

Full Length Research Paper

Applying the theory of planned behavior to explore the independent travelers' behavior

Chih-Yung Tsai*

Department of Business Administration, National Formosa University. Correspondence to: Dr. Chih-Yung Tsai. Tel: +886-5-631-5775. Address: No.64, Wunhua Rd., Huwei Township, Yunlin County 632, Taiwan (R.O.C.)
E-mail: ba_cytsai@nfu.edu.tw

Accepted 29 July, 2010

This study analyzes the behavior of Independent traveler participants on the basis of projected behavior theory. The results are as follows: (1) key person's opinion to the participant is the most significant to the participant's willingness to spend time to actively learn related knowledge before joining in the Independent traveler. (2)The greater confidence and capability the participant has during Independent traveler, the more measures are taken involved in the Independent traveler. (3)The more measures taken involving the Independent traveler by the participant, it is more likely the participant to join the Independent traveler. (4) The opinion from other key persons has impact on the participant's willingness to promote or recommend others to join the Independent traveler. (5)The greater confidence and capability the participant has, it is more likely the participant to join the Independent traveler. (6)The more thoughts the participant has, the more frequent the participant actually joins the Independent traveler. (7)The greater confidence and capability the participant performed during the Independent traveler, the more frequent the participant joins the Independent traveler.

Key words: Theory of planned behavior, travel behavior, independent travel.

INTRODUCTION

In recent years, the average annual income of Taiwanese has regularly increased. The quality of life of Taiwanese has also continuously improved. With the implementation of the 'two days- off a week' policy, Taiwanese have started to engage in more travel activities, given more leisure time and money. The growing trend of traveling has resulted in a significant increase in travel expenditure. In this rapidly changing society, Taiwanese now have more travel alternatives available in diverse forms.

According to the 2006 Survey of Travel by R.O.C. Citizens (Tourism Bureau, Rep., 2007), 90% of Taiwanese travel on their own itinerary with travel information largely gathered from family, friends and colleagues. The majority choose "traveling on their own itinerary" (95.6%) in their domestic travels. Thus, for the airline, hotel and bed-and-breakfast industries, identifying those factors influencing individuals to engage in independent travel is essential in seeking out business opportunities. Independent travel is a growing trend in domestic travels in Taiwan. An investigation into past research on indepen-

dent travel reveals a focus on the experiences of independent traveler (Hsu and You, 2005); the perceived constraints of outbound travel for individuals engaged in independent travel (Yang et al., 2007a); and, the relationship between purchase motives, purchase involvement and purchase intention of independent travel (Huang, 2005). On predicting the probability of a behavior, the Theory of Planned Behavior proposed by (Ajzen, 1991) has been applied extensively. It suggests that there are three factors that determine behavioral intention: attitude, subjective norm and perceived behavioral control. These can be used to predict the probability of a successful behavior attempt. There has been relatively little research done on independent travel behavior using TPB. Thus, this study uses TPB as its theoretical foundation in analyzing independent travelers' behavior patterns of Taiwanese. It also examines the factors affecting their behavioral intention towards independent traveler participation and the interactive effects between behavioral intention and actual behavior.

LITERATURE REVIEW

Independent travel

Chen (1987) define independent travel as: "travel characterized by the complete involvement of individuals in its design, allocation of resources, control and execution throughout the course of travel from the planning of the itinerary to the actual travel experience and until its conclusion".

Theory of planned behavior

To overcome the limitation of dealing with behaviors over which individuals have incomplete volitional control in theory of reasoned action (TRA), Ajzen (1987) added another antecedent to the theory called perceived behavioral control, representing other irrational factors, which led to the development of theory of planned behavior (TPB).

TPB supposes (Ajzen, 2001) that individual behavior is influenced by behavioral beliefs, normative beliefs and control beliefs. Behavioral beliefs can generate the attitude of an individual towards a behavior. Normative beliefs lead to the subjective norms of an individual. Control beliefs are the perceived behavioral control of an individual.

Attitude

Attitude refers to a relatively persistent and consistent behavioral inclination of individuals based on their recognition and likes and dislikes of people, event objects and the environment (Olson and Zanna, 1993). Lippa (1990) considered attitude as a kind of evaluative response (like or dislike) towards a particular object. He emphasized it as an intervening variable in social psychology research and a hypothetical construct that can be inferred but cannot be directly observed.

Subjective norms

Ajzen and Fishbein (1991) regarded subjective norm as the product of normative belief and motivation to comply. Normative belief reflects the pressure perceived by individuals to perform or not to perform a behavior in relation to those persons or organizations important to them. Motivation to comply refers to the willingness of individuals to comply with important others' expectations when deciding whether to perform a certain behavior or not. Subjective norms are normally the influence of those persons or organizations important to individuals when performing a certain behavior (Ajzen, 1991).

Perceived behavioral control

If an individual is to actually perform a behavior, he must

be able to control the objective situations, such as resources, time and money. Perceived behavioral control is a composition of control belief or the beliefs about the factors facilitating or impeding the behavior and the control power individuals have over these factors (Ajzen, 1985). The intention of individuals is affected by attitude, subjective norm and perceived behavioral control. Perceived behavioral control not only influences intention, but it may also directly influence the behavior of an individual. For example, a person needs to have time and the economic conditions that will allow him to engage in leisure activities. Otherwise, no matter how passionate about leisure this individual is and no matter how society has commended the significance of leisure travel towards a person's life, if this individual has little money and no spare time, his leisure intention will be constrained and thus harder for an actual behavior to manifest.

Behavioral intention

Ajzen (1991) defined intention as a person's subjective probability of performing a behavior. It reflects the willingness of an individual to engage in a certain behavior. In the study of leisure and recreation, behavioral intention refers to the intention of an individual to participate again within a year of having traveled and the willingness to expend more for travel (Baker and Crompton, 2000). Measuring behavioral intention is mainly conducted using such indicators as the intention to travel again, a positive word of mouth and the willingness to recommend (Woodside et al., 1989; Ross, 1993; Baker and Crompton, 2000; Bigné et al., 2001; Kozak, 2001).

Behavior

Hsing (2002), defined behavior as the performance of an action at a certain time in a certain context and with a certain purpose. For this study, behavior refers to the frequency of actual occurrences of independent travel conducted under various possible circumstances and purposes within the past three years.

Hypothesis

The relationship of subjective norms towards attitudes

Wu and Lin (2007) revealed that Subjective norm can directly influence attitude. Both have a significant relationship with each other. As the positive support received by individuals from other persons or organizations important to them becomes greater, their attitude also becomes more positive (Yu et al., 2005). Kuo (1998) shows an interactive effect among intervening variables such as usage attitude and subjective norm during path

analysis. When the subjective norms of respondents are more positive, their attitudes also become more positive. Research of (Yu et al., 2005) into the behavior patterns of downloading MP3 shows that the subjective norm of users on downloading MP3 positively influences their attitude. In view of these, this study presents its first hypothesis: there exists a significant relationship between subjective norm and participation attitude.

The relationship of perceived behavioral control towards attitudes

The TPB proposed by Ajzen (1985; 1991) does not consider that perceived behavioral control influences attitude. However, attitude can be an intervening variable of the subjective norm when influencing behavioral intention. Thus, in the causal model constructed by (Yu et al., 2005) specifying the behavioral tendencies of Taiwanese tourists in Kinmen, attitude was made an intervening variable. Results of this study show attitude as an intervening variable in the effect of perceived behavioral control towards behavior intention. From this, it can be said that perceived behavioral control has a positive effect on attitude. Yu et al (2005) Research of the behavior patterns of downloading MP3 shows that the perceived control behavior of users on downloading MP3 positively influences their attitude. Taking these into account, this study gives its second hypothesis: there exists a significant relationship between perceived control behavior and participation attitude.

The relationship of attitudes towards behavioral intentions

Ghen and Liu (2004) attitude is a main factor influencing behavioral intention. Attitude can be used to predict behavioral intention (Ajzen and Driver, 1992). When attitude is used to predict behavioral intention, attitude serves as an important predictive factor (Huang, 2002). Bock and Kim (2002) maintained that individual attitude influences behavioral intention. Research shows that the attitude on participation in eco-travel through the use of the Internet has a positive significant relationship with the behavioral intention to participate in eco-travel (Chan and Yu, 2008). Thus, this study presents its third hypothesis: there exists a significant relationship between participation attitude and behavioral intention towards independent traveler.

The relationship of subjective norm towards behavioral intentions

Ajzen and Driver (1992) proposed that the subjective norm can predict behavioral intention. It is the most important predictive factor of behavioral intention (Chao,

1998). Bock and Kim (2002) and Ryu et al (2003) presented that individual subjective norm can influence behavioral intention. Moreover, as subjective norm becomes more positive, behavioral intention to participation also becomes more positive (Kuo et al., 2007). It is with these findings that this study states its fourth hypothesis: there exists a significant relationship between subjective norm and behavioral intention.

The relationship of perceived behavior control towards behavior intention

Ajzen and Driver (1992) stated that perceived control behavior can predict behavioral intention. Perceived control behavior is an important factor. It not only influences the intention of an individual towards engaging in leisure activities, but it also directly affects the individual's actual leisure behavior (Blue, 1996). Ryu and Han (2003) on the knowledge sharing behavior of physicians in hospitals show that perceived control behavior directly influences intention to share. Perceived control behavior had a significant contribution in predicting behavioral intention and had greater influence than attitude (Hsu, 1998). Among the factors influencing the behavioral intention of citizens towards participation, the factor, perceived control behavior, has the most influence (Yang et al., 2007b).

As the perceived control behavior of an individual becomes more positive, the behavioral intention to participate also becomes more positive (Kuo et al., 2007). This study thus presents its fifth hypothesis: there exists a significant relationship between perceived control behavior and behavioral intention.

The relationship of behavioral intention towards behavior

Ajzen and Driver (1992) and Hrubes et al. (2001) stated that behavioral intention can effectively influence behavior. Bock and Kim (2002) employed the TRA to examine knowledge sharing behaviors which showed that behavioral intention directly influences actual behavior. Willingness is an important predictive factor and behavioral intention is an important factor influencing behavior (Blue, 1996; Gopi and Ramayah, 2007). From these, this study gives its sixth hypothesis: there exists a significant relationship between behavioral intention and behavior.

The relationship of perceived behavior control towards behavior

Ajzen (1985) identified perceived control behavior as influencing behavioral intention and directly influencing actual behavior. Perceived control behavior is an important factor. It not only influences behavioral intention of an individual towards engaging in leisure activities,

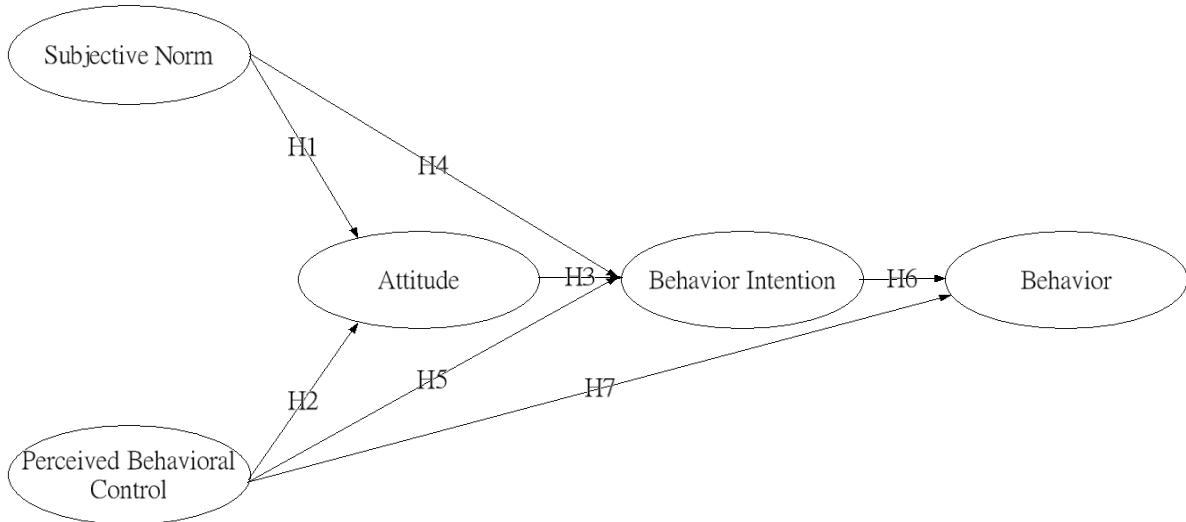


Figure 1. Research framework

but it also directly influences actual leisure behavior (Blue, 1996). Godin (1994) stated that perceived control behavior can increase the explained variance towards behavioral intention (Huang, 2002). Information gathered from the Internet can cause perceived control behavior towards eco-travel participation to have a positive significant relationship with behavior (Chan and Yu, 2008). This study then presents its seventh hypothesis: there exists a significant relationship between perceived control behavior and behavior.

METHODS

Research framework

The main purpose of this study is to examine the behaviors of Taiwanese in independent travel participation. Based on existing theoretical literature, belief factors influencing behavioral intention can be examined using three aspects: attitude, subjective norm and perceived control behavior. Under various circumstances, the factors influencing intention will also be different. The framework for this study can be seen in Figure 1.

Data collection

Convenient sampling method was employed in this study with a focus on those Taiwanese who had experiences in independent travel. In considering the limitation that participation in independent travel requires individuals to have certain economic conditions, sample subjects were required to be at least 18 years old. To increase the response rate of the questionnaire, respondents were first asked whether or not they had previous experience in independent travel. Consent was sought only when conditions for sample subjects were met.

Questionnaire design

The questionnaire for this study consisted of five parts which in-

cluded: (1) attitudes towards independent traveler participation using the leisure attitude scale developed by Ragheb and Beard (1982); (2) subjective norms on independent traveler using items given by Fan (2002) to measure subjective norm; (3) perceived behavior on independent traveler participation using the items created by Bandura (1977) to measure perceived control behavior; (4) behavioral intention on independent traveler participation using items proposed by Zeithaml, Berry and Parasuraman (1996) to measure behavioral intention; and, (5) individual characteristics. Items for the first four parts were measured on the 5-point Likert-type scale, ranging from 1 (strongly disagree) to 5 (strongly agree) with a higher number representing greater importance.

RESULTS

Describes statistical

Out of a total of 408 questionnaires distributed, 398 were returned from which 316 were valid. According to data gathered on the individuals engaged in independent travelers, 62% were females and 38% were males. 6% were 6 years old and below, 25% were 21 - 25 years old, 23% were 26 - 30 years old, 18% were 31 - 35 years old, 15% were 36 - 40 years old and 12% were 41 years old and over. 65% were married and 35% were single. 1% had at most a junior high school education, 13% had finished senior high school education, 20% had attained junior college education, 54% had a university education while 12% had attained a graduate degree or above. 23% were students, 2% worked in the industrial sector, 12% worked in business, 27% worked in services, 27% worked as public servants and 10% worked in other sectors. 20% resided in northern Taiwan, 14% resided in central Taiwan, 43% resided in the south, 21% resided in the outlying islands and 1% resided in other areas. 50% earned 15,000 NTD monthly and below, 29% earned between 15,000 - 30,000 NTD, 11% earned between

30,000 - 45,000 NTD, 3% earned between 60,000 - 75,000 NTD, 2% earned between 75,000 - 100,000 NTD and 1% earned more than 100,000 NTD.

Factor analysis and reliability analysis

This study employed the principal components analysis to extract meaningful factors. A criterion for extraction should be that factors must have eigenvalues greater than 1. These were then rotated using the varimax method. Factor loadings with absolute values greater than 0.5 were retained as factors for this study. These were then assigned labels based on the definitions of the variables.

A factor analysis of attitude revealed five dimensions. Its cumulative percentage of variance was 62.96%. Cronbach's was 0.933 for "autonomy", 0.882 for "preference", 0.852 for "well-being", 0.764 for "interaction" and 0.784 for "planning". "Autonomy" is the degree of freedom and control individuals have over what they want to do during independent travel. "Preference" is defined as the preferred actions during independent travel. "Well-being" refers to the belief that independent traveler can rejuvenate an individual's health and mind and improve work efficiency. "Interaction" is the belief that independent travel participation can widen an individual's circle of friends and improve the individual's social skills. "Planning" refers to whether a participant will spend time in classes on independent travel.

Through factor analysis, two dimensions were identified for subjective norm: "primary group" and "secondary group". Its cumulative percentage of variance was 66.04%. Cronbach's was 0.847 for the "primary group" and 0.777 for the "secondary group". "Primary group" refers to those persons important to the participant, such as parents, siblings and relatives. "Secondary group" refers to those organizations relevant to independent travel, such as government institutions and travel providers.

Factor analysis revealed two factors of perceived behavioral control: "facilitating conditions" and "self-efficacy". Its cumulative percentage of variance was 68.60%. Cronbach's was 0.849 for "facilitating conditions" and 0.814 for "self-efficacy". "Facilitating conditions" are the degree of external resources needed by an individual to perform a behavior. An example can be an ample amount of time and money to independent travel whenever desired. "Self-efficacy" is the belief in one's capability to engage in a particular behavior. This can be the knowledge of independent travel, confidence towards engaging in independent travel, sufficient independent travel itinerary information and adequate knowledge and skills needed for independent travel participation.

Two dimensions for behavioral intention were discovered using factor analysis: "intention to recommend to others" and "intention to participate". Its cumulative percentage of variance was 81.44%. Cronbach's was 0.914 for "intention to recommend to others" and 0.831

for "intention to participate". "Intention to recommend to others" refers to whether an individual will recommend to others to engage in independent travel and promote its advantages. "Intention to participate" refers to the opinions of individuals towards engaging in independent travel. Tables 1, 2, 3 and 4.

Path analysis

This study utilized the regression analysis method to facilitate a path analysis of participation attitude, behavioral intention and actual behavior. This path analysis (shown in Table 5) further examined the effects between the various variables.

Participation attitude

The direct effect of subjective norm towards participation attitude was 0.188. The direct effect of perceived control behavior towards participation attitude was 0.482. There were no indirect effects found; thus, direct effects were equal to the total effects.

Behavior Intention

The direct effect of participation attitude towards behavior intention was 0.511, there were no indirect effects found; thus, direct effects were equal to the total effects. Subjective norm were no indirect effects found towards behavior intention, there indirect effects was 0.096, the total effects was 0.096. The direct effect of Perceived Behavioral Control towards behavior intention was 0.326, there indirect effects were 0.246 and the total effect was 0.572.

Behavior

Subjective norm and participation attitude were no indirect effects found towards behavior, there, indirect effects were 0.013 and 0.073 and direct effects were equal to the total effects. The direct effect of perceived control behavior towards behavior was 0.220, indirect effect was 0.083 and the total effect was 0.303. The direct effect of Behavior Intention towards Behavior was 0.144, there was no direct effect and direct effects were equal to the total effects.

CANONICAL CORRELATION ANALYSIS

Analysis on subjective norm towards attitude

This study employed the canonical correlation analysis to examine whether there exists a significant relationship

Table 1. Factor analysis of Attitude.

	Autonomy	Preference	Well-being	Interaction	Planning
Engage in self-travel, allows you to get involved or rapture.	0.521				
Do you think engaging in self-travel is good for you?	0.555				
Engage in self-travel, you feel very comfortable	0.578				
Engage in self-travel, you feel time flies	0.580				
Do you think tourism is a waste of time engaging in self-travel.	0.586				
You are in favor of increasing leisure time to engage in self-travel.	0.612				
If you have enough money and time, you will engage in more self-travel.	0.621				
Do you think tourism can bring you to engage in pleasure?	0.631				
Do you think engaging in self-travel allows you to travel an enjoyable experience?	0.636				
Do you think engaging in self-travel, you enjoy at your own pace?	0.644				
Do you think engaging in self-travel, not a waste of time?	0.660				
If you choose, you will increase the time to engage in self-travel.	0.669				
You like self-travel.	0.688				
Do you think engaging in self-travel is new and interesting?	0.705				
Compared to other activities, self-travel is a top priority in your choice of leisure.		0.626			
Even if the busy, you still go to engage in self-travel?		0.654			
You think it is appropriate to regularly self-travel?		0.686			
Engage in self-travel is important to you.		0.746			
Do you have self-travel in travel demand?		0.748			
How often do you engage in self-travel?		0.789			
Do you think engaging in self-travel can increase the individual's happiness.			0.623		
Do you think engaging in self-travel can improve the efficiency of the individual?			0.686		
Do you think engaging in self-travel will help relax?			0.723		
Do you think engaging in self-travel benefits to personal health?			0.745		
Do you think engaging in self-travel will help to restore energy?			0.813		
Do you think engaging in self-travel is a great opportunity for social contact.				0.834	
Do you think engaging in self-travel can develop friendship with people?				0.823	
Do you think engaging in self-travel is a way of self-growth.				0.582	
Do you think engaging in self-travel is a wise use of time means.				0.561	
You will go to participate in relevant seminars or courses to enhance their ability to engage in self-travel.					0.704
You will invest time to learn and ready to engage in self-travel.					0.697
You will spend enough time and effort to enhance the ability to engage in self-travel.					0.727
Reliability	0.933	0.882	0.852	0.764	0.784
Constraints the overall reliability	0.948				

Table 1. Contd

Eigen value	6.807	4.509	3.920	2.585	2.329
Explained variance%	21.271	14.091	12.249	8.079	7.278
Total explained variance %	62.967				
KMO Kaiser-Meyer-Olkin	0.928				
Bartlett Spherical Test	6478.506				

Table 2. Factor analysis of subjective norm.

	Primary group	Secondary group
Your parents are to participate in can affect your important factor in independent travel.	0.833	
Your brothers and sisters to participate in influencing your important factor in independent travel.	0.880	
Your relatives are affecting your independent travel to participate in an important factor.	0.825	
Your Classmates or colleagues are to participate in can affect your important factor in independent travel.	0.667	
Your friends are to participate in can affect your important factor in independent travel.	0.540	
Business independent travel industry is to participate in can affect your important factor in independent travel.		0.803
Introduced by the Government Tourism Policy is to participate in can affect your important factor in independent travel?		0.837
Tourist information providers (such as: Internet, television, magazines, newspapers, etc.) is to participate in can affect your important factor in independent travel.		0.750
Reliability	0.847	0.777
Constraints the overall reliability		0.840
Eigenvalue	3.000	2.284
Explained variance (%)	37.497	28.546
Total explained variance (%)		66.043
KMO Kaiser-Meyer-Olkin		0.784
Bartlett Spherical Test		1212.361

between the subjective norm (independent variable) and the participation attitude (dependent variable) of individuals engaging in independent travel. Subjective norm was comprised of two sub-dimensions serving as criterion variables: "primary group" and "secondary group". On the other hand, attitude consisted of five sub-dimensions serving as predictor variables: "autonomy", "preference", "well-being", "interaction" and "planning".

Canonical correlation analysis revealed that the canonical correlation coefficients of the two variables both reached significant levels.

The first had a canonical correlation of $12=0.151$ ($p<0.05$). The second had a canonical correlation of

$22=0.053(P<0.05)$. Results showed that the first subjective norm canonical factor (1) can explain 15.1% of the total variance of the first participation attitude canonical factor (1). The second subjective norm canonical factor (2) can explain the 5.3% of the total variance of the second participation attitude canonical factor (2). The two subjective norm canonical factors (1, 2) can explain 20.4% of the total variance of the two participation attitude canonical factors (1, 2).

Results showed that there exists a close overall correlation between subjective norm and participation attitude, thereby supporting the H1 (Table 6).

Structurally, the first subjective norm canonical factor

Table 3. Factor analysis of perceived behavioral control.

	Facilitating conditions	Self-efficacy
You can participate in independent travel when you want to participate.	0.583	
You have enough the resource and the knowledge to participate in independent travel.	0.658	
You have enough hardware (professional clothes, shoes) to participate in independent travel.	0.804	
You have time to participate independent travel.	0.825	
You have money to participate independent travel.	0.862	
You have enough sources of information for reference in independent travel.		0.769
You understand what independent travel is.		0.843
You have confidence to participate in independent travel		0.864
Reliability()	0.849	0.814
Constraints the overall reliability	0.862	
Eigen value	2.964	2.524
Explained variance (%)	37.055	31.551
Total explained variance (%)	68.606	
KMO Kaiser-Meyer-Olkin	0.847	
Bartlett Spherical Test	1170.105	

Table 4. Factor analysis of behavioral intention.

	Intention to recommend to others	Intention to participate
You will be encouraged Friends and family involved in independent travel.	0.861	
You will be promoted the advantages of independent travel to your Friends and family.	0.889	
You will be promoted independent travel to your Friends and family.	0.907	
If you want to tourism activities, self- travel is your preferred.		0.786
If has the opportunity now, you will be able to participate in self- travel.		0.801
Even if the participation of independent travel to pay a higher price, you are still willing to participate.		0.882
Reliability()	0.914	0.831
Constraints the overall reliability	0.879	
Eigenvalue	2.651	2.236
Explained variance (%)	44.181	37.260
Total explained variance (%)	81.441	
KMO Kaiser-Meyer-Olkin	0.837	
Bartlett Spherical Test	1212.809	

(1) has a high correlation with the primary group whose structural coefficients are -0.779 respectively. The correlation of the first participation attitude canonical factor (1) with planning whose structural coefficients is -0.869 respectively, is higher than with autonomy, preference, well-being and interaction whose structural coefficients are 0.324, -0.021, -0.297 and -0.143 respec-

tively. Therefore, with a representative canonical factor, it is revealed that through 1 and 1, the observable variables of primary group have a stronger correlation with the observable variables of planning attitude.

The “primary group” of “Subjective Norm” influenced “planning” under Attitude, which suggests that the opinions of the family members and friends impacted the

Table 5. Path Analysis.

Path	Effect direct effect	indirect effects		Total Effects
		participation attitude	behavior intention	
subjective norm =>participation attitude	0.188			0.188
perceived behavioral control =>participation attitude	0.482			0.482
participation attitude =>behavior intention	0.511			0.511
subjective norm =>behavior intention		0.096		0.096
perceived behavioral control =>behavior intention	0.326	0.246		0.572
participation attitude =>behavioral			0.073	0.073
subjective norm =>behavioral			0.013	0.013
perceived behavioral control =>behavioral	0.220		0.083	0.303
behavior intention =>behavioral	0.144			0.144

Table 6. Analysis on subjective norm towards attitude.

	Subjective Norm			Attitude	
	1	2		1	2
primary group	-0.779*	0.789	autonomy	0.324	0.992
secondary group	-0.377	-1.040	preference	-0.021	-1.449
			well-being	-0.297	0.024
			interaction	-0.143	0.303
			planning	-0.869*	-0.090
Variance Extracted	0.268	0.078	Variance Extracted	0.694	0.306
Redundancy	0.041	0.004	Redundancy	0.105	0.016
			Z	0.151	0.053

participants' activeness towards and frequency of participating in the backpack tour.

Analysis on perceived behavioral control towards attitude

This study employed the canonical correlation analysis to examine whether there exists a significant relationship between the perceived behavioral control (independent variable) and the participation attitude (dependent variable) of individuals engaging in independent travel. Perceived behavioral control consisted of two sub-dimensions serving as criterion variables: "facilitating conditions" and "self-efficacy". On the other hand, parti-

cipation attitude comprised of five sub-dimensions serving as predictor variables: "autonomy", "preference", "well-being", "interaction" and "planning".

Canonical correlation analysis revealed that the canonical correlation coefficients of the two variables both reached significant levels. The first had a canonical correlation of $12=0.332(p<0.05)$. The second had a canonical correlation of $22=0.046(P<0.05)$. Results showed that the first subjective norm canonical factor (1) can explain 33.2% of the total variance of the first participation attitude canonical factor (1). The second subjective norm canonical factor (2) can explain the 4.6% of the total variance of the second participation attitude canonical factor (2). The two subjective norm canonical factors (1, 2) can explain 37.8% of the total

Table 7. Analysis on perceived behavioral control towards attitude.

	Perceived Behavioral Control			Attitude	
	1	2		1	2
facilitating conditions	-0.552*	-1.030	autonomy	-0.085	1.398
self-efficacy	-0.596*	1.005	preference	-0.888*	-0.519
			well-being	0.029	-0.234
			interaction	-0.103	-0.784
			planning	-0.009	0.225
Variance Extracted	0.758	0.242	Variance Extracted	0.420	0.091
Redundancy	0.252	0.011	Redundancy	0.139	0.004
			^z	0.332	0.046

variance of the two participation attitude canonical factors (1, 2). Results showed that there exists a close overall correlation between subjective norm and participation attitude, thereby supporting H2 (Table 7).

Structurally, the first perceived behavioral control canonical factor (1) has a high correlation with both the facilitating conditions and the self-efficacy whose structural coefficients are -0.552 and -0.596 respectively. The correlation of the first participation attitude canonical factor (1) with preference whose structural coefficients is -0.888 respectively, is higher than with autonomy, well-being, interaction and planning whose structural coefficients are -0.085, 0.029, -0.103 and -0.009 respectively. Therefore, with a representative canonical factor, it is revealed that through 1 and 1, the two observable variables (facilitating conditions and self-efficacy) have a stronger correlation with the observable variable of preference attitude. "Facilitating conditions" and "self-efficacy" of Perceived Behavioral Control influenced "preference" under Attitude, which suggests that the confidence demonstrated by participants during the backpack tour impacted their actions during the trip.

Analysis on attitude towards behavior intention

This study employed the canonical correlation analysis to examine whether there exists a significant relationship between the participation attitude (independent variable) and the behavioral intention (dependent variable) of individuals engaging in independent travel.

Participation attitude was comprised of five sub-dimensions serving as criterion variables: "autonomy", "preference", "well-being", "interaction" and "planning". On the other hand, behavior intention consisted of two sub-dimensions serving as predictor variables: "intention to recommend to others" and "intention to participate".

Canonical correlation analysis revealed that the canonical correlation coefficients of the two variables both reached significant levels. The first had a canonical correlation of $12=0.536(p<0.05)$. The second had a canonical correlation of $22=0.127(P<0.05)$. Results

showed that the first participation attitude canonical factor (1) can explain 53.6% of the total variance of the first participation attitude canonical factor (1). The second participation attitude canonical factor (2) can explain the 12.7% of the total variance of the second behavior intention factor (2). The two participation attitude canonical factors (1, 2) can explain 66.3% of the total variance behavior intention of the two canonical factors (1, 2). Results showed that there exists a close overall correlation between participation attitude and behavior intention, thereby supporting H3 (Table 8).

Structurally, the first participation attitude canonical factor (1) has a high correlation with the autonomy attitude and preference attitude whose structural coefficients are 0.426 and 0.549 respectively. The correlation of the first behavior intention canonical factor (1) with intention to participate whose structural coefficients are 0.761 respectively, is higher than with intention to recommend to others whose structural coefficients is 0.35 respectively. Therefore, with a representative canonical factor, it is revealed that through 1 and 1, the two observable variables (autonomy and preference) have a stronger correlation with the observable variable of intention to participate.

"Autonomy" and "preference" under Attitude influenced "intention to participate" under Behavior Intention, which indicates that the relevant actions undertaken by participants during the backpack tour impacted the probability of them returning to participate in the tour.

Analysis on subjective norm towards behavioral intention

This study employed the canonical correlation analysis to examine whether there exists a significant relationship between the subjective norm (independent variable) and the behavior intention (dependent variable) of individuals engaging in independent travel. Subjective norm was comprised of two sub-dimensions serving as criterion variables: "primary group" and "secondary group". On the other hand, behavior intention consisted of two sub-

Table 8. Analysis on attitude towards behavior intention.

	Attitude		intention to recommend to others intention to participate	Behavior Intention	
	1	2		1	2
autonomy	0.426*	-0.166	intention to recommend to others	0.350	-1.155
preference	0.549*	0.788	intention to participate	0.761*	0.937
well-being	-0.129	-0.408			
interaction	0.179	-0.274			
planning	0.175	-0.601			
Variance Extracted	0.480	0.209	Variance Extracted	0.759	0.241
Redundancy	0.257	0.027	Redundancy	0.407	0.031
			<i>z</i>	0.536	0.127

Table 9. Analysis on subjective norm towards behavioral intention.

	Subjective norm		intention to recommend to others intention to participate	Behavioral Intention	
	1	2		1	2
primary group	0.893*	-0.653*	intention to recommend to others	1.106*	-0.484*
secondary group	0.207	1.087*	intention to participate	-0.219	1.187*
Variance Extracted	0.567	0.343	Variance Extracted	0.564	0.436
Redundancy	0.028	0.004	Redundancy	0.024	0.006
			<i>z</i>	0.042	0.013

dimensions serving as predictor variables: "intention to recommend to others" and "intention to participate".

Canonical correlation analysis revealed that the canonical correlation coefficients of the two variables both reached significant levels. The first had a canonical correlation of $12=0.042(p<0.05)$. The second had a canonical correlation of $22=0.013(P<0.05)$. Results showed that the first subjective norm canonical factor (1) can explain 4.2% of the total variance of the first behavioral intention canonical factor (1). The second subjective norm canonical factor (2) can explain the 1.3% of the total variance of the second behavior intention factor (2). The two subjective norm canonical factors (1, 2) can explain 5.5% of the total variance behavior intention of the two canonical factors (1, 2). Results showed that there exists a close overall correlation between subjective norm and behavior intention, thereby supporting H4 (Table 9).

Structurally, the first subjective norm canonical factor (1) has a high correlation with the primary group whose structural coefficients are 0.893 respectively. The correlation of the first behavior intention canonical factor (1) with intention to recommend to others whose structural coefficients is 1.106 respectively, is higher than intention to participate whose structural coefficients is - 0.219 respectively. Therefore, with a representative canonical factor, it is revealed that through 1 and 1, the observable variables of primary group have a stronger correlation with intention to recommend to others.

The "primary group" of "Subjective Norm" influenced

"intention to recommend to others" under Behavior Intention, which indicates that the opinions of family members and friends impacted the probability of whether participants publicized or recommended the backpack tour to others.

Analysis on perceived behavioral control towards behavioral intention

This study employed the canonical correlation analysis to examine whether there exists a significant relationship between the perceived behavioral control (independent variable) and the behavior intention (dependent variable) of individuals engaging in independent travel. Perceived behavioral control was comprised of two sub-dimensions serving as criterion variables: "facilitating conditions" and "self-efficacy". On the other hand, behavior intention consisted of two sub-dimensions serving as predictor variables: "intention to recommend to others" and "intention to participate".

Canonical correlation analysis revealed that the canonical correlation coefficients of the one variable reached significant levels. It had a canonical correlation of $12=0.352(p<0.05)$. Results showed that the perceived behavioral control canonical factor (1) can explain 35.2% of the total variance of the behavioral intention canonical factor (1). Results showed that there exists a close overall correlation between perceived behavioral control and behavior intention, thereby supporting H5

Table 10. Analysis on perceived behavioral control towards behavioral intention.

	Perceived Behavioral Control		Behavioral Intention
			1
facilitating conditions	0.545*	intention to recommend to others	0.312
self-efficacy	0.603*	intention to participate	0.791*
Variance Extracted	0.758	Variance Extracted	0.752
Redundancy	0.267	Redundancy	0.264
		²	0.352

Structurally, the first perceived behavioral control canonical factor (1) has a high correlation with the facilitating conditions and self-efficacy whose structural coefficients are 0.545 and 0.603 respectively (Table 10).

The correlation of the first behavior intention canonical factor (1) with intention to participate whose structural coefficients is 0.791 respectively, is higher than intention to recommend to others whose structural coefficients is 0.312 respectively. Therefore, with a representative canonical factor, it is revealed that through 1 and 1, the two observable variables (facilitating conditions and self-efficacy) have a stronger correlation with the observable variable of intention to participate. "Facilitating conditions" and "self-efficacy" under Perceived Behavioral Control influenced "intention to participate" under Behavior Intention, which suggests that the confidence demonstrated by participants during the backpack tour impacted the probability of them returning to participate in the tour.

Analysis of behavioral intention towards behavior

In this study, regression analysis, behavior intention is taken as independent variables, and behavioral variables, as dependent. From Table 11 we can see that behavioral intention is significantly related to the behavior. Results showed that there exists a close overall correlation between behavioral intention and behavior, thereby supporting H6. Therefore, in further analysis, "intention to participation" affect independent travel behavior high than the "recommendation of the intentions of others".

* P<0.1** P<0.05*** P<0.01

Analysis on perceived behavioral control towards behavior

This study adopts regression analysis method, perceived behavioral control as independent variables and behavioral variables as dependent. In Table 12, perceived behavioral control on behavior was significantly related. Results showed that there exists a close overall correlation between perceived behavioral control and behavior, thereby supporting H7.

Therefore, in further analysis, "self-efficacy" affect

Table 11. Regression analysis of behavioral intention towards behavior

		Behavior	
		intention to recommend to others	intention to participate
Behavioral Intention	Adjust R ²	0.043	0.231*
	F	0.060	11.068**

Table 12. Regression analysis of Perceived behavioral control towards behavior.

		Behavior	
		facilitating conditions	self-efficacy
Perceived Behavioral Control	Adjust R ²	0.036	0.296*
	F	0.094	17.382**

independent travel behavior high than the "facilitating conditions".

DISCUSSION

This study adopted the TPB to examine the behavior of individuals engaged in independent travel. It also observed the relationship of latent variables within the model and the degree of effect these variables had towards behavioral intention on independent travel participation. Through these, it aimed to understand the psychological factors influencing the participation behavior of individuals engaged in independent travel. Results of this study are as follows:

On the factors influencing the participation attitude of individuals on independent travel, the results of this study show that there exists a significant relationship between subjective norm and perceived behavioral control. Between them, the effect of perceived behavioral control

is greater than subjective norm. The likes and dislikes of an individual towards independent travel activities are mainly determined by the degree of control over the objective situation. In other words, as an individual is more able to control the objective condition, the degree of the individual's inclination towards independent travel becomes greater. Moreover, on the relationship between perceived behavioral control and participation attitude, facilitating conditions has a stronger, significant relationship with self-efficacy. In other words, as individuals are more able to control factors such as time and money, their actions before engaging in independent travel (such as the gathering of information) also increase. Lastly, from the relationship between subjective norm and attitude, it can be observed that primary and secondary groups have a stronger, significant relationship with planning and autonomy. In other words, the degree of approval and recognition towards independent travel and the willingness to attend classes on independent travel are influenced positively by family, friends and relevant organizations.

On the behavior intention influencing participants of independent travel, this study discovered that participation attitude, subjective norm and perceived behavioral control all have significant effects. Among these, perceived behavioral control is the greatest and participation attitude is the second greatest. The willingness of an individual to participate in independent travel is mainly determined by the degree of control over the objective situation and the degree of like or dislike towards independent travel. In other words, as the degree of control of the objective conditions and the degree of inclination towards independent travel become greater, the willingness to engage in independent travel also increases. Secondly, on the dimensions of perceived behavioral control and behavior intention, both facilitating conditions and self-efficacy have a stronger, significant relationship with the intention to participate and the intention to recommend to others. In other words, self-confidence and external resources such as time, money and facilities influence a willingness to participate again and an intention to recommend to others. Thirdly, on participation attitude and behavior attitude, autonomy and preference have a stronger, significant relationship with the intention to participate and intention to recommend to others. In other words, the degree of approval and recognition towards independent travel and the willingness to attend classes on independent travel influence the willingness to participate again and intention to recommend to others. Lastly, on subjective norm and behavior intention, the primary group has a stronger significant relationship with the intention to recommend to others. In other words, the encouragement of family and friends to participate in independent travel influences the intention of an individual to recommend others to engage in independent travel.

On the participation behavior influencing participants of independent travel, this study shows that participation

attitude, subjective norm, perceived behavioral control and intention to participate all have significant effects. Among them, perceived behavioral control has the greatest effect. The participation to independent travel is mainly determined by the degree of control of an individual over the objective situation. In other words, as an individual is more able to control the objective condition, the behavior to participate in independent travel activities also becomes greater. On a further analysis of perceived behavior, the effect of self-efficacy is the most significant. In other words, as the self-confidence of an individual towards participation in independent travel becomes greater, the itinerary information and the knowledge and skills of the individual will be sufficient and thus, the frequency of participation in independent travel also increases. Path analysis revealed that subjective norm has no direct effect on behavioral intention. However, subjective norm through participation attitude has an indirect effect on behavioral intention. On the effects of behavioral intention, the total effect of perceived behavioral control is the greatest; attitude, second highest and subjective norm, the smallest. On behavior, it is the perceived behavioral control which has the most effect followed by behavioral intention. In other words, as the recommendations of family and friends are stronger and the self-confidence and abilities of the participants are greater, their preparations before engaging in independent travel increases. One example of this will be the initiative to spend time learning relevant knowledge and gathering information by attending classes. Both the views of participants on their independent travel and the frequency of their actual participation in independent travel will relatively increase. This study presents the following recommendations to the airline, hotel and bed-and-breakfast industries to serve as reference when implementing independent travel itineraries:

First, establish a favorable perception. The attitude of participants on independent travel is influenced by the opinions of those who are important to them. Moreover, the opinions of family and friends can influence their opinion on engaging in independent travel. Thus, a major task is to know how to promote the advantages of independent travel, such as allowing participants to learn various things or to better experience local customs than by group travel.

Second, provide more details and information on travel. The assessments of participants on independent travel, their views on their engaging in independent travel and their behavior during actual participation are influenced by the degree of self-confidence they have when participating in independent travel. Making more detailed travel information available to participants allows them to strengthen their confidence towards independent travel.

REFERENCES

- Ajzen I (1987). Attitudes, traits, and actions: dispositional prediction of behavior in personality and social psychology. *Adv. Exp. Soc.*

- Psychol. 20: 1-63.
- Ajzen I (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50:179-211.
- Ajzen I (2001). Nature and operation of attitudes. *Ann. Rev. Psychol.* Palo Alto. 52: 27-58.
- Ajzen I, Driver BL (1992). Application of the theory of planned behavior to leisure choice. *J. Leisure Res.* 24(3): 207-224.
- Ajzen I, Fishbein M (1991). Understanding attitudes and predicting social behavior. Prentice-Hall, Englewood Cliffs, NJ.
- Ajzen I (1985). From intentions to actions: a theory of planned behavior In Kuhl J, Beckmann J (Eds.) *Action-control: From cognition to behavior* (pp.11-39). Heidelberg, Germany: Springer.
- Baker DA, Crompton JL (2000). Quality, satisfaction and behavioral intentions. *Ann. Tourism Res.* 27(3): 785-804.
- Bandura A (1977). Social learning theory. Englewood Cliffs, NJ: Prentice-Hall.
- Bigne JE, Sanchez MI, Sanchez J (2001). Tourism image, evaluation variables and after purchase Behavior: inter-relationship. *Tourism Manage.* 22(6): 607-616.
- Blue CL (1996). Theory of planned behavior and self-efficacy and exercise behavior in blue-collar workers. Unpublished doctoral dissertation, University of Illinois at Chicago, Health Science Center.
- Bock GW, Kim YG (2002). Breaking the myths of rewards: an exploratory study of attitudes about knowledge sharing. *Info. Resour. Manage. J.* 15(2): 14-21.
- Chan SC, Yu PC (2008). Eco-tourism behavior analysis: an extension of the theory of planned behavior perspective. Proceeding in 6th Tourism Industry Development Conference, pp. 274-286.
- Chao HP (1998). Relationship among Attitudes, subjective norms, perceived behavioral control and Intention: An Example of Elementary School Students Participating Recreation Sport Camp. Unpublished master dissertation, National College of Physical Education and Sports, Tao Yuen, Taiwan R. O. C.
- Chen TL (1987). How to prepare for independent travel conducted, Taipei: Youth travel conduct club.
- Fan LW (2002). Students participate in eco-tourism study of behavioral intention- Tunghai University students as an example to. Unpublished master dissertation, National Taichung Normal University, Taichung, Taiwan R. O. C.
- Ghen KJ, Liu GM (2004). Positive brand extension trial and choice of parent brand. *J. Prod. Brand Manage.* 13(1): 25-36.
- Godin G (1994). Theories of reasoned action and planned behavior: usefulness for exercise promotion. *Medicine and Science in Sports and Exercise.* 26: 1391-1394.
- Gopi M, Ramayah T (2007). Applicability of theory of planned behavior in predicting intention to trade online: Some evidence from a developing country. *Int. J. Emerging Markets.* 2(4): 348 - 360.
- Hrubes D, Ajzen I, Daigle J (2001). Predicting Hunting Intentions and Behavior: An Application of the Theory of Planned Behavior. *Leisure Sci.* 23: 165-178.
- Hsing IL (2002). Application of the theory of planned behavior to leisure choice: Predicting and explaining the leisure intention and behavior of National Dong Hwa University students. Unpublished master dissertation, National Dong Hwa University, Hualien, Taiwan R. O. C.
- Hsu CC (1998). The prediction and investigation of the regular exercise intention and behavior among elementary school teachers: test the theory of planned behavior. Unpublished master dissertation, National College of Physical Education and Sports, Tao Yuen, Taiwan R. O. C.
- Hsu TC, You SC (2005). Discussion of women self-help tourists travel experience. *J. Recreational Sports,* (4): 61-67.
- Huang CM (2002). The research of leisure-participation behavioral intention and effective factors on highly-concerned junior high school students: The application and verification on the theory of planned behavior. Unpublished master dissertation, National College of Physical Education and Sports, Tao Yuen, Taiwan R. O. C.
- Huang TC (2005). FIT Motivation Involvement and Purchase Intention-A study of Traveling to Mainland China. Unpublished master dissertation, Chung Yuan Christian University, Tao Yuen, Taiwan R. O. C.
- Kozak M (2001). Repeater behavior at two distinct destinations. *Ann. Tourism Res.* 28, (3): 784-807.
- Kuo FC (1998). A Study of the influential factors of the farmer's pesticide use behavior an illustration of grape farmers in Cho-Lan and Tung-Shih Township. Unpublished master dissertation, National Chung Hsing University, Taichung, Taiwan R. O. C.
- Kuo HY, Hsu HM, Wang HS, Che ZH (2007). A Study of Intention of Participating in Health Promotion Training Programs for Public Health Workers Serving in Hualien and Taitung Counties. *J. National Taipei University Technol.* 40(1): 151-162.
- Lippa RA (1990). *Introduction to Social Psychology*, California: Wadsworth, Inc. 521-545.
- Olson JM, Zanna MP (1993). Attitudes and attitude change. *Ann. Rev. Psychol.* 44: 117-154.
- Ragheb MG, Beard JG (1982). Measuring leisure at attitude. *J. Leisure Res.* 14(2): 155-167.
- Ross GF (1993). Destination evaluation and vacation preferences. *Ann. Tourism Res.* 20(3): 477-489.
- Ryu S, Ho SH, Han I (2003). Knowledge Sharing Behavior of Physicians in Hospitals. *Expert Systems with Applications*, (25): 113-122.
- Tourism Bureau, Rep. (2007). Tourism bureau 2006 Chinese tourism survey summary. Tourism Bureau, <http://admin.taiwan.net.tw/statistics/File/200612/95.htm>.
- Woodside AT, Frey LL, Daly RT (1989). Linking service quality, customer satisfaction and behavioral intention. *J. Health Care Market.* 9(1): 5-17.
- Wu S, Lin TC (2007). Exploring knowledge sharing behavior of IS personnel with theory of planned behavior. *J. Info. Manage.* 14(2): 75-110.
- Yang CH, Chen KH, Lee CJ (2007a). Using Rasch model to explore the perceived constraints of outbound travel for individual travelers. *J. Leisure Tourism Industry Res.* 2(1): 1-26.
- Yang DJ, Kao MR, Guo SM (2007b). Behavior intention of citizens to participate in forest ecosystem management at the Liukuei experimental forest in Kaohsiung. *Taiwan J. Forest Sci.* 22(4): 381-398.
- Yu TK, Lee NH, Wu GS (2005). An empirical research of Kinmen tourists' behavioral tendencies model: a case of cross-validation in causal modeling. *J. Tourism Studies.* 11(4): 355-384.
- Yu TK, Wu GS, Lee NH (2005). Exemplified by the MP3 download behavioral by students in the technological and vocational system. *J. Info. Manage.* 12(3): 189-222.
- Zeithaml VA, Berry LL, Parasuraman A (1996). The behavioral consequences of service quality. *J. Market.* 60: 33-46.