

Verifying Cross Validation on Water Sports Tourists' Behavioral Intention in Kenting Area with SEM

Chin-Jung Wu^{*}; Yen-Yu Chen^{**} & Mao-Chou Hsu^{***}

^{*}Health and Leisure Industries for Indigenes at National Ping-Tung University, Taiwan

^{**}Corresponding Author,

Hospitality Management Tajen University in Pingtung County, Taiwan;

^{***}Department of Recreation and Sports Management Tajen University, Taiwan

Abstract

The study purpose was conducted based on the theory of planned behavior Ajzen (1985) to verify behavior intention model for sports tourists in the water recreational areas of Kenting, Taiwan. The research method data obtained from the returned survey were analyzed by using descriptive analysis, and the SEM technique was used to analyze the Sport Tourism data for cross-validation and to verify the validity extension between two research groups. The research finding showed the consistency between the study results in 2015 and 2016. Base on the Conclusions, the theoretical and practical recommendations are made to enhance the future understanding of this area.

Key words: *Theory of planned behavior, Structural equation modeling (SEM), Model extension*

1. INTRODUCTION

From 1991, national per capita income was \$ 8,473. By 1998, the government had implemented two days off every other week increased by \$ 2,942. In 2001, two-day weekend has conducted; it was US \$ 11,821, an increase by US \$ 3,348. By 2010, national per capita income was \$ 15,878. From 1991 to 2010, the rate national per capita income increase by 87% (Department of Statistics, 1991, 1998, 2001, 2010).

The above showed that economic growth, people's living standards improve the free time and income as well. Comparing 2009 and 2010, the populations of total number of domestic tourists were 97,990,000 and 123,937,000 respectively. The number of domestic tourists had grown by 26.5%, indicating that total number of domestic tourists will continue to grow (Tourism Bureau of the Ministry of Tourism , 2010)

People gradually realized that they should improve their quality of life, and of course sports and leisure played a very important role. With ease relationship of Cross-Strait and economic development, the government also puts great efforts to enhance people' quality of life. Tourism industry plays a crucial role in the country's economic development (Fang , 2010).

In recent years, the population of domestic people who engaged in sports has generally increased. According to the Bureau of Tourism (2011), "the Survey of Travelers' Conditions in 2009" indicated the purpose of travelers is "pure sightseeing Travel" takes the most parts, followed by "fitness vacation sports". "The Fitness and Vacation "accounted for 7.1% in 2009, 7.2% in 2008 and 7.0% in 2007. This showed that "fitness and vacation" was the major tourism (that is, sports and tourism) has become a very popular sightseeing activity for Taiwanese citizens on the weekend.

The tourism and leisure industry in the 21st century is recognized as the most developed chimneyless industry. That is, people' daily life is inseparable from sightseeing and leisure (Qiu & Li, 2006). Sports, fitness, entertainment, viewing, sports tourism continues to evolve and become a new force in the tourism industry (Chen, 2006). The popularity of sports and tourism, while driving the development of related industries, had a considerable profit and business opportunities.

Among many leisure sports people are willing to participate in water sports (Katz, 1996; Moore, 2002). Water sports sightseeing is currently the most popular area for sports sightseeing tours. Watersports are also the sport that many people in advanced countries spend their leisure time (Doyle, 1989; Moore, 2002).

Recently, In year 2011 the Bureau of Tourism of the Ministry of Transportation launched the "Project Vanguard for Excellence in Tourism" and the "Tour Taiwan and Experience the Centennial" and planned to "develop international tourism, improve domestic tourism quality and increase foreign exchange earnings" (Ministry of Communications Tourism Bureau, 2013), which has led to a gradual understanding of sports and tourism.

Kenting area in Southern Taiwan has superior marine resources with geological landscape, cultural resources, climate and other aspects, have sufficient conditions for the development of sports and tourism (Yan , Xu & Pan , 2012; Yanshi , 2012). In order to make the sports tourism industry in Kenting becoming more vigorous development, it is necessary to further explore the water sports and tourism to make the public understand it.

Sporting and Sightseeing is an individual highly involved activity. The thinking of sports travelers in making decisions before participating sports and sightseeing will prioritizes sports and sightseeing activities from expecting of personal satisfaction and experience. In the sports tourism

activities, it will affect everyone's attitude and behavior changes in sports. Therefore, the “value-attitude-behavior model” is often used to predict the perception of sporting tourists for sightseeing, beliefs, behavioral intentions and actual behavior (Fulton, Manfredo & Lipscomb, 1996; Tarrant, Bright & Cordell, 1997; Vaske & Donnelly, 1999; Yu , Li & Wu , 2005; Zinn, Manfredo, Vaske & Wittmann, 1998).

The “value-attitude-behavior” model and the research variables in this model are all not directly measurable; and some of the potential variables have interplay with each other. The relationship between “attitude and behavior” in the field of marketing psychology is mostly discussed in terms of multiple attributes. Among them, the earliest developed and mature theoretical models are theory of reasoned action (TRA) by Fishbein and Ajzen (1975). The basic assumption is that the behavior occurs from the message evaluation, and the formations of attitudes, then generate behavioral tendencies, and finally produce behavior.

However, in the actual situation, the individual's behavior is usually influenced by money, time and other factors; usually cannot be reasonable justified. The “theory of planned behavior” (TPB) extends to the “theory of rational action” (TRA), which gives more predictable and appropriate explanations with weaker control of personal behavior (Yu Et al., 2005; Yu , 2005). Therefore, this study applies TPB as the fundamental theoretical model (Wu &Lin , 2007).

Tourists' behavioral model has been concerned and explored by researchers and practitioners. Ajzen and Driver (1992) conducted the leisure activities of “theory of rational action” and “theory of planned behavior” in beach, running, mountain-climbing, rowing and cycling and other recreational sports. TPB has better explanation than TRA because it incorporates perceptual behavioral control, which is more effective in predicting various behaviors in the certain environment. It is the most widely accepted theory in many fields of human behavior in the social psychology

The TPB advocates that behavioral intention occurring behavior before action is taken. Individual' s intention is mainly influenced attitude, subjective norm and perceptual behavioral control (Ajzen, 1987; Ajzen & Madden, 1986; Bamberg, Ajzen, & Schmidt, 2003Xu & Yu , 2006). Therefore, using the TPB to construct the behavioral intention model of water sports tourists in Kenting can better show the relationship how they affect each other between behaviors. Therefore, based on the TPB and the researcher of this study revises the attitude as the intermediate variable

Mediation is a fairly important concept of methodology in social science research. Theoretically, mediation is a variable that influences the observation phenomenon; however, these variables are not easily observed, measured or manipulated. Its existence and effect can be inferred from the observed phenomenon by the independent variable to explore the importance of the mediation effect. That can understand the process from independent variable to the dependent variable, and figure out the mediating effect of independent variable.

Baron and Kenny (1986) proposed the concept and verify procedure of mediation effect, which is regarded as a formal procedure for the test of a single level of mediating variables. Baron and Kenny (1986) practice regression analysis to examine mediation effects with three linear equations. In other words, regression analysis is a typical technique for handling mediation effects (Marsh, Wen & Hau, 2006; Moulder & Algina, 2002; Wen, Marsh & Hau, 2002Wen & Qiu, 2009).

However, this test has the following problems: Simple Z test, the mediation effect usually does not meet the normal distribution; and, ± 1.96 , in practice, it does not necessarily represent significant. As

the evaluation of mediation effects becomes more and more important, there are two ways to solve the above problems, which can help to reduce the abnormal estimation error caused by the multiplication of coefficients. (A) Bootstrap technical re-calculation of the indirect effect of confidence intervals and standard errors; (b) Bootstrap technical estimates of indirect effects standard error and normalization coefficients, the indirect value of the calculation of significant level (z value); these new methods have become estimates standard operating procedures.

This study re-estimates the standard error of the path based on the bootstrap estimation technique proposed by MacKinnon (2008) and verifies the standard error of the mediation effect with reference to MacKinnon's (2008) Intermediary Effect Confidence Interval Method, and then calculates the significant level of mediation effect.

MacCallum (1986) conducted the SEM that occurred problems such as not independency between items, high or low correlations, low loading, and underestimates that will have to remove the items. This is called Model Specification Search. In practice, this is as often vulnerable to data driven analysis. In order to effectively prevent the model from generating randomization of capitalization on chance, we must conduct cross-validation after the model execution (Bentler, 1980; Cliff, 1983; Cudeck & Browne, 1983; Huang, 2004; Zhang, 2011; .

SEM analysis, the revised theoretical model must be cross validation to verify its correctness and inferential (Hoyle & Panter, 1995; Li, 2009). In this study, the samples of sports tourists' survey conducted in different years (2015 and 2016) to analyze and the make cross validation data. That exam the validity of the models for the two groups of samples and to exam whether the validity expands to other population.

TRA proposed by Fishbein and Ajzen (1975) is based on Dulany's theory of prepositional control, which incorporates psychologist Vroom's Expected Value Model or Multi Attribute Attitude Model into behavioral intention and subjective norms.

In practice, many factors affect the degree of control of the individual's will (Ajzen, 1985). Human behavior cannot be controlled under complete rationality and will, such as drag racing, alcoholism and weight loss. In actual implementation, many objective conditions must be met; as many people who want to engage in sports and sightseeing cannot enjoy without good weather, bad timing or insufficient information therefore the sightseeing behavior would be difficult to implement.

Leisure recreation, sports, tourism, travel and other activities are often affected by many non-will factors, such as leisure resources, time, weather, opportunities, transportation and other obstacles. The TRA often fails to provide a reasonable explanation for these behaviors because they all involve personal control issues. To be able to make sports tourism and leisure activities, individuals must be able to continue to control "different variables" in order to conduct behavior (Ajzen & Madden, 1986).

In order to overcome the restrictions from TRA, Ajzen and Madden (1986) differentiate behavioral intention into intrinsic and extrinsic factors, and extend the perspectives of time and opportunities factor - a variable of perceived behavioral control (PBC); it has been added to the original TRA and developed into a TPB.

Armitage and Conner (2001) pointed out in a total of 136 literature studies of TPB that it is 5% to 6% better explanative strengths than TRA because of the increased perceived behavioral control (PBC) and the PBC variables reached significant.

Godin and KoK (1996) examined 76 articles on TPB. Among them, 65 articles showed that total variance explained increasing by up to 48% if perceived behavioral control variables added to the model. In addition, Li (2008) point out that many studies applying with TPB will have better prediction and variance explained increasing. That is better than the model applying with TRA. There is more and more studies are applying with TPB in different fields.

Its applications include leisure sports, organizational transformation, ethical behavior (Cordano & Frieze 2000), travel alternatives model (Ajzen 2005), career choice, financial management, seeking help behavior(Xu ,2006), computer and educational behavior, health and medical behavior (Yang , 2008) and so on.

Ajzen and Driver (1992) based on TRA and TPB to study leisure activities. Whether it is recreational activities such as mountain climbing, boating, beach, running and cycling, and etc..... the that total variance explained of TPB is higher than TRA.

All of the above literature reviews point out that TPB can better demonstrate the interrelationship between each construct than TR A. The more positive the assumptions of attitude from TPB, the more obvious the power of social support and the stronger the PBC over activities are, then the stronger the behavioral intention participating in activities (Ajzen & Madden, 1986; Xu & Yu , 2006; Ajzen, 1987).

Competition fiercely in the sports tourism market, Kenting sports tourism industry how to attract more sports tourists? According to researchers indicated that understand the needs of sports tourists, improve service quality, develop potential markets, but also need to know more about the behavior of Kenting sports travelers' preferences. (Xu, Li & Wu, 2011), to attract more sports tourists. Therefore, this study based on the TPB to analyze the tourist behavioral intention of water sports in Kenting area.

According to the TPB, this study will verify the behavioral intention of watersports tourists in Kenting. This theory advocates that behavioral intention can lead to behaviors before taking action, while personal behavioral intentions are mainly influenced by attitudes, subjective norms and perceived behavioral control (Ajzen, 1987;Ajzen & Madden, 1986; Bamberg et al., 2003)

1.1 Attitude

In social psychology, attitude refers to the intrinsic psychological reaction of an individual to an affair, which is a collection of thoughts, feelings, and actions triggered by the affair (Zhang & Yang, 1983). It includes instrumental evaluations such as favorable, harmful, and empirical evaluations such as pleasant, unpleasant, and holistic evaluations such as good and bad (Ajzen, 2002). The attitude refers to a particular attitude towards concerned behavior and also an individual belief in certain behavior, which is regarded as an important factor that directly affects the intention of determining behavior, rather than personal traits (Zhang , 2006).

1.2 Subjective Norm

Subjective norm refers to a set of normative beliefs and perception of social pressures in particular behavior. Individual's decision will adopt motivation to comply of a reference group to act and cooperate (Fishbein & Ajzen, 1975Xu & Yu , 2006).

The impact of subjective norms on behavioral intention did not reach significant in many empirical studies (Davis, Bagzzi & Warshaw, 1989; Dishaw & Strong, 1999; Li et al. 2004; Mathieson, 1991 ; Rhodes, Lee & Courneya, 2002) that is inconsistent with TPB.

Ajzen and Driver (1992) showed that the subjective norms did not have direct effect on the behavioral intention but the subjective norms influence the behavioral intentions through attitude as a

mediator. McFarlane (1996) and Chang (1998) indicated subjective norms influence behavior intentions through mediator of attitude.

Li et al. (2004); Yu and Li (2001), and Yu (2005) represented that subjective norms and perceived behavioral control have an indirect effect on the behavioral intentions through their attitudes.

Zhang and Chang (2009) showed subjective norms did not have direct effect on behavioral intention. Subjective norms have an indirect effect on behavioral intention through attitude.

Davis, Bagozzi and Warshaw (1989); Dishaw and Strong (1999); Igarria, Parasuraman and Paroudi (1996); Mathieson (1991), Yu and Zheng (2004) illustrated subjective norms have direct effect on attitude; subjective norms have an indirect effect on the behavioral intention, and attitude mediated between subjective norms and behavioral intentions variables.

To sum up, in the field of sports and leisure, subjective norms is an important factor for the intense sports behavior.

1.3 Perceived Behavioral Control

Perceived behavioral control is the degree to which the user expects the particular system to be effortless. Therefore, individuals required less resources and time consuming toward new activity, the more likely to be accepted by the tourists. It is limited by the resources and opportunities available to the participant. The more resources and opportunities you have, the less hurdles you anticipate and the better perceived behavioral control (Li, Gu, Wu & Yu, 2004; Lin & Yu, 2003).

Ajzen (1985) argued that when an individual considers himself or herself to be capable of executing or has more resources and opportunities to conduct, the individual's perceived behavioral control becomes stronger to conduct activity. Conversely, similar experiences of the past have made him feel difficult to enforce the behavior and have little control over the individual's perceived behavioral, and they will not have a strong intention to enforce the act. In other words, the behavioral intention must consider the factors of perceived behavioral control. When the individual considers that the perceived behavior control can affect the behavior of individuals; the perceived behavioral control will be stronger and the behavioral intention will be strengthened so that it tends to engage in the activity.

1.4 Behavioral Intention

Behavioral intention refers to the individual for their own certain behavior, the subjective determination. It can be measured from how much the individual is willing to do to achieve this behavior, because the stronger the intention of the act, the higher the probability of the individual engaging in the movement. The TPB expressed that behavioral intentions are the variables that predict the behavior well, and the measure of actual behavior can be replaced by behavioral intention (Fishbein & Ajzen, 1975).

Fishbein and Ajzen (1975) argued that behavioral intention refers to the process of choice, the process of decision-making, and the level of resulting expression (Ajzen & Driver, 1992; Ajzen, 1985, 1988, 1991; Ajzen & Fishbein, 1980 Armitage & Conner, 2001; Fishbein & Ajzen, 1975; Kurland, 1995; Sheeran & Taylor, 1999 Yu, Li & Wu, 2005; Yu & Li, 2001; Li, 2004).

This study regards attitude as a mediating variable that based on the study of Li et al. (2004), Therefore, this study amends subjective norms through mediator of attitude to influence behavioral intention based on Ajzen's TPB (1985).

Model Generating (MG) is the most common method of application. It is unlikely that the model will have a good model fit from the outset, so the model needs to be modified (Anderson & Gerbing, 1988 Zhang & Zheng, 2012)

In practice, most of the research models have been modified to produce new models. Because Model Generating (MG) is exploratory, another set of samples is needed for cross-validation (Breckler,1990; Anderson & Gerbing,1988).

MacCallum (1986) is a SEM researcher. He said that to avoid the Cap Italization on Chance, the model must be cross-validated after setting the search (Huang, 2004; Zhang, 2011; Bentler, 1980 ; Cliff, 1983; Cudeck & Browne, 1983); to verify the correctness, predictability and inference of patterns

Sports tourism related researches such as Kenting sports traveler's behavioral propensity model test of identity between men and women groups to explore the gender identity of gender equality (Chen, Xu & Li (2012).

To explore the construction of the behavioral intention model of tourists in Kinmen, and to explore the identities of measurement models and structural models of samples living in different regions of Taiwan. Based on the TPB (Ajzen, 1985), attitude as a mediating variable, this paper constructs an mediation model for the behavior intention of water sports tourists in Kenting area.

The above studies did not test cross-validation of samples of sports tourists from different years. Therefore, we studied the validity of the study model of cross-validation test and the test model of the two groups of samples of sports tourists surveyed in different years (2015 and 2016), and examined whether the validity of the model can be extended to other population.

2. METHODOLOGY

2.1 Research Structure

This study is based on the above research purposes and relevant research literature, the causal model of attitude, subjective norms, perceived behavioral control and behavioral intention of water sports tourists in waters with SEM to construct Kenting waters Sports traveler behavioral intention model.

The research hypothesis and the research framework are shown in Figure 1

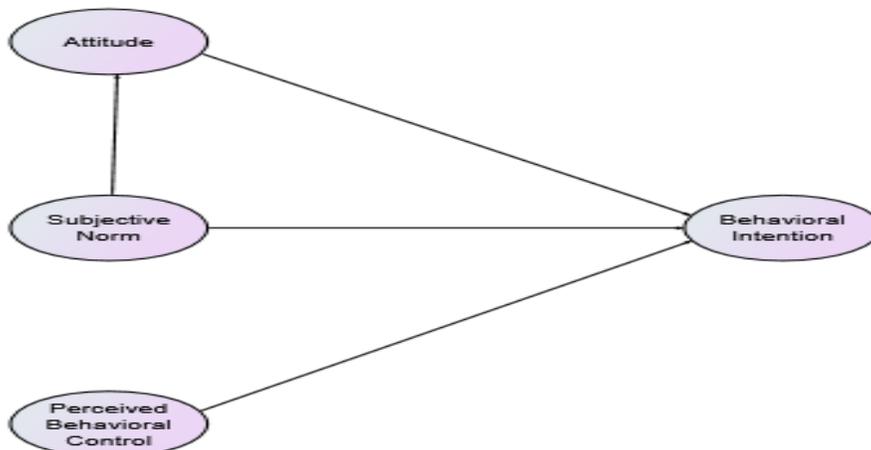


Figure 1 Research Structure

2.2 Hypothesis

Chen (2007) said: “SEM is a way to verify the relationship between variables by using covariance matrices between variables, and to find out how to make the θ co-variation matrix and the sample covariant matrix S closer together”.

H1: Verify the behavioral intention pattern of tourists in waters of Kenting, and expect that there is no difference between the covariance matrix and the sample covariance matrix.

H2 : The more positive of the “attitude” of water sports tourists to waters in Kenting, the more positive the “behavioral intention” for water sports and sightseeing in Kenting area.

H3 : The more positive of the “subjective norms” the water sports tourists in Kenting area, the more positive of the “behavioral intention” for water sports and sightseeing in Kenting area.

H4 : The more positive of the “perceived behavior control”, the more positive of the “behavioral intention” they are to do water sports and sightseeing in Kenting area.

H5: The more positive of “subjective norms” of the water sports in Kenting area, the more positive of “attitude” they are to do sightseeing and water sports activities in Kenting area.

H6 : Mediation effect of “Attitude” of Watersports and Sightseeing in Kenting Area on the Relationship between “subjective norms” and “behavioral intention”.

3. RESEARCH OBJECTS AND SAMPLING METHODS

3.1 Research objects

The study is to target the watersports participating tourists in Kenting, its activities include diving, upstream, water aerobics, jet skiing, surfing, sailing and so on. The most representative area of the Kenting is “South Bay”, which is the best place for performance waters sports development in South Taiwan. Therefore, this study focuses on tourists who engage in watersports activities in “South Bay” area of Kenting.

Table 1 Variable and Operational Definition

Variable	Operational Definition	Literature Review
Attitude	Includes instrumental evaluations such as favorable, harmful, and empirical evaluations such as pleasant, unpleasant, and holistic evaluations such as good and bad (Ajzen, 2002). This study is defined as participating water sports sightseeing in the Kenting area can increase my knowledge and knowledge, participate water sports tourism is a very meaningful activity in Kenting area, participate in Kenting area, water sports sightseeing brings me the pleasure of life, participate in water sports and sightseeing activities is a novel activity , and it is a wise	Yu et al (2005); Yu & Li et al (2004). Ajzen (1980, 1989, 1991), Ajzen & Driver (1992), Ajzen & Fishbein (1980), Fishbein & Ajzen,

Variable	Operational Definition	Literature Review
Subjective Norm	<p>choice to participate in waters sightseeing in Kenting area.</p> <p>The perception of social pressure on whether or not to take an action, that is, how people think about who they care about the belief in the performance of a particular act, and the will to obey the norm. This study is defined as my classmates or friends engaged in water sports or sightseeing in Kenting area, I will take the consideration of the government or expert opinions of water sports tourism in Kenting area, I will participate water sports activities if parents and family members agree with me.</p>	<p>Yu et al (2005); Yu & Li (2001); Li et al (2004). Ajzen (1980, 1989, 1991), Ajzen & Driver (1992), Ajzen & Fishbein (1980), Fishbein & Ajzen,</p>
Perceived Behavioral Control	<p>Ajzen (1985) argues that when an individual considers himself or herself to have more resource and opportunities in conducting activities, the individual's perceived behavioral control becomes stronger, whereas past experiences make him or her feels the activity is difficult, and when the individual's perceived behavioral control is at a low level, they will not have a strong intention to conduct the behavior. This study is defined as I have enough physical strength, information and time to engage in water sports and sightseeing in Kenting area.</p>	<p>Yu et al (2005); Yu & Li (2001); Li et al (2004). Ajzen (1980, 1985, 1989, 1991), Ajzen & Driver (1992). Armitage, & Conne. (2001)</p>
Behavioral Intention	<p>Fishbein and Ajzen (1975) consider that behavioral intention motivate individual takes a specific action, which means that some degree of expression guided by the process of decision-making as that I will strongly recommend others to join water sports in Kenting area. As a whole, I will come to engage in water sports and sightseeing and endure the inconvenience of practicing water sports in this area.</p>	<p>Yu et al (2005); Yu, Li (2001); Li et al (2004).Ajzen, (1985, 1989, 1991),Ajzen & Driver, (1992),Ajzen & Fishbein, (1980)Armitage & Conner (2001) Fishbein & Ajzen, (1975) Kurland(1995),Sheeran & Taylor(1999)</p>

Pilot-test

In the pre-test part, this study adopts the method of purposive sampling from February 19 to February 21, 2015, for three days, taking 50 samples, with the exception of those with incomplete answers, 45 copies returned with fully completed, a return rate is 90%. The pre-test subjects are mainly tourists who are engaged in water sightseeing in the “South Bay” area of Kenting.

Table 2 Pilot-test Reliability

Variable	Mean	Standard Deviation	Crobanch's α
Attitude (ATT)	5.17	0.66	0.71
Subjective Norms (SN)	5.08	0.74	0.73
Perceived Behavioral Control (PBC)	5.20	0.77	0.78
Behavioral Intention (BI)	4.62	1.20	0.84

3.2 Sampling Method

There is no equal opportunity for Kenting water sightseeing population to be taken as sample, and the sample is an individual who is representative and convenient for the researcher to judge subjectively. Therefore, for the purpose of research, subjective judgments were later decided to select samples by purposive sampling (Wu, 2017).

The first stage of the test was conducted from May 23, 2015 to May 29, 2015 at “South Bay” area of Kenting. A total of 10 master's students were inspectors to give away questionnaires for seven days. Detailed explanations of the questionnaire contents were given. A total of 300 subjects were recruited and 292 questionnaires were collected. Subjects with incomplete answers were deleted, and 284 valid questionnaires were collected. The effective questionnaire rate was 94.66%.

The second phase of testing time from May 20, 2016 to May 26, 2016, for seven days, ten master's class students as testers, and a detailed explanation of the questionnaire content; and give the subject a small beautiful gift. A total of 300 subjects were selected. Subjects with incomplete answers were deleted, and 280 valid questionnaires were collected. The effective questionnaire rate was 93.33%.

4. RESEARCH TOOL

4.1 Scale Design

The scale is divided into two parts, and for the actual needs of the questionnaire to be appropriately modified, as a tool for this study: tourist behavior patterns of Kenting area and basic personal information form, respectively.

Tourists Behavioral Intention Scale of Kenting Water Sports Area

This scale refers to Fishbein and Ajzen, (2010); Li et al. (2004), Xu, Li and Wu (2011). The survey was compiled and revised. The scale consists of four dimensions: Attitude has 4 questions, a subjective norm has questions, perceived behavioral control has 4 questions, and behavioral intention has 4 questions. There are 16 questions in this part.

4.2 Personal Profile

This part refers to University Sport Sightseeing Obstruction Scale validity research (Xu, 2010), it includes, gender, age, education level, marital status, place of residence, the total number of 5 questions.

4.3 Scale method

The questionnaire is based on Likert's seven-point scale. According to Bollen (1989), the basic requirements of the verification-based research (SEM) are preferably seven-point scale. Therefore, (1 = "strongly disagree" to 7 = "strongly agree") on the scale of attitude, subjective norms and perceived behavioral control rating.

4.4 Pre-test the scale

In this study, watersports tourists of Kenting area are as a pre-test sample. Gave away 50 copies of the questionnaire, 45 returned copies, 45 valid questionnaires, the effective questionnaire rate of 90%, in the pre-test phase of the study is used to measure the items to test the following procedures (Xu, 2010Yu, 2006).

Calculate the correlation coefficient matrix of questions, and delete or merge the items with high relevance (correlation coefficient higher than .90). If all the items are lower than .90, then all items are reserved.

The purpose of the pretest information is to judge the suitability of the item by statistics and to find out the CR of each item. Behavior Question 1 (B11): "Visitors to future possibility and intention of sports and sightseeing waters of Kenting area". That did not reach a significant level, it was deleted and other items were reserved.

Then calculate the correlation between each item and the total score of the difference. The questions will be deleted if they are less than 0.30. The results show that all the items reached a significant level, they will be retained.

Adopt the consistency test to examine the credibility and consistency between one item and the other item to ensure the validity and reliability of the questionnaire. The resulting internal consistency reliability coefficient will be acceptable between 0.70 ~ 0.90. Wu and Tu (2005) pointed out that the Crobach's α value is preferably up to 0.70 or more.

The Crobach's alpha values of all the items of pre-test in this study are above 0.70, reaching the ideal standard, the reliability of the pre-test data, as shown in Table II.

5. RESULTS

5.1 Descriptive Statistics of Sample Characteristics

The sample of the survey comes from the year 2015 and 2016, so the sample homogeneity needs to be considered before the merger. If the sample is not homogeneous, the merger analysis will lead to wrong conclusions.

In this study, homogeneity test applies chi-square test of gender, age, marital status and residence. Chi-square test applied with SPSS12.0 because the data as a category variable. Chi square test results were 1.39, 6.04, 1.17, 4.99, p values were greater than 0.05. Therefore, it can be proved that there

is no difference in terms of gender, age, marital status and residence between the year of 2015 and 2016, so the two groups can be combined into one group of 564 samples in total.

After the questionnaires were collected and the valid samples were screened, the distribution of the basic information was descriptively analyzed. The order of the questionnaires was respectively as follows, and the data analysis as shown in Table III.

The 2015 sample study is based on descriptive data on gender distribution, with 284 valid samples, 167 males and 117 females. It is shown that the majority of sports tourists who participates watersports in Kenting area are male. In the age group, "21-30" is the highest; indicating that the majority of tourists who participates water sports in the Kenting area and sightseeing are those with the highest number of people aged "21-30". In the marital status segment, "married" of 141 people and "unmarried" of 143 people showed that the marital status of the subjects was close to average. In the part of the status of residence, the "southern part of the country" is the highest, indicating that this respondent mainly refers to the "southern part" as the main ethnic group.

The 2016 sample study is based on descriptive data on the distribution of gender. There are 153 males and 127 females, indicating that more male sportsmen are involved in the watersports of Kenting. In the age group, the highest was "21-30" of 89 persons. In the marital status part, "married" of 150 people; and the proportion of "unmarried" of 130 people was slightly lower; it shows that the marital status of the subjects is close to average. In terms of the status of residence, "Southern" is the highest of 161 people, indicating that the respondents were from the "southern" region as the main ethnic group.

Table 3 Demographic Statistics

Item	Category	Year 2015	Year 2016	χ^2	df	<i>p</i>
Gender	Male	167	153	1.39	1	.25
	Female	117	127			
Age	20 below	53	63	6.04	4	.20
	21-30	84	89			
	31-40	65	60			
	41-50	63	50			
	Over 51	19	18			
Marital Status	Single	141	150	1.17	1	.31
	Married	143	130			
Residence	North	17	29	4.99	3	.17
	Middle	91	86			
	South	170	161			
	East of off shore islands	6	4			

5.2 Convergence validity

The structural equation model (SEM) consists of a measurement model and a structural model. The measurement model is derived from the estimation of potential variables and the structural model is to deal with the relationship between the estimated potential variables. SEM measurement model is more flexible validation of potential variables, and to assess the validity of the construct. The SEM assessment of measurement patterns is called confirmatory factor analysis (CFA) when discussing structural patterns. Only measuring variables without estimating potential variables are called regression analysis or path analysis (Chu, 2003).

Confirmatory Factor Analysis (CFA) is part of the SEM analysis. In this study, the CFA measurement model was reduced to two-stage model Kline (2005), and the test model was first verified in the execution of structural model assessment. In this study, the CFA analysis of facets is carried out. The four constructs of the model are attitude, subjective norms, perceived behavioral control and behavioral intention. All constructs factor loading are between .64 and .94. Compositional reliability (C.R.) is between .79 and .94. The AVE is of between .56 and .80 (see Table 4) met the criteria (Hair, Anderson, Tatham and Black ,1998; Fornell and Larcker 1981). 1. Factor loading is greater than .50; 2. CR is greater than .60; 3. The AVE is greater than .50. Since all the models are match with the standard, all four constructs have convergent validity.

Table 4 CFA Analysis

Latent Variable	Observation Variable	2015				2016			
		Factor Loading	SMC	CR	AVE	Factor Loading	SMC	CR	AVE
ATT	AT1	.88	.77	.93	.77	.88	.77	.93	.77
	AT2	.92	.85			.92	.85		
	AT3	.80	.64			.80	.64		
	AT4	.91	.83			.91	.83		
SN	SN1	.87	.76	.94	.79	.89	.79	.94	.80
	SN2	.89	.79			.93	.87		
	SN3	.91	.83			.87	.76		
	SN4	.88	.77			.89	.79		
PBC	PBC1	.65	.42	.88	.64	.65	.42	.87	.64
	PBC2	.94	.88			.94	.88		
	PBC3	.78	.61			.81	.66		
	PBC4	.81	.66			.76	.58		
BI	BI2	.64	.41	.79	.56	.65	.42	.82	.61
	BI3	.87	.76			.94	.88		
	BI4	.71	.50			.73	.53		

5.3 Discriminant Validity

This study applied AVE method to test the discriminant validity. Fornell and Lacker (1981) pointed out that the square root average extracted (AVE) between the constructs and their measures. Off-diagonal elements are correlations between the constructs needs to be greater than the correlation coefficient of each pairwise variable, representing the discriminant validity of the constructs.

Table 5 Discriminant Analysis

	Year 2015				Year 2016			
	ATT	SN	PBC	BI	ATT	SN	PBC	BI
ATT	.88				.88			
SN	.80	.89			.62	.94		
PBC	.26	.33	.80		.01	.04	.80	
BI	.46	.44	.49	.75	.05	.07	.58	.78

5.4 Structural Model Analysis

In this study, we applied nine fit indices to exam overall model fit (Jackson, Gillaspay, and Purc-Stephenson, 2009). There will be more likely to cause the chi-square value is too large with sample more than 200. It will lead to model fit, so the values for good fit need to be modified by Bootstrap (Xu & Yan, 2013; Bollen & Stine, 1992). The revised good fit model exhibits on table 6. After the model revised by Bollen-Stine Bootstrap method, it shows the overall model fit and results of this study as an acceptable model.

Table 6 Model Fit

(Fit Indices)	Acceptable	2015	2016	Model Fit
Chi-square		116.57	108.74	
Degree of freedom		85	85	
CFI	>0.9	.99	.99	Pass
RMSEA	<0.08	.04	.03	Pass
TLI	>0.9	.99	.99	Pass
GFI	>0.9	.94	.97	Pass
NFI	>0.9	.97	.97	Pass
χ^2/df	<3	1.37	1.28	Pass
AGFI	>0.9	.97	.95	Pass

Therefore, the behavioral intention of water sports tourists in Kenting area constructed by the sample data of this study can be used to explain the actual observation data. In the study, the independent variables have direct effect on the dependent variables: subjective norms to attitudes; subjective norms to behavioral intention; and attitudes toward behavior intention reach significant levels. Therefore, we assume that hypothesis 2, 4, and 5 are supported. Subjective norms toward to behavioral intention did not reach a significant level; therefore, hypothesis 3 was not supported.

Table 7 Hypothesis Results

			2015	2016
			Factor Loading	Factor Loading
2	Attitude	→ Behavioral Intention	.49*	.57*
3	Subjective Norm	→ Behavioral Intention	-.04	-.11
4	Perceive Behavioral Control	→ Behavioral Intention	.44*	.45*
5	Subjective Norm	→ Attitude	.86*	.80*

* $p < .05$

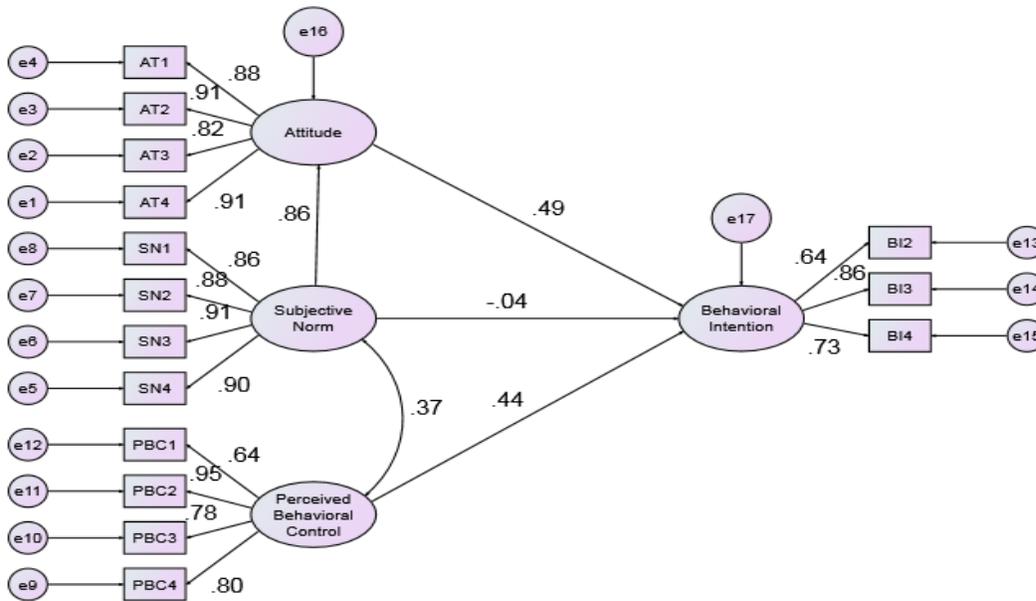


Figure 2. Year 2015 Mediation effect of Water sports Tourists in Kenting Area

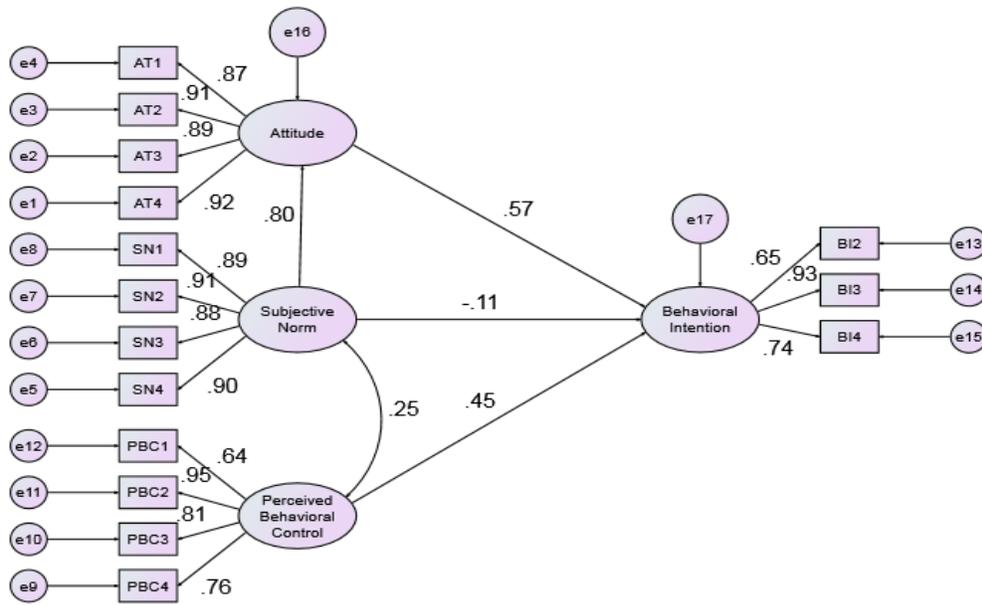


Figure 3. Year 2016 Mediation effect of Water sports Tourists in Kenting Area

5.5 Comparison Of Group Invariance

If the Model did not match the original assumption, you need to be modified model, this step will be set to Model Specification Search (MacCallum,1986). This step is data-driven in order to avoid a capitalization on chance. After the model setting to search, it must be processed with cross-validated (Bentler,1980;Cliff,1983; Cudeck & Browne,1983). In this study, we conducted 284 samples in 2015 and 280 samples in 2016 to do the cross-validation of water sports tourists in Kenting to verify the external validity of the this two groups. First, set factor loading of two groups are the same parameters, there will be 11 factor loadings are set to (DF = 11). The chi square value (χ^2) increased by 16.48, p value is .12, and it is not significant. That means the 11 factor loadings are equal.

In addition to the constraints of the measurement model, there will be 4 path coefficient are set (DF = 15-11 = 4), the chi square value (χ^2) increased by 5.80 ($\chi^2 = 22.28-16.48 = 5.80$), and it is not significant, indicating that these four structural path are coefficient equal.

There will be 3 variances and covariance are set (DF = 18-15 = 3), the chi square value (χ^2) increased by 2.98 ($\chi^2 = 25.26-22.28 = 2.98$), the p value is .12, which did not reach <.05 significant level, indicating that the three variances and the total variation were equal. Therefore, hypothesis 1 is no difference between the expected covariant matrix and the sample covariant matrix.

Table 8 Group invariance comparison

Model	ΔDegree of Freedom	Chi-Square Value	ΔChi-Square Value	P
Coefficient setting measurement	11	16.48		.12
Additional structure coefficient	15	22.28	5.80	.10
Add the covariance structure	18	25.26	2.98	.12

5.6 Mediation Effect Analysis

In this study, the attitude construct as a mediation variable based on the TPB. Subjective norms have an indirect effect on the behavioral intention through attitude. Therefore, the attitude as a mediation variable, subjective norm toward to behavioral intention through attitude of mediator are as shown in Table IX.

Using bootstrap's estimation technique to estimate the standard error of mediation effect and then calculate the significant level of mediation effect. It shows on Table 9 that total effect of subjective norms toward to behavioral intention is .27 in the year 2015 model with a standard error (SE) value is .05, CR value is 5.40, a bias-corrected lower limit value is .17, an upper limit value is 0.38, a percentile 95 % CI of the lower limit value is .17, the upper limit value is .37, and CR value is 5.40 > 1.96, so the total effect of the year 2015 model was supported.

The total effect of subjective norm toward behavioral intention was .26 in the year 2016 model with a standard error (SE) value is .06, CR value is 4.33, a lower limit of Bias-corrected value is .15, an upper limit value is .39, a Percentile 95% CI of the lower limit value is .14, the upper limit value is .37, CR value is 4.33 > 1.96, so t the total effect of the year 2016 model was supported.

The indirect effect of subjective norm toward to behavioral intention was .30 in the year 2015 model, the standard error (SE) value is .08, the CR value is 3.75, the lower limit of Bias-corrected value is .14, the upper limit value is .47, and the Percentile 95% of CI the lower limit value is .13, the upper limit value is .45, CR value is 3.75 > 1.96, so the indirect effect of the year 2015 model was supported.

The indirect effects of subjective norm toward to behavioral intention of the year 2016 model is .32, the standard error (SE) value is .07, the CR value is 4.57, the bias-corrected lower limit value is .21. The upper limit value is .48. The Percentile 95% of CI Lower limit value is .18, upper limit value is .45, CR value is 4.57 > 1.96, so the indirect effect of the year 2016 model was supported.

Table 9 Mediation

Variable	Year 2015						Year 2016							
	Point estimate	Coefficient multiplication	Bootstrapping				Point Estimate	Coefficient multiplication	Bootstrapping					
		product of Coefficients	Bias-Corrected 95% CI	Percentile 95%CI				product of Coefficients	Bias-Corrected 95% CI	Percentile 95%CI				
	SE	Z	Lower	Upper	Lower	Upper	SE	Z	Lower	Upper	Lower	Upper		
Total Effect														
Subjective	.27	.05	5.40	.17	.38	.17	.37	.26	.06	4.33	.15	.39	.14	.37
Norm →														
Behavioral														
Intention														
Indirect Effect														
Subjective	.30	.08	3.75	.14	.47	.13	.45	.32	.07	4.57	.21	.48	.18	.45
Norm →														
Behavioral														
Intention														

6. DISCUSSION

This study uses SEM analysis to verify the model's reliability and validity, and the scale is divided into four constructs: "attitude", "subjective norms", "perceived behavioral control" and "behavioral intention". The analysis results show that the models of 2015 and 2016 reached the standardized path coefficients, the composite reliability and the average variance extracted are both reach the convergent validity criterion (Bagozzi and Yi,1988). The model of 2015 and 2016 Bootstrap correlation coefficient 95% confidence interval does not contain 1, so that reach the discriminant validity criterion.

The models of 2015 and 2016 have an overall model good fit; observation variables and potential variables have good reliability, convergent validity, discriminant validity, cross-validity. Therefore, this study of the behavioral intention of water sports tourists of Kenting area is fully verified. Hypothesis I in the study of behavioral intention of watersports tourists in Kenting is expected that the covariance matrix and the sample covariant matrix will be supported. In the 2015 and 2016 models, "attitude" and "perceived behavioral control" have significant effects on "behavioral intention". Among them, "perceived behavioral control" has the most significant impact on "behavioral intention", which is consistent result with the studied of Ajzen and Driver (1992), Mcfarlane (1996), Xu (2006) This is because that the water sports in Kenting area need sufficient physical strength to carry out the activities smoothly, and the water sports activities are required technical support such as swimming, paddling,

diving, canoeing and so on. It is very important that behaviors and attitudes that are easier to engage in daily life, whereas behaviors that are less frequently performed are more likely to be influenced by perceived behavioral control (Xu, 2006).

This study revised viewpoints of TPB (Ajzen's 1985,1989,1991) and then take reference of refers from the research of the construction of Kinmen's behavioral intention model for sightseers, taking construct of attitude as a mediator. The study found that subjective norms had no direct effect on behavioral intention but had indirectly effect on behavioral intention through attitude. This result was in line with the study of Recreational Behaviors at Beach and Bike by Ajzen and Driver's (1992), Bird Watching Leisure Activities by Mcfarlane (1996), and Study on the Intent-Attention Pattern of High School Students Movement Associations by Zhang Chi-Pei & Cheng Chi-Fu (2009). The Study of Theory of Planned Behavior to Verify the Behavioral Intention of Water Sports Tourists of Kenting Area by Yan, Xu and Pan (2012), and other empirical studies found that subjective norms have no direct effect on behavioral intention but have indirect effect on behavioral intention through attitude.

To sum up, in order to verify the mediating effect of attitude, this study uses the trust interval method to verify that subjective norms have an impact on the behavioral intention through attitude. Therefore, attitude plays an important role in the mediation effect.

The results of this study show that there is consistency between the water sports sightseeing patterns of Kenting area in the year 2015 and 2016, which shows that there is no significant change in behavioral intention of waters sports tourists in Kenting area. However, all the standardized path coefficients have significant effects except for the subjective norms, which have no direct effect on the behavioral intention in the year 2015 and 2016.

In comparison with the year model of Kenting watersports sightseeing in 2015 and 2016, the subjective norms have an effect on the behavioral intention through the mediating effect of attitude, and the subjective norms have no direct effect on the attitude, and that is fully mediation, thus confirming that attitudes play an important role in mediating effects of both years.

Management implication

Based on the findings of this study, the researchers proposed the following suggestions to be used as references for researchers in related fields for water sports sightseeing in Kenting area.

1. Suggestion for water sports sightseeing in Kenting area

1-1 According to the results of the study, it is found that perceived behavior control of tourists who are engaged in water sports in Kenting area has the most significant impact on behavioral intention. Therefore, to enhance the participation of water sport tourists in Kenting areas, practitioners can put efforts on visitors' perceived behavioral control. The results of this study showed that enough money, physical strength, time and information can positively affect whether tourists participate water sports and sightseeing in Kenting area, thus reducing the tourist's consumption cost so as to enhance visitors' behavioral intention engaging in water sports in Kenting area.

The study suggested that Hotel practitioner could cooperate with water sports activity providers to reduce tourists' cost visiting Kenting area, such as hotels can provide coupons for water activities, or purchase three kinds of water sports activities will offer dinner discount voucher in order to reduce tourists' economic loading.

One of the most significant changes in the twenty-first century is the development of network, which makes the transmission of all kinds of information borderless and no time difference. Statistics of

Tourism Bureau of Tourism (2011) pointed out that the most popular channel of travel information for the public through their relatives, friends, colleagues or classmates counted for 51%, followed by 33% of the computer network, and then would be 14% of electronic media in 2010. The above data shows that computer network plus electronic media play an important role in information dissemination (Yan Shikuan, Xu Mao Zhou, Pan Fengquan, 2012).

Therefore, it is suggested that practitioners in Kenting area should introduce local tourism information through the Internet, print media and travel manuals so that instant information can be quickly and easily obtained by tourists and make tourists fully accessible of tourism information of Kenting area. Not only will tourists be provided with the desirable information but they also need enhance their perceived behavioral control so as to improve the behavioral intention in Kenting area.

According to the findings of the study, the year 2015 and 2016 of subjective norms did not have a direct impact on tourists' behavioral intention in Kenting but indirectly affected behavioral intention through attitude. The possible reasons could be tourists are mostly 20 years adults with independent thinking and judgment, and they are less likely to be influenced by their peers, the media, government, parents, etc.

Therefore, the attitude of tourists may be an important role to promote tourists participate water sports in Kenting area. For example, the introduction of scuba diving, speedboat paddling, water parachutes, canoes, etc., not only can it increase the excitement of water sports in Kenting area, but it also can have more fun to engage in water sports. In addition to enhancing the attitudes of water sports tourists in Kenting area, it is possible to increase the behavioral intention of water sports and sightseeing of Kenting area. It also motivates the behavior to participate the water sports activities and sightseeing.

Reference

- [1]. Accounting Office (1991,1998,2001,2010). Executive Yuan Office. 1991, 1998, 2001, 2010 Social Indicators and Calendar Topics - Cultural and Leisure Tables. Online search date: July 15, 2016. Website: <http://www.dgbas.gov.tw/mp.asp?mp=1>.
- [2]. Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In Kuhl, J., & Beckmann, J. (eds.), *Action-Control: From Cognition to Behavior*, 11-39. Heidelberg: Springer.
- [3]. Ajzen, I. (1989). *Attitude, personality, and behavior*, The Dorsey Press, Chicago.
- [4]. Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50 (2), 179-211.
- [5]. Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology*, 32 , 1-20.
- [6]. Ajzen, I.(1987).Attitudes, traits and actions: Dispositional prediction of behavior in personality and social psychology .*Advances in experimental social psychology*,20,1-61
- [7]. Ajzen, I., & Driver, B. L. (1992). Application of the theory of planned behavior to leisure choice. *Journal of Leisure Research*, 24(3), 207-240.
- [8]. Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*, Englewood cliffs, NJ: Prentice-Hall.
- [9]. Ajzen, I., & Madden, T. J. (1986). Prediction of goal directed behavior: Attitudes, intentions, and perceived behavioral control. *Journal of Experimental Social Psychology*, 22, 453-474.
- [10]. 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
- [11]. Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. *British Journal of Social Psychology*, 40 , 471-499.
- [12]. Bagozzi, R. P., & Yi, Y. (1988). On the evaluation for structural equation models. *Journal of the Academy of Marketing Science*, 16, 74-94.
- [13]. Bamberg, S., Ajzen , I., & Schmide, P. (2003). Choice of Travel Mode in the Theory of Planned Behavior: The Roles of Past Behavior, Habit and Reasoned Action. *Basic & Applied Social Psychology*, 25(3), 175-187.
- [14]. 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.
- [15]. Bentler, P. M. (1980). Multivariate analysis with latent variables: Causal modeling. *Annual Review of Psychology*, 31(1), 419-456.
- [16]. Bollen, K. A. (1989). *Structural equations with latent variables*. New York: Wiley.
- [17]. Bollen, K. A., & Stine, R. A. (1992). Bootstrapping goodness-of-fit measure in structural equation models. *Sociological Methods and Research*, 21, 205-229.
- [18]. Breckler, S. J. (1990). Applications of covariance structure modeling in psychology: Cause for concern? *Psychological Bulletin*, 107, 260-273
- [19]. Brown, M. W., & Cudeck, R. (1993). Alternatives ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models*. Newbury Park, CA: Sage
- [20]. Chang, M. K.(1998). Predicting unethical behavior: A comparison of the theory of reasoned action and the theory of planned behavior. *Journal of Business Ethics*, 17(16),1825-1834.

- [21]. Chen, S.M., Xu, M.Z., & Li, F. (2012). Kenting sports tourists behavioral tendencies in male and female groups on the measurement of identity test. *Journal of Leisure Industry Management*, 5(3), 1-21.
- [22]. Chen, S.Y. (2007). *Structural Equation Model Amos Operation*. Taipei: Psychology.
- [23]. Chen, X.Y. (2006). Reflection on the Economic Changes around Taihu Lake and the Development of Sports Tourism. *Journal of Physical Education*, 13(1), 42-44.
- [24]. Cliff, N. (1983). Some cautions concerning the application of causal modeling methods. *Multivariate Behavioral Research*, 18, 115-126.
- [25]. Cordano, M., & Frieze, I. H. (2000). Pollution reduction preferences of U.S. environmental managers: Applying Ajzen's theory of planned behavior. *Academy of Management Journal*, 43, 627-641.
- [26]. Courneya, K. S., Plotnikoff, R. C., Hotz, S. B., & Birkett, N.J. (2000). Social support and the theory of planned behavior in the exercise domain. *American Journal of Health Behavior*, 24(4), 300-308.
- [27]. Cudeck, R., & Browne, M. W. (1983). Cross-Validation of Covariance Structure. *Multivariate Behavioral Research*, 18, 147-167.
- [28]. Davis, F. D., Bagozzi, R. P. & Warshaw, P. R. (1989) Extrinsic and intrinsic motivation to use computers in the workplace, *Journal of Applied Social Psychology*, 22, 1111-1132.
- [29]. Diamantopoulos, A., & Siguaw, J. A. (2000). *Introducing LISERAL: A guide for the uninitiated*. Thousand Oaks, CA: SAGE.
- [30]. Dishaw, M. T., & Strong, D. M. (1999). Extending the technology acceptance model with task-technology fit constructs. *Information and management*, 36, 9-21.
- [31]. Doyle, T. B. (1989). *Survival of the fittest*. *American Demographics*, 11(5), 40-41.
- [32]. Fishbein, M., & Ajzen, I. (2010). *Predicting and changing behavior: The reasoned action approach*. New York: Psychology Press.
- [33]. Fang, X. Y. (2010). Sports and Tourism: Multiple Forums - Sports and Tourism. *School Physical Education*, 121, 116. Fornell, C., & Lacker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error, *Journal of Marketing Research*. 18, 39-50.
- [34]. Fulton, D. C., Manfredo, M. J., & Lipscomb, J. (1996). Wildlife value orientations: A conceptual and measurement approach. *Human Dimensions of Wildlife*, 1(2), 24-47.
- [35]. Godin, G., & Kok, G. (1996). The theory of planned behavior: A review of its applications to health-related behaviors. *American Journal of Health Promotion*, 11(2), 87-98.
- [36]. Hair, J. F. Jr., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis* (5th ed.). Upper saddle River, NJ: Prentice Hall.
- [37]. Hausenblas, H. A., Carron, A. V., & Mack, D. E. (1997). Application of the theories of reasoned action and planned behavior to exercise behavior: A meta-analysis. *Journal of Sport and Exercise Psychology*, 19(1), 36-51.
- [38]. Hoyle, R. H., & Panter, A. T. (1995). *Writing about structural equation models*. In R. Hoyle (Ed.), *Structural Equation Modeling*. Thousand Oaks, CA: Sage Publications
- [39]. Huang, F. M. (2004). *Social Science Statistical Methodology: Structural Equation Modeling*. Taipei: Wu Nan.
- [40]. Igarria, M., S., Parasuraman., & Baroudi, J. J. (1996). A motivational model of microcomputer usage, *Journal of Management Information Systems*, 13(1), 127-138.

- [41]. Jackson, D.L., Gillaspay, J.A., & Purc-Stephenson, R. (2009). Reporting practices in confirmatory factor analysis: A review and some recommendations. *Psychological Methods, 14*,6-23.
- [42]. Katz, J. (1996). *The aquatic handbook for lifetime fitness*. Needham Heights, MA: Allyn and Bacon.
- [43]. Kline, R. B. (2005). *Principles and practice of structural equation modeling* (2nd. ed.). New York: Guilford Press.
- [44]. Kurland, N. B. (1995). Ethical intentions and the theories of reasoned action and planned behavior. *Journal of Applied Social Psychology, 25*(4) , 297-313.
- [45]. Ling, Y. L. (2002). *Predict and explain the national Donghua University students engaged in running, singing KTV, Internet cafe three kinds of leisure activities - planning theory for the application*. National Donghua University, unpublished master's thesis, Hualien County.
- [46]. Li Mao can (2009). Illustration AMOS application in academic research. Taipei City: Wu Nan.
- [47]. MacCallum, R. C.(1986).Specification Searches in Covariance Structure Modeling. *Psychological Bulletin, 100*(1),107-120.
- [48]. MacKinnon, D. P. (2008). *Introduction to statistical mediation analysis*.
- [49]. *Mahwah*, NJ: Erlbaum.
- [50]. Marsh, H.W., Wen, Z., & Hau, K-T. (2006). *Structural equation models of latent interaction and quadratic effects*. In G.R. Hancock & R.O. Mueller (Eds.), *Structural equation modeling: A second course* (pp. 225-265). Greenwich, CT: Information Age Publishing.
- [51]. Mathieson, K. (1991). Predicting user intentions: Comparing the technology acceptance model with the theory of planned behavior. *Information Systems research, (2)*,173-190.
- [52]. McFarlane, B. (1996).Socialization influences of specialization among birdwatchers. *Human Dimensions of wildlife, 1*(1),35-50.
- [53]. Ministry of Tourism Bureau of Tourism (2010). 2010 national tourism survey. Online search date: July 15, 2016. Website: <http://admin.taiwan.net.tw/indexc.asp>.
- [54]. Ministry of Tourism Bureau of Tourism (2011). Tourism Bureau Administration Information System Tourism Market Survey. March 23, 2016. Taken from <http://admin.taiwan.net.tw/statistics/market.aspx?no=133>.
- [55]. Ministry of Tourism Bureau of Tourism (2013). 2011 governance priorities. Online retrieval date: July 22, 2016. Website: [# Top](http://admin.taiwan.net.tw/public/public.aspx?no=122)
- [56]. Moore, M. L. (2002). *A competency analysis of aquatic professionals* .Unpublished master's thesis, University of Oregon, Eugene, Oregon.
- [57]. Moulder, B. & Aligina, J. (2002). Comparison of models for estimating and testing latent value interactions, *Structural Equation Modeling: A Multidisciplinary Journal, 9*, 1-19.
- [58]. Qiu, S. Z.,& Li, C.H. (2006). Sports Tourism and Regional Development. *Chinese Sports Quarterly, 20* (2), 46-54.
- [59]. Qiu. H. Z. (2003). *Structural Equation Model: Theory, Techniques and Applications of LISREL*. Taipei: Sha Yieh.
- [60]. Rhodes, R. E., Lee, W. J., & Courneya, K. S. (2002). Extending the theory of planned behavior in the exercise domain: A comparison of social support and subjective norm. *Research Quarterly for Exercise and Sport, 73*(2), 193-199.

- [61]. Sheeran, P., & Taylor, S. (1999). Predicting intentions to use condoms: A meta-analysis and comparison of the theories of reasoned action and planned behavior. *Journal of Applied Social Psychology*, 29(8), 1624-1675.
- [62]. Tarrant, M. A., Bright, A. D., & Cordell, H. K. (1997). Attitudes toward wildlife species protection: Assessing moderating and mediating effects in the value-attitude relationship. *Human Dimensions of Wildlife*, 2(2), 1-20.
- [63]. Vaske, J. J., & Donnelly, M. P. (1999). A value-attitude-behavior model predicting wild land preservation voting intentions. *Society and Natural Resources*, 12(6), 523-537.
- [64]. Wen Fuxing, Qiu Hao Zheng (2009). Multilevel mediation effect in organizational research: A case study of the organizational innovation atmosphere, organizational commitment and job satisfaction. *Journal of Management*, 26(2), 189-211.
- [65]. Wen, Z., H. Marsh, W., & Hau, K. (2002). Interaction effects in growth modeling: A full model, structural equation modeling: *A Multidisciplinary Journal*, 9, 20-39.
- [66]. Wu, S., & Lin, D. Q (2007). To Discuss the Knowledge Sharing Behavior of Information Staffs with the Theory of Planned Behavior. *Journal of Information Management*, 14(2), 75-110.
- [67]. Xu Maochou (2010). Research on the Constructiveness and Validity of College Students' Obstacles in Sports Sightseeing. *Journal of Sports and Leisure Management*, 1, 174-186.
- [68]. Xu, M. C, Li, F.E., Wu, L. H. (2011). Research on the Participation of Members of Water Sports Association in Kenting Waters Sports and Traveling Behavior. *Journal of Sports and Leisure Management*, 8(1), 77-92.
- [69]. Xu, M.Z., Pan, F. Q., Huang, Q.M. (2011). Research on the Behavior of Sport Tourists in Green Island Waters - Verification of Project Behavior Theory. *Journal of Physical Education and Sport in Taiwan*, 11 (2), 43-67.
- [70]. Xu, M. Z., & Yan, H. P. (2013). Program Behavior Theory to Construct Senior High School Students' Behavior Pattern of NBA Jeremy Lin Ball Players. *International Journal of Lisrel*, 6 (1), 24-56.
- [71]. Xu, J. M.(2006). Research on Intention of Orbiting Appreciation in Baseball Game - Application of Planning Behavior Theory. *National Institutes of Physical Education*, 17(4), 11-24.
- [72]. Xu, Y. H., & Yu, T. K. (2006). Construction of Internet Schemes of Students in a University in the East of China. *Journal of Educational Psychology*, 37(3), 257-274.
- [73]. Yan, S.G. (2012). *A Study on the Behavioral Intentions of Tourists to Verify the Performance of Watersports in Kenting by Plan Theory of Action*. Daren University Leisure Management Institute, unpublished master's thesis, Pingtung County.
- [74]. Yan, S.K., Xu, M., & Pan, F.Q (2012). A Study on the Behavioral Intentions of Tourists to Verify the Performance of Watersports in Kenting by Plan Theory of Action. *International Journal of LISREL*, 5(2), 1-32.
- [75]. Yang, Z. F. (2008). *The main trend of the theory of a theory of program research using the literature co-cited analytical methods*. Unpublished master's thesis, National Chiao Tung University, Hsinchu County.
- [76]. Yu, T. K. (2006). An Empirical Study of Cognitive Patterns and Internet Teaching Curriculum Adopting Behavioral Intentions. *Education and Psychology*, 29(4), 67-77.
- [77]. Yu, T. K., & Li, N. H. (2001). Construction and Empirical Study on the Model of Tourism Satisfaction Affecting North People to Kinmen. *Outdoor Recreation Research*, 14(4), 51-76.

-
- [78]. Yu, T. F., Li, N. H., & Wu, G. S. (2005). An Empirical Study on Tourism Intention of Kinmen - Cross Validation of Linear Structural Model, *Journal of Tourism Research*, 11, 4.
- [79]. Yu, T. K., & Zheng, S. Y. (2004). Research on Online Chat Behavior Models in Virtual Communities. *E-commerce Research*, 2(2), 117-136.
- [80]. Yu, T. K. (2005). An Empirical Study of Online Behavior Patterns in Virtual Communities - Cross - validation of Linear Structure Patterns. *Jiaotong University Journal of Management*, 25(1), 67-95.
- [81]. Zhang, Q. P., & Zheng, Z. F. (2009). A Study on the Mode of Participation of High School Students Sports Associations. *Journal of Physical Education*, 42 (3), 95-112.
- [82]. Zhang, C. X., & Yang, G. S. (1983). *psychology*. Taipei: Sha Min.
- [83]. Zhang, L. X. (2006). The Intent of Political Behavior in the Development of Information System: A Study Based on the Theory of Planned Behavior - A Comparison of the Differences between Information Professionals and Users. *Chinese Journal of Management*, 23(3), 347-365.
- [84]. Zhang, W. H. (2011). *Paper writing SEM does not ask for help*. Kaohsiung City: Tri-star Statistics.
- [85]. Zhang, W. H., & Zheng, S. Y. (2012). *Dances with Structural Equation Models: Dawn Emerges*. New Taipei City: Fortune Culture.
- [86]. Zinn, H. C., Manfredi, M. J., Vaske, J. J., & Wittmann, K. (1998). Using normative beliefs to determine the acceptability of wildlife management actions. *Society and Natural Resources*, 11(7), 649-662.