated emotion, and two concepts of past behavior on intention. As mentioned above, one of the limitations of the TRA and the TPB is that they do not consider affective or emotional processes from intention formation (Conner & Armitage, 1998). The role of anticipate emotions in the MGB is related to the situation when people consider the emotional consequences of both achieving and not achieving a goal (Bagozzi et al., 2007); therefore, incorporation of positive anticipated emotion and negative anticipated emotion can enlarge the effect of the TPB by introducing new decision criteria with respect to a person's goals. In terms of past behavior, some scholars have stated that past behavior or habits can be a significant

determinant of human behavior (Bentler & Speckart, 1981; Ouellette & Wood, 1998). In the MGB, the recency of past behavior, a short-term influence of past behavior, predicts only behavior, but the frequency of past behavior, a long-term influence of past behavior, is further assumed to be a predictor of desires, intentions and behavior (Bagozzi & Dholakia, 2006).
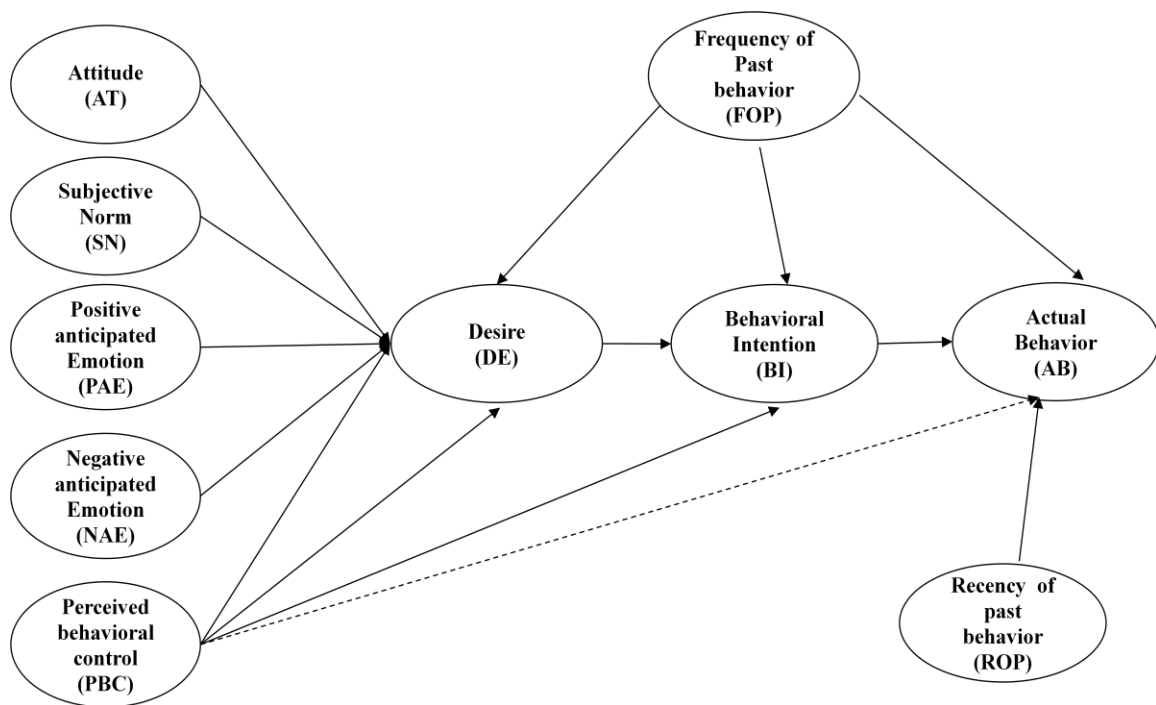
Figure 2.4: Perugini and Bagozzi's MGB (MGB)

The Role of Desire in the MGB

Because humans have a nature to satisfy their desires, desire can be one of the important constructs to understand human behaviors. Desire means a state of mind that is related to a sense of longing for a person or object or hoping for an outcome (Taylor,

50

Bagozzi, & Gaither, 2005). When an individual desires something or someone, the individual has a tendency to feel, think, and behave in certain ways to achieve the individual's goals. Desire is generally dived into two types: appetitive desire and volitive desire. Appetitive desire is related to consuming behavior (e.g., a desire to eat) while volitive desire is derived from reasons and can be applied to a wide range of goal behavior (Davis, 1984). Attitude usually stimulates volitive desires since it is based on reasons. For example, if one person contains a positive attitude toward traveling, this attitude can generate a desire to take a travel. Therefore, it is necessary to consider this close relationship between attitude and desire in that the attitude has an effect on intentions through desire (Perugini & Bagozzi, 2001). Bagozzi and Kimmel (1995) validated the distal effects of attitude on intention through desire.

Although the TPB does not consider the construct of desire by stating that desires and intentions are not distinct because intentions are motivational in nature (Fishbein & Stasson, 1990), stimulating a behavioral intention for a specific behavior with only positive attitude for the specific behavior is not sufficient without the construct of desire. Perugini and Bagozzi (2001) stated that the missing point of the relationship between attitude and desire is a motivational role to perform a specific behavior. Although an individual has enough beliefs to perform a specific behavior, the individual usually requires motivational appealing for performing the behavior. In other words, desire to perform a specific behavior entails a motivational commitment when an individual believes he/she can perform the behavior, whereas an attitude does not. Moreover,

51

although attitude can apply to past, the present, or the future situation, desire only refers to a future situation (Perugini & Bagozzi, 2004).

It is also worth knowing the relationship between desire and motivation. Mayo and Jarvis (1981) stated that motivation means an individual's inner driving force which compels him/her to perform a specific behavior or an individual's internal state forcing him/her to achieve external goals by activating physical and psychological energies. In this regard, it seems that motivation can be considered a momentum to make an individual think and perform a specific behavior. In the relationship between desire and motivation, desire is considered a state of mind generated by continuous motivation process for a specific behavior. Speaking of the relationship between desire and motivation, in travel behavior, tourists will have various travel motivations such novelty, sociality, and escaping. The motivation process through various travel motivations would stimulate a desire for a travel, and the desire will affect behavioral intention and actual behavior for the travel directly or indirectly. Therefore, motivation can be considered an important antecedent of desire for a specific behavior.

Bagozzi (1992) claimed that although intention can lead to behavior, desire does not automatically lead to behavior. For instance, having an intention to take a trip can imply possibility to travel. However, a desire to travel is not always linked to travel without some implied intention to take a trip. Philosophers of action (Brand, 1984) have provided other arguments in favor of the distinctiveness of intentions and desires. They also stated that it is generally possible to have opposite desires for a certain behavior but not opposite intentions for that (Davidson, 1980; McCann, 1986). The means to carry out

52

a particular behavior are always intended but not always desired. Intentions, but not desires, have to be self-directed. This critical distinction underlines the fact that intending is more closely connected to actual behavior than desiring (Brand, 1984). Perugini and Bagozzi (2001) claimed that intentions presuppose desires in the sense that forming an intention to perform a specific behavior requires a desire to perform the behavior; desires do not imply intentions.

Bagozzi (1992) has also addressed the processes linking desires with intentions. Once a desire is presented, an outcome-desire appraisal takes place based on comparisons of the desire and possible end states. Appraisals related to different end states lead to emotional reactions and coping responses (Lazarus, 1991) as intentions (Bagozzi, 1992). The theoretical distinction between desires and intentions is further supported by empirical findings. A recent meta-analysis of the TPB has found evidence for their distinctive roles (Armitage & Conner, 2001). Intentions and self-predictions were found to be superior predictors of behavior over desires, and the impact of attitude on intention was found to be almost entirely mediated by desire.

The Role of Anticipated Emotions in the MGB

Emotions have been regarded as fundamental mechanisms at the basis of human behavior (Carrus, Passafaro, & Bonnes, 2008), and anticipated affective reactions to the performance of behavior have been suggested as imperative factors of intention by some scholars (Conner & Armitage, 1998). In the situation of uncertain future, people may have forward-looking emotions to behaviors for the future. Gleicher et al. (1995) called

these anticipated counterfactuals "prefactuals" and stated that this concept can have an effect on intentions and behaviors by motivating avoidance of negative emotions and promoting positive affect.

The Role of Past Behavior in the MGB

Although the influence of past behavior is not considered in the original model of both the TRA and TPB, some researchers maintained that past behavior is an important determinant of intention and behavior (Bagozzi & Warshaw, 1990; Fredricks & Dossett, 1983). Thus, past behavior can be regarded as a theoretical factor to influence intention and behavior (Bagozzi & Warshaw, 1990; Conner & Armitage, 1998; Ouellette & Wood, 1998; Perugini & Bagozzi, 2001; Verplanken & Arts, 1999).

Past behavior may have an impact on the future behavior through two different ways (habit formation and intention formation) (Ouellette & Wood, 1998). In the case of habit formation, behaviors are performed in relatively stable contexts where the process to initiate and control over the behavior becomes automatic. For the case of intention formation, behaviors are performed in less stable contexts, and past behavior is more likely to be mediated by conscious and reasoned decision-making processes. Due to these characteristics of past behavior, it might perform a role to decide behavioral intention together with the variables of the TPB (attitudes, subjective norm, and perceived behavioral control), or other potential predictors. In the MGB, it is hypothesized that past behavior influences both intentions and behaviors with two concepts of past behavior: the frequency of past behavior and the recency of past behavior (Perugini & Bagozzi, 2001,

2004). Frequency indicates the performance of a behavior within a relatively long lapse of time, typically 1 year. Recency represents the performance of a behavior over relatively short period of time, typically a few weeks or months. Frequency and recency effects are theoretically distinct and usually present independent information to influence behavior. Generally, the frequency of past behavior is regarded as a proxy of habit and therefore is expected to also influence desires and intentions, unlike the recency of past behavior.

Past Studies of the MGB

In the first application of the MGB, Perugini and Bagozzi (2001) applied the MGB to two studies: body-weight regulation and studying effort. They confirmed that the MGB predicted more variance in intentions and behaviors as compared to the TPB. For studying effort, the MGB respectively explained 53% of the variance on intentions and 24% of the variance on behaviors while the TPB respectively explained 34% of the variance on intentions and 15% of the variance on behaviors. It was also found that desires mediate the influences of attitudes, subjective norm, perceived behavioral control, and anticipated emotions on behavioral intention. In terms of past behavior, frequency of past behavior influenced intention for body-weight regulation and for studying behavior. However, recency predicted behavior only for body-weight regulation. In addition to this study, the MGB has been a recently applied social-psychological model for different behaviors: brand-related behavior (Bagozzi & Dholakia, 2006), drinking alcohol (Prestwich, Perugini, &Hurling, 2008), drinking soft drink (Richetin, Perugini, Adjali, &

Hurling, 2008), digital piracy (Taylor, Ishida, & Wallace, 2009), fruit intake (Prestwich et al., 2008), information search (Taylor, 2007), recycling (Carrus et al., 2008), self-regulation decisions to control hypertension (Taylor et al., 2005), snack consumption (Prestwich et al., 2008), studying (Perugini & Bagozzi, 2001), use of public transportation (Carrus et al., 2008), and weight control (Perugini & Bagozzi, 2001).

CHAPTER III

THEORETICAL FRAMEWORK AND CONCEPTUAL MODEL

Theoretical Framework

One of the general approaches to revise any theory is to establish new variables or constructs that clarify how existing predictors function to influence dependent variables in the original model (Perugini & Bagozzi, 2001). By introducing a new construct that mediates or moderates the effects of existing variables, certain theoretical mechanisms can be better understood. The MGB, an expanded model of the TPB, may have the potential to make a contribution to tourism research on understanding visitors' behavior by adding desire, positive and negative anticipated emotion, and two past behavior concepts. However, it is possible that some relevant variables may be excluded from the formation of behavioral intention and actual behavior in the MGB. In other words, in a certain context, the theoretical mechanism of the MGB can be better comprehended by altering the model or including a new construct that is critical in that context.

Ajzen (1991) claimed that although the original constructs of a sociological model like the TPB have been taken into account, it is still open to modify paths and include additional variables in order to explain more variance of intention and behavior. This idea means that it is reasonable, in a specific context, to alter the paths to and to add an appropriate construct to a sociological model if the model can be better explained with increasing substantial predictive power. Perugini and Bagozzi (2001) called this process theory broadening and deepening. Many scholars (e.g., Fila & Smith, 2006; Oh & Hsu, 2001; Ouellette & Wood, 1998; Rivis & Sheeran, 2003; Shaw & Shiu, 2002; Sheeran &

57

Orbell, 1999) have tried to perform the process of theory broadening and deepening in various contexts. They significantly improved the predictive ability of human behaviors through the process of theory broadening and deepening for TRA and the TPB by introducing new important constructs such as self-identity, self-efficacy, social support, descriptive norms, and anticipated regret as a theory expansion.

The idea of theory broadening and deepening can be applied to the original MGB for casino visitors. If there are some important additional factors which affect visitors' gambling behavior, the process of broadening and deepening is required to more clearly understand the behavior of casino visitors. In terms of theory broadening and deepening, Ajzen (1991) suggested some criteria. Specifically, new variables which will be added to the original model should be imperative factors which have an effect on decision-making and behaviors. They also should be conceptually independent factors from the existing factors in the theory.

Lastly, they should be potentially appropriate to a specific behavior. Based on these criteria, the original MGB is expanded to the Extended MGB by integrating the new construct of the perception of responsible gambling since casino companies have attempted to achieve sustainable development through responsible gambling strategy (Hing, 2003; Lee et al., 2006), and it is believed that this responsible gambling strategy would affect casino visitors' decision-making processes (Blaszczynski, Ladouceur, & Shaffer, 2004; Hing, 2003; Monaghan, 2009). The research model of the current study is presented in Figure 3.1. Specific theoretical relationships among constructs in the research are discussed in the next section.
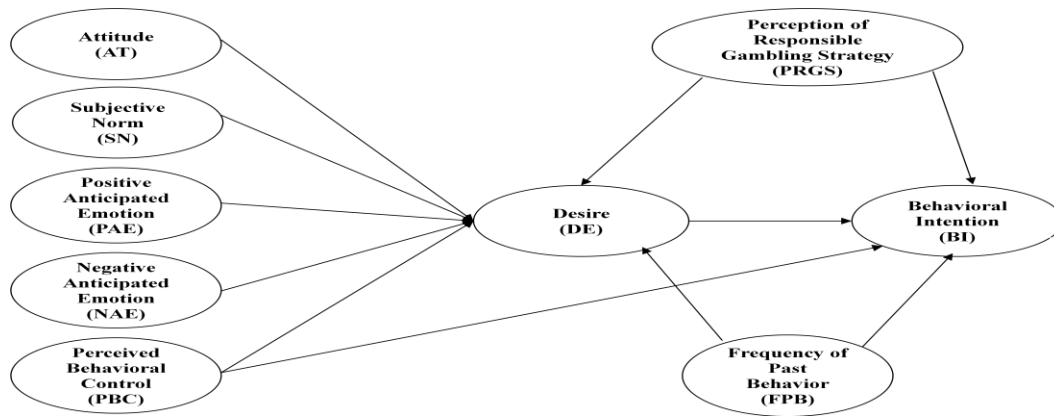
Figure 3.1: Proposed research model using the EMGB

<u>Hypothetical Relationships</u>

<u>Relationship between Attitude and Desire</u>

Researchers in various fields have found that attitude as one's overall positive or negative evaluation on conducting a specific behavior exerts a positive influence on individual intention to perform a behavior (e.g., Ajzen, 1991; Baker et al., 2007; Cheng et al., 2006). A person tends to assess the possible benefits or losses derived from a specific behavior in order to determine whether or not to undertake the behavior (Baker et al., 2007; Cheng et al., 2006). As a result, a person can have willingness to perform a specific behavior only when the expected outcomes are positively evaluated. In the TPB, attitude toward a certain behavior reflecting overall evaluation to conduct a behavior would strengthen an individual's behavioral intention (Ajzen, 1991; Baker et al., 2007) and lead to a desirable outcome as a result of performing the specific behavior. However, the role of attitude is redefined in the MGB, in that an individual's attitude does not directly affect his/her intention to perform a behavior, but it affects intention indirectly through desire

59

(Perugini & Bagozzi, 2001; Prestwich et al., 2008). Therefore, attitude toward a certain behavior reflecting overall evaluation to conduct a behavior would exert a positive influence on an individual's desire (Perugini & Bagozzi, 2001; Prestwich et al., 2008) and lead to a behavioral intention to undertake the specific behavior in the MGB.

Relationship between Subjective Norm and Desire

An individual's decision and behavior is highly influenced by salient referents (Bearden & Etzel, 1991; Cheng et al., 2006). In other words, an individual is likely to consider and comply with other people's opinions to determine whether the individual should undertake a specific behavior. In this regard, a number of studies have revealed that subjective norm is another significant factor in the formation of behavioral intention in the TPB (Baker et al., 2007; Bearden & Etzel, 1991; East, 2000; Laroche et al., 2001).

Although the subjective norm, like attitude, is still included in the MGB the character of subjective norm is redeemed to have an effect on behavioral intention indirectly through desire. Therefore, subjective norm referring to the perceived social pressure to perform or not to perform the behavior would fortify an individual's desire (Carrus et al., 2008; Perugini & Bagozzi, 2001; Prestwich et al., 2008) and link to a behavioral intention to perform the certain behavior in the MGB.

Relationship between Perceived Behavioral Control, Desire, and Intention

One's intention to undertake a specific behavior tends to be strengthened in the situation that necessary resources or opportunities to perform the behavior are fully

prepared (Ajzen, 1991; Ajzen & Madden, 1986). As a non-volitional dimension, perceived behavioral control is also considered an imperative factor of behavioral intention. Many scholars demonstrated that an individual's decision could be strongly affected by perceived behavioral control, individual confidence, or ability to carry out a specific behavior in the TPB (Ajzen, 1991; Ajzen & Madden, 1986; Conner & Abraham, 2001; Taylor & Todd, 1995).

In the MGB, although it still contains the construct of perceived behavioral control, the role of perceived behavioral control is redeemed to influence desire, behavioral intention, and actual behavior respectively. Thus, it is assumed that perceived behavioral control reflecting the perceived ease or difficulty of performing a certain behavior (Ajzen, 1991) reinforces an individual's desire, behavioral intention to perform a certain behavior, and actual behavior (Carrus et al., 2008; Perugini & Bagozzi, 2001; Prestwich et al., 2008) in the MGB. However the hypothetical relationship between perceived behavioral control and actual behavior is not considered since the final variable of the current study is a behavioral intention, not an actual behavior. In other words, perceived behavioral control is hypothesized to influence desire and behavioral intention to gamble in casinos in this study.

Relationship between Anticipated Emotions and Desire

The anticipated affective pre-response to the performance of behavior might be important determinants of intention (Triandis, 1977; Van der Pligt & De Vries, 1998). Two anticipated emotions (positive anticipated emotion and negative anticipated emotion)

perform a role to predict desire with the variables of the TPB in the MGB. Expecting compensation through achieving a goal causes positive anticipated emotions and expecting a failure leads to negative anticipated emotions. Likewise, people usually have both positive anticipated emotion and negative anticipated emotion for uncertain futures together. Therefore, in the MGB, anticipated emotions are assumed to predict desire, alongside the original variables of the TPB, in that those emotions lead to the dynamic self-regulatory process implied by the appraisal of success or failure (Carver & Scheier, 1998).

Relationship between Past Behavior, Desire, and Intention

Although the original model of both the TRA and TPB did not consider the influence of past behavior, the effect of past behavior has been found in several attitude-behavior research texts (Bagozzi & Warshaw, 1990; Bentler & Speckart, 1979, 1981; Fredricks & Dossett, 1983). Generally, past behavior is regarded as a proxy of habit, and it is also expected to influence desires and intentions. In other words, past behavior is regarded as a theoretical factor to influence desire, intention, and behavior (Bagozzi & Warshaw, 1990; Conner & Armitage, 1998; Ouellette & Wood, 1998; Perugini & Bagozzi, 2001). In the MGB, it is hypothesized that past behavior influences desire, intention, and behavior (Perugini & Bagozzi, 2001, 2004). However, because the final dependent variable is not an actual behavior but a behavioral intention in this study, without considering the recency of past behavior, the hypothetical relationship between past behavior, desire, and intention is considered in this study.

Relationship between Desire and Intention

Bagozzi (1992) claimed that the key factor omitted in the TPB is desire, a motivation-based variable linked to intention. According to Bagozzi (1992), desire is a proximal cause of intentions, whereas other variables in the MGB are regarded as distal causes, for which influence is mediated by desire. For example, in the MGB, attitude is typically regarded as evaluative appraisals. If these evaluations are strong enough, attitude will influence intentions to enact or not to enact specific behavior. However, evaluative appraisals do not usually entail motivational commitment and cannot activate intention without desire. In other words, intentions cannot arise without desire as a motivational push derived from evaluative appraisals (Bagozzi, 1992; Leone et al., 1999). Inclusion of desire makes up the TPB by reinterpreting the role of original variables in the TPB. Thus it is hypothesized that desire has a positive effect on intention to gamble in casinos, whereas other antecedents in the MGB affect intention through desire.

Relationship between the Perception of Responsible Gambling Strategy, Desire, and Intention

Responsible gambling strategy is related to an action or policy taken by casino operators to minimize harmful effects on casino visitors and maximize benefits to the local community (Monaghan, 2009). Various approaches have been conducted by scholars to assess gamblers' awareness, perceived adequacy, and perceived effectiveness of responsible gambling strategies (Blaszczynski, Ladouceur, & Shaffer, 2004; Hing, 2003; Monaghan, 2009). In terms of casino operators' responsible gambling strategies, casino visitors can have perceptions of casinos because perception is defined as an

individual's cognitive process, responsive to objects, behaviors, and events through knowledge, information, and experiences (Anderson, 2004; Oliver, 1997).

In other words, it is possible for casino visitors to have perceptions of a casino operator's responsible gambling strategy through their knowledge, information, and experiences, and they are likely to form and change their attitudes, interests, and opinions because of their perceptions of a responsible gambling strategy. Some scholars have stated that a definite level of perception on objects, behaviors, and events, as a human's unique cognitive process, is related to an individual's decision-making process in a specific behavior (Oliver, 1993, 1997; Oliver & Swan, 1989). However, despite the possible relationship between the perception of a responsible gambling strategy and behavioral variables, no study has yet attempted to explore their relationship because previous studies have been exploratory, without specific theoretical frameworks. The possible relationships between the perception of a responsible gambling strategy, desire, and intention are supported by some scholars in the field of marketing, in which they have used similar terms for analyzing corporate social responsibility.

Corporate social responsibility is conceptually similar to responsible gambling, in that it is defined by managerial activities that, based on the concept of sustainable development, protect consumers and contribute to the development of community (Murray & Vogel, 1997; Turban & Greening, 1997). Positive corporate images, implemented by corporate social responsibility strategies, are likely to directly affect customer attitudes and behaviors (Brown & Dacin, 1997; Wansink, 1989). The positive relationship between corporate social responsibility, consumer attitudes (Berens, Riel, &

Bruggen, 2005; Ross, Paterson, & Stuffs, 1992), and purchasing intentions (Klein &

Dawar, 2004; Sen & Bhattacharya, 2001) has been demonstrated in past studies. Recently,

Lee and Shin (2010) found higher perception levels of corporate social contributions and

local community contributions as corporate social responsibility strategies have more

positive effects on consumers' purchase intentions, because consumer perceptions of

corporate social responsibility strategies and their purchase intentions are positively

linked. In this respect, this study hypothesizes that the perception of a responsible

gambling strategy has a positive effect on visitors' desires and intentions to gamble in

casinos.

Research Hypotheses

Below are the research hypotheses which correspond to the five research

questions of the study. The first hypothesis is intended to test the original MGB as put

forth by Perugini and Bagozzi (2001), and it is written as:

H1: The original MGB can be applied to predict behavioral intention of casino visitors.

In order to address each construct within the model more specifically, H1 is

further broken down into nine sub hypotheses. These hypotheses address the significance

of each predictor variable in explaining desire or behavioral intention to gamble in

casinos.

$H1_a$: Attitude has a positive influence on desire.

$H1_b$: Subjective norm has a positive influence on desire.

$H1_c$: Perceived behavioral control has a positive influence on desire.

$H1_d$: Perceived behavioral control has a positive influence on behavioral intention.

65

$H1_e$: Positive anticipated emotion has a positive effect on desire.

$H1_f$: Negative anticipated emotion has a negative effect on desire.

$H1_g$: Past behavior has a positive effect on desire.

$H1_h$: Past behavior has a positive effect on behavioral intention.

$H1i$: Desire has a positive effect on intentions.

The second hypothesis concerns the role of desires as a mediator of the effects of attitude, subjective norm, perceived behavioral control, positive anticipated emotion, and negative anticipated emotion on the desire to gamble in casinos. The second hypothesis is

$H2$: The influence of attitude, subjective norm, perceived behavioral control, positive anticipated emotion, and negative anticipated emotion to behavioral intention is mediated by desire.

The third hypothesis is about comparing three competing models, the original MGB, TPB and TRA. The third hypothesis is

$H3$: The original MGB which added desire, two anticipated emotions, and past behavior as new constructs to the TPB performs significantly better than the TRA and TPB.

The fourth hypothesis is related to test the EMGB as:

$H4$: The EMGB can be applied to predict behavioral intention of casino visitors.

In order to address each construct within the model more specifically, H4 is also further broken down into eleven sub hypotheses. These hypotheses address the significance of each predictor variable in explaining desire or behavioral intention to gamble in casinos.

$H4_a$: Attitude has a positive influence on desire.

$H4_b$: Subjective norm has a positive influence on desire.

$H4_c$: Perceived behavioral control has a positive influence on desire.

$H4_d$: Perceived behavioral control has a positive influence on behavioral intention.

H4$_e$: Positive anticipated emotion has a positive effect on desire.

H4$_f$: Negative anticipated emotion has a negative effect on desire.

H4$_g$: Past behavior has a positive effect on desire.

H4$_h$: Past behavior has a positive effect on behavioral intention.

H4$_i$: Desire has a positive effect on intentions.

H4$_j$: The perception of a responsible gambling strategy has a positive influence on desire.

H4$_k$: The perception of a responsible gambling strategy has a positive influence on behavioral intention.

The fifth hypothesis is also about comparing two competing models, the EMGB and original MGB. The fifth hypothesis is

H5: The EMGB which added the perception of responsible gambling strategy as a new construct to the original MGB performs significantly better than the original MGB.

In summary, these five research hypotheses are presented in Table 3.1.

Table 3.1: Research hypotheses

Hypothesis #1	The original MGB can be applied to predict behavioral intention of casino visitors
Hypothesis #2	The influence of attitude, subjective norm, perceived behavioral control, positive anticipated emotion, and negative anticipated emotion to behavioral intention is mediated by desire.
Hypothesis #3	The original MGB which added desire, two anticipated emotions, and past behavior as new constructs to the TPB performs significantly better than the TRA and TPB
Hypothesis #4	The EMGB can be applied to predict behavioral intention of casino visitors
Hypothesis #5	The EMGB performs significantly better than the original MGB

CHAPTER IV

METHODOLOGY

The purpose of this study is to examine casino visitors' behavioral intention for casino gambling using the EMGB. Based on the MGB (Perugini & Bagozzi, 2001) and relevant literature, the role of attitudes, subjective norms, perceived behavioral control, two anticipated emotions, desire, frequency of past behavior, and perception of responsible gambling strategy is examined in making a gambling decision for casino gambling in this study.

To meet the research objectives, the proposed model was empirically tested. Data were collected via an on-site survey. In this study, a convenient sampling method was performed for casino visitors at Kangwon Land Casino in South Korea. Data were assessed initially using exploratory factor analysis. Structural equation modeling was also used to test the hypothesized research model. This chapter gives a detailed description of a preliminary study, sampling, questionnaire development, data collection procedure, and proposed data analysis.

Variable Measurement and Pretest

After reviewing the literature, the researcher utilized the constructs of the MGB and perception of responsible gambling strategy to examine casino visitors' behavioral patterns as they are related to casino visitors' intention to gamble in casinos. A preliminary list of measurement items was selected after an extensive review of literature pertaining to the behavior of tourists, casino gambling, and the theories of human

behavior (Ajzen 1985, 1991, 2006; Ajzen & Madden, 1986; Bagozzi et al., 1998; Bagozzi, Gurhan-Canli, & Priester, 2001; Bentler & Speckart, 1979, 1981; Carrus et al., 2008; Hing, 2003; Lam & Hsu, 2004, 2006; Lee et al., 2003; Oh & Hsu, 2001; Perugini & Bagozzi, 2001, 2004; Young & Wohl, 2009). The survey instruments were originally written in English, translated into Korean by professional translators, and then translated back to English by native Koreans who were proficient in both English and Korean. This was done to check the accuracy of the translation, thus avoiding construct bias (Van de Vijver & Hambleton, 1996). Based on a comparison between the original English version and the translated-back version, modifications were made to the questions that were less accurately translated. Next, tourism scholars and twelve experts who have worked as casino managers were asked to clarify each item and comment on whether the items were appropriate for evaluating casino visitors' behavior.

After this, a pretest was conducted in December 2008 to increase the probability of a successful study since a pretest is important to assess the clarity of items, as well as length, format, and instructions for the overall survey (Churchill & Iacobucci, 2002). Based on the results of the pretest and comments from the participants, necessary corrections were made in the questionnaire before main data collection commenced. Because theoretical constructs generally cannot be directly measured, they should be inferred or measured indirectly through observed variables. A set of measures tends to be more reliable and valid than any other individual measure. Multiple indicators to measure theoretical constructs can enhance validity covering various facets of the construct (Kline, 2005). Due to these reasons, all variables in this study—except past behavior—were

measured with multiple items. In terms of operational definitions of variables in the current study, as shown in Table 4.1, the subjects' attitude associated with casino gambling was operationalized by four items rated on 7-point Likert scale, ranging from *Strongly disagree* (1) to *Strongly agree* (7) based on previous research (Ajzen 1985, 1991, 2006; Lam & Hsu, 2004, 2006; Oh & Hsu, 2001).

Table 4.1: Operational definitions of attitude

Items	Previous research
I think casino gambling is my favorite activity I think casino gambling is an exciting activity I think casino gambling is an attractive activity I think casino gambling is an enjoyable activity	Ajzen 1985, 1991, 2006; Lam & Hsu, 2004, 2006; Oh & Hsu, 2001

As depicted in Table 4.2, the subjective norm was operationalized by four items rated on 7-point Likert scale, ranging from *Strongly disagree* (1) to *Strongly agree* (7) based on previous research (Ajzen 1985, 1991; Lam & Hsu, 2004, 2006; Oh & Hsu, 2001).

Table 4.2: Operational definitions of subjective norm

Items	Previous research
Most people who are important to me think it is okay for me to gamble in casinos Most people who are important to me support that I gamble in casinos Most people who are important to me understand that I gamble in casinos Most people who are important to me agree with me about casino gambling	Ajzen 1985, 1991; Lam & Hsu, 2004, 2006; Oh & Hsu, 2001

As shown in Table 4.3, the perceived behavioral control was operationalized by four items rated on 7-point Likert scale, ranging from *Strongly disagree* (1) to *Strongly agree* (7) based on previous research (Ajzen 1991, 2006; Lam & Hsu, 2004, 2006; Oh & Hsu, 2001).

Table 4.3: Operational definitions of perceived behavioral control

Items	Previous research
I am confident that if I want, I can gamble in casinos I am capable of casino gambling I have enough resources (money) to gamble in casinos I have enough time to gamble in casinos	Ajzen 1991, 2006; Lam & Hsu, 2004, 2006; Oh & Hsu, 2001

As depicted in Table 4.3, Positive and negative anticipated emotion were operationalized by eight items (4 items of positive anticipated emotions and 4 items of negative anticipated emotions) on a 7-point Likert scale, ranging from *Strongly disagree* (1) to *Strongly agree* (7) based on previous research (Bagozzi et al., 1998; Bagozzi, Gurhan-Canli, & Priester, 2001; Perugini & Bagozzi, 2001; Carrus et al., 2008).

Table 4.4: Operational definitions of anticipated emotions

Items	Previous research
If I succeed at casino gambling I will be excited If I succeed at casino gambling I will be glad If I succeed at casino gambling I will be satisfied If I succeed at casino gambling I will be happy If I fail at casino gambling I will be angry If I fail at casino gambling I will be disappointed If I fail at casino gambling I will be worried If I fail at casino gambling I will be sad	Bagozzi et al., 1998; Bagozzi, Gurhan-Canli, & Priester, 2001; Perugini & Bagozzi, 2001; Carrus et al., 2008;

As shown in Table 4.5, the perception of a responsible gambling strategy was operationalized by four items rated on 7-point Likert scale, ranging from *Definitely do not know* (1) to *Definitely know* (7) based on previous research (Hing, 2003) and the current responsible gambling strategy of the Kangwon Land Casino, the research site of this study.

Table 4.5: Operational definitions of perception of responsible gambling strategy

Items	Previous research
Kangwon Land has provided counseling services at the Problem Gambling and Prevention Center Kangwon Land has allowed local residents access to the casino only once a month Kangwon Land has allowed casino visitors access to the casino no more than 15 times a month Kangwon Land is closed for a few hours a day	Hing, 2003; Current responsible gambling strategy of the Kangwon Land Casino

As depicted in Table 4.6, the desire was operationalized by four items rated on a 7-point Likert scale, ranging from *Strongly disagree* (1) to *Strongly agree* (7) based on previous research (Oh & Hsu, 2001; Perugini & Bagozzi, 2001, 2004; Young & Wohl, 2009).

Table 4.6: Operational definitions of desire

Items	Previous research
I would enjoy casino gambling I wish to gamble in casinos I crave casino gambling I have an urge to gamble in casinos	Oh & Hsu, 2001; Perugini & Bagozzi, 2001, 2004; Young & Wohl, 2009

As presented in Table 4.7, the subjects' behavioral intention to gamble in casinos was operationalized by four items rated on 7-point Likert scale, ranging from *Strongly disagree* (1) to *Strongly agree* (7) based on previous research. Frequency of past behavior was assessed with a single item (i.e., "How many times have you gone casino gambling in the past 12 months?") based on previous studies (Ajzen & Madden, 1986; Bentler & Speckart, 1979). Besides these measures that were necessary to analyze the proposed research model, demographic and behavioral questions were included in the questionnaire to understand the sample characteristics (Ajzen 1991, 2006; Lam & Hsu, 2004, 2006; Oh & Hsu, 2001; Perugini & Bagozzi, 2001).

Table 4.7: Operational definitions of behavioral intention

Items	Previous research
I am planning to casino gambling in the near future I will make an effort to go casino gambling in the near future I intend to go casino gambling in the near future I am willing to go casino gambling in the near future	Ajzen 1991, 2006; Lam & Hsu, 2004, 2006; Oh & Hsu, 2001; Perugini & Bagozzi, 2001

The additional questions included gender, education level, income level, household structure, type of game played, and average length of casino visits (for details see the appendix).

<u>Site Selection</u>

The study area, Gangwon province in Korea, was a run-down, former mining area that has legalized casinos. In the 1970-80s, the three towns around Kangwon Land

Casino in Gangwon province underwent an economic boom when coal was used as a major energy resource for industries and households (Lee, Kim, & Kang, 2003). However, in the 1990s, this region began to experience severe economic difficulties due to the decreased energy demand of coal, and many residents left this region. In this situation, an alternative way was required to maintain economic and social status of this mining region. Finally, the Korean Parliament passed the Abandoned Mine Development Support Act to encourage the development of this declining mining area on December 29, 1995. This act included the legalization of casino gambling for the native Koreans for the first time. Due to these things, Kangwon Land that was selected as a study site was opened on October 28, 2000 for revitalizing economic and social development of this mining region.

The initial investment for Kangwon Land Casino was about US$100 million in which central and local governments invested 51%, and private investors invested 41% of total funds. Following its immediate success, Kangwon Land Casino was expanded in 2003 to accommodate more players with 132 table games and 960 slot machines as shown in Table 4.8. In 2006, visitors to Kangwon Land Casino totaled about 1.8 million, and their expenditures amounted to approximately US$844 million, almost all of which came from domestic customers (Korea Casino Association, 2007). Moreover, the Kangwon Land Casino opened a ski resort called High 1 Resort in 2006. In 2007, the visitors of High 1 Ski Resort exceeded 430,000 with rapid pace since its opening. Through these developments, the Kangwon Land Casino has become one of the most important resorts in Korea, providing tourists with various opportunities to enjoy different facilities such as a golf course and ski resort. Lastly, Kangwon Land Casino has

implemented various responsible gambling strategies to prevent and reduce harm associated with excessive gambling behaviors.

Table 4.8: Casino facility of Kangwon Land Casino

| Classification | Game Type | Classification | | Total |
		General Rooms	Membership Rooms	
Table Games	Black Jack	45	4	49
	Baccarat	45	16	61
	Roulette	10		10
	Big Wheel	2		2
	Tai-Sai	4		4
	Caribbean Stuo Poker	4		4
	Casino War	2		2
	Sub Total	112	20	132

| Classification | Game Type | Face Value (US 1$ = 1,145 Korean won) | | | Total |
		10 won	100 won	500 won	
Machine Game	Video Game	48	582		630
	Slot Machine		88	242	330
	Sub Total	48	670	242	960

Size: Auxiliary Facilities:	27,300 square meter floor space Game tables and machine (132 tables and 960 machine) Casino bar, casino buffet, VIP lounge

Specifically, Kangwon Land Casino has provided counseling services for potential problem gamblers. Kangwon Land Casino has restricted not only local residents to one visit per month but also domestic visitors with a maximum of 15 visits per month. Moreover, Kangwon Land Casino closes for few hours a day without ever staying open for 24 hours.

Approval of the Use of Human Subjects

Prior to collecting data, the Institutional Review Board (IRB) evaluated the study including the questionnaire and data collection procedure, and the board approved the use of human subjects with the protocol number of #IRB2008-377 in Clemson University. The rights and welfare of the human subjects were protected from any risks or discomfort to the participants. Voluntary participation and confidentiality of data were assured.

Data Collection Procedures

The target population of this study is made of casino visitors at Kangwon Land Casino, in Gangwon province, South Korea. The sample was obtained by conveniently selecting participants at the main gate of Kangwon Land Casino. A self-administrated questionnaire was distributed at a temporary booth nearby at the main exit of the Kangwon Land Casino. This research was given an opportunity that is exceedingly rare in the gambling research literature—that is, an opportunity to interview casino gamblers on-site in a live gambling site, which is rare in other gambling studies.

To collect a more representative sample of casino gamblers, the survey was conducted with onsite casino gamblers on both weekdays and weekends in the third and fourth week of December 2009. Gamblers voluntarily came to the survey booth, where field researchers outlined the purpose of the research project and invited these gamblers to participate in the survey. Upon approval, a self-administered questionnaire was presented to each respondent. Some participants who had difficulty in reading the questionnaires due to the lack of a magnifying glass were administered the survey

through personal interviews by the field researchers. Furthermore, the questionnaires were completed in the presence of the field researchers, allowing for rigorous monitoring of the data collection process. A small gift of chocolate was provided to those who completed the survey questionnaire.

The overall response rate of this survey was 89.6% (i.e., 515 completed surveys from the 575 casino visitors that were contacted). However, after a thorough examination, 43 questionnaires were eliminated from the analysis since important questions were left blank or checked irregularly. Finally, 472 questionnaires were coded and used for analysis. In terms of sample size for the structural equation model (SEM), Anderson and Gerbing (1988) stated that the sample size from 100 to 150 is appropriate. Kelloway (1998) claimed that a sample size of 200 is recommendable for the use of SEM. Gay and Airasain (2003) also indicated that a sample size for SEM should be over 400 if the population size was around 5,000 or more. In order to maintain the accuracy of the estimates, a large sample size is required for applying structural equation modeling. Therefore, it seems that the sample size of this study is adequate to analyze SEM when considering literature mentioned above.

Data Analysis Procedures

This section describes the statistical methods used to answer the research questions. Collected data from the main survey was analyzed by using the Statistical Package for the Social Sciences program (SPSS) and the Equations (EQS) program to analyze the hypothesized structural model (Bentler & Wu, 1995; SPSS, 2001). Data

77

analysis consisted of two phases: 1) preliminary analysis and 2) hypotheses testing. First, the SPSS was used to conduct preliminary analyses such as frequencies, reliability, and exploratory factor analysis. Second, hypotheses testing were performed through structural equation models using the EQS. Structural equation model testing was conducted through two steps: 1) original model testing and 2) extended model testing with the comparisons of competing models.

Preliminary Analysis Procedures

Data Screening

Prior to beginning any further data analysis involving hypotheses, univariate data screening was performed to clean the data and remove cases of outliers that cause data to be skewed and non-normally distributed. Variables that were used in subsequent hypothesis testing were screened initially by requesting corresponding z-scores. Those variables included the 36 items across the eight constructs and twelve demographic and casino gambling variables (i.e., age, favorite casino game, income, and education level). Following Tabachnick and Fidell (2001), the value of 3.29 was used as a cutoff to determine whether some cases were problematic (i.e., with z-scores greater than 3.29). In particular, cases with scores over the cutoff were checked to see whether or not they fell within the data distribution by examining a graph. If not, the original value for that case was considered an outlier and removed.

In terms of multivariate data screening, linear regression analysis with Mahalanobis' Distance in the form of Chi-square values was used for each construct.

Some cases which had extreme Chi-square values were deleted compared against the critical Chi-square value with given degrees of freedom at an alpha level of $p < 0.001$ for each construct (Tabachnick & Fidell, 2001). Remaining cases were then examined across each construct to determine the extent of missing values for construct indicators. If at least 50% of the indicators for a particular construct were missing, the entire case was deleted as suggested by Kline (2005). After all stages of univariate and multivariate data screening, the dataset was reduced to 455 cases.

Exploratory Factor Analysis and Internal Consistency

As a first step of the evaluation of measurement model, exploratory factor analysis (EFA) was executed to identify the structure of factors and purify systematically measured variables in underlying constructs. Specifically, the EFA using the principal components method was employed to delineate underlying dimensions of multiple item measurements and a varimax orthogonal rotation procedure was used to maximize the differences among the dimensions extracted.

To extract reasonable factors, three criteria were used: eigenvalues greater than 1.0, factor loadings greater than 0.4, and a scree plot examination of eigenvalues (Fabrigar, Wegener, MacCallum, & Strahan, 1999; Mertler & Vannatta, 2005; Tabachnick & Fidell, 2001). This analysis is a beneficial and desirable procedure to diminish multicollinearity or error variance correlations among indicators (Bollen, 1989; Yoon & Uysal, 2005). The internal consistency of multiple indicators was next examined using Cronbach's alpha coefficient. Although Peterson (1994) stated that the value of

Cronbach's alpha coefficient should exceed 0.70 to have an acceptable level of reliability, exceeding 0.60 is also usually acceptable in social psychology research (Robinson, Shaver, & Wrightsman, 1991).

Hypotheses Testing Procedures

In order to test first and fourth hypotheses, related to test original MGB and EMGB in the context of a casino, SEM was employed. Specifically, for establishing a measurement model and structural model of original MGB and EMGB, a two-step approach was utilized, which is a hybrid estimating method concerning specifying a measurement model using confirmatory factor analysis at first and then testing a latent structural model developed from the measurement model (Kline, 2005). A constructed measurement model through a two-step approach usually shows the confirmation of acceptable fit to the data and presents a confirmatory assessment of validity (Anderson & Gerbing, 1988; Hatcher, 1994). In terms of estimating structural equation modeling, the robust maximum-likelihood (ML) estimation procedure was employed in this study because collected data in the current study did not satisfy the assumption of multivariate normality (Byrne, 2006).

In terms of evaluating the measurement model, an individual reliability is used to measure the factor loading of observed items of latent variables to determine whether each factor loading has statistical significance. Hair, Black, Babin, Anderson, and Tatham (2006) suggested that a factor loading of greater than 0.50 is considered to be acceptable for individual item reliability. A composite reliability is used to indicate the internal

consistency reliability of a construct indicator composed by observed variables reliability. The latent variables would be measured efficiently from observed variables if the composite reliability is high. Fornell and Larcker (1981) suggested that a composite reliability should be greater than 0.7. The average variance extracted is used to assess the meaning of observed variables as they related to latent variables. The convergent validity and reliability of latent variables would be high if the average variance extraction is high. Fornell and Larcker (1981) suggested that the average variance extraction should be greater than 0.5. In addition, average variance extracted is used to identify the discriminant validity of measurement model. An average variance for an extracted variable should be higher than each squared correlation coefficient between variables in the model to satisfy the discriminant validity of measurement model (Fornell & Larcker, 1981; Segars & Grover, 1998).

The SEM analysis includes a model fit and a model interpretation. In order to obtain accurate estimates, the SEM provides a variety of criteria to determine whether or not the data fit the model and if the model is plausible. In this study, Chi-square statistics, normed fit index (NFI), non-normed fit index (NNFI), comparative fit index (CFI), and root mean square error of approximation (RMSEA) were used to identify the overall fit of the model to data. Chi-square measures the difference between the sample variance-covariance matrices. A smaller Chi-square indicates a better fit to the model, but the Chi-square statistic is known to be sensitive to sample size, especially when $N \geq 200$ (Bagozzi & Yi, 1988; Kline, 2005). While the indices of NFI, NNFI, and CFI range from 0 to 1.0, it is recommended that each value has at least 0.9 for an acceptable fit (Hu & Bentler,

1998; Kline, 2005). A RMSEA value less than 0.08 indicates an acceptable model fit (close to 0.05 for a good fit) (MacCullum, Browne, & Sugawara, 1996). In order to determine the statistical significance of parameter estimates, t-statistic is also used; greater than 2.00 is considered an indicator of statistical significance (Byrne, 1998). By dividing the parameter by its standard error t-value is obtained. The path coefficients are used to test the proposed hypotheses.

In order to test the second hypothesis, examining the role of desires as a mediator in the MGB, two approaches were employed; Sobel's product of coefficients approach and Chi-square difference approach. First of all, Sobel's product of coefficients approach was employed in order to check the presence of mediating effect of antecedents of MGB (attitude, subjective norm, perceived behavioral control, positive anticipated emotion, and negative anticipated emotion) which influences behavioral intention through desire. Sobel's product of coefficients approach is useful to test the significance of mediating effect which influences dependent variable through mediator (Kline, 2005).

Although Baron and Kenny (1986) proposed a method about testing for mediation through a four step approach in which several regression analyses are conducted and the significance of the coefficients is examined at each step, this method has some problems. The first problem is that this method is not able to really test the significance of mediating effects. A second problem that it is difficult to apply Baron and Kenny's (1986) method if there is a suppressed relationship at each step. The alternative and more preferable methods are Judd & Kenny's difference of coefficients approach (1981) and Sobel's product of coefficient approach (1982). Although there are two ways to estimate

mediating effect MacKinnon, Warsi and Dwyer (1995) stated that the Kenny and Judd's difference of coefficients approach and the Sobel's product of coefficients approach yield identical values for the mediating effect. In this study, Sobel's product of coefficient approach is used. In Sobel's approach, the two coefficients are obtained from two regression models as seen below.

Table 4.9: Sobel's product of coefficient approach

	Equation	Visual description
Model 1	$Z = B_0 + BX + e$	
Model 2	$Y = B_0 + B_1X + B_2Z + e$	

X: independent variable, Z: mediator, Y: dependent variable
h: a coefficient between independent variable and dependent variable
g: a coefficient between mediator and dependent variable
f: a coefficient between independent variable and dependent variable without mediator
* Suggested approach was based on Newsom (2010).

Model 1 involves the relationship between the independent variable and mediator. A product is formed by multiplying two coefficients together, the partial regression effect for mediator predicting dependent variable, B_2, and the simple coefficient for independent variable predicting mediator, B.

$$B_{mediating\ effect} = (B_2) * (B)$$

And, the standard error of the mediating effect can be calculated as seen below (Sobel, 1986).

$$S.E._{mediating\ effect} = \sqrt{(B)^2 * S.E._{B_2}^2 + (B_2)^2 * S.E._B^2}$$

Therefore, the z-value of Sobel's product of coefficients approach can be calculated as seen below.

$$Z - value\ of\ Sobel = \frac{B_{mediating\ effect}}{S.E_{mediating\ effect}}$$

The null hypothesis of Sobel's product of coefficients approach is "there is no mediating effect." If the z-value of Sobel is greater than +1.96 or less than -1.96, it indicates that there is a significant mediating effect by rejecting the null hypothesis of Sobel's product of coefficients approach (Kline, 2005).

After the test of Sobel's product of coefficients, the Chi-square difference test was used to decide the form of mediating effect between full mediation and partial mediation. Full mediation means that an independent variable influences a dependent variable only through a mediator, and partial mediation indicates that an independent variable affects a dependent variable directly and indirectly through a mediator.

Speaking of using the Chi-square difference test to decide the form of mediating effect more specifically, Chi-square difference tests were respectively performed for original models without adding paths, and modified models adding paths from attitude, subjective norm, positive anticipated emotion, and negative anticipated emotion to behavioral intention because the relationship between these two models is a nested model. For example, if the Chi-square difference test for an original model without adding a path from attitude to intention and a modified model adding a path from attitude to intention is not significant, it means that the added path is not necessary to consider, and it indicates that the desire fully mediates the influence of attitude for behavioral intention. In other words, if the Chi-square difference between an original model and a modified model is

significant (p<0.05) in the Chi-square difference test, the null hypothesis of full mediation is rejected, and it is concluded that the form of mediation effect is partial mediation which has a direct path from an independent variable to a dependent variable. However, if the Chi-square difference between two models is not significant (p>0.05) in the Chi-square difference test, the null hypothesis of full mediation is accepted, and it is concluded that the form of mediation effect is full mediation which does not have a direct path from an independent variable to a dependent variable (Kline, 2005).

In order to test the third and fifth hypotheses associated with comparison among the EMGB, original MGB, TPB, and TRA in the context of a casino, R^2 is employed. For example, when comparing the EMGB with the original MGB, if R^2 for behavioral intention in the EMGB is higher than that in original MGB we can conclude that the EMGB performs significantly better than the original MGB.

CHAPTER V

RESULTS

This chapter of results contains two sections. The first section presents preliminary analysis. The SPSS was used for frequencies, reliability, and exploratory factor analysis. The second section consists of hypotheses testing. Hypothesis testing was performed through SEMs using the EQS.

Preliminary Results

This section presents the participants' profiles, the results of descriptive statistics of research variables, and preliminary analyses of the research data. First, sample characteristics were described. Second, EFA was conducted on the research constructs that were measured using multiple items: attitude, subjective norm, perceived behavioral control, positive anticipated emotion, negative anticipated emotion, desire, behavioral intention, and perception of responsible gambling strategy. Internal consistency of multiple indicators was assessed using Cronbach's alpha coefficient.

Demographic Characteristics of Sample

Table 5.1 presents demographic characteristics of the respondents. The proportion of male respondents (69.5%) was higher than that of the female (30.5%). The majority of respondents were ages 30-39 (31.6%) and ages 40-49 (30.5%). University or higher graduates were predominant (53.6%).

Table 5.1: Demographic characteristics of respondents (N=455)

Characteristics	n	%
Gender		
Male	316	69.5
Female	139	30.5
Age:		
20s	76	16.6
30s	144	31.6
40s	139	30.5
50s	81	17.9
More than 60	15	3.4
Education level:		
Less than elementary school	6	1.3
Middle and High school	115	25.3
2 year College	90	19.8
University	196	43.1
Graduate school	48	10.5
Monthly income level		
Less than 1 million won	32	7.1
1-1.9 million won	86	18.9
2-2.9 million won	127	28.0
3-3.9 million won	87	19.2
4-4.9 million won	54	11.8
More than 5 million won	68	15.0
* US 1$ = 1,145 Korean won		
Marriage:		
Single	142	31.2
Married	299	65.7
Others	14	3.1
Job:		
Expert/technician	131	28.7
Businessman	66	14.5
Service	60	13.2
Office worker	52	11.4
Civil servant	7	1.5
Housewife	47	10.3
Student	9	2.0
Retired	13	2.9
Others	71	15.5

Table 5.2: Gambling-related profile of respondents (N=455)

Characteristics	n	Percentage
Favorite casino game:		
Blackjack	167	36.6
Baccarat	148	32.6
Roulette	41	9.1
Slot machine	59	12.9
Tai-sai	15	3.3
Others	25	5.5
How many days did you stay in casino resort?		
Without stay	5	1.1
1 day	164	36.0
2 days	134	29.5
3 days	64	14.0
4-7 days	57	12.6
More than 8 days	31	6.8
Who are you accompanied by?		
Alone	103	22.6
Friends	192	42.2
Relatives	4	0.9
Couple	25	5.5
Family	66	14.5
Business Group	49	10.7
Others	16	3.6
How many times have you visited a casino during		
entire life?	86	18.9
1-3 times	100	21.9
4-10 times	72	15.9
11-30 times	46	10.0
31-50 times	61	13.3
51-100 times	91	20.0
More than 100 times		
Gambling is a main goal to visit casino resort?		
Yes	324	71.2
No	131	28.8
This visit is first time to play casino gambling?		
Yes	71	15.5
No	384	84.5

Many of the respondents (47.2%) considered themselves to be middle annual income level (2-3.9 million won, US 1$ = 1,145 Korean won) and middle–high annual income level (26.8%). Respondents who are married were dominant (65.7%), followed by respondents that had various jobs (expert/technician (28.7%), others (15.5%), businessman (14.5%), service (13.2%), office worker (11.4%), housewife (10.3%), etc).

These results indicate that the target market of Kangwon Land Casino consists of married, middle-class men between 30 and 40 years old. Moreover, the demographic characteristics of Kangwon Land Casino visitors were similar between this study and the previous study of Lee et al. (2006).

Gambling-related Profile of Sample

As depicted in Table 5.2, the majority of respondents (84.5%) were people who had casino gambling experience at least one time in their life. Casino visitors preferred table games, such as blackjack (36.6%) and baccarat (32.6%), rather than slot machines (12.9%). Their purposes for visiting the casino were gambling (71.2%) and others (28.8%)—including ski and travel. Respondents preferred to gamble in casinos with friends (42.2%) or alone (22.6%). They usually stayed for one or two days (65.5%) when visited the casino.

Exploratory Factor Analysis (EFA)

In order to determine underlying dimensions of multi-item measurement scales, a principal components analysis with varimax rotation was performed on the subsequent

multi-item variables: attitude, subjective norm, perceived behavioral control, positive anticipated emotion, negative anticipated emotion, desire, behavioral intention, and perception of responsible gambling strategy. Minimum eigenvalues of 1.0 and scree plot helped determine the number of factors for each scale. Item loadings above 0.5 on all other factors were retained. Internal consistency of multiple indicators was examined using Cronbach's standardized alpha. Summated mean scores of multiple items were created for the research variables and used in subsequent analyses.

<center>Attitudes</center>

As shown in Table 5.3, the average of respondents' attitudes toward casino gambling from four items was 4.17. The factor of attitude for casino gambling included three items with an eigenvalue of 3.06 and explained 76.7% of the variance. Factor loadings ranged from 0.80 to 0.91, and Cronbach's alpha coefficient was 0.90 (Peterson, 1994).

Table 5.3: Factor analysis of casino visitors' attitude

Items	Mean[a]	SD	Factor Loading
I think casino gambling is my favorite activity	3.76	1.57	0.912
I think casino gambling is an exciting activity	4.44	1.51	0.907
I think casino gambling is an attractive activity	4.17	1.52	0.881
I think casino gambling is an enjoyable activity	4.31	1.47	0.797
Eigenvalue = 3.066			
Cronbach's alpha = 0.897			
Total percent of variance = 76.654			
Factors' mean score = 4.17			

[a]: Scores were computed based on 7-point Likert scale.

Among items for attitude, an item which has the highest mean was "I think casino gambling is an exciting activity (4.44)," and an item which has the lowest mean was "I think casino gambling is my favorite activity (3.76)".

Subjective Norm

As shown Table 5.4, the average of respondents' subjective norm from four items was 2.41. The factor of subjective norm for casino gambling included four items with an eigenvalue of 3.43 and explained 85.7% of the variance. Factor loadings ranged from 0.91 to 0.94, and Cronbach's alpha coefficient was 0.94. The third item, "Most people who are important to me understand that I gamble in casinos (2.55)" showed the highest mean while the second item, "Most people who are important to me support that I gamble in casinos (2.3)" revealed the lowest mean among items for subjective norms.

Table 5.4: Factor analysis of casino visitors' subjective norm

Items	Mean[a]	SD	Factor Loading
Most people who are important to me think it is okay for me to gamble in casinos	2.30	1.28	0.937
Most people who are important to me support that I gamble in casinos	2.27	1.24	0.928
Most people who are important to me understand that I gamble in casinos	2.55	1.42	0.925
Most people who are important to me agree with me about casino gambling	2.50	1.37	0.914
Eigenvalue = 3.429			
Cronbach's alpha = 0.944			
Total percent of variance = 85.728			
Factors' mean score = 2.41			

[a]: Scores were computed based on 7-point Likert scale.

Perceived Behavioral Control

Principal components analysis was conducted with items measuring perceived behavioral control over casino gambling (see Table 5.5). The average of respondents' perceived behavioral control from four items was 4.44. The factor of perceived behavioral control for casino gambling included four items with an eigenvalue of 2.78 and explained 69.5% of the variance. Factor loadings ranged from 0.76 to 0.91, and Cronbach's alpha coefficient was 0.85.

Table 5.5: Factor analysis of casino visitors' perceived behavioral control

Items	Mean[a]	SD	Factor Loading
I am confident that if I want, I can gamble in casinos	5.01	1.51	0.911
I am capable of casino gambling	4.29	1.48	0.875
I have enough resources (money) to gamble in casinos	4.10	1.43	0.782
I have enough time to gamble in casinos	4.34	1.46	0.757
Eigenvalue = 2.780			
Cronbach's alpha = 0.851			
Total percent of variance = 69.512			
Factors' mean score = 4.44			

[a]: Scores were computed based on 7-point Likert scale.

Among items for perceived behavioral control, an item which has the highest mean was, "I am confident that if I want, I can gamble in casinos (5.01)," and an item which has the lowest mean was, "I have enough resources (money) to play gamble in casinos (4.1)".

Positive Anticipated Emotion

As shown Table 5.6, the average of respondents' positive anticipated emotion from four items was 3.80. The factor of positive anticipated emotion for casino gambling included four items with an eigenvalue of 3.40 and explained 84.9% of the variance. Factor loadings ranged from 0.90 to 0.94, and Cronbach's alpha coefficient was 0.94. The second item, "If I succeed at casino gambling I will be glad (3.94)," showed the highest mean while the fourth item, "If I succeed at casino gambling I will be happy (3.64)" revealed the lowest mean among items for subjective norms.

Table 5.6: Factor analysis of casino visitors' positive anticipated emotion

Items	Mean[a]	SD	Factor Loading
If I succeed at casino gambling I will be excited	3.83	1.42	0.941
If I succeed at casino gambling I will be glad	3.94	1.40	0.928
If I succeed at casino gambling I will be satisfied	3.81	1.38	0.915
If I succeed at casino gambling I will be happy	3.64	1.38	0.901
Eigenvalue = 3.395			
Cronbach's alpha = 0.941			
Total percent of variance = 84.874			
Factors' mean score = 3.8			

[a]: Scores were computed based on 7-point Likert scale.

Negative Anticipated Emotion

As shown Table 5.7, the average of respondents' perception of negative anticipated emotion from four items was 2.87. It indicates that respondents have low level of negative anticipated emotion for casino gambling. The factor of negative anticipated emotion for casino gambling included four items with an eigenvalue of 3.47 and explained 86.9% of the variance. Factor loadings ranged from 0.91 to 0.95 and

Cronbach's alpha coefficient was 0.95. The second item, "If I fail at casino gambling I will be disappointed (2.98)," showed the highest mean while the second item, "If I fail at casino gambling I will be sad (2.71)," revealed the lowest mean among items for subjective norms.

Table 5.7: Factor analysis of casino visitors' negative anticipated emotion

Items	Mean[a]	SD	Factor Loading
If I fail at casino gambling I will be angry	2.97	1.415	0.948
If I fail at casino gambling I will be disappointed	2.98	1.49	0.938
If I fail at casino gambling I will be worried	2.82	1.45	0.924
If I fail at casino gambling I will be sad	2.71	1.48	0.916
Eigenvalue = 3.471			
Cronbach's alpha = 0.949			
Total percent of variance = 86.784			
Factors' mean score = 2.87			

[a]: Scores were computed based on 7-point Likert scale.

Perception of Responsible Gambling Strategy

As shown Table 5.8, the average of respondents' perception of responsible gambling strategy from four items was 4.37. It means that respondents have a relatively high level of perception of responsible gambling strategy. The factor of perception of responsible gambling strategy included four items with an eigenvalue of 2.90 and explained 72.5% of the variance. Factor loadings ranged from 0.82 to 0.88, and Cronbach's alpha coefficient was 0.87. Among items for perception of responsible gambling strategy, an item which has the highest mean was, "Kangwon Land is closed for a few hours a day (4.63)," and an item which has the lowest mean was, "Kangwon Land has allowed local residents access to the casino only once a month (4.14)."

Table 5.8: Factor analysis of casino visitors' perception of responsible gambling strategy

Items	Mean[a]	SD	Factor Loading
Kangwon Land has provided counseling services at the Problem Gambling and Prevention Center	4.23	1.60	0.883
Kangwon Land has allowed local residents access to the casino only once a month	4.14	1.60	0.858
Kangwon Land has allowed casino visitors access to the casino no more than 15 times a month	4.49	1.51	0.840
Kangwon Land is closed for a few hours a day	4.63	1.53	0.824

Eigenvalue = 2.900
Cronbach's alpha = 0.873
Total percent of variance = 72.505
Factors' mean score = 4.37

[a]: Scores were computed based on 7-point Likert scale.

Desire

Principal components analysis was conducted with items measuring desire for casino gambling (see Table 5.9). According to the results of factor analysis for desire, the average of respondents' desire for casino gambling from four items was 3.81. The factor of desire for casino gambling included four items with an eigenvalue of 2.95 and explained 73.7% of the variance.

Table 5.9: Factor analysis of casino visitors' desire

Items	Mean[a]	SD	Factor Loading
I would enjoy casino gambling	4.28	1.40	0.906
I wish to gamble in casinos	4.02	1.40	0.877
I crave casino gambling	3.46	1.43	0.853
I have an urge to gamble in casinos	3.49	1.55	0.794

Eigenvalue = 2.948
Cronbach's alpha = 0.880
Total percent of variance = 73.690
Factors' mean score = 3.81

[a]: Scores were computed based on 7-point Likert scale.

Factor loadings ranged from 0.79 to 0.91, and Cronbach's alpha coefficient was 0.88. Among items for desire, an item which has the highest mean was "I would enjoy casino gambling (4.28)," and an item which has the lowest mean was "I crave casino gambling (3.49)."

Behavioral Intention

Intention to gamble in casinos represented respondents' willingness to gamble in casinos in the near future. As shown Table 5.10, the average of respondents' perception of responsible gambling strategy from four items was 3.85. The factor of behavioral intention included four items with an eigenvalue of 3.08 and explained 77.0% of the variance. Factor loadings ranged from 0.86 to 0.89, and Cronbach's alpha coefficient was 0.90. Among items for behavioral intention, an item which has the highest mean was, "I intend to go casino gambling in the near future (4.13)," and an item which has the lowest mean was, "I will make an effort to casino gambling in the near future (3.42)."

Table 5.10: Factor analysis of casino visitors' behavioral intention

Items	Mean[a]	SD	Factor Loading
I am planning to casino gambling in the near future	3.84	1.58	0.892
I will make an effort to go casino gambling in the near future	3.42	1.43	0.881
I intend to go casino gambling in the near future	4.13	1.51	0.879
I am willing to go casino gambling in the near future	4.01	1.48	0.859
Eigenvalue = 3.080			
Cronbach's alpha = 0.900			
Total percent of variance = 77.006			
Factors' mean score = 3.85			

[a]: Scores were computed based on 7-point Likert scale.

Hypotheses Testing

This section presents the results of SEM depicting casino visitors' decision-making processes. Based on results from preliminary analyses, the theoretical model was analyzed, and hypotheses were tested in this section. For the analysis of SEM, EQS was employed (Bentler & Wu, 1995). Research models were estimated through seven steps: 1) testing the original MGB (hypothesis #1), 2) testing for sufficiency of desire as a mediator in the original MGB (hypothesis #2), 3) comparisons among the TRA, TPB, and original MGB (hypothesis #3), 4) testing the EMGB (hypothesis #4) , and 5) comparison of original MGB and EMGB (hypothesis #5).

In the first step, the measurement model and structural model for the original MGB variables were estimated by performing a Confirmatory Factor Analysis (CFA) based on the two-step approach (Anderson & Gerbing, 1988). And then, the proposed sub hypotheses for the first hypothesis were tested. As second step, the role of desire as a mediator in the original MGB was examined using Chi-square difference test. In the third step, the original MGB was compared with the TRA and TPB to examine if original MGB performed significantly better than the TRA and TPB.

As a fourth step, the SEM for EMGB was developed by adding a new construct, perception of responsible gambling strategy, to the original MGB. And then, the proposed sub hypotheses for hypothesis 5 were tested. In the fifth step, EMGB was compared with the original MGB to examine whether the EMGB was the best model of understanding the decision-making processes of casino visitors with the inclusion of perception of responsible gambling strategy.

For estimating SEM, maximum likelihood estimation is generally used under the assumption of multivariate normality for collected data (Byrne, 2006). In order to confirm whether the data violated the assumption of multivariate normality, Mardia's standardized coefficient was employed in this study. In the result of the measurement model for the original MGB, since Mardia's standardized coefficient (42.44) was greater than the criteria of 5, it was considered that the data of the current study were multivariate non-normally distributed (Byrne, 2006). Therefore, a robust maximum likelihood method was used to estimate SEM in the study.

Robust maximum likelihood method based on Satorra-Bentler (S-B) Chi-square can provide more robust and valid Chi-square value, standard error, and other fit indexes when the data violates the multivariate normality assumption (Byrne, 2006; Bentler & Wu, 1995; Byrne, 1994a; 1994b). As shown in Table 5.11, the proposed measurement and structural models were found to fit the data well with the good-fit to the data for measurement model (NFI = 0.929, NNFI = 0.954, CFI = 0.961, RMSEA = 0.050) and structural model (NFI = 0.920, NNFI = 0.946, CFI = 0.954, RMSEA = 0.053).

Table 5.11: Goodness-of-fit indices for the original MGB

	χ^2	S-B χ^2	df	Normed S-B χ^2	NFI	NNFI	CFI	RMSEA
Measurement Model	782.148	682.633	320	2.133	0.929	0.954	0.961	0.050
Structural Model	904.265	790.560	348	2.272	0.920	0.946	0.954	0.053
Suggested value[*]				≤ 3	≥ 0.9	≥ 0.9	≥ 0.9	≤ 0.08

a. Suggested values were based on Hair et al. (2006) and Bearden, Sharma, & Teel, (1982).

As shown in Table 5.12, all factor loadings were greater than the minimum criteria of 0.5 with significantly associated t-values, supporting the convergent validity of the measurement model for the original MGB (Anderson & Gerbing, 1988). Also, reliability and construct validity for the measurement model were examined in Table 5.13. In terms of reliability, each construct had the sufficient level of reliability because the values of Cronbach's alpha ranged from 0.851 to 0.949, exceeding the suggested minimum criteria of 0.7 (Nunnally, 1978). Convergent and discriminant validity were checked to judge construct validity in the Table 5.13.

All average variance extracted (AVE) and composite reliability values for the multi-item scales were greater than the minimum criteria of 0.5 and 0.7, respectively (Hair et al., 2006). The results indicate the sufficient level of convergent validity of the measurement model. Discriminant validity was estimated by the correlation between constructs. In the measurement model, there are generally three methods to check the discriminant validity of constructs: 1) using AVE (Fornell & Larcker, 1981), 2) confidence interval (Anderson & Gerbing, 1992), and 3) constrained model (Bagozzi & Phillips, 1982; Steenkamp & Trijp, 1991).

In the case of the AVE method, all AVEs of each construct should be greater than the squared correlation to demonstrate satisfactory discriminant validity. The confidence interval method is to assess the discriminant validity between two constructs by calculating a confidence interval, plus or minus two standard errors around the correlation between the constructs and determining whether this interval includes 1.0. If it does not contain a value of 1.0, discriminant validity is affirmed.

Table 5.12: Results of confirmatory factor analysis for measurement model of the original MGB

Factors	Factor loading	t-value
Factor 1: Attitude (AT)		
I think casino gambling is my favorite activity	0.719	18.066
I think casino gambling is an exciting activity	0.884	24.766
I think casino gambling is an attractive activity	0.883	25.522
I think casino gambling is an enjoyable activity	0.844	20.434
Factor 2: Subjective norm (SN)		
Most people who are important to me think it is okay for me to gamble in casinos	0.910	23.460
Most people who are important to me support that I gamble in casinos	0.934	23.599
Most people who are important to me understand that I gamble in casinos	0.837	22.522
Most people who are important to me agree with me about casino gambling	0.854	21.736
Factor 3: Perceived behavioral control (PBC)		
I am confident that if I want, I can gamble in casinos	0.732	13.918
I am capable of casino gambling	0.774	18.552
I have enough resources (money) to gamble in casinos	0.696	14.909
I have enough time to gamble in casinos	0.731	16.125
Factor 4: Positive anticipated emotion (PAE)		
If I succeed at casino gambling I will be excited	0.835	22.456
If I succeed at casino gambling I will be glad	0.888	24.399
If I succeed at casino gambling I will be satisfied	0.932	27.110
If I succeed at casino gambling I will be happy	0.880	23.910
Factor 5: Negative anticipated emotion (NAE)		
If I fail at casino gambling I will be angry	0.914	25.683
If I fail at casino gambling I will be disappointed	0.958	31.731
If I fail at casino gambling I will be worried	0.866	23.173
If I fail at casino gambling I will be sad	0.825	20.309
Factor 6: Desire (DE)		
I would enjoy casino gambling	0.752	17.637
I wish to gamble in casinos	0.880	22.957
I crave casino gambling	0.804	22.245
I have an urge to gamble in casinos	0.701	18.046
Factor 7: Behavioral intention (BI)		
I am planning to go casino gambling in the near future	0.797	22.458
I will make an effort to go casino gambling in the near future	0.789	19.257
I intend to go casino gambling in the near future	0.779	18.063
I am willing to go casino gambling in the near future	0.842	21.649

a: All standardized factor loadings are significant at p<0.001.

Lastly, the constrained model method is to perform a Chi-square difference test between the constrained model (i.e., where the correlation between constructs is fixed to 1) and unconstrained model (i.e., the correlation between two constructs is free). If the two models are different significantly using the Chi-square difference test, this confirms the discriminant validity of the constructs. As shown in the Table 5.13, although the first method using AVE did not confirm discriminant validity since the highest squared correlation between desire and behavioral intention (0.610) exceeded the AVE of PBC (0.538) (Fornell & Larcker, 1981), the other two methods using confidence interval and constrained model showed satisfactory discriminant validity levels.

Table 5.13: Results of measurement model of the original MGB

Constructs	AT	SN	PBC	PAE	NAE	DE	BI
Attitude (AT)	1.000						
Subjective norm (SN)	0.256 (0.066)	1.000					
Perceived Behavioral Control (PBC)	0.432 (0.187)	0.155 (0.024)	1.000				
Positive Anticipated Emotion (PAE)	0.711 (0.506)	0.327 (0.107)	0.457 (0.209)	1.000			
Negative Anticipated Emotion (NAE)	0.327 (0.107)	0.193 (0.037)	0.198 (0.039)	0.498 (0.248)	1.000		
Desire (DE)	0.578 (0.334)	0.219 (0.048)	0.359 (0.129)	0.661 (0.437)	0.528 (0.279)	1.000	
Behavioral Intention (BI)	0.611 (0.373)	0.244 (0.060)	0.521 (0.271)	0.647 (0.419)	0.458 (0.210)	0.781[c] (0.610)	1.000
Cronbach's Alpha	0.897	0.944	0.851	0.941	0.949	0.880	0.900
CR	0.902	0.935	0.823	0.935	0.940	0.866	0.878
AVE	0.697	0.782	0.538	0.782	0.796	0.619	0.643

a. The numbers in the parenthesis indicate squared correlation among latent constructs
b. Correlation coefficients are estimates from EQS.
c. Highest correlations between pairs of constructs
d. CR = Composite Reliability; AVE = Average Variance Extracted
e: frequency of past behavior was not included in the measurement model because it was a single indicator

Specifically, discriminant validity based on the confidence interval method was confirmed since the confidence interval of correlation between desire and behavioral intention (0.933, 0.629), plus or minus two standard errors of correlation between the constructs, did not include the criteria of 1.0 (Anderson & Gerbing, 1992). Discriminant validity using constrained model was also confirmed because Satorra-Bentler Chi-square difference test statistic for relationship between desire and behavioral intention (20.53) exceeded the criteria of 3.84 ($p < 0.001$) (Bagozzi & Phillips, 1982; Steenkamp & Trijp, 1991).

Test of Sub Hypotheses for Hypothesis #1

Table 5.14 and Figure 5.1 represent the results of the original MGB. Four predictor variables (positive anticipated emotion ($\beta_{PAE \to DE} = 0.364$, t = 4.979, $p < 0.01$), negative anticipated emotion ($\beta_{NAE \to DE} = 0.280$, t = 5.628, $p < 0.01$), attitude ($\beta_{AT \to DE} = 0.262$, t = 3.613, $p < 0.01$), and the frequency of past behavior ($\beta_{FPB \to DE} = 0.144$, t = 3.662, $p < 0.01$) were positively associated with desire to casino gambling, supporting $H1_a$, $H1_e$, $H1_f$, and $H1_{1h}$. However, subjective norm ($\beta_{SN \to DE} = 0.037$, t = 0.954, not significant) and perceived behavioral control ($\beta_{PBC \to DE} = 0.001$, t = 0.015, not significant) were not statistically significant to predict desire to casino gamble, rejecting $H1_b$ and $H1_c$. Other hypotheses related to behavioral intention were also tested. As expected, the relationships between perceived behavioral control, desire, and behavioral intention were found positive and significant ($\beta_{DE \to BI} = 0.747$, t = 11.784, $p < 0.01$; $\beta_{PBC \to BI} = 0.250$, t = 4.371, $p < 0.01$), supporting $H1_i$, and $H1_d$.

Table 5.14: Standardized parameter estimates of the original MGB

	Hypotheses	Coefficients	t-values	Test of Hypotheses
$H1_a$	AT → DE	0.262^{**}	4.079	Accepted
$H1_b$	SN → DE	0.037	0.954	Rejected
$H1_c$	PBC → DE	0.001	0.015	Rejected
$H1_d$	PBC → BI	0.250^{**}	4.371	Accepted
$H1_e$	PAE → DE	0.364^{**}	4.979	Accepted
$H1_f$	NAE → DE	0.280^{**}	5.628	Accepted
$H1_g$	FOP → DE	0.144^{**}	3.662	Accepted
$H1_h$	FOP → BI	0.039	1.031	Rejected
$H1_i$	DE → BI	0.747^{**}	11.784	Accepted
R^2	DE: 0.604		BI: 0.760	
Fit Indexes	S-B $\chi^2 = 790.560$, $df = 348$, $p < 0.001$, Normed S-B $\chi^2 = 2.272$ NFI = 0.920, NNFI = 0.946, CFI = 0.954, RMSEA = 0.053			

$*p < .05, **p < .01$
Note. AT = Attitude; SN = Subjective Norm; PBC = Perceived Behavioral Control;
PAE = Positive Anticipated Emotion; NAE = Negative Anticipated Emotion;
FOP = Frequency of Past behavior; DE = Desire; BI = Behavioral Intention
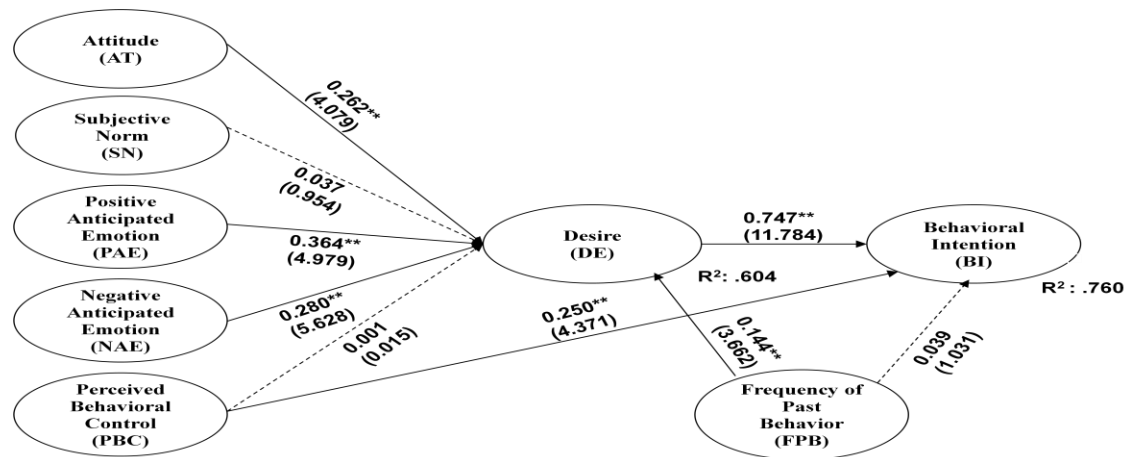
S-B $\chi^2 = 790.560$, $df = 348$, $p < 0.001$, $\chi^2/df = 2.272$,
NFI = 0.920, NNFI = 0.946, CFI = 0.954, RMSEA = 0.053
$*p < 0.05, **p < 0.01$

Note: a. Covariance relationships between exogenous variables are not shown for clarity.
b. The numbers in the parenthesis indicate t-value.

Figure 5.1: Results of the original MGB

However, the frequency of past behavior was not statistically significant to predict behavioral intention for casino gambling ($\beta_{FOP \rightarrow DE}$ = 0.039, t = 1.031, not significant), rejecting H1$_h$. Therefore, results from this SEM procedure for the original MGB accept the first research hypothesis that the original MGB can be applied to predict behavioral intention of casino visitors because the six constructs of the original MGB (i.e., desire, attitude, perceived behavioral control, positive anticipated emotions, negative anticipated emotion, and the frequency of past behavior) significantly predict behavioral intention of casino visitors directly or indirectly.

Testing Desire as a Mediator in the Original MGB (Hypothesis #2)

In order to test hypothesis 2, to check the presence of mediating effect of antecedents of MGB (attitude, subjective norm, perceived behavioral control, positive anticipated emotion, and negative anticipated emotion) which influences behavioral intention through desire, Sobel's product of coefficients approach was employed. Table 5.15 summarizes the results of Sobel's product of coefficients approach testing the presence of the mediating effect of antecedents of MGB. In Table 5.15, it was found that there are significant mediating effects for antecedents of MGB because all Z-values of Sobel for antecedents of MGB are greater than the minimum criteria of 1.96.

After Sobel's product of coefficients approach, Chi-square difference tests are respectively performed for original models without adding paths and modified models adding paths from attitude, subjective norm, positive anticipated emotion, and negative anticipated emotion to behavioral intention. Table 5.16 summarizes testing the

104

sufficiency of desires as a mediator for the antecedents of original MGB based on Chi-square and Satorra-Bentler Chi-square difference test.

Table 5.15: Results of Sobel's product of coefficients approach

AT		Coefficient	S.E	SN		Coefficient	S.E
Model1	AT→DE	0.668	0.063	Model1	SN→DE	0.238	0.054
Model2	AT→DE	0.354	0.055	Model2	SN→DE	0.128	0.047
	DE→BI	0.767	0.075		DE→BI	0.901	0.079
Mediating effect		0.512		Mediating effect		0.214	
S.E of medication effect		0.070		S.E of medication effect		0.052	
Z-value of Sobel		7.361		Z-value of Sobel		4.111	
PBC		Coefficient	S.E	PAE		Coefficient	S.E
Model1	PBC→DE	0.497	0.058	Model1	PAE→DE	0.725	0.061
Model2	PBC→DE	0.243	0.056	Model2	PAE→DE	0.397	0.057
	DE→BI	0.789	0.074		DE→BI	0.726	0.072
Mediating effect		0.392		Mediating effect		0.526	
S.E of medication effect		0.059		S.E of medication effect		0.068	
Z-value of Sobel		6.679		Z-value of Sobel		7.689	
NAE		Coefficient	S.E				
Model1	NAE→DE	0.497	0.058				
Model2	NAE→DE	0.243	0.056				
	DE→BI	0.789	0.074				
Mediating effect		0.392					
S.E of medication effect		0.059					
Z-value of Sobel		6.679					

In Table 5.16, although the direct path from attitude to behavioral intention was significant from the result of Chi-square difference test, all additional paths from attitude,

subjective norm, positive anticipated emotion, and negative anticipated emotion to behavioral intention were non-significant separate from the results of the Satorra-Bentler Chi-square difference test.

Therefore, these findings show that desire fully mediates the influence of attitude, subjective norm, positive anticipated emotion, and negative anticipated emotion on behavioral intention based on the Satorra-Bentler Chi-square difference test. In other words, these results indicate that added paths from attitude, subjective norm, positive anticipated emotion, and negative anticipated emotion to behavioral intention are not necessary to consider.

Table 5.16: Tests for sufficiency of desire

	χ^2	S-B χ^2	df	$\Delta\chi^2$	ΔS-B χ^2
MGB	904.265	790.560	348		
MGB + AT to BI	900.013	788.535	347	4.252*	2.131
MGB + SN to BI	900.786	787.264	347	3.479	3.426
MGB + PAE to BI	901.313	790.474	347	2.952	1.232
MGB + NAE to BI	904.242	791.352	347	0.023	0.015

*p < 0.05
Note. AT = Attitude; SN = Subjective Norm; PAE = Positive Anticipated Emotion;
NAE = Negative Anticipated Emotion; BI = Behavioral Intention

Therefore, results from the Chi-square difference tests accept the second research hypothesis that the influence of attitude, subjective norm, perceived behavioral control, positive anticipated emotion, and negative anticipated emotion on behavioral intention are mediated by desire.

Comparison of Three Models (Hypothesis #3)

For third hypothesis, the three competing models, the TRA, TPB, and original MGB, are compared for explanatory power (Table 5.17). First, the TPB model had better explanatory power than the TRA. Specifically, the antecedents of behavioral intention in the TPB explained approximately 46.4% of the total variance in behavioral intention to gamble in casinos while attitude and subjective norm jointly explained about 38.4% of the total variance in the TRA. Second, the TPB was slightly better in fit statistics, but the model lacked the explanatory power of behavioral intention as compared to the original MGB. That is, the original MGB improved R^2 from 0.464 to 0.760.

Table 5.17: Modeling comparisons

	S-B χ^2	df	Normed S-B χ^2	NFI	NNFI	CFI	RMSEA	R^2 for BI
TRA	122.039	47	2.597	0.968	0.972	0.980	0.059	0.384
TPB	228.953	93	2.462	0.952	0.963	0.971	0.057	0.464
MGB	790.560	348	2.272	0.920	0.946	0.954	0.053	0.760
Suggested Value*			≤ 3	≥ 0.9	≥ 0.9	≥ 0.9	≤ 0.08	

* Suggested values were based on Hair et al. (1998) and Bearden et al. (1982).

The results show that the original MGB, which added desire, two anticipated emotions, and past behavior as a new construct to the TPB performs significantly better than the TRA and TPB. Therefore, the third research hypothesis is supported based on comparisons using R^2. Enhancing our understanding of the decision-making processes of behavioral intention, these results propose several suggestions. The TRA and TPB are inadequate for explaining behavioral intention to gamble in casinos, and the processes

behind the effect of the predictors are more intricate than assumed in the TRA and TPB (Perugini & Bagozzi, 2001).

Testing the EMGB (Hypothesis #4)

Because a new construct, perception of responsible gambling strategy, was added to the original MGB in the EMGB, measurement model and structural model of EMGB were re-estimated by incorporating the perception of responsible gambling strategy within the model. As shown in Table 5.18, the robust maximum likelihood method was used because Mardia's standardized coefficient of 42.84 indicated the deviation of data significantly from multivariate normality in the measurement model of the EMGB.

Prior to structural model measurement model was firstly analyzed. As shown in Table 5.18, although Chi-square was significant (S-B χ^2 = 821.80 df = 424, p < 0.001), all the other indices indicated the good-fit to the data in the measurement model of EMGB (NFI = 0.924, NNFI = 0.954, CFI = 0.961, RMSEA = 0.046).

As depicted in Table 5.18, because Cronbach's alpha for each construct exceeded the suggested criteria of 0.7 (Nunnally, 1978), it was shown that multiple measures in the Extended MGB were highly reliable for measuring each construct. In order to assess construct validity, convergent and discriminant validity were also examined. As shown in Table 5.19, all factor loadings were greater than the minimum criteria of 0.5 with significant t-values. In addition, AVE and composite reliability values for the multi-item scales were greater than the minimum criteria of 0.5 and 0.7, respectively in Table 5.18 (Hair et al., 2006).

Table 5.18: Results of measurement model and structural model of the EMGB

Constructs	AT	SN	PBC	PAE	NAE	PRGS	DE	BI
Attitude (AT)	1.000							
Subjective norm (SN)	0.256 (0.066)	1.000						
Perceived Behavioral Control (PBC)	0.432 (0.187)	0.150 (0.023)	1.000					
Positive Anticipated Emotion (PAE)	0.711 (0.506)	0.327 (0.107)	0.456 (0.208)	1.000				
Negative Anticipated Emotion (NAE)	0.327 (0.107)	0.193 (0.037)	0.198 (0.039)	0.498 (0.248)	1.000			
Perception of Responsible Gambling Strategy (PRGS)	0.255 (0.065)	-0.103 (0.011)	0.319 (0.102)	0.186 (0.035)	0.188 (0.035)	1.000		
Desire (DE)	0.599 (0.359)	0.212 (0.045)	0.371 (0.138)	0.677 (0.458)	0.557 (0.310)	0.338 (0.086)	1.000	
Behavioral Intention (BI)	0.614 (0.377)	0.247 (0.061)	0.525 (0.276)	0.657 (0.432)	0.477 (0.228)	0.420 (0.138)	0.816[d] (0.666)	1.000
Cronbach's Alpha	0.897	0.944	0.851	0.941	0.949	0.873	0.880	0.900
CR	0.902	0.935	0.822	0.935	0.940	0.866	0.854	0.871
AVE	0.698	0.782	0.536	0.782	0.796	0.621	0.594	0.628

	χ^2	S-B χ^2	df	Normed S-B χ^2	NFI	NNFI	CFI	RMSEA
Measurement model	938.807	824.798	424	1.945	0.924	0.954	0.961	0.046
Structural model	1138.054	1002.159	458	2.272	0.909	0.940	0.948	0.051
Suggested value[*]				≤ 3	≥ 0.9	≥ 0.9	≥ 0.9	≤ 0.08

Note. a. The numbers in the parenthesis indicate squared correlation among latent constructs

b. All correlations except SN vs. PRGS are significant at p<0.01

c. Correlation coefficients are estimates from EQS.

d. Highest correlations between pairs of constructs

e. CR = composite reliability, AVE = average variance extracted

f. NFI = Normed Fit Index, NNFI = Non-Normed Fit Index; CFI = Comparative Fit Index; and RMSEA = Root Mean Square Error of Approximation.

g. Suggested values were based on Hair, Black, Babin, Anderson, & Tatham (2006) and Bearden, Sharma, & Teel, (1982)

Table 5.19: Results of confirmatory factor analysis for measurement model of the EMGB

Factors	Factor loading	t-value
Factor 1: Attitude (AT)		
I think casino gambling is my favorite activity	0.720	18.066
I think casino gambling is an exciting activity	0.885	24.832
I think casino gambling is an attractive activity	0.882	25.443
I think casino gambling is an enjoyable activity	0.843	20.397
Factor 2: Subjective norm (SN)		
Most people who are important to me think it is okay for me to gamble in casinos	0.911	23.485
Most people who are important to me support that I gamble in casinos	0.933	23.631
Most people who are important to me understand that I gamble in casinos	0.836	22.563
Most people who are important to me agree with me about casino gambling	0.854	21.776
Factor 3: Perceived behavioral control (PBC)		
I am confident that if I want, I can gamble in casinos	0.736	14.200
I am capable of casino gambling	0.766	18.243
I have enough resources (money) to gamble in casinos	0.688	14.716
I have enough time to gamble in casinos	0.735	16.378
Factor 4: Positive anticipated emotion (PAE)		
If I succeed at casino gambling I will be excited	0.836	22.502
If I succeed at casino gambling I will be glad	0.888	24.433
If I succeed at casino gambling I will be satisfied	0.932	27.194
If I succeed at casino gambling I will be happy	0.880	23.891
Factor 5: Negative anticipated emotion (NAE)		
If I fail at casino gambling I will be angry	0.914	25.673
If I fail at casino gambling I will be disappointed	0.958	31.687
If I fail at casino gambling I will be worried	0.867	23.221
If I fail at casino gambling I will be sad	0.825	20.343
Factor 6: Perception of responsible gambling strategy (PRGS)		
Kangwon Land has provided counseling services at the Problem Gambling and Prevention Center	0.693	15.633
Kangwon Land has allowed local residents access to the casino only once a month	0.728	16.887
Kangwon Land has allowed casino visitors access to the casino no more than 15 times a month	0.878	22.480
Kangwon Land is closed for a few hours a day	0.838	21.009
Factor 7: Desire (DE)		
I would enjoy casino gambling	0.750	17.562
I wish to gamble in casinos	0.840	20.705
I crave casino gambling	0.776	20.360
I have an urge to gamble in casinos	0.712	18.545
Factor 8: Behavioral intention (BI)		
I am planning to go casino gambling in the near future	0.791	22.213
I will make an effort to go casino gambling in the near future	0.794	19.815
I intend to go casino gambling in the near future	0.749	17.148
I am willing to go casino gambling in the near future	0.835	21.677

a: All standardized factor loadings are significant at p<0.001.
b: frequency of past behavior was not included in the measurement model because it was a single indicator

These results support enough level of convergent validity of the measurement model for EMGB. With regard to discriminant validity for measurement model for EMGB, as shown in Table 5.18, although the first method using AVE was not confirmed for discriminant validity since the highest squared correlation between desire and behavioral intention (0.666) exceeded some AVEs (PBC = 0.536, PRGS = 0.621, DE = 0.594, BI = 0.628) (Fornell & Larcker, 1981), the other two methods using confidence interval and constrained model showed satisfactory discriminant validity levels.

Specifically, discriminant validity based on confidence interval method was confirmed since the confidence interval of correlation between desire and behavioral intention (0.980, 0.652) did not include the criteria of 1.0 (Anderson & Gerbing, 1992). Discriminant validity using the constrained model was also confirmed because the Satorra-Bentler Chi-square difference test statistic for relationship between desire and behavioral intention exceeded the criteria of 3.84 (p < 0.001) (Bagozzi & Phillips, 1982; Steenkamp & Trijp, 1991).

Test of Sub Hypotheses for Hypothesis #4

The EMGB was developed by adding the perception of responsible gambling strategy to the original MGB. Table 5.20 and Figure 5.2 represent the results of the EMGB. Five predictor variables (positive anticipated emotion ($\beta_{PAE \rightarrow DE}$ = 0.375, t = 5.140, p < 0.01), negative anticipated emotion ($\beta_{NAE \rightarrow DE}$ = 0.267, t = 5.333, p < 0.01), attitude ($\beta_{AT \rightarrow DE}$ = 0.232, t = 3.613, p < 0.01), perception of responsible gambling strategy ($\beta_{PRGS \rightarrow DE}$ = 0.136, t = 2.999, p < 0.01), and the frequency of past behavior

($\beta_{FPB \to DE} = 0.099$, t = 2.514, $p < 0.05$) were positively associated with desire to casino gamble, supporting $H4_a$, $H4_e$, $H4_f$, $H4_h$, and $H4_j$. However, subjective norm ($\beta_{SN \to DE} = 0.051$, t = 1.302, not significant) and perceived behavioral control ($\beta_{PBC \to DE} = -0.023$, t = -0.380, not significant) were not statistically significant to predict desire to casino gamble, rejecting $H4_b$ and $H4_c$. Other hypotheses related to behavioral intention were also tested.

Table 5.20: Standardized parameter estimates of the EMGB

	Hypotheses	Coefficients	t-values	Test of Hypotheses
$H4_a$	AT → DE	0.232**	3.613	Accepted
$H4_b$	SN → DE	0.051	1.302	Rejected
$H4_c$	PBC → DE	-0.023	1.279	Rejected
$H4_d$	PBC → BI	0.232**	5.086	Accepted
$H4_e$	PAE → DE	0.375**	5.140	Accepted
$H4_f$	NAE → DE	0.267**	5.333	Accepted
$H4_g$	FOP → DE	0.099*	2.514	Accepted
$H4_h$	FOP → BI	0.004	0.115	Rejected
$H4_i$	DE → BI	0.725**	11.485	Accepted
$H4_j$	PRGS → DE	0.136**	2.999	Accepted
$H4_k$	PRGS → BI	0.097*	2.132	Accepted
R^2	DE: 0.616		BI: 0.767	
Fit Indexes	S-B χ^2 = 1002.649, df = 458, $p < 0.001$, Normed S-B χ^2 = 2.189 NFI = 0.909, NNFI = 0.940, CFI = 0.948, RMSEA = 0.051			

*$p < .05$, **$p < .01$
Note. AT = Attitude; SN = Subjective Norm; PBC = Perceived Behavioral Control;
    PAE = Positive Anticipated Emotion; NAE = Negative Anticipated Emotion;
    FOP = Frequency of Past behavior; DE = Desire; BI = Behavioral Intention;
    PRGS = Perception of Responsible Gambling Strategy

As expected, the relationships between behavioral intention, desire, perceived behavioral control, and the perception of responsible gambling strategy were found positive and significant ($\beta_{DE \to BI} = 0.725$, t = 11.485, $p < 0.01$; $\beta_{PBC \to BI} = 0.232$, t = 4.131,

$p < 0.01$; $\beta_{PRGS \rightarrow BI} = 0.097$, t = 2.132, $p < 0.05$), supporting H4$_i$, H4$_d$, and H4$_k$. However, the frequency of past behavior was not statistically significant to predict behavioral intention for casino gambling ($\beta_{FOP \rightarrow DE} = 0.004$, t = 2.115, not significant), rejecting H4$_h$. Overall, five predictor constructs (positive anticipated emotion, negative anticipated emotion, attitude, perception of responsible gambling strategy, and the frequency of past behavior) play an essential role in explaining the formation of casino visitors' desire to casino gamble, and three predictor constructs (desire, perceived behavioral control, and perception of responsible gambling strategy) perform important roles in predicting visitors' behavioral intention to gamble in casinos.
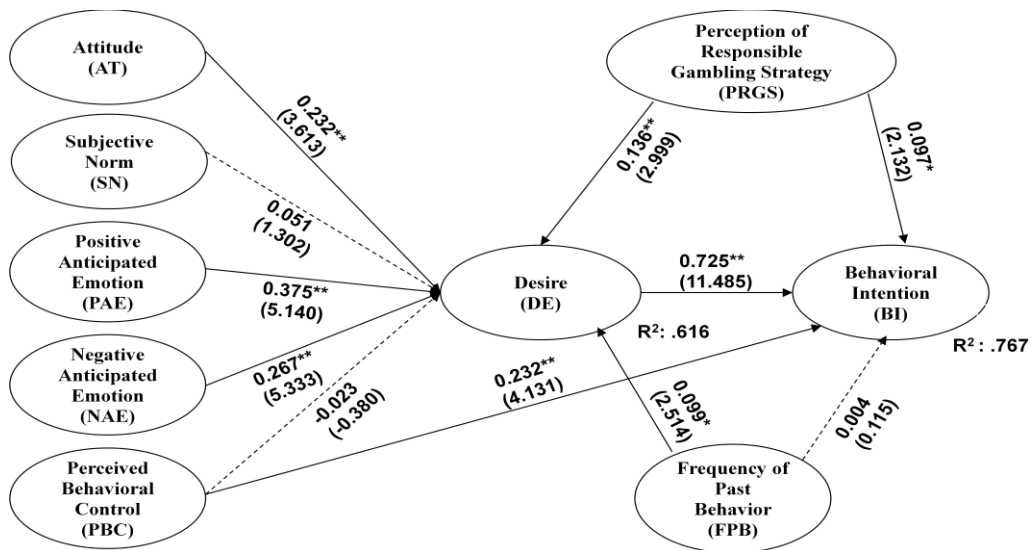
S-B $\chi^2 = 1002.649$, $df = 458$, $p < 0.001$, $\chi^2/df = 2.189$,
NFI = 0.909, NNFI = 0.940, CFI = 0.948, RMSEA = 0.051
*$p < 0.05$, **$p < 0.01$

Note: a. Covariance relationships between exogenous variables are not shown for clarity.
b. The numbers in the parenthesis indicate t-value.

Figure 5.2: Results of the EMGB

It is interesting to note that the perception of responsible gambling strategy is also a significant (direct) predictor of both desire and behavioral intention. This finding indicates that the responsible gambling strategy is closely related to the casino visitors' gambling behavior. Therefore, the results of this SEM procedure for the EMGB accept the fourth research hypothesis in that the EMGB can be applied to predict behavioral intention of casino visitors because the seven constructs of the EMGB significantly predict behavioral intention of casino visitors directly or indirectly.

Comparison of the Original MGB and the EMGB (Hypothesis #5)

For the fifth hypothesis, the structural model of the EMGB is compared with the original MGB by including added perception of responsible gambling strategy. Results of the structural model comparison are presented in Table 5.21. Although two models showed a satisfactory level of fit index, the original MGB model was slightly better than the EMGB (original MGB: NFI = 0.920, NNFI = 0.946, CFI = 0.954, and RMSEA = 0.053 vs. EMGB: NFI = 0.909, NNFI = 0.940, CFI = 0.948, and RMSEA = 0.051).

Table 5.21: Modeling comparisons

	S-B χ^2	df	Normed S-B χ^2	NFI	NNFI	CFI	RMSEA	R^2 for DE	R^2 for BI
MGB	790.560	348	2.272	0.920	0.946	0.954	0.053	0.604	0.760
EMGB	1002.649	458	2.189	0.909	0.940	0.948	0.051	0.616	0.767
Suggested Value[*]			≤ 3	≥ 0.9	≥ 0.9	≥ 0.9	≤ 0.08		

* Suggested values were based on Hair et al. (1998) and Bearden et al. (1982).

However, the EMGB had slightly better explanatory power than the original MGB. In particular, while the original MGB explained about 76.0% of the variance in intention to gamble in casinos, the EMGB explained approximately 76.7% of the total variance in intention. In addition, the EMGB explained the variance in desire to gamble in casinos more than original MGB with improved R^2 from 0.604 to 0.616.

Therefore, the fifth research hypothesis is supported based on comparisons using R^2. The findings imply that the inclusion of perception of the responsible gambling strategy plays a critical role in predicting intention for gambling in a casino context. Overall, the results of the modeling comparison clearly show that the EMGB involving perception of responsible gambling strategy performs significantly better than the original MGB.

CHAPTER VI

CONCLUSION

According to Perugini & Bagozzi (2001), the central factor in the MGB is the individual's desire and intention to perform a given behavior. The theory suggests six determinants of desire: attitude, subjective norm, perceived behavioral control, positive anticipated emotion, negative anticipated emotion, and frequency of past behavior. The theory also has three determinants of behavioral intention: desire, perceived behavioral control, and frequency of past behavior. In order to understand the gambling behavior of casino visitors, the MGB was tested for casino visitors in the current study.

Specifically, the purpose of this study was to examine the gambling behavior of casino visitors using the EMGB developed by including a new construct, perception of responsible gambling strategy, to the original MGB. The perception of responsible gambling strategy is likely to affect the casino industry positively because responsible gambling strategy is able to minimize social problems associated with excessive gambling behaviors. However, little research has examined how it influences casino visitors' decision-making processes. Therefore, this study aimed to examine the effect of the perception of responsible gambling strategy on the casino visitors' decision-making processes by developing the EMGB. The model used in this study examined the role of attitudes, subjective norms, perceived behavioral control, positive anticipated emotion, negative anticipated emotion, past behavior, desire, and perception of responsible gambling strategy in predicting casino visitors' intentions to gamble in casinos. This

study also compared the EMGB with the original MGB, TRA, and TPB to investigate which model can best predict behavioral intention of casino visitors. This study shed light on understanding the decision-making processes of casino gamblers by including the new concept of perception of responsible gambling strategy in the EMGB.

The study provided a better understanding of the nature of gambling behavior with a sample of casino visitors of Kangwon Land Casino in Gangwon province in South Korea using a self-administered questionnaire from an on-site survey. The questionnaire included demographic and casino behavioral questions of casino visitors and EMGB constructs (i.e., attitude, subjective norm, perceived behavioral control, positive anticipated emotion, negative anticipated emotion, desire, behavioral intention, and perception of responsible gambling strategy). In the EMGB, the perception of responsible gambling strategy was hypothesized to affect desire and behavioral intention to gamble in casinos.

<u>Summary</u>

Research Questions and Hypotheses Testing

The overarching research question of this study was, "What is the psychological decision-making process of people who want to gamble in casinos within the perspective of responsible gambling?" In order to examine the overarching research question, this study had five specific research questions presented below:

1. Can the original MGB be applied to predict behavioral intention of casino visitors?

2. What is the role of desire in the MGB for the decision-making processes?

3. Does the original MGB which added desire, two anticipated emotions, and past behavior as new constructs to the TPB perform significantly better than the TRA and the TPB?

4. Can the EMGB, developed by adding a new construct—perception of a responsible gambling strategy—to the original MGB, be applied to predict behavioral intention of casino visitors?

5. Is the EMGB the best model to explain casino visitors' gambling behavior within the perspective of responsible gambling?

Research Question 1

Based on research question 1, hypothesis #1 stated that the original MGB can be applied to predict behavioral intention of casino visitors. In order to test hypothesis #1, SEM using a two-step approach was employed. The measurement model and structural model for the original MGB were found to fit the data well with the good-fit to the data. Through sub hypotheses testing for hypothesis #1, it was shown that positive anticipated emotion, negative anticipated emotion, attitude, and the frequency of past behavior were positively associated with desire to casino gamble, although subjective norm and perceived behavioral control were not statistically significant to predict desire to casino gambling. In addition, the significant relationships between perceived behavioral control, desire, and behavioral intention were found positive and significant. However, the frequency of past behavior was not statistically significant to predict behavioral intention

for casino gambling. Therefore, based on good overall model fit and sub hypotheses testing, hypothesis #1 was confirmed that the original MGB can be applied to predict behavioral intention of casino visitors.

Research Question 2

Corresponding to research question 2, hypothesis #2 stated that desire mediates the influence of attitude, subjective norm, positive anticipated emotion, and negative anticipated emotion for behavioral intention. In order to test hypothesis #2, the Chi-square difference test and Satorra-Bentler Chi-square difference test were employed. Specifically, the Chi-square difference test and Satorra-Bentler Chi-square difference test were respectively performed for modified models adding paths from attitude, subjective norm, positive anticipated emotion, and negative anticipated emotion to behavioral intention and original models without adding the paths. From the results of the Satorra-Bentler Chi-square difference tests, all additional paths from attitude, subjective norm, positive anticipated emotion, and negative anticipated emotion to behavioral intention were non-significant individually. Therefore, hypothesis #2 was confirmed that desire mediated the influence of attitude, subjective norm, positive anticipated emotion, and negative anticipated emotion for behavioral intention.

Research Question 3

Based on research question 3, Hypothesis #3 stated that the MGB was significantly better than the TPB, although the TPB was better than TRA. R^2 was

119

employed to compare three competing models. Based on the value of R^2, it was found that the MGB was better than the TPB, although the TPB was better than the TRA because the MGB had the highest R^2 followed by the TPB and the TRA. These findings were consistent with previous research in various areas (Ajzen & Madden, 1986; Bagozzi & Kimmel, 1995; Lam & Hsu, 2004, 2006; Sparks, 2007) that the TPB is better than the TRA in that perceived behavioral control in the TPB played a significant role in predicting behavioral intention. The results were also consistent with previous studies of MGB (e.g., Bagozzi & Dholakia, 2006; Carrus et al., 2008; Taylor, 2007) that three additional factors (desire, anticipated emotions, and past behavior) largely enhanced the predictive power of a specific human behavior.

Research Question 4

Corresponding to research question 4, hypothesis #4 suggested that EMGB can be applied to predict behavioral intention of casino visitors. In order to test hypothesis #4 SEM was also employed. The measurement model and structural model for EMGB were found to fit the data well with the good-fit to the data. Through sub hypotheses testing for hypothesis #4, it was found that eight sub hypotheses were supported, but three sub hypotheses were rejected.

Specifically, five predictor constructs (positive anticipated emotion, negative anticipated emotion, attitude, perception of responsible gambling strategy, and the frequency of past behavior) played an essential role in explaining the formation of casino visitors' desire to casino gamble. In addition, three predictor constructs (desire, perceived

behavioral control, and perception of responsible gambling strategy) performed an important role of predicting visitors' behavioral intention to gamble in casinos.

Perception of responsible gambling had a positive effect on both desire and behavioral intention and increased the explained variance of the EMGB. This finding supports the important predictor of the perception of responsible gambling strategy. Therefore, based on good overall model fit and sub hypotheses testing, hypothesis #4 was confirmed that EMGB can be applied to predict behavioral intention of casino visitors.

Research Question 5

Based on research question 5, Hypothesis #5 stated that the EMGB performs significantly better than the original MGB. In order to test hypothesis #5, corresponding to research questions 5, R^2 was employed. Based on the value of R^2, it was found that EMGB was significantly better than the original MGB because the EMGB had a higher R^2 than the original MGB.

These results indicated that the inclusion of perception of responsible gambling strategy to the original MGB was largely supported with increasing the predictive power of visitors' intention to gamble in casinos. In other words, the EMGB accounted for significantly more variance in intention to gamble in casinos than the original MGB, implying an improvement in explaining casino visitors' intention.

This finding suggests that the EMGB contributed to modest but significant improvement in explaining behavioral intention to gamble in casinos, with increased R^2

and two significant relationships from the perception of responsible gambling strategy to desire and behavioral intention, over the TRA, TPB, and original MGB.

Discussion

The constructs of the EMGB were effective in predicting visitors' intentions to gamble in casinos. The ability of the MGB to predict intention was improved when expanded to include perception of responsible gambling strategy. Among antecedent variables of the EMGB, desire as a sufficient impetus for intention formation was the most important latent variable. In the model, the important determinants of desire were emotional factors, specifically positive anticipated emotion, while other determinants were less important to predict the desire. The importance of emotional factors to casino visitors might explain that they are more likely to gamble in casinos due to emotional factors rather than other cognitive factors. This might be attributable to the fact that gambling behaviors are likely to be motivated by the high expectation to win money, which is related to emotional decision-making, but not rational decision-making (Lee et al., 2006; Neighbors et al., 2002; Platz & Millar, 2001). This finding would not be discovered when employing the TPB.

An interesting result was that there was no specific cause and effect relationship between subjective norm, perceived behavioral control, and desire in this study, but attitude was a significant predictor for desire among original variables of the TPB. Although Lam and Hsu (2004) stated that Asians tend to rate self-monitoring highly and struggle with undertaking a specific behavior because of other people's attention and

122

opinions for that behavior, the results of this study were inconsistent with their study (Han et al., 2010; Lam & Hsu, 2004; Sparks & Pan, 2009). In addition, the insignificant relationship between perceived behavioral control and desire indicates that people usually do not consider their resources or opportunities to gamble in casinos at the stage of forming a desire while they consider those things at the stage of forming an intention.

Implications

Results of this study indicate that, consistent with past studies, the decision to gamble in casinos is a conscious, emotional, and deliberate decision measurable by the constructs of the MGB. Results also indicate that the theory could be expanded to include the influence of casino visitors' perception of responsible gambling strategy. The current study using the original MGB and EMGB as new theoretical frameworks tells us a great deal about both theoretical and practical implications.

First, it was found that positive anticipated emotion, negative anticipated emotion, attitude, and the frequency of past behavior were important factors when determining desire in the original MGB, and desire and perceived behavioral control were found to be significant factors affecting behavioral intention. Consistent with previous studies of MGB (e.g., Bagozzi & Dholakia, 2006; Carrus et al., 2008; Taylor, 2007), the results of the current study demonstrated that three additional factors (desire, anticipated emotions, and past behavior) largely enhanced the predictive power of a specific human behavior in the context of casino gambling. It is not a problem that all antecedent variables in the original MGB cannot make a considerable contribution to behavioral intention to gamble

123

in casinos. This is because the relative importance of individual antecedent variables in the model can differ based on given contexts (Sparks & Pan, 2009). For example, although Lam and Hsu (2004, 2006) used the TPB to understand the decision-making processes of international travel, attitude was a significant determinant for travel intention only in the study of Lam and Hsu (2004).

Second, the EMGB which adds the new construct of the perception of a responsible gambling strategy to the original MGB accounted for significantly more variance in behavioral intention than the original MGB, TRA, and TPB, indicating the high predictive validity. This finding is consistent with Ajzen's (1991) openness to altering social psychological models by considering additional factors and changing relationships among latent variables as long as it explains a substantial proportion of the total variance of behavioral intention. A simultaneous examination of the EMGB not only contributes to enhancing understanding of the intricate mechanism which forms behavioral intention to gamble in casinos, but also avoids possible misspecification which includes unimportant variables or omits important variables in the model.

Third, according to previous research which proposed possible relationships among the perception of responsible gambling strategy, desire, and intention, perception of responsible gambling strategy was a significant (direct) predictor to determine desire and behavioral intention for casino gambling in the EMGB. The finding suggests that perception of responsible gambling strategy increased desire and behavioral intention to gamble in casinos as they had a positive image of casino companies which implemented responsible gambling strategies. Casino operators may need to promote responsible

gambling strategies since it had a positive effect on desire and behavioral intention. Kangwon Land Casino should consider providing counseling services for potential problem gamblers at the Problem Gambling and Prevention Center. It is also a good responsible strategy that Kangwon Land Casino restricts local residents in four counties by law to one casino visit a month since the residents are susceptible to problem gambling due to easy access to the casino. Restriction on general domestic visitors to Kangwon Land Casino with a maximum of 15 times a month should continue to be implemented in order to minimize adverse impacts of casino gambling, such as problem gambling. One of the responsible gambling strategies that Kangwon Land utilizes is that it closes for few hours a day without ever opening for 24 hours which is also effective to minimize social costs such as addiction. These responsible gambling strategies help casino visitors avoid addiction to casino gambling by preventing and reducing harm associated with excessive gambling behaviors.

Lee et al. (2006) stated that light and multi-purpose gambling seekers can be responsible gambling segments in the research of casino market segmentation because they usually participate in gambling without excessive gambling behaviors and adverse consequences. Thus, casino operators may need to attract the market segments who enjoy casino gambling as a more social or leisure activity. Casino operators also should encourage family visitors to take tour packages surrounding casino areas by linking casino gambling with local tourism attractions (e.g., local cultural events, museum, and themed villages) to promote casino gambling as a general leisure activity—contributing to a responsible gambling strategy. These implications are associated with the

125

international trends of the casino industry, which tend to build resort casinos in areas such as Las Vegas, Macau, and Singapore. Casinos in Las Vegas provide leisure and recreational activities such as shows, restaurants, and entertainment in order to attract pleasure and family tourists. The findings of this study suggest that casino visitors, including tourists, would be more desirable for casino businesses in the long run. In other words, casino operators should consider responsible gambling strategy as one of the important casino policies since this strategy provides a positive image to visitors and minimizes social costs in the long run.

Therefore, casino operators' responsible gambling strategy not only helps them build positive relationships between casino companies and casino visitors, but also provides an effective marketing tool differentiating them from other competitors. Responsible gambling strategies should be continuously expanded as an important long-term business activity to increase casino visitors' positive image of casino companies and their behavioral intention to gamble in casinos. These strategies will contribute to minimizing adverse social impacts, such as problem gambling, in the long run. Casino operators should provide information on responsible gambling strategy to casino visitors so that they can be less addicted and enjoy casino gambling as part of leisure activity.

Limitations and Future Research

This study has some limitations which may help those conducting future studies. First, this study relied on participants to self-report their gambling behavior. Some participants may have been hesitant to share such information if they were problematic

gamblers. Therefore, there was the potential for respondents to not fully disclose information regarding their gambling behavior. In order to minimize this self-report bias, future studies should consider various survey methods being more confidential, in that any information they gave would not be linked to their identity. Second, there was also potential for recall bias because participants were asked to report past year gambling behaviors. Respondents may not have accurately remembered their gambling behaviors in the survey, especially if they gambled frequently when gambling.

Another limitation is the lack of generalizability and the selection bias associated with the use of a convenience sampling method. Because this study used a convenience sample of Kangwon Land Casino visitors in Korea, the results may not be necessarily generalizable to other populations of casino visitors. Although the results of this study were generally consistent with those of previous studies (e.g., Bagozzi & Dholakia, 2006; Carrus et al., 2008; Oh & Hsu, 2001; Taylor, 2007), repeated research using EMGB should be conducted in order to generalize findings from this study in the context of other international casino sites. As the casino industry has expanded rapidly internationally, cross-cultural studies with different geographical locations would also be useful to increase external validity (Lee et al., 2010).

Fourthly, although it is difficult to measure actual casino gambling behavior pre- and post surveys, to measure actual casino gambling behavior will be a good trial for future research in order to understand and predict behavior of casino visitors more clearly. In terms of measuring actual casino gambling behavior, a reward program can be effective. These days, reward programs have been implemented in some casino

127

companies, like Harrah's casino in Las Vegas (Kale, 2005), to build the databases of casino visitors, segment casino visitors, and encourage casino visitors to return through direct mail. Therefore, it is possible to measure the actual casino gambling behavior of casino visitors by providing a reward program to survey participants. However, when performing the reward program to measure actual casino gambling behavior, the issue of privacy for casino visitors should be considered.

A fifth limitation is that the results of EMGB are likely to be different depending on seasonality because this study was performed only for casino visitors in winter. Future studies should be performed for various casino visitors other times during the year since seasonality is one of the fundamental characteristics of tourism, including casinos (Jolliffe & Farnsworth, 2003). Finally, future researchers may include more important variables such as motivation, involvement, and prior knowledge not considered in this model when better explaining decision-making processes. More items of responsible gambling strategies in the model may be included such as self-exclusion programs, clocks in the casinos, access to ATMs, and an available help-line which would also minimize adverse social impact resulting from gambling.

APPENDIX: SURVEY ON CASINO VISITORS

We are conducting the survey to examine the behavior of casino tourists. This survey is performed for the purpose of academic research. Your sincere response will contribute to improving the development of the casino industry.

Your responses will be completely confidential. If you have any questions, feel free to contact Clemson University's Office of Research Compliance at 864-656-0636. Additionally, you can contact (Dr. William C. Norman) at Clemson University at 864-656-2060. We would greatly appreciate your time and cooperation in completing this questionnaire. Thank you very much.

1-1. How many times have you gone casino gambling in the past 12 months?

_____ Times

2-1. Was gambling your main purpose to visit this Kangwon Land Casino?
☐ Yes   ☐ No (What is your main purpose? _____)

2-2. How many hours did you gamble while staying at Kangwon Land Casino?
_____ Hours

2-3. How much money did you gamble while staying at Kangwon Land Casino?
_____ Won

2-4. How much money did you lose on casino gambling while staying at Kangwon Land Casino?
_____ Won

3. What is your favorite casino game? (Please check one)
☐ Blackjack   ☐ Baccarat   ☐ Roulette
☐ Slot Machine   ☐ Tai-sai (or Dice) ☐ Others

4. How long did you stay at Kangwon Land Casino on this trip?
_____ Nights

5. Who are you accompanied by? (Please check one)
☐ Alone   ☐ Friends   ☐ Relatives
☐ Couple   ☐ Family   ☐ Business Group
☐ Friends & Family ☐ Others

6. Please rate your attitude toward playing casino gambling by indicating your level of agreement with the following statements.

	Strongly disagree	Somewhat disagree	Disagree	Neutral	Agree	Somewhat agree	Strongly agree
1. I think casino gambling is my favorite activity	1	2	3	4	5	6	7
2. I think casino gambling is an exciting activity	1	2	3	4	5	6	7
3. I think casino gambling is an attractive activity	1	2	3	4	5	6	7
4. I think casino gambling is an enjoyable activity	1	2	3	4	5	6	7

7. Please rate your level of agreement with the following statements.

	Strongly disagree	Somewhat disagree	Disagree	Neutral	Agree	Somewhat agree	Strongly agree
1. Most people who are important to me think it is okay for me to gamble in casinos	1	2	3	4	5	6	7
2. Most people who are important to me support that I gamble in casinos	1	2	3	4	5	6	7
3. Most people who are important to me understand that I gamble in casinos	1	2	3	4	5	6	7
4. Most people who are important to me agree with me about casino gambling	1	2	3	4	5	6	7

8. Please rate your ability to participate in casino gambling by indicating your level of agreement with the following statements.

	Strongly disagree	Somewhat disagree	Disagree	Neutral	Agree	Somewhat agree	Strongly agree
1. I am confident that if I want, I can gamble in casinos	1	2	3	4	5	6	7
2. I am capable of casino gambling	1	2	3	4	5	6	7
3. I have enough resources (money) to gamble in casinos	1	2	3	4	5	6	7
4. I have enough time to gamble in casinos	1	2	3	4	5	6	7

9. Please rate your desire to gamble in casinos by indicating your level of agreement with the following statements.

	Strongly disagree	Somewhat disagree	Disagree	Neutral	Agree	Somewhat agree	Strongly agree
1. I would enjoy casino gambling	1	2	3	4	5	6	7
2. I wish to gamble in casinos	1	2	3	4	5	6	7
3. I crave casino gambling	1	2	3	4	5	6	7
4. I have an urge to gamble in casinos	1	2	3	4	5	6	7

10. Please rate the extent of your emotion if you succeed or fail in casino gambling by indicating your level of agreement with the following statements.

	Strongly disagree	Somewhat disagree	Disagree	Neutral	Agree	Somewhat agree	Strongly agree
1. If I succeed at casino gambling I will be excited	1	2	3	4	5	6	7
2. If I succeed at casino gambling I will be glad	1	2	3	4	5	6	7
3. If I succeed at casino gambling I will be satisfied	1	2	3	4	5	6	7
4. If I succeed at casino gambling I will be happy	1	2	3	4	5	6	7
5. If I fail at casino gambling I will be angry	1	2	3	4	5	6	7
6. If I fail at casino gambling I will be disappointed	1	2	3	4	5	6	7
7. If I fail at casino gambling I will be worried	1	2	3	4	5	6	7
8. If I fail at casino gambling I will be sad	1	2	3	4	5	6	7

11. Please rate your intentions to gamble in casinos in the near future by indicating your level of agreement with the following statements.

	Strongly disagree	Somewhat disagree	Disagree	Neutral	Agree	Somewhat agree	Strongly agree
1. I am planning to go casino gambling in the near future	1	2	3	4	5	6	7
2. I will make an effort to go casino gambling in the near future	1	2	3	4	5	6	7
3. I intend to go casino gambling in the near future	1	2	3	4	5	6	7
4. I am willing to go casino gambling in the near future	1	2	3	4	5	6	7

12. Please rate your level of agreement with the following statements.

	Definitely do not know		Do not know	Neutral	Know		Definitely know
1. Kangwon Land has provided counseling services at the Problem Gambling and Prevention Center	1	2	3	4	5	6	7
2. Kangwon Land has allowed local residents access to the casino only once a month	1	2	3	4	5	6	7
3. Kangwon Land has allowed casino visitors access to the casino no more than 15 times a month	1	2	3	4	5	6	7
4. Kangwon Land is closed for a few hours a day	1	2	3	4	5	6	7

Demographic Characteristics

1. You are: ☐ Male   ☐ Female

2. Your age: _____ years old

3. Your education level:
☐ Less than elementary school   ☐ Middle and High school   ☐ 2 year College
☐ University   ☐ Graduate school

4. Marital status:
☐ Single   ☐ Married   ☐ Other

5. How would you think of your monthly income level?
☐ Less than 1 million won   ☐ 1-1.9 million won   ☐ 2-2.9 million won
☐ 3-3.9 million won   ☐ More than 4 million won

6. Your occupation:
☐ Expert or technician   ☐ Businessman   ☐ Service
☐ Office worker   ☐ Civil servant   ☐ Housewife
☐ Student   ☐ Retired   ☐ Others

WORKS CITED

Aasved, M. J., & Laundergan, J. C. (1993). Gambling and its impacts in a northeastern Minnesota community: An exploratory study. *Journal of Gambling Studies, 9*(4), 301-319.

Abt, V., McGurrin, M. C., & Smith, J. F. (1984). Gambling: The misunderstood sport. *Leisure Sciences, 6*(2), 205-220.

Abbott, D. A., & Cramer, S. L. (1993). Gambling attitudes and participation: A midwestern survey. *Journal of Gambling Studies, 9*(3), 247-263.

Abbott, M. W., & Volberg, R. A. (2000). *Taking the pulse on gambling and problem gambling in New Zealand: A report on phase one of the 1999 national prevalence survey.* Wellington: Department of Internal Affairs.

Ajzen, I. (1985). From intentions to actions: A TPB. In J. Kuhl & J. Beckham (Eds.), *Action control: From cognition to behavior* (pp. 11-39). Heidelberg: Springer.

---. (1988). *Attitudes, personality and behavior*. Chicago, IL: Dorsey Press.

---. (1991). The theory of planned behaviour. *Organisational Behaviour and Human Decision Processes, 50*(2), 179–211.

Ajzen, I., & Driver, B. L. (1991). Prediction of leisure participation from behavioral, normative, and control beliefs: An application of the TPB. *Leisure Sciences*, *13*(3), 185-204.

Ajzen, I., & Fishbein, M. (1973). Attitudinal and normative variables as predictors of specific behavior. *Journal of Personality and Social Psychology, 27*(1), 41-57.

---. (1980). *Understanding attitudes and predicting social behavior*. Englewood-Cliffs, NJ: Prentice Hall.

Ajzen, I., & Madden, T. (1986). Prediction of goal-directed behavior: Attitudes, intentions and perceived behavior control. *Journal of Experimental Social Psychology, 22*(5), 453-474.

American Gaming Association (2006). State of the states: the AGA survey of casino entertainment. Retrieved October 31, 2009, from http://www.americangaming.org/assets/files/2006_Survey_for_Web.pdf

Alberta Alcohol Drug Abuse Commission (2009). Drug abuse commission. Retrieved October 31, 2009, from http://www.aadac.com

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin, 103*(3), 411-423.

Anderson, J. R. (2004). *Cognitive psychology and its implications.* Worth Pub.

Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. *British Journal of Social Psychology, 40*(4), 471-499.

Assael, H. (2004). *Consumer behavior: A strategic approach.* Boston: Houghton MifflinCompany.

Back, K., & Lee, C. (2005). Residents' perceptions of casino development in Korea: The kangwon land. *UNLV Gaming & Research Journal*, *9*(2), 45-54.

Bagozzi, R. P. (1981). Attitudes, intentions and behavior: A test of some key hypothesis. *Journal of Personality and Social Psychology, 41*(4), 607-627.

---. (1982). A field investigation of causal relations among cognitions, affect, intentions and behavior. *Journal of Marketing Research, 19*(4), 562-583.

---. (1984). Expectancy-value attitude models: An analysis of critical measurement issues. *International Journal of Research in Marketing, 1*(4), 295-310.

---. (1992). The self-regulation of attitudes, intentions and behavior. *Social Psychology Quarterly, 55*(2), 178-204.

Bagozzi, R. P., Baumgartner, H., & Pieters, R. (1998). Goal-directed emotions. *Cognition and Emotion,* 12(1), 1-26.

Bagozzi, R. P., & Dholakia, U. M. (2006). Antecedents and purchase consequences of customer participation in small group brand communities. *International Journal of Research in Marketing*, *23*(1), 45-61.

Bagozzi, R. P., Dholakia, U. M., & Pearo, L. R. K. (2007). Antecedents and consequences of online social interactions. *Media Psychology*, *9*(1), 77-114.

Bagozzi, R. P., Gurhan-Canli, Z., & Priester, J. R. (2001). *The social psychology of consumer behaviour*. Buckingham: Open University Press.

Bagozzi, R. P., & Kimmel, S. K. (1995). A comparison of leading theories for the prediction of goal-directed behaviours. *British Journal of Social Psychology, 34*(4), 437-461.

Bagozzi, R., & Phillips, L. (1982). Representing and testing organizational theories: A holistic construal. *Administrative Science Quarterly*, *27*(3), 459-490.

Bagozzi, R. P., & Warshaw, P. R. (1990). Trying to consume. *Journal of Consumer Research, 17*(2), 127-140.

---. (1992). An examination of the etiology of the attitude-behavior relation for goal-directed behaviors. *Multivariate Behavioral Research, 27*(4), 601-634.

Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science, 16*(1), 74–97.

Baker, E. W., Al-Gahtani, S. S., & Hubona, G. S. (2007). The effects of gender and age on new technology implementation in a developing country: testing the TPB (TPB). *Information Technology & People, 20*(4), 352-375.

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist, 37*(2), 122-147.

Barker, T., & Britz, M. (2000). *Jokers wild: Legalized gambling in the twenty-first century.* Greenwood Publishing Group.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*(6), 1173-1182.

Bearden, W. O., & Etzel, M. J. (1991). Reference group influence on product and brand purchase decisions. In H. H. Kassarjian, & T. S. Robertson, *Perspectives in Consumer Behaviour* (pp. 435-451). Englewood Cliffs: Prentice-Hall (4th ed).

Bearden, W.O., Sharma, S., & Teel, J. E. (1982) Sample-size effects on chi-square and other statistics used in evaluating causal-models. *Journal of Marketing Research*, *19*, 425-430.

Beck, L., & Ajzen, I. (1991). Predicting dishonest actions using the TPB. *Journal of Research in Personality, 25*(3), 285-301.

Bentler, P. M., & Chou, C. P. (1987). Practical issues in structural modeling. *Sociological Methods and Research*, *16*(1), 78-117.

Bentler, P. M., & Speckart, G. (1979). Models of attitude-behavior relations. *Psychological Review, 86*(5), 452-464.

---. (1981). Attitudes 'cause' behaviors: A structural equation analysis. *Journal of Personality and Social Psychology, 40*(2), 226-238.

Bentler, P. M., & Wu, E. J. C. (1995). *EQS for Windows: User's guide*. Encino, CA: Multivariate Software, Inc.

Berens, G., Riel, C. B. M., & Bruggen, G. H. (2005). Corporate associations and consumer product responses: The moderating role of corporate brand dominance. *Journal of Marketing*, *69*(3), 35-48.

Bernstein, P. L. (1996). *Against the gods: The remarkable story of risk*. NY: John Wiley & Sons.

Blaszczynski, A., Ladouceur, R., & Shaffer, H. J. (2004). A science-based framework for responsible gambling: The reno model. *Journal of Gambling Studies*, *20*(3), 301-317.

Bollen, K. A. (1989). *Structural equation with latent variable*. NY: John Wiley & Sons.

Brand, M. (1984). *Intending and acting: Toward a naturalized theory*. Massachusetts: MIT Press.

Brady, M. K., & Cronin, J. J. J. (2001). Some new thoughts on conceptualizing perceived service quality: A hierarchical approach. Journal of Marketing, *65*(3): 34-49.

Braunlich, C. G. (1996). Lessons from the Atlantic City casino experience. Journal of Travel Research, 34(3), 46-56.

Breen, R. B., & Zuckerman, M. (1999). Chasing'in gambling behavior: Personality and cognitive determinants. *Personality and Individual Differences, 27*(6), 1097-1111.

Breen, H., Buultjens, J., & Hing, N. (2005). The responsible gambling code in Queensland, Australia: Implementation and venue assessment. *UNLV Gaming Research& Review Journal*, *9*(1), 43-60.

British Columbia partnership for responsible gambling (2010). B.C.'s responsible gambling strategy and three year plan (2008/09-2010/11). Retrieved October 31, 2009, from http://www.bcresponsiblegambling.ca/responsible/docs/plan-rg-three-yr-2008-2011.pdf

Brown, T. J., & Dacin, P. A. (1997). The company and the product: Corporate associations and consumer product responses. *The Journal of Marketing*, *61*(1), 68-84.

Byrne, B. M. (1994a). *Structural equation modeling with EQS and EQS/Windows: Basic concepts, applications, and programming*. Thousand Oaks, CA: Sage.

---. (1994b). Testing for the factorial validity, replication, and invariance of a measuring instrument: A paradigmatic application based on the Maslach burnout inventory. *Multivariate Behavioral Research*, *29*(3), 289-311.

---. (1988). The Self Description Questionnaire III: Testing for equivalent factorial validity across ability. *Educational and Psychological Measurement*, *48*, 397-406.

---. (2006). *Structural equation modeling with EQS: Basic concepts, applications, and programming* (2nd ed.). Lawrence Erlbaum Associates.

Carrus, G., Passafaro, P., & Bonnes, M. (2008). Emotions, habits and rational choices in ecological behaviours: The case of recycling and use of public transportation. *Journal of Environmental Psychology, 28*(1), 51-62.

Caneday, L., & Zeiger, J. (1991). The social, economic, and environmental costs of tourism to a gaming community as perceived by its residents. *Journal of Travel Research, 30*(2), 45-49.

Carmichael, B. A., Peppard, D. M., & Boudreau, F. A. (1996). Megaresort on my doorstep: Local resident attitudes toward Foxwoods Casino and casino gambling on nearby Indian Reservation Land. *Journal of Travel Research, 34*(3), 9-16.

Carver, C. S., & Scheier, M. F. (1998). *On the self-regulation of behavior*. Cambridge, UK: Cambridge University Press.

Casinosmack (2010). Singapore mega casinos: Marina Bay Sands & Sentosa Island. Retrieved July 18, 2010, from http://casinosmack.com/blog/singapore-mega-casinos-marina-bay-sands-sentosa-island

Chadbourne, C., Walker, P., & Wolfe, M. (1997). *Gambling, economic development, and historic preservation*. Chicago: American Planning Association.

Chaiken, S., & Stangor, C. (1987). Attitudes and attitude change. *Annual Review of Psychology, 38*(1), 575-630.

Chang, M. K. (1998). Predicting unethical behavior: A comparison of the TRA and TPB. *Journal of Business Ethics, 17*(16), 1825-1834.

Chantal, Y., Vallerand, R. J., & Vallières, E. F. (1995). Motivation and gambling involvement. *The Journal of Social Psychology*, *135*(6), 755-763.

Cheng, S., Lam, T., & Hsu, C. H. C. (2006). Negative word-of-mouth communication intention: An application of the TPB. *Journal of Hospitality & Tourism Research, 30*(1), 95-116.

Churchill, G. A., Jr., & Iacobucci, D. (2002). *Marketing research: Methodological foundations* (8th ed.). Fort Worth, TX: Harcourt.

Ciarrocchi, J., & Richardson, R. (1989). Profile of compulsive gamblers in treatment: Update and comparisons. *Journal of Gambling Studies*, *5*(1), 53-65.

Clark, T. L. (1987). *The dictionary of gambling and gaming*. NY: Lexik House.

Claussen, C. L., & Miller, L. K. (2001). The gambling industry and sports gambling: A stake in the game? *Journal of Sport Management, 15*(4), 350-363.

Clotfelter, C. T., Cook, P. J., Edell, J. A., & Moore, M. (1999). *State lotteries at the turn of the century: Report to the national gambling impact study commission.* National Gambling Impact Study Commission. Retrieved October 31, 2009, from http://govinfo.Library.Unt.edu/ngisc/reports/lotfinal.pdf

Conner, M., & Abraham, C. (2001). Conscientiousness and the TPB: Towards a more complete model of the antecedents of intentions and behavior. *Personality and Social Psychology Bulletin, 27*(11), 1547-1561.

Conner, M., & Armitage, C. J. (1998). Extending the TPB: A review of the literature and avenues for future research. *Journal of Applied and Social Psychology, 28*(15), 1429-1464.

Conner, M., Povey, R., Sparks, P., James, R., & Shepherd, R. (2003). Moderating role of attitude ambivalence within the TPB. *British Journal of Social Psychology, 42*(1), 75-94.

Cook, A. A. (1992). Towards understanding today's changing gaming participants. *Journal of Travel and Tourism Marketing, 1*(2), 63-70.

Cotte, J. (1997). Chances, trances, and lots of slots: Gambling motives and consumption experiences. *Journal of Leisure Research, 29*(4), 380-406.

Crompton, J. L. & Mckay, S. L. (1997). Motives of visitors attending festival events, *Annals of Tourism Research, 24*(2): 425-439.

Cummings, W. T., & Corney, W. (1987). A conceptual model of gambling behavior: Fishbein's TRA. *Journal of Gambling Studies*, *3*(3), 190-201.

Davis, W. A. (1984). The two senses of desire. *Philosophical Studies*, *45*(2), 181-195.

Davidson, D. (1980). *Essays on actions and events*. Oxford: Clarendon Press.

Delfabbro, P. (2008). Evaluating the effectiveness of a limited reduction in electronic gaming machine availability on perceived gambling behaviour and objective expenditure. *International Gambling Studies*, *8*(2), 151-165.

Derevensky, J. L., & Gupta, R. (2000). Prevalence estimates of adolescent gambling: A comparison of the SOGS-RA, DSM-IV-J, and the GA 20 questions. *Journal of Gambling Studies*, *16*(2), 227-251.

Dickerson, M., Walker, M., England, S. L., & Hinchy, J. (1990). Demographic, personality, cognitive and behavioral correlates of off-course betting involvement. *Journal of Gambling Studies, 6*(2), 165-182.

Dimanche, F., Havitz, M. E., & Howard, D. R. (1993). Consumer involvement profiles as a tourism segmentation tool. *Journal of Travel & Tourism Marketing*, *1*(4), 33-52.

Dumont, M., & Ladouceur, R. (1990). Evaluation of motivation among video-poker players. *Psychological Reports*, *66*(1), 95-98.

Dunstan, R. (1997). *Gambling in California.* California Research Bureau.

Eade, J. (1997). *Living the global city: Globalization as a local process*. Taylor & Francis US.

Eadington, W. R. (2001). The Spread of casinos and their role in tourism development. In D. G. Pearce & R. W. Butler (Eds.), *Contemporary issues in tourism development* (pp. 127-143). London and New York: Routledge.

Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. Fort Worth, TX: Harcourt Brace Jovanovich.

East, R. (2000). Complaining as planned behavior. *Psychology & Marketing, 17*(12), 1077-1095.

Ellenbogen, S., Derevensky, J., & Gupta, R. (2007). Gender differences among adolescents with gambling-related problems. *Journal of Gambling Studies*, *23*(2), 133-143.

Evans, G. (1991). The problem of analyzing multiplicative composites. *American Psychologist*, *46*(1), 6-15.

Evans, R. I. (2003). Some theoretical models and constructs generic to substance abuse prevention programs for adolescents: Possible relevance and limitations for problem gambling. *Journal of Gambling Studies*, *19*(3), 287-302.

Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods, 4*(3), 272-299.

Fila, S., & Smith, C. (2006). Applying the TPB to healthy eating behaviors in urban Native American youth. *International Journal of Behavioral Nutrition and Physical Activity*, *3*, 11(Epub ahead of print).

Filby, M., & Harvey, L. (1989). Recreational betting: Individual betting profiles. *Leisure Studies, 8*(3), 219-227.

Fishbein, M. (1967). Attitude and the prediction of behavior. In M. Fishbein (Ed.), *Readings in attitude theory and measurement* (pp. 477-492). New York: Wiley.

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior*. Reading, MA: Addison-Wesley.

Formica, S. & Uysal, M. (1996). A market segmentation of festival visitors, *Festival Management and Event Tourism, 3*(4), 175-182.

---. (1998). Market segmentation of an international, cultural-historical event in Italy, *Journal of Travel Research, 36*(4), 16-24.

Fornell, C., & Larcker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, *18*(1), 39-50.

Fredricks, A. J., & Dossett, D. L. (1983). Attitude behavior relations: A comparison of the Fishbein-Ajzen and Bentler-Speckart models. *Journal of Personality and Social Psychology, 45*(3), 501-512.

Gay, L. R., & Airasian, P. (2003). *Educational research: Competencies for analysis and applications* (7th ed.). Upper Saddle River, New Jersey: Merrill Prentice Hall.

Gill, T., Grande, E. D., & Taylor, A. W. (2006). Factors associated with gamblers: A population-based cross-sectional study of South Australian adults. *Journal of Gambling Studies*, *22*(2), 143-164.

Gleicher, F., Boninger, D. S., Strathman, A., Armor, D., Hetts, J., & Ahn, M. (1995). With an eye toward the future: The impact of counterfactual thinking on affect, attitudes, and behavior. In N. J. Roese & J. M. Olson (Eds.), *What might have been: The social psychology of counterjiactual thinking* (pp. 283-304). Mahwah, NJ: Lawrence Erlbaum.

Gu, Z. (2004). Macau gaming: Copying the Las Vegas style or creating a Macau model? *Asia Pacific Journal of Tourism Research*, *9*(1), 89-96.

Hair, Jr. J. F., Black, W.C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate Data Analysis*. Upper Saddle Ricer, NJ: Pearson Education.

Han, H., Hsu, L., & Sheu, C. (2010). Application of the TPB to green hotel choice: Testing the effect of environmental friendly activities. *Tourism Management*, *31*(3), 325-334.

Hankins, M., French, D., & Horne, R. (2000). Statistical guidelines for studies of the TRA and the TPB. *Psychology & Health, 15* (2), 151-161.

Hatcher, L. (1994). *A step-by-step approach to using the SAS systems for factor analysis and structural equation modeling*. Cary, NC: SAS Institute.

Hee, S. P. (2000). Relationships among attitudes and subjective norm: Testing the TRA across cultures. *Communication Studies, 51*(2), 162-175.

Henderson, J. (2006). Betting on casino tourism in Asia: Singapore's integrated resorts. *Tourism Review International*, *10*(3), 169-179.

Hing, N. (2003). Principles, processes and practices in responsible provision of gambling: A conceptual discussion. *UNLV Gaming Research & Review Journal*, *7*(1), 33-47.

Hing, N., & Breen, H. (2001). Profiling lady luck: An empirical study of gambling and problem gambling amongst female club members. *Journal of Gambling Studies*, *17*(1), 47-69.

Hing, N., & Mackellar, J. (2004). Challenges in responsible provision of gambling: Questions of efficacy, effectiveness and efficiency. *UNLV Gaming Research & Review Journal*, *8*(1), 43-59.

Hoogstraten, J., De Haan, W., & Ter Horst, G. (1985). Stimulating the demand for dental care: An application of Ajzen & Fishbein's TRA. *European Journal of Social Psychology, 15*(4), 401-414.

Hrubes, D., Ajzen, I., & Daigle, J. (2001). Predicting hunting intentions and behavior: An application of the TPB. *Leisure Sciences*, *23*(3), 165-178.

Hsu, C. H. C. (2006). *Casino industry in Asia Pacific: Development, operation, and impact*. New York: Haworth Hospitality Press.

Hu, W., Borden, G. W., Harris, T. R., & Maynard, L. (2008). Do job, age, and place of residence matter for gaming activity? A study of the mid-Colorado river communities. *UNLV Gaming Research & Review Journal*, *12*, 43-52.

Ivancevish S. H., & Fried, B. N. (1996). New development in gaming taxation and regulation: An update. *UNLV Gaming Research & Review Journal*, *3*(2), 25-37.

Johnson, J. E. V., & Bruce, A. C. (1997). An empirical study of the impact of complexity on participation in horserace betting. *Journal of Gambling Studies, 13*(2), 159-172.

Jolley, B., Mizerski, R., & Olaru, D. (2006). How habit and satisfaction affects player retention for online gambling. *Journal of Business Research*, *59*(6), 770-777.

Jolliffe, L., & Farnsworth, R. (2003). Seasonality in tourism employment: Human resource challenges. *International Journal of Contemporary Hospitality Management*, *15*(6), 312-316.

Judd, C. M., & Kenny, D. A. (1981). Process analysis: Estimating mediation in treatment evaluations. *Evaluation Review*, *5*(5), 602-619.

Kale, S. H. (2005). Change management: Antecedents and consequences in casino CRM. *UNLV Gaming Research & Review Journal*, *9*(2), 55-67.

---. (2006). Designing culturally compatible internet gaming sites. *UNLV Gaming Research & Review Journal*, *10*(1), 55-67.

Kelloway, E. K. (1998). *Using LISREL for structural equation modeling: A researcher's guide*. Sage Publications, Inc.

Kline, R. B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). New York: Guilford Press.

Klein, J., & Dawar, N. (2004). Corporate social responsibility and consumers' attributions and brand evaluations in a product–harm crisis. *International Journal of Research in Marketing*, *21*(3), 203-217.

Korea Casino Association (2007). *Casino visitors and revenues*. Seoul: Korean Casino Association.

Korn, D. A., & Shaffer, H. J. (1999). Gambling and the health of the public: Adopting a public health perspective. *Journal of Gambling Studies*, *15*(4), 289-365.

Kwon, E., & Back, K. J. (2009). A content analysis of gaming research: 1994-2008. *Worldwide Hospitality and Tourism Themes*, *1*(4), 367-378.

Lam, T., & Hsu, C. H. C. (2004). TPB: Potential travelers from China. *Journal of Hospitality & Tourism Research, 28*(4), 463-482.

---. (2006). Predicting behavioral intention of choosing a travel destination. *Tourism Management, 27*(4), 589-599.

Laroche, M., Bergeron, J., & Barbaro-Forleo, G. (2001). Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of Consumer Marketing, 18*(6), 503-520.

Lazarus, R. S. (1991). *Emotion & adaptation*. Oxford New York.

Lee, C. K., & Back, K. J. (2006). Examining structural relationships among perceived impact, benefit, and support for casino development based on 4 year longitudinal data. *Tourism Management*, *27*(3), 466-480.

Lee, C. K., Kang, S. K., Long, P., & Reisinger, Y. (2010). Residents' perceptions of casino impacts: A comparative study. *Tourism Management*, *31*(2), 189-201.

Lee, C. K., Kim, S. S., & Kang, S. K. (2003). Perceptions of casino impacts: A Korean longitudinal study. *Tourism Management, 24*(1), 45-55.

Lee, C. K., & Kwon, K. S. (1997). The economic impact of the casino industry in South Korea. Journal of Travel Research, *36*(1), 52-58.

Lee, C. K., Lee, B., Bernhard, B. J., & Lee, T. K. (2009). A comparative study of involvement and motivation among casino gamblers. *Psychiatry Invest*, *6*, 141-149.

Lee, C. K., Lee, Y. K., Bernhard, B. J., & Youn, Y. S. (2006). Segmenting casino gamblers by motivation: A cluster analysis of Korean gamblers. *Tourism Management, 27*(5), 856-866.

Lee, K. H., & Shin, D. (2010). Consumers' responses to CSR activities: The linkage between increased awareness and purchase intention. *Public Relations Review*. doi:10.1016/j.pubrev.2009.10.014 (Accessed on January 10, 2010)

Lee, M. J., & Back, K. (2007). Association members' meeting participation behaviors: Development of meeting participation model. *Journal of Travel & Tourism Marketing*, *22*(2), 15-33.

Leone, L., Perugine, M., & Ercolani, A. P. (1999). A comparison of three models of attitude-behavior relationships in the studying behavior domain. *European Journal of Social Psychology, 29*(2-3), 161-189.

Lepage, C., Ladouceur, R., & Jacques, C. (2000). Prevalence of problem gambling among community service users. *Community Mental Health Journal*, *36*(6), 597-601.

Lesieur, H. R., & Rosenthal, R. J. (1991). Pathological gambling: A review of the literature (prepared for the American psychiatric Association task Force on DSM-IV committee on disorders of impulse control not elsewhere classified). *Journal of Gambling Studies*, *7*(1), 5-40.

Long, P. T. (1996). Early impacts of limited stakes casino gambling on rural community life. *Tourism Management*, *17*(5), 341-353.

Loroz, P. S. (2004). Golden-age gambling: Psychological benefits and self-concept dynamics in aging consumers' consumption experiences. *Psychology and Marketing*, *21*(5), 323-349.

MacCullum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods, 1*(2), 130-149.

MacKinnon, D. P., Warsi, G., & Dwyer, J. H. (1995). A simulation study of mediated effect measures. *Multivariate Behavioral Research*, *30*(1), 41-62.

Madden, T. J., Ellen, P. S., & Ajzen, I. (1992). A comparison of the TPB and the TRA. *Personality and Social Psychology Bulletin, 18*(1), 3-9.

Mayo, E., & Jarvis, L. (1981). *The Psychology of leisure travel, effective marketing and selling of travel services*. Boston: CBI Publishing.

McCann, H. J. (1986). Rationality and the range of intention. In P. A. French (Ed.), *Midwest studies of philosophy* (Vol. 10, pp. 191-211). Minneapolis: University of Minnesota Press.

McDaniel, S. R., & Zuckerman, M. (2003). The relationship of impulsive sensation seeking and gender to interest and participation in gambling activities. *Personality and Individual Differences, 35*(6), 1385-1400.

McMillen, J. (1996). *Gambling cultures: Studies in history and interpretation*. Routledge.

Mcmillen, J., & Wenzel, M. (2006). Measuring problem gambling: Assessment of three prevalence screens. *International Gambling Studies*, *6*(2), 147-174.

Mertler, C., & Vannatta, R. (2005). *Advanced and multivariate statistical methods* (3rd ed.). Glendale, AZ: Pyrczak.

Monaghan, S. (2009). Responsible gambling strategies for internet gambling: The theoretical and empirical base of using pop-up messages to encourage self-awareness. *Computers in Human Behavior*, *25*(1), 202-207.

Moore, S. M., & Ohtsuka, K. (1997). Gambling activities of young Australians: Developing a model of behaviour. *Journal of Gambling Studies*, *13*(3), 207-236.

---. (1999). The prediction of gambling behavior and problem gambling from attitudes and perceived norms. *Social Behavior and Personality: An International Journal*, *27*(5), 455-466.

Morse, E. A., & Goss, E. (2007). *Governing fortune: Casino gambling in America.* Ann Arbor: University of Michigan Press.

Moufakkir, O., Singh, A. J., Moufakkir-Van der Woud, A., & Holecek, D. F. (2004). Impact of light, medium, and heavy spenders on casino destinations: Segmenting gaming visitors based on amount of non-gaming expenditures. *UNLV Gaming Research & Review Journal*, *8*(1), 59-72.

Mailonline (2010). Manchester wins licence to build Britain's first supercasino. Retrieved April 28, 2010, from http://www.dailymail.co.uk/news/article-432483/Manchester-wins-licence-build-Britains-supercasino.html

Mayer, K. J., & Johnson, L. (2003). A customer-based assessment of casino atmospherics. *UNLV Gaming Research & Review Journal*, *7*(1), 21-31.

Miniard, P. W., & Cohen, J. B. (1981). An examination of the Fishbein-Ajzen behavioral intentions model's concepts and measures. *Journal of Experimental Social Psychology, 17*(3), 309-329.

Murray, K. B., & Vogel, C. M. (1997). Using a hierarchy-of-effects approach to gauge the effectiveness of corporate social responsibility to generate goodwill toward the firm: Financial versus nonfinancial impacts. *Journal of Business Research*, *38*(2), 141-159.

Neighbors, C., Lewis, M. A., Fossos, N., & Grossbard, J. R. (2007). Motivation and risk behaviors: A self-determination perspective. In L. V. Brown (Eds.), Psychology of motivation (pp. 99-113). Nova Science Publishers.

Neighbors, C., Lostutter, T. W., Larimer, M. E., & Takushi, R. Y. (2002). Measuring gambling outcomes among college students. *Journal of Gambling Studies*, *18*(4), 339-360.

Newsom (2010). Testing mediation with regression analysis. Retrieved April 28, 2010, from http://www.upa.pdx.edu/IOA/newsom/da2/ho_mediation.pdf

Nunnally, J. (1978). *Psychometric Theory*. New York: McGraw-Hill.

Oh, H., & Hsu, C. H. C. (2001). Volitional degrees of gambling behaviors. *Annals of Tourism Research, 28*(3), 618-637.

Olason, D. T., Sigurdardottir, K. J., & Smari, J. (2006). Prevalence estimates of gambling participation and problem gambling among 16–18-year-old students in Iceland: A comparison of the SOGS-RA and DSM-IV-MR-J. *Journal of Gambling Studies*, *22*(1), 23-39.

O'Leary, Z. (2004). *The essential guide to doing research*. Sage Publications Ltd.

Oliver, R. L. (1993). Cognitive, affective, and attribute bases of the satisfaction response. *Journal of Consumer Research, 20*(3), 418-430.

---. (1997). *Satisfaction: A behavioral perspective on the consumer*. New York: McGraw-Hill.

Oliver, R. L., & Swan, J. E. (1989). Consumer perceptions of interpersonal equity and satisfaction in transaction: A field survey approach. *Journal of Marketing, 53*(2), 21-35.

Olson, J. M., & Zanna, M. P. (1993). Attitudes and attitude change. *Annual Review of Psychology, 44*(1), 100-154.

Ouellette, J. A., & Wood, W. (1998). Habit and intention in everyday life: The multiple processes by which past behavior predicts future behavior. *Psychological Bulletin, 124*(1), 54-74.

Perdue, R. R., Long, P. T., & Kang, Y. S. (1995). Resident support for gambling as a development strategy. *Journal of Travel Research, 34*(2), 3-11.

Perugini, M., & Bagozzi, R. P. (2001). The role of desires and anticipated emotions in goal-directed behaviors: Broadening and deepening the TPB. *British Journal of Social Psychology, 40*(1), 79-98.

---. (2004). The distinction between desires and intentions. *European Journal of Social Psychology, 34*(1), 69-84.

Peterson, R. (1994). A meta-analysis of Cronbach's coefficient alpha. *Journal of Consumer Research*, *21*(2), 381-391.

Petry, N. M. (2005). *Pathological gambling: Etiology, comorbidity and treatment*. Washington, DC: American Psychological Association Press.

Piscitelli, F., & Albanese, J. S. (2000). Do casinos attract criminals? *Journal of Contemporary Criminal Justice*, *16*(4), 445-456.

Pizam, A., & Pokela, J. (1985). The perceived impacts of casino gambling on a community. *Annals of Tourism Research, 12*(2), 147-165.

Plant, M., Single, E., & Stockwell, T. (1997). *Introduction: Harm minimization and alcohol*. London: Freedom Association Books.

Platz, L., & Millar, M. (2001). Gambling in the context of other recreation activity: A quantitative comparison of casual and pathological student gamblers. *Journal of Leisure Research, 33*(4), 383-395.

Powell, J., Hardoon, K., Derevensky, J. L., & Gupta, R. (1999). Gambling and risk-taking behavior among university students. *Substance use & Misuse*, *34*(8), 1167-1184.

Prestwich, A., Perugini, M., & Hurling, R. (2008). Goal desires moderate intention-behaviour relations. *British Journal of Social Psychology*, *47*(1), 49-71.

Prum, D., & Bybee, S. (1999). Commercial casino gaming in the United States: Jurisidictional analysis of gaming taxes, licenses, and fees. *UNLV Gaming Research & Review Journal*, *4*(1), 17-41.

Quintal, M. V., Lee, J., & Soutar, G. (2010). Risk, uncertainty and the TPB: A tourism example. *Tourism Management*. doi:10.1016/j.tourman.2009.08.006 (Accessed on January 10, 2010)

Responsible Gambling Council (2010). 2008-2009 Annual report. Retrieved April 28, 2010, from http://www.responsiblegambling.org/en/media/09_AnnualReport.pdf

Richetin, J., Perugini, M., Adjali, I., & Hurling, R. (2008). Comparing leading theoretical models of behavioral predictions and post-behavior evaluations. *Psychology and Marketing*, *25*(12), 1131-1150.

Rivis, A., & Sheeran, P. (2003). Descriptive norms as an additional predictor in the theory of planned behaviour: A meta-analysis. *Current Psychology, 22*(3), 218-233.

Robinson, J. P., Shaver, P. R., & Wrightsman, L. S. (1991). *Measures of personality and social psychological attitudes*. New York: Academic Press.

Rose, I. N. (2006). Viewpoint: The Unlawful Internet Gambling Enforcement Act of 2006 analyzed. *Gaming Law Review*, *10*(6), 537-541.

Rosenberg, M. J. (1960a). A structural theory of attitude dynamics. *Public Opinion Quarterly, 24*(2), 319-340.

---. (1960b). Cognitive reorganization in response to an attitudinal affect. *Journal of Personality, 28*, 39-63.

Rosenthal, R. J. (1992). Pathological gambling. *Psychiatric Annals*, *22*(2), 72-78.

Ross, J. K., Patterson, L. T., & Stutts, M. A. (1992). Consumer perceptions of organizations that use cause-related marketing. *Journal of the Academy of Marketing Science*, *20*(1), 93-97.

Rossi, A. N., & Armstrong, J. B. (1999). TRA vs. TPB: Testing the suitability and sufficiency of a popular behavior model using hunting intentions. *Human Dimensions of Wildlife*, *4*(3), 40-56.

Segars, A. H., & Grover, V. (1998). Strategic information systems planning success: An investigation of the construct and its measurement. *MIS Quarterly*, *22*(2), 139-163.

Sen, S., & Bhattacharya, C. (2001). Does doing good always lead to doing better? Consumer reactions to corporate social responsibility? *Journal of Marketing Research*, *38*(2), 225–243.

Shaffer, H. J., & Korn, D. A. (2002). Gambling and related mental disorders: A public health analysis. *Annual Review of Public Health*, *23*(1), 171-212.

Shaw, D., & Shiu, E. (2002). An assessment of ethical obligation and self-identity in ethical consumer decision-making: A structural equation modeling approach. *International Journal of Consumer Studies*, *26*(4), 286-293.

Sheeran, P. (2002). Intention-behavior relations: A conceptual and empirical review. *European Review of Social Psychology, 12*(1), 1-36.

Sheeran, P., & Orbell, S. (2006). Augmenting the TPB: Roles for anticipated regret and descriptive norms. *Journal of Applied Social Psychology*, *29*(10), 2107-2142.

Shinnar, R. S., Young, C. A., & Corsun, D. L. (2004). Las Vegas locals as gamblers and hosts to visiting friends and family: Characteristics and gaming behavior. *UNLV Gaming Research & Review Journal*, *8*(2), 39-48.

Smith, G. J. & Hinch, T. D. (1996). Casinos as tourist attractions: Chasing the Pot of Gold, *Journal of Travel Research*, *34*(3): 37-45.

Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equations models. In S. Leinhart (Ed.), *Sociological methodology* (pp. 290-312). San Francisco: Jossey-Bass.

---. (1986). Some new results on indirect effects and their standard errors in covariance structure models. In N. Tuma (Ed.), *Sociological Methodology* (pp. 159-186). Washington, DC: American Sociological Association.

Sparks, B. (2007). Planning a wine tourism vacation? Factors that help to predict tourist behavioural intentions. *Tourism Management*, *28*(5), 1180-1192.

Sparks, B., & Pan, G. W. (2009). Chinese outbound tourists: Understanding their attitudes, constraints and use of information sources. *Tourism Management*, *30*(4), 483-494.

SPSS. (2001). *SPSS base 11.0 user's guide*. Chicago, IL: SPSS Inc.

Spears, D. L., & Boger, C. A. (2002). Residents' perceptions and attitudes towards Native American gaming in Kansas: Proximity and number or trips to MAG activity. *UNLV Gaming Research & Review Journal*, *6*(2), 13-27.

Stasson, M., & Fishbein, M. (1990). The relation between perceived and preventive action: A within subjects analysis of perceived driving risk and intentions to wear seatbelts. *Journal of Applied Social Psychology, 20*(19), 1541-1557.

Stephenson, J. (1996). For some American Indians, casino profits are a good bet for improving health care. *Journal of the American Medical Association, 275*, 1783-1785.

Steenkamp, J., & Trijp, H. (1991). The use of LISREL in validating marketing constructs. *International Journal of Research in Marketing*, *8*(4), 283-299.

Stinchfield, R. (2002). Reliability, validity, and classification accuracy of the South Oaks Gambling Screen (SOGS). *Addictive Behaviors*, *27*(1), 1-19.

Stokowski, P. A. (1993). Undesirable lag effects in tourist destination development: A Colorado case study. *Journal of Travel Research*, *32*(2), 35-41.

---. (1996). Crime patterns and gaming development in rural Colorado. *Journal of Travel Research, 24*(3), 63-69.

Tabachnick, B. G., & Fidell, L. S. (2001). Using multivariate statistics (4th ed.). Boston, MA: Allyn and Bacon.

Taylor, S., & Todd, P. (1995). Assessing IT usage: The role of prior experience. *MIS Quarterly, 19*(4), 561-568.

Taylor, S. A. (2007). The addition of anticipated regret to attitudinally based, goal-directed models of information search behaviours under conditions of uncertainty and risk. *British Journal of Social Psychology*, *46*(4), 739-768.

Taylor, S. A., Ishida, C., & Wallace, D. W. (2009). Intention to engage in digital piracy: A conceptual model and empirical test. *Journal of Service Research*, *11*(3), 246-262.

Taylor, S. D., Bagozzi, R. P., & Gaither, C. A. (2005). Decision making and effort in the self-regulation of hypertension: Testing two competing theories. *British Journal of Health Psychology*, *10*(4), 505-530.

Tesser, A., & Shaffer, P. (1990). Attitudes and attitude change. *Annual Review of Psychology, 41*(1), 479-523.

Thin, T. O., & Hsu, C. H. C. (1994). Opinions on riverboat casinos and the perceived impacts on community quality by Quad Cities residents. *UNLV Gaming Research & Review Journal, 1*(2), 1-14.

Titz, K., Andrus, D., & Miller, J. (2001). Hedonistic differences between mechanical game players and table game players. *UNLV Gaming Research and Review Journal*, *6*(1), 23–32.

Travelpulse (2010). Orlando, Las Vegas top ASTA's hot spots for summer Travel. Retrieved April 28, 2010, from http://www.travelpulse.com/Resources/Editorial.aspx?n=68090

Triandis, H. C. (1977). *Interpersonal behavior*. Monterey, CA: Brooks/Cole.

Turban, D. B., & Greening, D. W. (1997). Corporate social performance and organizational attractiveness to prospective employees. *The Academy of Management Journal*, *40*(3), 658-672.

Unwin, B. K., Davis, M. K., & De Leeuw, J. B. (2000). Pathologic gambling. *American Family Physician*, *61*(3), 741-754.

Vallerand, J. R., Deshaies, P., Cuerrier, J. P., Pelletier, L. G., & Mongeau, C. (1992). Ajzen and Fishbein's TRA as applied to moral behavior: A confirmatory analysis. *Journal of Personality and Social Psychology, 62*(1), 98-109.

Van de Vijver, F., & Hambleton, R. (1996). Translating tests: Some practical guidelines. *European Psychologist, 1*(2), 89-99.

Van der Pligt, J., & De Vries, N. K. (1998). Expectancy-value models of health behaviour: The role of salience and anticipated affect. *Psychology & Health, 13*(2), 289-305.

Verplanken, B., & Aarts, H. (1999). Habit, attitude, and planned behaviour: Is habit an empty construct or an interesting case of goal-directed automaticity? In W. Stroebe & M. Hewstone (Ed.), *European review of social psychology* (Vol. 10, pp. 101-134). Chichester, UK: Wiley.

Vong, F. (2008). Influence of personal factors on Macau residents' gaming impact perceptions. *UNLV Gaming Research & Review Journal*, *12*, 21-26.

Walker, D. M. (2007). *The economics of casino gambling*. NY: Springer.

Walker, G. J., Courneya, K. S., & Deng, J. (2006). Ethnicity, gender, and the TPB: The case of playing the lottery. *Journal of Leisure Research*, *38*(2), 224-248.

Wansink, B. (1989). The impact of source reputation on inferences about unadvertised attributes. *Advances in Consumer Research*, *16*, 399-406.

Warren, M. G. (2006). Internet casino-style gambling: Is it legal in Nevada? *UNLV Gaming Research & Review Journal*, *10*(1), 21-26.

Weinstein, N. D. (1980). Unrealistic optimism about future life events. *Journal of Personality and Social Psychology*, *39*(5), 806-820.

Welte, J. W., Barnes, G. M., Tidwell, M. C., & Hoffman, J. H. (2008). The prevalence of problem gambling among US adolescents and young adults: Results from a national survey. *Journal of Gambling Studies*, *24*(2), 119-133.

Welte, J. W., Barnes, G. M., Wieczorek, W. F., Tidwell, M. C., & Parker, J. (2002). Gambling participation in the US—Results from a national survey. *Journal of Gambling Studies, 18*(4), 313-337.

Wood, R. T. A., & Griffiths, M. D. (2004). Adolescent lottery and scratchcard players: Do their attitudes influence their gambling behaviour? J*ournal of Adolescence*, *27*(4), 467-475.

Wynne, H., Smith, G., & Volberg, R. A. (1994). *Adult gambling and problem gambling in Alberta*. Edmonton: Alberta Lotteries and Gaming.

Yoon, Y., & Uysal, M. (2005). An examination of the effects of motivation and satisfaction on destination loyalty: A structural model. *Tourism Management, 26*(1), 45-56.

Young, M. M., & Wohl, M. J. A. (2009). The gambling craving scale: Psychometric validation and behavioral outcomes. *Psychology of Addictive Behaviors*, *23*(3), 512-522.

Zagorsek, H., & Jaklic, M. (2007). Resort casino development and its linkage to national and international tourism: A Slovenian perspective. Retrieved July 18, 2010, from http://www.fuds.si/media/pdf/organizacija/nova.gorica.zagorsek.jaklic.pdf

Zint, M. (2002). Comparing three attitude-behavior theories for predicting science teachers' intentions. *Journal of Research in Science Teaching, 39*(9), 819-844.